

A. Research

a. Research outputs:

1. Journal papers

- Lele, Sharachchandra, V. Srinivasan, Bejoy K. Thomas, and **Priyanka Jamwal**. Adapting to climate change in rapidly urbanizing river basins: insights from a multiple-concerns, multiple-stressors, and multi-level approach. *Water International*, (43), 2 (2018): 281-304
- **Jamwal, P.** Fate of nutrients in the human dominated ecosystems - A case study of Jakkur Lake in Bengaluru. *Resonance*, (22), 3 (2017): 79-290
- Thomas, Bejoy K., Sharachchandra Lele, V. Srinivasan, and **Priyanka Jamwal**. Rethinking resilience in urbanizing river basins. In *Seminar*, vol. 694: 55-58. Seminar Publications, 2017.
- **Jamwal, P.**, Naveen, M. N., and Y. Javeed. Estimating fast and slow reacting components in surface water and groundwater using a two-reactant model. *Drinking Water and Science Journal*, 9 (2016):19-25
- **Jamwal, P.** and M.S. Mohan Kumar. Effect of flow velocity on chlorine decay in water distribution network: A pilot loop study. *Current science*, (114), 8 (2016): 1349-1354
- **Jamwal, P.**, T. Md. Zuhial., P. Raje. Urs. V. Srinivasan and S. Lele. Contribution of Sewage treatment to pollution abatement of urban streams: A case study from Bangalore. *Current science*, (108), 4 (2015): 677-685
- Srinivasan. Veena., Bejoy. K. Thomas, **Priyanka Jamwal**, and Sharachchandra Lele. Climate vulnerability and adaptation of water provisioning in developing countries: approaches to disciplinary and research-practice integration. *Current Opinion in Environmental Sustainability*, (5), 3-4 (2013): 378-383
- **Jamwal, P.**, Mittal, A.K and Mouchel, J.M. Non-point source microbial pollution: a case study of Delhi. *Physics Chemistry of Earth*. (12), 36 (2011): 490-499
- **Jamwal, P.**, and Mittal, A.K. Removal of physiochemical and biological contaminants in different stages of wastewater treatment for Delhi city: implications to water use. *Resource Conservation and Recycling*, (4), 54 (2010): 211-221
- **Jamwal, P.**, Mittal, A.K and Mouchel, J.M. Efficiency evaluation of wastewater treatment plants based on different treatment technologies in Delhi (India). *Environmental Monitoring and Assessment*, (1-4), 153 (2008): 293-305
- **Jamwal, P.**, Mittal, A.K and Mouchel, J.M. Effects of urbanization on the quality of the urban runoff for Delhi watershed, *Urban water*, (3), 5 (2007):247-257
- **Jamwal, P.**, Mittal, A.K and Mouchel J.M. Study of the effect of different factors on fate of indicator micro-organisms in urban sewer systems, *Environmental Engineering and Management Journal*, (3), 5 (2006): 375- 381

2. Book chapters

- **Jamwal, P.** 2018. Remediation of Contaminated Urban Streams: A Decentralized Ecological Wastewater Treatment Approach. In *Water Remediation* (pp. 29-41). Springer, Singapore.
- **Jamwal, P.** and Lele, S. 2017. Addressing Pollution in Urban Rivers: What we learnt from the Vrishabhavathy River in Bengaluru. In Hiremath, A. J., Rai, N. and Siddhartha, A. (Eds), *Transcending boundaries: Reflecting on twenty years of action and research at ATREE.* (pp. 104-113). Bangalore: ATREE.
- Srinivasan. V, S. Lele, B.K. Thomas and **P. Jamwal** 2017. Whose River? The Changing Waterscape of the Upper Arkavathy Under Urbanisation. In Hiremath, A. J., Rai, N. and Siddhartha, A. (Eds), *Transcending boundaries: Reflecting on twenty years of action and research at ATREE.* (pp. 122-130). Bangalore: ATREE.
- B. K Thomas, N. Deepthi, and **P. Jamwal** 2017. Going With the Flow? Urban Wastewater and Livelihoods Change in Peri-urban Bengaluru. In Hiremath, A. J., Rai, N. and Siddhartha, A. (Eds), *Transcending boundaries: Reflecting on twenty years of action and research at ATREE.* (pp. 114-121). Bangalore: ATREE.

3. Reports and discussion papers

- **Jamwal Priyanka**, Chandan Gowda and Praveen Kumar. "A rapid water quality assessment of Vembanad Lake" (2018).
- Lele, Sharachchandra, Veena Srinivasan, **Priyanka Jamwal**, K. Bejoy Thomas, and Meghana Eswar. "Water management in Arkavathy basin: A situation analysis" (2013).

