PRADEEP K. NAIK

National Geoscience Award, Govt. of India

Certified Groundwater Professional (NGWA, USA)

Professional Hydrologist – Ground Water (AIH, USA)

Director

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EDUCATION

Research Associate	Hydrodynamic Processes and Ecosystems Laboratory, Oregon Graduate Institute of Science and Technology, Portland, OR, USA, 1998-2001.
Ph. D.	Earth Sciences (Hydrogeology), Indian Institute of Technology, Roorkee, 1995.
M.S.	Environmental Science and Engineering, Oregon Graduate Institute of Science and Technology, Beaverton, Portland, OR, USA, 1998.
M.Sc.	Applied Geology, Indian Institute of Technology, Roorkee, 1984.
B. Tech.	Civil Engineering (Water), University of South Africa, Pretoria, RSA
B.Sc. (Hons.)	Geology Honors. Sambalpur University, Jyoti Vihar, Burla, Odisha, India
Certificate	Science Communication, University of California, San Diego, CA, USA

PROFESSIONAL EXPERIENCE

Director (2022 – present)
Centre for Hydrological Sciences and Communication

Research and development on various water and environmental issues, and science communication. Current projects: Human health assessment based on probabilistic and deterministic approaches, rock-water interactions, source apportionment of potential pollutants, and hydrogeochemical forecasting in a tribal stretch in central India; amplification of climate signals through streamflow and fluvial sediment transport in the West Coast of North America; impact of human activities and large-scale climate processes in the groundwaters of Punjab and Haryana; SWOT analysis of science journalism in India; water journalism; science communication in ancient India; and history of science of India.

Scientist B (1987 – 1992), Scientist C (1993 – 1997), Senior/Superintending Hydrogeologist / Senior Faculty (RGNGWTRI, Raipur) / Regional Director (1998 – 2022):
Central Ground Water Board, Ministry of Jal Shakti, Govt. of India.

Groundwater resources assessment, development and management; hydrogeological investigations; aquifer mapping; groundwater modeling; water supply investigations; groundwater exploration, aquifer performance tests, well logging and well installation; site characterization and risk assessment; groundwater quality monitoring, regulatory permitting and compliance; monitoring of hydrograph stations and field sampling; environmental impact assessment, policy design and evaluation; remote sensing studies and GIS; managed aquifer recharge; rainwater harvesting; project coordination and management; preparation of technical reports; research & development, and training.

Past Leaderships

- **2021-2022**: Managed all administrative, financial and HR matters of 120 employees.
- **2021-2022**: Responsible for all groundwater affairs of the state of Chhattisgarh including those of National Hydrology Project (NHP), National Project on Aquifer Management and World Bank-funded Atal Bhujal Yojana. Monitoring and evaluation of all activities.
- **2016-2021**: First/Second-in-Command at the Rajiv Gandhi National Ground Water Training and Research Institute, a capacity building scheme of the Government of India. Responsible for management of 120-130 training courses annually in pan-India scale. Trained about 8000 participants per annum about $1/5^{th}$ of which were women. The capacity building program was extended to Africa, Middle East and Asian countries.
- **2013-2016**: Managed the World-Bank funded National Aquifer Mapping program in the States of Punjab and Haryana and in the National Capital Region, New Delhi. Lead a team of scientists for preparation of a state-of-the-art report on aquifer mapping.
- **2007-2013**: Served as advisor (water resources) for the Govt. of the Kingdom of Bahrain.
- **2001-2007**: Team Leader for implementation of NHP in the state of Maharashtra, India. Responsible field monitoring, retrieval, storage, analysis and dissemination of monitoring data and reports and development of a sustainable Hydrological Information System (HIS), named as the Groundwater Estimation and Management System (GEMS) as part of MIS support. Procured numerous machines and equipment (M & E) under NHP.
- **2005-2006:** Chaired the Sub-group for the State-level Water Quality Review Committee, a program under National Water Quality Assessment Authority (under NHP).

Advisor (Water Resources) (November 2007 – September 2013)

Ministry of Municipalities Affairs and Urban Planning, Kingdom of Bahrain

Advisory work on all matters related to groundwater resources assessment, development and management; planning, monitoring and coordination of work programs; capacity building; policy design and evaluation; assessment and formulation of project proposals; managed aquifer recharge; groundwater data analysis and processing; formulation of policies and guidelines for dredging and reclamation, deep foundations, piling, geotechnical investigations and other infrastructural developments; environmental impact assessment; training and supervision of personnel.

Research Associate (July 1998 to September 2001):

Hydrodynamic Processes and Ecosystems Laboratory, Oregon Graduate Institute of Science and Technology, Portland, OR, USA.

Hydrological modeling and fluvial sediment transport in the major North American rivers (from north to south): the Yukon, Mackenzie and Fraser Rivers of Alaska and Canada, the Columbia, Snake, Cowlitz and Willamette Rivers of the Pacific Northwest, and the Eel, Sacramento and San Joaquin Rivers of California; impact of the large-scale climate processes, such as those of El Niño Southern Oscillation (ENSO), Pacific Decadal Oscillation (PDO), and California Pressure Anomaly (CPA) on the streamflow and sediment discharges; seasonality of sediment transport dynamics; Columbia River historical virgin flow estimation and the corresponding sediment/sand transport; separation of natural and anthropologic influences on the Columbia River mean flow and sediment transport; analysis of freshet styles and their timings; Columbia River disturbance processes and overbank flows; statistical analyses and computer simulations.

PROFESSIONAL AFFILIATIONS

National

1. Indian Association of Hydrologists (life fellow) – (1993 – present)
2. Geological Society of India (life fellow) – (2002 – 2007; 2023 – present)
3. Gondwana Geological Society (life fellow) – (2002 – present)
4. Indian Water Resources Society (life fellow) – (2002 – present)
5. Indian Science Congress Association (member) – (2002 – 2007)
6. Institution of Engineers (India) (life fellow) – (2003 - present)
7. Maharashtra Academy of Sciences (life fellow) – (2003 – present)
8. Odisha Bigyan (Science) Academy (life member) – (2004 – present)
9. Association for Hydrologists of India (life member) – (2005 – present)
10. Indian Association of Soil and Water Conservationists (life member) – (2009 – present)

International

11. Geological Society of America (member) – (2000 – present)
12. International Association of Hydrogeologists (member) – (2000 – present)
13. International Association of Hydrological Sciences (life member) – (2000 – present)
14. American Geophysical Union (member) – (2001 – present)
15. Water Science and Technology Association (member) – (2007 – 2014)
16. Water Environment Federation (member) – (2008 – 2014)
17. Saudi Arabian Water Environment Association (member) – (2008 – 2014)
18. International Association for Promoting Geoethics (life member) – (2017 – present)
19. National Groundwater Association (member) – (2020 – present)
20. American Academy of Environmental Engineers and Scientists (2024-present)
21. Sigma XI (2024 – present)
22. American Institute of Hydrology (2025 – present)

AWARDS / HONOURS

1. **National Geoscience Award 2016 for Groundwater Exploration** including project development, hydrogeological studies and management of groundwater resources, Ministry of Mines, Government of India. Award presentation by the President of India.
2. Eminent Environmental Engineer Award 2006, Institution of Engineers (India).
3. Invited Membership - Sigma Xi, The Scientific Research Honor Society, USA, 2024
4. Certified Groundwater Professional, National Groundwater Association, USA, 2021.
5. Professional Hydrologist – Ground Water, American Institute of Hydrology, USA, 2025.
6. Innovation Patent, Australian Government, Patent Number: 2021103521 (2022).
7. South African Patent. Govt. of the Republic of South Africa. Patent No. 2023/02628.
8. Publisher's Choice Article 2017 on occasion of the World Water Day.
9. Professional Excellence Award 2019, Aqua Foundation, New Delhi.
10. Felicitation by the Inst. of Engineers (India) on occasion of the 51st Engineers' Day 2018.
11. Rashtriya Gaurav Award 2017, India International Friendship Society, New Delhi.
12. Included in Who's Who in America, Marquis Publications, USA, since 2008.
13. Included in Marquis Who's Who in Asia, since 2007.
14. Included in Marquis Who's Who in the World, since 2006.
15. Included in Marquis Who's Who in Science and Engineering, since 2006.
16. First Prize for Best Scientific Writing, Indian Physics Association, Roorkee, 1986.