4. Editorials and commentaries (in academic journals)

- Biswas. D and **Jamwal P.** Swachh Bharat Mission - Groundwater Contamination in Peri-urban India, *Economic and Political weekly* (52), 20 (2017): 18-20.

5. Seminar proceedings

- Philipps. D., Karlsurd, K and **P. Jamwal** (2017). Strategic in-stream systems (STRAIn-s): A decentralized, anticipatory approach to urban wastewater decontamination within Bangalore and beyond. Annual Work seminar, ATREE, 2 – 4 August, 2017.
- Biswas. D and **Jamwal. P** (2017). Groundwater and sanitation nexus in peri-urban towns: Learnings from the field. Annual Work seminar, ATREE, 2 – 4 August, 2017.
- Thomas, B. K, **P. Jamwal**, S. Lele and V. Srinivasan (2014). 'Thinking About Urban Resilience: The Case of Water Scarcity and Wastewater Reuse in Bengaluru', *Urban Resilience: Proceedings of the Colloquium, Bengaluru: Public Affairs Centre, ISBN 9788188816378.*
- **Jamwal. P**, T. Md. Zuhail, Praveen Raj Urs and Malavika Gopinath (2013). Estimation of organic load along the Vrishabhavathy River, Karnataka, India. Annual Work seminar, ATREE, 6 – 8 August, 2013.

6. Conference papers (oral or poster)

- Fones. G., **P. Jamwal.**, Gravell. A. and Mills. A. Graham (2018). *Applications of Chemcatcher for screening pharmaceuticals in the effluent of sewage treatment plant in Bangalore, India*, In 10th International Passive Sampling Workshop (IPSW), 9 – 11 May 2018, Dublin, Ireland.
- K.B. Chandan., P. Raj Urs., and **P. Jamwal** (2016). *Benchmarking efficiency and efficacy of decentralized STPs using life cycle approach: A case study of Bangalore, India*, In: Thirty-second

National Convention of Environmental Engineers. Organised by The Institution of Engineers (India), 5 – 6 August 2016, Pune Local Center, India.

- **Jamwal P.**, S. Lele and M. Menon (2016). *Rethinking water quality standards in the context of urban rivers*, In: Urbanization and the Environment. Organised by Indian Society for Ecological Economics, January 4 - 6, 2016. Bangalore, India.
- **Jamwal, P.**, Mohammed. Idris, P. Raje. Urs and S. Lele (2015). *Rethinking framework for instream and effluent water quality in the context of urban wastewater reuse in agriculture*, In: National Conference on Challenges in Environmental Research, 4 - 6 June 2015, IIT Guwahati, India.
- **Jamwal, P.**, Naveen. M. N & Y. Javeed (2015). *Estimating fast and slow reacting component in surface and groundwater using 2R model*, In: National Conference on Challenges in Environmental Research, 4 - 6 June 2015, IIT Guwahati. Assam, India.
- **Jamwal, P** (2015). *Water Quality in Urban Landscapes Issues & Challenges*, In: National Conference on Sustainable Management of Urban Environmental Issues, Dayananda Sagar College of Arts, Science & Commerce, Bangalore, 30 March 2015, Bangalore, India.
- **Jamwal, P** (2014). *Wastewater treatment and reuse: complexities and challenges in Bangalore*, In: Indo-US workshop on *Best Practices and Eco-restoration technologies for enhancing functional quality of urban landscapes*, 3 - 5 November 2014, Bangalore, India.
- **Jamwal, P** and T. Md. Zuhail (2013). *Impact of wastewater reuse in peri urban areas*, In: Indo-UK Perspective on Water Quality: Threats, Technologies and Options, 8 August 2013, IISc, Bangalore, India.

b. Ongoing/Completed Projects: List of funded projects

- **2017-20:** Co-Investigator, Global innovation for sustainable rural communities, Funded by the Scottish Government, Principal -Investigator: Rachel Helliwell, James Hutton Institute, UK. (USD 206,000)
- **2017-18:** Co-Investigator, Groundwater and sanitation nexus in small towns of Bangalore: Case study of Nelamangala, Funded by Arghyam's Groundwater- Sanitation (GW-SAN) Nexus Programme, Principal-Investigator: Durba Biswas, ATREE (USD 15,000)
- **2017-18:** Co-Investigator, BES for treating of wastewater and monitoring of effluent quality, Funded by Global Challenges Research Fund, Research Council UK, Principal-Investigator: Paolo Bombelli, University of Cambridge, UK. (USD 30,000)
- **2017-18:** Co-Investigator, Microfluidics Diagnostics for Water Quality: Applications in Decentralised Water Treatment, Funded by Global Challenges Research Fund, Research Council UK, Principal-Investigator: Helen Bridle, Herriot Watt Institute, UK (USD 30,000)
- **2015-18:** Co-Investigator, Citizen's dashboard for Bengaluru's lakes, Funded by Oracle CSR, Principal-Investigator: Veena Srinivasan, ATREE (USD 45,000)
- **2011-16:** Principal-Investigator, Rural-urban conundrum: political economy of social and environmental transformation in agrarian landscapes, Funded by Sir Dorabji Tata Trust and the Allied Trusts, Co-Investigator-Bejoy Thomas, ATREE (USD 110,000)
- **2014-16:** Co-Investigator, 2035 Vision for Sustainable Water and Wastewater Management in Bangalore, Funded by Royal Norwegian Embassy, Principal-Investigator: Veena Srinivasan ATREE (USD 110,000)

- **2012-15:** Co-Investigator. Adapting to climate change in urbanizing watersheds (ACCUWa), Funded by International Development Research Centre (IDRC). Principal-Investigator: Sharachandra Lélé (USD 500,000)
- **2012-15:** Principal-Investigator: Water distribution network study on fate and transport of contaminant and its decontamination by Pilot-Scale Tests, Funded by Department of Science and Technology (USD 15,000)
- **2014:** Co-Investigator. Strategy and action plan for strengthening the ecological and integrity of Dal Lake. 6 months study, Funded by United Nations Development Programme (USD, 88000).

c. Proposals: List of submitted proposals

- **2018-** Global Water Observatory and Solution Hub (GWOSH), submitted to Research Council of UK: Global Challenges Research Fund UK (in review)
- **2018 - ALLSTAR** – Action on Local biological Sewage Treatment for Agricultural Re-use submitted to European Commission – Horizon 2020, Indian Department of Science and Technology (DST) and Indian Department of Biotechnology (DBT) (in review)
- **2018 - Rapid and low-cost water quality monitoring** – a step towards sustainable water resource management, IMPRINT, submitted to the Department of Science and Technology (DST) (in review)
- **2018 - Bio- Electrochemical System (BES)** as self-sustainable method of wastewater monitoring, with the University of Cambridge, submitted to The University of Chicago and Tata Trusts (unsuccessful)
- **2018-** Strategic in-stream systems: A Decentralised anticipatory approach to wastewater contamination in Bangalore with The Common studio, submitted to The University of Chicago and Tata Trusts (unsuccessful)
- **2017-**Strategic In-stream Systems (STRAINS): A Decentralized, Anticipatory Approach to Urban Wastewater Contamination Within India’s Emerging Cities, submitted to HCL CSR (unsuccessful)
- **2017-** Decentralised ecological wastewater treatment solutions for surface water bodies in India, submitted to Natural Environment Research Council UK and Department of Science and Technology India (unsuccessful)

d. Academic conferences/symposia/workshops

- **2018 June:** Groundwater Sanitation Nexus, Workshop on Groundwater Sanitation Nexus Research Programme, IHS Bangalore, 19th June 2018 Bangalore, India.
- **2018 May:** Planetary Health Annual Meeting, University of Edinburgh, 29-31 May 2018 Edinburgh, United Kingdom. <https://planetaryhealthannualmeeting.org/>
- **2018 March:** GCRF-Water Observatory and Solutions Hub (G-WOSH) Full application workshop, 6-9 March 2018, Stirling Highland Hotel, Stirling, United Kingdom.
- **2017 October:** Frontiers of Engineering for Development symposium, Oxford University, 17-20 September 2017, United Kingdom. <https://www.raeng.org.uk/policy/international-policy-and-development/gcrf-international-development/frontiers-of-engineering-for-development>
- **2017 December:** Rethinking Water Management in Bengaluru, Workshop supported by IDRC, Royal Norwegian Embassy and Oracle, Alliance Francaise, 19th December 2017 Bangalore, India.