SIGNIFICANT CONTRIBUTIONS

1. Developed a new indexing method (Comprehensive Water Quality Index - CWQI) for appraisal of groundwater contamination due to physicochemical parameters (Ecological Indicators, 2022) (**Patent No. 2023/02628, Govt. of the Republic of South Africa**).
2. Developed a new indexing method (Heavy-metal Contamination Index - HCI) for evaluation of heavy metal contamination in groundwater (Chemosphere, 2020). **Australian Innovation Patent (No. 2021103521/2021).**
3. Made hydrogeochemical forecasting of the groundwater regime in a tribal stretch infected with chronic kidney disease of unknown etiology (CKDu). **First time in the World.**
4. Studied rock-water interactions and source apportionment of possible pollutants in an area infected with CKDu. **Most extensive rock-water interaction study in a CKDu area.**
5. Characterized groundwater usages in an area infected with CKDu. Answered many pertinent questions the public in such areas have been asking for long. **First Time in the World.**
6. Made an appraisal of the role of heavy metals and their source apportionment in an area infected with CKDu. We proved that heavy metals have a minimal role in CKDu's etiology.
7. Proved that probabilistic modeling is superior to deterministic approaches in human health risk assessment (Scientific Reports, 2023). **First Time in the World.**
8. Evaluated heavy meal contamination in soil using indexing and chemometric techniques.
9. Examined impact of urbanization on the groundwater regime. The conventional assumption that urbanization reduces urban groundwater recharge was dismissed. Several contributions.
10. Studied groundwater pollution in an industrial belt in the coastal stretch of Maharashtra and suggested several remedial measures to be applied in similar areas in the Indian coasts.
11. Formulated aquifer management plan for the National Capital Region, New Delhi, India. **State-of-the-Art Report for Central Ground Water Board, Government of India.**
12. Depicted in detail the hydrogeological framework and hydrogeochemistry of the Koyna River basin (India), world-famous for the Koyna earthquake of 1967 (M7).
13. Evaluated the aquifer parameters of basaltic horizons through pumping tests in large diameter wells by conventional methods and critically analyzed their constraints/advantages.
14. Studied the high-elevation springs in the Western Ghats in terms of their origin, distribution, classification, discharges, chemistry, and possible water uses. **First time in India.**
15. Defined unique methods for estimation of regional specific yield and baseflow in a regulated river basin with modified streamflow.
16. Suggested several measures for groundwater resources development and management in the Western Ghats region, India for solving water scarcity.
17. Estimated the virgin flow of the Columbia River, USA for the periods 1860-1929 and 1990-2004 and virgin sediment/sand transport for the period 1860-2004. **First time in the USA.**
18. Developed a proto-type model for separation of climate and anthropogenic influences on the Columbia River mean flow and sediment transport. **First time in the world.**
19. Made a historical analysis of the Columbia River hydrological disturbance processes, flow magnitudes, timings and freshet styles. Separated the human and climate influences.
20. Studied impacts of the large-scale climate processes, such as those of ENSO and PDO, on the sediment transport volumes of the North American rivers in the west coast. **First time.**
21. Studied seasonality of sediment transport in major North American rivers in the estuaries.
22. Conducted a SWOT analysis of science journalism in India (Science Comm., 2022; IF 9.00).
23. Conducted pilot studies in Bahrain for storm water injection. **First Time in Bahrain**.
24. Made an appraisal of the myths surrounding Africa's water scarcity. **First time in Africa.**

IMPORTANT PROFESSIONAL SERVICES

1. Associate Editor, Arabian Journal of Geosciences, Springer.
2. Associate Editor, Frontiers in Water, Frontiers Media Limited.
3. Associate Editor, Air, Soil and Water Research, Libertas Academica/SAGE.
4. Past-Member, Editorial Board, Gondwana Geological Magazine, Nagpur, India.
5. Past-Editor, e-journal of Indian Geohydrology, Int. Association of Hydrogeologists.
6. Past-Editor, Bhujal, Quarterly Journal of Central Ground Water Board, Govt. of India.
7. Past-Member, Editorial Board, Jour. of Environmental Sc. & Engg., David Publ. Co.
8. Past-Editor, Journal of Geology and Mining Research, Academic Journals
9. Reviewer, Research Proposals for National Science Foundation, USA
10. Reviewer, Journal of Environmental Management, Elsevier, USA.
11. Reviewer, Pedosphere, Elsevier, People's Republic of China.
12. Reviewer, Hydrological Sciences Journal, IAHS, Oxfordshire, UK.
13. Reviewer, Journal of Environmental Monitoring and Assessment, Springer
14. Reviewer, Hydrogeology Journal, International Association of Hydrogeologists.
15. Reviewer, Journal of Stochastic Environmental Research and Risk Assessment.
16. Reviewer, Journal of Asian Earth Sciences, Elsevier.
17. Reviewer, Journal of Environmental Earth Sciences, Springer.
18. Reviewer, Journal of Agricultural Water Management, Elsevier.
19. Reviewer, Journal of Earth System Sciences, Indian Academy of Sciences.
20. Reviewer, Journal of Climate Change, Springer.
21. Reviewer, Climate Change Biology, Wiley
22. Reviewer, Journal of Soil Science and Environ. Management, Academic Journal.
23. Reviewer, Journal of Chemistry and Ecology, Taylor and Francis.
24. Reviewer, Journal of Geological Society of India.
25. Reviewer, Indian Journal of Geochemistry.
26. Reviewer, Current Science, Indian Academy of Sciences.
27. Reviewer, Arabian Journal of Geosciences, Springer.
28. Reviewer, Fresenius Environmental Bulletin, Parlar Scientific Publications.
29. Reviewer, British Journal of Applied Science and Technology, Science Domain Int.
30. Reviewer, Environmental Science and Pollution Research, Springer.
31. Reviewer, Journal of Water and Climate, International Water Association.
32. Reviewer, River Research and Applications, Wiley.
33. Reviewer, Water Resources Management, Springer.
34. Reviewer, International Journal of Environmental Science and Technology, Springer.
35. Reviewer, Journal of Environmental Processes, Springer.
36. Reviewer, Journal of Hydro-environment Research, Elsevier.
37. Reviewer, Environment, Development and Sustainability, Springer.
38. Reviewer, Global and Planetary Change, Elsevier.
39. Reviewer, Chemosphere, Elsevier.
40. Reviewer, Times Journal of Agriculture and Veterinary Sciences.
41. Reviewer, Open Journal of Oceanography, Peertechz.
42. Reviewer, Journal of Water Security, Aleksandras Stulginskis University, Lithuania.
43. Reviewer, Open Journal of Petroleum Engineering, Bentham Open.
44. Reviewer, Geofluids, Wiley/Hindawi.

45. Reviewer, Journal of Geochemical Exploration, Elsevier
46. Reviewer, Journal of Hydrology, Elsevier
47. Reviewer, Groundwater for Sustainable Development, Elsevier.
48. Reviewer, International Journal of Environmental Research, MDPI.
49. Reviewer, Science of the Total Environment, Elsevier
50. Reviewer, Applied Water Sciences, Springer.
51. Reviewer, Journal of Agricultural Sciences, Cambridge University Press.
52. Reviewer, Regional Studies in Marine Science, Elsevier.
53. Reviewer, Environmental and Sustainability Indicators, Elsevier.
54. Reviewer, Acta Geophysica, Springer
55. Reviewer, Groundwater for Sustainable Development, Elsevier.
56. Reviewer, Journal of Water and Climate Change, IWA Publishing.
57. Reviewer, Water Security, Elsevier.
58. Reviewer, Open Petroleum Engineering Journal,
59. Reviewer, Time Journal of Agriculture and Veterinary Sciences, Time Journals.
60. Reviewer, Environmental Engineering and Management Journal, GATU, Romania
61. Reviewer, Qeios, Qeios Ltd.
62. Reviewer, F1000Research
63. Reviewer, Heliyon, Elsevier.
64. Reviewer, Repositories of Peertechz Publications.
65. Reviewer, Marine Pollution Bulletin, Elsevier.
66. External Expert, Departmental Academic Committee and Departmental Visiting Committee, National Institute of Technology, Raipur, 2021-2024.
67. Domain Expert, National Research Development Corporation, Govt. of India. 2017-2018.
68. Member, Technical Committee, International Water Conf. 2016, Water Resources in Arid Areas: The Way Forward, Sultan Qaboos University, Muscat, Oman, March 12-16, 2016.
69. Convener, Workshop on Groundwater Development in the Alluvial Terrains of Northwestern India, Chandigarh, October 28, 2015.
70. Nodal Officer, Workshop on Treated Sewage Effluent (TSE) and its Utilization in the Kingdom of Bahrain, October 26, 2011.
71. Technical Committee, Workshop on Aquifer Storage Recovery, Bahrain, May 26, 2008.
72. Vice-President, Indian Water Resources Soc., Nagpur Centre, India, 2007-2009.
73. Expert, Manual on "Integrated Fluorosis Mitigation: Challenges and Avenues", UNICEF and NEERI, Nagpur, India, January – February 2007.
74. Organizing Secretary, 22nd National Convention of Environmental Engineers and National Seminar on "Rainwater Harvesting and Water Management" Nagpur, India, Nov. 2006.
75. Expert, Manual on "Wise Water Management - Water Reuse at Schools and Households in Rural Areas of India", UNICEF-NEERI, Nagpur, India, June 2006.
76. Expert, Guidance Manual for Water Testing Laboratories, US Environmental Protection Agency, World Health Organization-NEERI, India, June 2006.
77. Convener, Sub-group for Optimization of Water Quality Monitoring Network, Water Quality Review Committee, Maharashtra State, India, 2005-06.
78. Joint Organizing Secretary, All India Seminar on "Challenging Problems in Water Resources Development and Management", Nagpur, India, November 2005.
79. Joint Secretary, Indian Water Resources Society, Nagpur Centre, India, 2004-07.
80. Member, Technical Committees, 1st, 2nd, and 3rd Conferences of the Arabian Journal of Geosciences (CAJG) held during12-15 Nov 2018, 25-28 Nov 2019 and 2–5 Nov 2020.