- **2017 July:** Unlock Bengaluru 2017, Water Research Institute , 8th July 2017, Bangalore, India, Panelist <http://wri-india.org/events/unlock-bengaluru-2017>
- **2016 November:** Indo-UK Scoping Workshop on Water Quality, Department of Science and Technology, UK Natural Environment Research Council (NERC), and Engineering and Physical Sciences Research Council (EPSRC), 17 – 18 November 2016, New Delhi, India. <http://www.nerc.ac.uk/latest/events/list/water-workshop/>
- **2016 September:** Women in science, Workshop supported by the Indian Academy of Sciences, Bengaluru in association with Azim Premji University, 17th September 2016, Bangalore, India. <http://www.azimpremjiuniversity.edu.in/SitePages/events-other-events-women-in-science.aspx>
- **2016 November:** Apartment Level Waste-Water Treatment and Reuse, In Bengaluru, Meeting Organised 5th November 2016, ATREE, Bangalore, India.
- **2016 August:** Managing surface water quality in urbanising watersheds, National Workshop, Organised by ATREE, 5th August 2016, Bangalore, India, Speaker, http://www.atree.org/nws_mswquw_schedule_2016
- **2016 August:** Adapting to Climate Change in Urbanising Watersheds, National Dissemination Workshop, 22-23 August 2016, New Delhi, India <https://www.atree.org/content/adapting-climate-change-urbanising-watersheds-national-dissemination-workshop-aug-22-23-2016>
- **2016 February:** Urbanized: New Frontiers of Development, Centre for international governance innovation uptown Waterloo, The University of Waterloo, 26 – 29 February 2016, Waterloo, Canada, Panelist, <http://indevconference.com/>
- **2016 January:** Rethinking water quality standards in the context of urban rivers, Eighth INSEE Biennial Conference, 2016, Bengaluru Urbanization and the Environment, Indian society for ecological economics (INSEE), 4th January 2016, Bangalore, India. <http://ecoinsee.org/conference/2016>
- **2015 October:** Rethinking framework for instream and effluent water quality in the context of urban wastewater reuse in agriculture , National conference on National Conference on Challenges in Environmental Research, IIT Guwahati, Assam, 7-8 October 2015, Guwahati, Assam, Speaker, <http://www.iitg.ac.in/env/Abstract%20book%20NCOCER-2015.pdf>

e. Invited talks/keynote addresses

- **2018 May:** Water quality management: the effect of industrial effluents on human health, **Invited Talk**, Planetary Health Annual Meeting, University of Edinburgh, 2018-05-28, University of Edinburgh, UK, <https://planetaryhealthannualmeeting.org/>
- **2018 March:** Catchment-based strategy to address water quality issues in rapidly urbanising habitations, **Key Note address**, E-Sail International Conference, 2018-03-01, Christ University campus, Bangalore, India.
- **2017 October:** Strategic In-stream Systems (STRAIn-s): A Decentralized, Anticipatory Approach to Urban Wastewater De-contamination Within Indian Emerging Cities, **Invited Talk**, Frontiers of Engineering for Development symposium , Research councils UK, 2017-09-17, Oxford Union, UK. [https://www.raeng.org.uk/policy/international-policy-and-development/gcrf-international-development/frontiers-of-engineering-for-development/past-symposia-\(1\)/symposium-3](https://www.raeng.org.uk/policy/international-policy-and-development/gcrf-international-development/frontiers-of-engineering-for-development/past-symposia-(1)/symposium-3)
- **2017 November:** Catchment-based strategy to address water quality issues in rapidly urbanising habitations, **Invited Talk**, 2nd Information & Networking, Event: EU-India Call on Water, Bengaluru, 30 -11-2017, Bangalore, India

- **2017 July:** Surface water quality management in urbanising watersheds: Key issues Challenges and way forward, **Invited Talk**, Department of Civil Engineering, Christ College, 2017-07-08, Bangalore, India
- **2017 March:** Surface water quality management in urbanising watersheds: Key issues Challenges and way forward, **Invited Talk**, Society of Civil Engineering, 2017-03-27, NIT Hamirpur, Himachal Pradesh
- **2017 January:** Sustainable Development and Water issue- Scarcity, Pollution and Water conservation management, **Invited Talk**, Training programme on Environment Audit, Regional Training Centre (RTC), 2017-01-04, Bangalore, India
- **2016 November:** Place History: An important determinant of human health: A case study of peri urban Bangalore, **Invited Talk**, Saint John's Medical College , 2016-11-02, Bangalore, India
- **2016 September:** Water Pollution and Sustainable Waste Water Recycling in Urban Areas, National Training Program Audit of waste and water issues, **Invited Talk**, International Centre for Environment Audit & Sustainable Development (iCED), 2016-09-22, Jaipur, India
- **2016 September:** Surface water quality management in urbanising watersheds: present scenario and future directions, **Invited Talk**, School of liberal arts APU, Azim Permji University, 2016-09-26, Bangalore, India
- **2017 July:** City and its wastewater : Key issues and challenges, **Invited Talk**, National Workshop on Advocating for Scaling Safe water Solutions, Freshwater Action Network South Asia (FANSA) , 2016-07-21, Himachal Pradesh, India
- **2016 April:** Diagnosing the water quality problem in the Vrishabhavathy watershed in Bangalore: A problem-driven approach, **Invited Talk**, Indo-UK Workshop on Water Quality Source Protection, Indian Institute of Science, 2016-04-30, Bangalore, India
- **2016 January:** Wastewater reuse in urbanizing watersheds: issues and challenge, **Invited Talk**, Urbanized: New Frontiers of Development, Centre for international governance innovation uptown Waterloo, The University of Waterloo, 2016-01-26, Waterloo, Canada
- **2016 May:** Surface water quality management in urbanising watersheds: Key issues, **Invited Talk**, Open Data Meet: datameet.org, 2016-05-14, Bangalore, India
- **2016, May:** Water Pollution and Sustainable Waste Water Recycling in Urban Areas, **Invited Talk**, National Training Programme on Audit of Waste Management and Water issues, The International Centre for Environment Audit and Sustainable Development (iCED), 2016-05-09, Jaipur, India
- **2016, April:** Jakkur lake water quality-key issues and challenges, **Invited Talk**, Srishti Institute of Art Design & Technology, 2016-04-04, Bangalore, India
- **2016, February:** Rethinking the framework for regulating water quality in urbanizing watersheds, **Invited Talk**, Public lecture series, The Water Institute, University of Waterloo, 2016-02-22, Waterloo, Canada
- **2015 October:** Linking urban wastewater discharges to water quality of Peri-Urban areas: A case study of Bangalore city, **Invited Talk**, 1st Indo-Chinese Young Engineering Leaders Conclave (ICON-1) , I.I.T. Gandhinagar, 2015-10-07, Gandhinagar, India
- **2015 December:** Water Pollution and Sustainable Waste Water Recycling in Urban Areas, **Invited Talk**, National Training Programme on Audit of Waste Management and Water issues,