RESEARCH PUBLICATIONS

Papers in Peer-reviewed Publications

1. Rajkumar H., **P.K. Naik***, R.K. Dewangan, J.R. Verma, P.K. Naik (2025). Hydrogeochemical forecasting in a tribal stretch infected with chronic kidney disease of unknown etiology (CKDu). Science of the Total Environment, 969, 178906, ISSN: 1879-1026. **IF 8.2.** https://doi.org/10.1016/j.scitotenv.2025.178906. ***Corresponding Author.**
2. Rajkumar H., **P.K. Naik***, R.K. Dewangan, J.R. Verma, P.K. Naik (2025). Geochemical characterization of groundwater and source apportionment of potential pollutants in a tribal stretch infected with chronic kidney disease of unknown etiology. Chemosphere. 376, 144272, https://doi.org/10.1016/j.chemosphere.2025.144272. ISSN: 0045-6535, **CiteScore 15.8. *Corresponding Author.**
3. Rajkumar, H, R.K. Dewangan, **P.K. Naik***, J.R. Verma, P.K. Naik (2025). Groundwater usage characterization in a tribal stretch infected with chronic kidney disease of unknown etiology (CKDu). Journal of Environmental Sciences. 157:232-251, ISSN: 1878-7320. **IF 6.3**. https://doi.org/10.1016/j.jes.2025.02.037. ***Corresponding Author.**
4. **Naik, P.K.**, P.K. Naik (2024). Feasibility of rooftop rainwater harvesting at Grey Iron Foundry, Jabalpur, Madhya Pradesh, India. Iranian Journal of Science and Technology, Transactions of Civil Engineering, 48(6):4811-4818. ISSN: 2364-1843. **IF 1.7**. https://doi.org/10.1007/s40996-024-01596-2.
5. **Naik, P.K.,** P.K. Naik, G. Prasad, K.C. Mondal (2024). A design plan for roof top rainwater harvesting in a defence establishment in central India. Desalination and Water Treatment, 317: 100252. ISSN 1944-3986. **IF 1.273.** DOI: https://doi.org/10.1016/j.dwt.2024.100252.
6. Herojeet, R.K., R. Dewangan, **P.K. Naik***, J.R. Verma (2023). Probabilistic modelling is superior to deterministic approaches in the human health risk assessment: an example from a tribal stretch in central India. Scientific Reports, 13, 19351. https://doi.org/10.1038/s41598-023-45622-1. ISSN: 2045-2322. **IF 4.6**. (***Corr. Author**).
7. **Naik, P.K.**, K.C. Mondal, P.K. Naik, G. Prasad, P. Gupta (2023). Subsurface geophysics and hydrogeology at the Gun Carriage Factory, Jabalpur, Madhya Pradesh, India. Journal of Geological Society of India, 99(11):1595-1603. https://doi.org/10.1007/s12594-023-2511-x. ISSN: 1895-7455. **IF 1.466.**
8. **Naik, P.K.** (2022**)**. Science Journalism in India: Strengths, Weaknesses, Opportunities and Threats. Science Communication. 44(5):656-664, ISSN 1075-5470. https://doi.org/10.1177/10755470221134253. **IF 9.00**.
9. Rajkumar H., **P.K. Naik***, M.S. Rishi (2022). A comprehensive water quality index based on analytical hierarchy process. Ecological Indicators, 145(2): 109582, ISSN: 1470-160X. https://doi.org/10.1016/j.ecolind.2022.109582. **IF 7.0. *Corresponding Author.**
10. Rajkumar H., **P.K. Naik,** G. Singh, M.S. Rishi (2022). Hydrogeochemical characterization, multi-exposure deterministic and probabilistic health hazard evaluation in groundwater of Northern India. Toxin Reviews, 42(1): 204–227. DOI: https://doi.org/10.1080/15569543.2022.2080222. ISSN: 1556-9543 **IF 4.266.**