The International Centre for Environment Audit and Sustainable Development (iCED), 2015-12-18, Jaipur, India

- **2015 November:** Water quality and health risk, **Invited Talk**, Training programme on Environment Audit, Regional Training Centre (RTC), 2015-11-18, Bangalore, India
- **2015 March:** Water Quality in Urban Landscapes Issues & Challenges, **Key Note address**, National Conference on Sustainable Management of Urban Environmental Issues, Dayananda Sagar College of Arts, Science & Commerce, Bangalore, 2015-03-30, Bangalore, India
- **2015 June:** Heavy metals budget in Peenya stream, **Invited Talk**, workshop on Linking Robotics, Citizen Science and Remote Sensing to Advance Water Science in Data-Scarce Regions, ATREE, 2015-06-12, Bangalore, India
- **2014 April:** Water and wastewater treatment technology, **Invited Talk**, Training programme on Environment Audit at Regional Training Centre (RTC), 2014-04-30, Bangalore, India

f. Major visits of faculty within the country and abroad

- **2018 August:** Invited to attend stakeholder meeting on Grassroots Field Exposure Initiative (GFES) in the Water Quality Management sector in West Bengal, Supported by the India-UK Water Centre (IUKWC), 5-8 August 2018, India
- **2018 May:** Invited to present my work on water pollution and the associated Health risk at the Annual Planetary health alliance meeting held in the University of Edinburgh, 29-31 May 2018, United Kingdom
- **2018 March:** Invited to attend the pre-proposal workshop on Global Water Observatory and Solution Hub (GWOSH), Supported by the University of Stirling, Scotland, 6-9 March 2018, United Kingdom
- **2017 October:** Invited to attend the Frontiers of Engineering for Development symposium, Supported by the Research councils UK, Oxford Union 17-20 September 2017, United Kingdom
- **2016 February:** Visiting Professor at the University of Waterloo, Waterloo, Supported by Royal Bank of Canada (RBC), 01 – 28 February 2016, Canada

B. Teaching, training and capacity building

a. Teaching: List of courses coordinated

- Fundamentals of Environmental Science (C1B), Research methods (C4) co-taught, ATREE PhD programme (Internal)
- Water and Wastewater Treatment Systems, M.E water resources course, co-taught in the Civil Engineering Department, IISc Bangalore (External)
- Occasional lectures on introduction to water and wastewater treatment, for early and mid-career professionals based in academic centers and NGOs (External)
- Environmental Auditing, iCED, Jaipur (Government of India), India (External)
- Environmental Auditing, Regional Training Centre (RTC) (Karnataka state Government) , (External)

b. Mentorship: List of students

- **Ruchi Verma**, Doctoral Student, ATREE, 2017: Thesis title – Assessing the impact of land use change on river ecosystem health using remote sensing

- **Sumita Bhattacharyya**, Doctoral Student, ATREE, 2017: Thesis title – Low-cost technology to address water quality issues in urbanising catchments.

c. **List of Research Assistants (RA) and Interns**

- Anusree K Anju, RA Water quality, **NIT Suratkal**, Decentralized wastewater treatment - global innovation for sustainable rural communities, 2017-07-01, till date.
- Chandan Gowda, RA water quality, **Vidyavardhaka College of Engineering**, Efficiency evaluation of apartment scale sewage treatment plants employing different treatment technology, 2015-08-01, till date
- Mahesh J, Intern, **Mysore University**, Exploring the presence of antibiotic-resistant bacteria in lakes receiving treated/untreated wastewater, 2018-01-01, 2018-03-05
- Praveen Kumar, RA Water quality, **Annamalai University**, Decentralized wastewater treatment - global innovation for sustainable rural communities, 2017-07-01, 2018-07-01
- Praveen Raje Urs, RA water quality, **Bangalore University**, Adapting to climate change in urbanizing watersheds (ACCUWa), 2014-03-01, 2017-07-01
- Abhijit Sreepada, Intern, **Ashoka University**, Identification of pollution sources in Bellandur Lake catchment , 2018-06-10, 2018-07-10
- Malkan Syed, Intern, **Department of Chemical Engineering, Siddaganga Institute of Technology (SIT)**, Fate and transport of pollutant in Bellandur Lake Catchment, 2018-06-10, 2018-07-31
- Isabel S Seguin, Intern, **Massachusetts Institute of Technology**, Are Floating Wetlands a Viable Water Treatment Option for Bangalore's Lakes?, 2017-07-01, 2017-08-09
- Sowmya Murugan, Intern, **ISER Thiruvananthapuram**, Filtration Experiment - Assess and compare the passive performance and efficiency of various filter materials on water quality, 2017-04-01, 2018-06-01
- Aswathy S, Intern, **ISER Thiruvananthapuram**, Spatial Case Study Of Groundwater And Sanitation Nexus In Peri Urban Small Towns Of Bangalore, 2017-04-01, 2018-06-01
- Janis Lobo, Student, Environmental Engineering, **University of Waterloo**, Jakkur Lake Remediation Project, 2016-10-01, 2017-03-31
- Aseela Naqvi, Intern, Environmental Engineering, **University of Waterloo**, Jakkur Lake Remediation Project, 2016-10-01, 2017-03-31
- Noorulain Salim, Intern, Environmental Engineering, **University of Waterloo**, Jakkur Lake Remediation Project, 2016-10-01, 2017-03-31
- Joy Liu, Intern, Environmental Engineering, **University of Waterloo**, Jakkur Lake Remediation Project , 2016-10-01, 2017-03-31
- Divya Nayak, RA, **Carnegie Mellon University**, Adapting to climate change in urbanizing watersheds (ACCUWa), 2015-07-01, 2016-08-18
- Mohammed Idris, RA, **Bangalore University**, Adapting to climate change in urbanizing watersheds (ACCUWa), 2014-12-22, 2016-05-09
- Panthagada Kavitha, Intern, **IIT Bhubaneswar**, Efficiency evaluation of Jakkur lake Sewage treatment plant, 2016-05-01, 2016-07-13
- Naveen M N, Intern, **National Institute of Engineering Mysore**, Modelling Chlorine decay in a Scaled Water Distribution System, 2015-01-01, 2015-06-30

- Syeda Arshiya, Intern, **National Institute of Engineering Mysore**, Modelling Fecal coliform decay in a Water Distribution System, 2015-11-01, 2016-03-31

d. Outreach

1. Training Workshops/Summer Schools/Conferences organized:

- **2018 November:** Indo-UK workshop on monitoring and analysis strategies for anthropogenic pollutants in environmental and waste waters, **Project dissemination Workshop** supported by Royal Council of UK: Global Challenges Research Fund, Bangalore, 12 November, 2018 (upcoming)
- **2017 December:** Rethinking Water Management in Bengaluru, **Project dissemination Workshop** supported by IDRC, Royal Norwegian Embassy and Oracle, Alliance Francaise, Bangalore, 19 December, 2017
- **2017 May:** Surface water quality monitoring: Key issues, challenges and the way forward, **Workshop** supported by Indo-UK water Centre (IUKWC) ATREE, Bangalore, May 18, 2017
- **2016 November:** Apartment level wastewater treatment and reuse in Bengaluru, **Meeting** Organised 5 November, 2016, Attended by KSPCB officials, BWSSB officials, Resident associations, Expert members.
- **2016 August:** Adapting to Climate Change in Urbanising Watersheds, **National dissemination Workshop** supported by IDRC, TSWT and DST, New Delhi, 22-23 August, 2016
- **2016 August:** Managing surface water quality in urbanising watersheds, **National Workshop** supported by TSWT, IDRC and DST, Bangalore, 8 August, 2016
- **2015 June:** Water and society, **Summer school**, Adapting to Climate change in an urbanising watersheds, supported by IDRC, Bangalore, 15-26 June 2015, 25 fresh masters and early doctorate students.