11. Mishra, C., S. Toppo, **P.K. Naik***, H.P. Singh, A. Raj (2022). Well Hydraulics in parts of western Vidarbha Region in Deccan Traps, India. Journal of Geological Society of India, 99(1):105-110. https://doi.org/10.1007/s12594-023-2272-6. **IF 1.466. *Corr. Author**
12. Angurala M.L., **P.K. Naik***, S.C. Behera (2022). Depth wise variation of selenium in groundwater in parts of Punjab, India, Jour. of Geological Soc. of India. 98(11):1567- 1572. https://doi.org/10.1007/s12594-022-2213-9. ISSN: 0974-6889**. IF 1.466. *Corr. Author.**
13. Matta, G., A. Kumar, A. Nayak, P. Kumar, A. Kumar, **P.K. Naik**, S. Kumar (2023). Assessing heavy metal index referencing health risk in Ganga River System. International Journal of River Basin Management, 21(4):759-769. DOI: https://doi.org/10.1080/15715124.2022.2098756. ISSN 1814-2060. **IF. 2.2**
14. Herojeet R., **P.K. Naik***, M.S. Rishi (2020). A new indexing approach for evaluating heavy metal contamination in groundwater. Chemosphere, 245, 125598. https://doi.org/10.1016/j.chemosphere.2019.125598. **IF 8.943. *Corresponding Author.**
15. Matta, G, A. Nayak, A. Kumar, P. Kumar, A. Kumar, A.K. Tiwari, **P. K. Naik** (2020). Evaluation of heavy metal contamination with calculating pollution index for Ganga River system. Taiwan Water Conservancy, 68 (3): 52-65. ISSN: 0492-1550. **IF 0.20**.
16. Matta G., A. Kumar, A.K. Tiwari, **P.K. Naik**, R. Berndtsson (2020) HPI appraisal of concentrations of heavy metals in dynamic and static flow of Ganga River System. Environment, Development and Sustainability, 22:33-46 https://doi.org/10.1007/s10668-018-0182-3. ISSN: 1387-585X. **IF 3.219.**
17. Herojeet R., **P.K. Naik**, M.S. Rishi (2019). Evaluation of heavy metal contamination in soil using indexing approaches and chemometric techniques. International Journal of Environmental Science and Technology. 16:7467-7486. DOI https://doi.org/10.1007/s13762-018-2081-4. ISSN: 1735-1472. **IF 2.86.**
18. Matta, G., **P.K. Naik**, J. Machel, A. Kumar, L. Gjyli, A.K. Tiwari, A. Kumar(2018) Comparative study on seasonal variation in hydro-chemical parameters of Ganga River water using comprehensive pollution index (CPI) at Rishikesh, Uttarakhand, India. Desalination and Water Treatment Science and Engineering, 118: 87-95.DOI: https://doi.org/10.5004/dwt.2018.22487.ISSN: 1944-3994. **IF 1.32**.
19. Matta G., A. Kumar, A. Kumar, **P. K. Naik**, A. Kumar (2018). Assessment of Heavy Metals Toxicity and Ecological Impact on Surface Water Quality Using HPI in Ganga River. Transactions of the Indian National Academy of Engineering, 3(3):123-129. DOI: https://doi.org/10.1007/s41403-018-0041-4. ISSN: 2366-326X.
20. Anantha Rao. D., **P. K. Naik**, S. K. Jain, E. N. Dhananjaya Rao, K. Vinod Kumar (2018). Assessment of vulnerability zones for groundwater pollution using GIS-DRASTIC-EC model: a field-based approach. Journal of Earth System Science, 127:49. DOI: https://doi.org/10.1007/s12040-018-0944-1. ISSN: 2347-4327. **IF 1.371.**
21. Matta G., A. Kumar, **P.K. Naik**, A.K. Tiwari, R. Berndtsson (2018). Ecological Analysis of Nutrient Dynamics and Phytoplankton Assemblage in the Ganga River System, Uttarakhand, Taiwan Water Conservancy, 66(1):1-12. ISSN: 0492-1505. **IF 0.30.**
22. **Naik, P.K.**, M. Mojica, F. Ahmed, and S. Al-Mannai (2017). Stormwater injection in Bahrain: pilot studies. Arabian Journal of Geosciences.10: 452, 2017. ISSN: 1866-7511. DOI: https://doi.org/10.1007/s12517-017-3232-5.**IF 1.827.**
23. Matta, G., A. Kumar, D.P. Uniyal, P. Singh, A. Kumar, G.K. Dhingra, A. Kumar, **P.K. Naik**, N. G. Shrivastva (2017). Temporal assessment using WQI of River Henwal, a tributary of river Ganga in Himalayan region**.** International Journal for Environmental Rehabilitation and Conservation, VIII (1): 187-204. ISSN: 0975-6272. **IF 0.72.**

24. **Naik, P.K.** (2017). Water crisis in Africa: myth or reality. International Journal of Water Resources Development, 33(2): 326-339. ISSN: 0790-0627. **IF 4.660.**
25. Thakur T., M.S. Rishi, **P.K. Naik**, and P. Sharma (2016). Elucidating hydrochemical properties of groundwater for drinking and agriculture in parts of Punjab, India. Environmental Earth Sciences, 75(6): 467, DOI: 10.1007/s12665-016-5306-1. ISSN: 1866-6280. **IF 2.784**.
26. **Naik P.K.**, and D.A. Jay (2011). Distinguishing human and climate influences on the Columbia River: Changes in mean flow and sediment transport. Journal of Hydrology, 404 (3-4): 259-277. ISSN: 0022-1694. **IF 6.708.**
27. Jay, D.A., and **P.K. Naik** (2011). Distinguishing human and climate influences on hydrological disturbance processes in the Columbia River, USA. Hydrological Sciences Journal, 56 (7), 1186-1209. ISSN: 0262-6667. **IF 3.787.**
28. **Naik, P.K.**, and D.A. Jay (2011). Human and climate impacts on Columbia River hydrology and salmonids. River Research and Applications, 27 (10):1270-1276. ISSN: 1535-1467. **IF 2.780.**
29. **Naik, P.K.**, and D.A. Jay (2011). Distinguishing human and climate influences on the Columbia River: changes in the disturbances processes. In: D. Yang, P. Marsh, A. Gelfan (Eds.), Cold Regions Hydrology in a Changing Climate, Proc., Symposium H2 held during XXV IUGG2011 General Assembly on 'Earth on the Edge: Science for a Sustainable Planet', Melbourne, Australia, 28 June - 7 July 2011, Proc., International Association of Hydrological Sciences (PIAHS), 346, 21-26. ISSN: 2199- 8981. **CiteScore 1.4.**
30. **Naik, P.K.**, and D.A. Jay (2011). Separation of climate and anthropogenic influences on Columbia River mean flow and sediment transport. In: S.W. Franks, E. Boegh, E. Blyth, D.M. Hannah, K.K. Yilmaz (Eds.), Hydro-climatology: Variability and Change, Proceedings of the symposium J-H02 held during XXV IUGG2011 General Assembly on 'Earth on the Edge: Science for a Sustainable Planet', Melbourne, Australia, 28 June - 7 July 2011, PIAHS 344, 157-162.ISSN: 2199-8981. **CiteScore 1.4.**
31. **Naik, P.K.** (2009). Impact of National Watershed Development Program for Rainfed Agriculture – a case study. Indian Journal of Soil Conservation, 37 (3), 230-235. ISSN: 0970-3349. **NAAS IF 5.20.**
32. **Naik, P.K.**, A.K. Awasthi, A.V.S.S. Anand, and P.N. Behera (2009). Hydrogeochemistry of the Koyna River basin, India. Environmental Earth Sciences, 59 (3), 613-629. ISSN: 1866-6280. **IF 2.784.**
33. **Naik, P.K.** and A.K. Awasthi (2009). Groundwater resources development in the Western Ghats, India. In: A.L. Ramanathan, P. Bhattacharya, A.K. Keshari, J. Bundschuh, D. Chandrasekharam, S.K. Singh (Eds.), Assessment of Groundwater Resources and Management, I.K. International Publication, pp. 277-286, ISBN: 978-81-90675-72- 7.
34. **Naik, P.K.**, J.A. Tambe, B.N. Dehury, and A.N. Tiwari (2008). Impact of urbanization on the groundwater regime of a fast growing city in central India. Environmental Monitoring and Assessment, 146 (1-3): 339-373. ISSN: 0167-6369. **IF 2.513.**
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3. "Recharging and Utilization of Groundwater for Sustainable Agriculture", Indira Gandhi Krishi Vishwavidyalaya, Raipur, August 24, 2018.
4. "Climate Change Impacts on Water Resources in Chhattisgarh: Understanding Issues of Floods and Droughts", Chhattisgarh Administrative Academy, Raipur, March 8, 2018.
5. "Perils of water in Punjab", Chandigarh Science Congress, Centre of Advanced Studies in Geology, Punjab University, Chandigarh, January 26, 2015.