C. General Outreach

a. Publications:

1. Popular articles or op-ed pieces published:

- Srinivasan Veena. S. Lele., J. Krishnaswamy and **P. Jamwal**. Economic times. Rallying to protect our rivers is great. But let's get the science right. September 2017
<https://economictimes.indiatimes.com/opinion/poke-me/poke-me-rallying-to-protect-our-rivers-is-great-but-lets-get-the-science-right/articleshow/60412430.cms>
- Lele, S., **P. Jamwal** and V. Srinivasan. Managing our lakes and sewage. Deccan Herald. April 2016 <https://www.deccanherald.com/content/539203/managing-our-lakes-sewage.html>

b. Outreach to wider audiences

1. Media appearances (TV /radio interviews/talks):

- **2016:** ATREE YouTube Channel, Wastewater: a curse or an untapped resource-Panel discussion on the World Water Day 2016. https://www.youtube.com/watch?v=w_9his6x5Jg

- **2016:** TV, English, News9, Pollution sensors to revive lakes, Lakes, Sensors, Pollution. 2016-07-10, https://youtu.be/V_sAdvlIXec,
- **2016:** ATREE YouTube Channel, River or Sewer: The Story of Vrishabhavathy River in Bengaluru, Southern India, <https://www.youtube.com/watch?v=lhFgpsy4fyU> (**Maximum views on ATREE official YouTube Channel**)

c. Legislation /Regulatory Input:

- Using passive sapling monitoring devices for water quality monitoring, Demonstrated the use of Chemcatchers to monitor surface water quality to the key officers of Karnataka State Pollution Control Board, 2017-05-10
- Water quality monitoring of Urban streams, Presented findings of TSWT project to the key officers of Karnataka State Pollution Control Board , 2016-04-05
- Water management in urbanising watersheds, Presented findings of ACCUWa project to the key officers of Bangalore Water Supply And Sewerage Board , 2016-04-05
- Water management in urbanising watersheds, Presented findings of TSWT project presented to the key officers of Karnataka state Pollution control board, 2015-03-31

d. Government committees served on or contributed to:

- **Bellandur Lake Committee:** Member, Urban Development Department, Karnataka
- **Karnataka State Water Policy-Task Group:** Member (Sub Group –Water Quality), Karnataka Jnaana Aayoga
- **National Water Mission:** Invited to contribute to the water quality chapter of the state specific Action plan, National Water Mission

D. Institutional Service

a. ATREE Committees: Duration and whether as Chair or Member

- Waste Management Committee, Chair, 2017-04-01, till date
- Hostel warden, 2017-04-04, till date
- Waste Management Committee, Member, 2016-03-01, 2017-04-01
- Committee Against Sexual Harassment, Chair, 2013-03-01, 2016-01-01
- Committee Against Sexual Harassment, Member, 2016-01-01, 2017-01-01
- Salary Task Force, Member, 2017-10-15

b. Institutional representation

- **Karnataka State Water Policy:** Member, (Water quality –Sub group), Karnataka Jnaana Aayoga
- **Bellandur Lake Committee:** Member, Urban Development Department, Karnataka
- **National Water Mission:** Invited to contribute to the water quality chapter of the state specific Action plan, National Water Mission

E. Professional service and achievements

a. Achievements

1. Awards

- **Water Quality Workshop Grant**, Royal Society of Chemistry, British Council, UK, **November 2018** <https://www.atree.org/events/indo-uk-workshop-monitoring-and-analysis-strategies-anthropogenic-pollutants-environmental>
- **Researcher Exchange Grant**, NERC, UK and the Ministry of Earth Sciences, India, **May 2017**
- **RBC Fellowship**, Royal Bank of Canada, Canada, **February 2016**
- **Fast Track Young Scientist Award**, Department of Science And Technology, India, **March 2012**
- **Postdoctoral Research Associate Fellowship**, from Indian Institute of science, Bangalore, India, **September 2008**
- **Research Assistantship Fellowship**, Ministry of Human Resource Development (MHRD), India **March 2005**
- **EGIDE Scholarship**, for nine months sandwich program of Ministere Affairs Etrangeres Boursier du Gouvernement Francais as a Research Fellow in CERERE Paris, France, **December 2004**