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9. "Role of springs in regeneration of forests in the Western Ghats, India", International Workshop on 'Impacts of Reforestation of Degraded Land on Landscape Hydrology in the Asian Region', National Institute of Hydrology, Roorkee, India, March 07, 2006.
10. "Springs of the Western Ghats of Maharashtra and environmental concerns", Institute of Science, Nagpur, India, January 13, 2005.
11. "Conjunctive use of water resources, watershed management, and estimation of groundwater resources in canal command areas", Workshop on "Techno-economic appraisal of water resources projects", Central Water Commission (CWC), Nagpur, India, Oct 21, 2003.
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1. Science Communication Skills for Journalists, Script, 2020.
2. TerrSet Software at the Rajiv Gandhi National Ground Water Training & Research Institute, Raipur, May 13-14, 2019.
3. ArcGIS Desktop, Environmental Systems Research Institute, USA at the Rajiv Gandhi National Ground Water Training & Research Institute, Raipur, October 23-25, 2018.
4. SPSS Statistics 24.0 Software. at the Rajiv Gandhi National Ground Water Training & Research Institute, Raipur, November 20-24, 2017.
5. Facilitation Skills, Department of Personnel and Training, Govt. of India at Yashwantrao Chavan Academy of Development Administration, Pune, March 23-25, 2017.
6. Management of Training, Department of Personnel and Training, Govt. of India at Chhattisgarh Academy of Administration, Raipur, August 28, 2017 to September 1, 2017.
7. Right to Information, Department of Personnel and Training, Govt. of India at Chhattisgarh Academy of Administration, Raipur, January 04-05, 2017.
8. Evaluation of Training, Department of Personnel and Training, Govt. of India at Gopabandhu Academy of Administration, Bhubaneswar, Dec. 26-30, 2016.
9. Design of Training, Department of Personnel and Training, Govt. of India at Chhattisgarh Academy of Administration, Raipur, September 26-30, 2016.
10. Direct Training Skills, Department of Personnel and Training, Govt. of India at Chhattisgarh Academy of Administration, Raipur, July 11-15, 2016.
11. Groundwater Modeling with iMOD, Deltares Academy (The Netherlands), New Delhi, March 8-10, 2016.
12. Administration and Finance, Rajiv Gandhi National Ground Water Training Institute, Raipur, India, September 21- October 1, 2015.
13. Protecting Marine Resources, United Nations Environment Programme, Public Commission for the Protection of Marine Resources, Environment and Wildlife, Kingdom of Bahrain, 29 November – 1 December 2011.

14. Treated Sewage Effluent and its Utilization, Ministry of Municipalities Affairs and Urban Planning, Kingdom of Bahrain, through United Nations Economic, Social Commission for Western Asia, Lebanon, 24 October 2011.
15. Managed Aquifer Recharge, Ministry of Works, Kingdom of Bahrain through M/s. Schlumberger, November 8, 2008.
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17. Regional Workshop on Water Quality for Western Region, Regional Workshop on Water Quality for Western Region, January 24-25, 2006.
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22. Stocktaking and Upgradation Skills in GWDES, DHV Consultants, Bangalore, India, September 11-12, 2002.
23. CORMIX Training Workshop, United States Environmental Protection Agency, Portland, Oregon, USA, March 15-17, 2000.
24. Applications of Remote Sensing and GIS in Groundwater Exploration, Indian Space Research Organization, Faridabad, India, August 17 - September 25, 1992.

PROFESSIONAL WEBSITES

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