2. Press coverage

- **2018 June:** Newspaper, English, Deccan Chronicle, 38 apartments yet to install STPs: KSPCB 2018-06-01. <https://deccanchronicle.com/nation/current-affairs/280618/38-apartments-yet-to-install-stps-kspcb.html>
- **2018 March:** Newspaper, English, The Hindu, STP has residents of gated community worried, 2018-03-24. <http://www.thehindu.com/news/cities/bangalore/stp-has-residents-of-gated-community-worried/article23344427.ece#>
- **2018, February:** News Channel, English, The national geographic , Why This Lake Keeps Catching on Fire, 2018-02-14. <https://news.nationalgeographic.com/2018/02/bangalore-india-lake-bellandur-catches-fire-pollution/>
- **2018 January:** Blog/Portal, English, The news minute, Bellandur-lake-fire: green-court-orders-apartments-catchment-area-build-stps , 2018-01-30.
- **2018 January:** Newspaper, English, The Hindu, Pleading with officials had no impact, Bangalore, city, 2018-01-29. <http://www.thehindu.com/news/cities/bangalore/pleading-with-officials-had-no-impact/article22568358.ece>
- **2018 January:** Newspaper, English, The news minute, Bellandur lake fire: NGT directs K'taka to submit timelines to treat lake by Jan 29, 2018-01-25. <https://www.thenewsminute.com/article/bellandur-lake-fire-ngt-directs-k-taka-submit-timelines-treat-lake-jan-29-75331>
- **2017 November:** Newspaper, English, The news minute, Swachh Bharat Abhiyan in peri-urban areas: Is groundwater being contaminated? 2017-11-17. <https://www.thenewsminute.com/article/does-bbmp-even-care-about-setting-waste-processing-units-bengaluru-seems-not-79045>

- **2017 October:** Newspaper, English, Water bodies near Ooty polluted by industrial effluents, 2017-10-05. <https://timesofindia.indiatimes.com/city/coimbatore/water-bodies-near-ooty-polluted-by-industrial-effluents/articleshow/60946985.cms>
- **2017 August:** Newspaper, English, Indian Express, Green Chaturthi has feet of clay, 2017-08-28. <http://www.newindianexpress.com/cities/bengaluru/2017/aug/23/green-chaturthi-has-feet-of-clay-1647343.html>
- **2016 December:** Newspaper, English, The Economics Times, Peenya effluent getting into veggies, says study, 2016-12-13. <http://economictimes.indiatimes.com/news/politics-and-nation/peenya-effluent-getting-into-veggies-says-study/articleshow/55954254.cms>
- **2016 August:** Newspaper, English, The Hindu, Illegal industrial discharge harming Vrishabhavathi, says ATREE study, 2016-08-06. <http://www.thehindu.com/news/cities/bangalore/illegal-industrial-discharge-harming-vrishabhavathi-says-atree-study/article8949499.ece>
- **2016 August:** Newspaper, English, The Times of India, 50% heavy metal discharge from Peenya Industrial Area goes straight into Vrishabhavathi river , 2016-08-06. <http://timesofindia.indiatimes.com/city/bengaluru/50-heavy-metal-discharge-from-Peenya-Industrial-Area-goes-straight-into-Vrishabhavathi-river/articleshow/53564720.cms>
- **2016 August:** Newspaper, English, Bangalore Mirror Bureau, City's Oldest Stp Has Zero Impact On Water It Treats, 2016-08-06. <http://www.bangaloremirror.com/bangalore/others/Citys-oldest-STP-has-zero-impact-on-water-it-treats/articleshow/53565108.cms>
- **2016 July:** TV, English, News9, Pollution sensors to revive lakes, 2016-07-10. https://youtu.be/V_sAdvlIXec
- **2016 July:** Newspaper, English, The Economic Times , Bengaluru's Jakkur lake turns wasteland; redesign begins, 2016-07-18. <http://economictimes.indiatimes.com/news/politics-and-nation/bengalurus-jakkur-lake-turns-wasteland-redesign-begins/articleshow/53259465.cms>
- **2016 July:** Newspaper, English, Deccan Herald, City's oldest STP in Vrushabhavathi underutilised: Study, 2016-07-04. <http://www.deccanherald.com/content/532558/citys-oldest-stp-vrushabhavathi-underutilised.html>
- **2016 May:** Newspaper, English, Bangalore Mirror Bureau, Heavy metals found in the only river that runs through the city, 2016-05-03. <http://epaperbeta.timesofindia.com/Article.aspx?eid=31820&articlexml=Heavy-metals-found-in-the-only-river-that-03052016003022>
- **2016 May:** Newspaper, English, Deccan Herald, Toxic lakes, poisoned veg farms, City, 2016-05-01. <http://www.deccanherald.com/content/543690/toxic-lakes-poisoned-veg-farms.html>
- **2016 April:** News Portal, English, TheWire, India's Haphazard Quality Monitoring Strategies are Letting Water Pollution Get Worse, 2016-04-21. <http://thewire.in/30563/indias-haphazard-quality-monitoring-strategies-are-letting-water-pollution-get-worse/>
- **2016 March:** Newspaper, English, The Economic Times , Bengaluru's Ulsoor Lake turns into fish graveyard: Is pollution plaguing water bodies? 2016-03-20. <http://economictimes.indiatimes.com/news/politics-and-nation/bengalurus-ulsoor-lake-turns-into-fish-graveyard-is-pollution-plaguing-water-bodies/articleshow/51473174.cms>
- **2016 March:** Newspaper, English, The Times of India, Oxygen levels in Ulsoor Lake way below limit, ammonia content high: study featured in Times of India, 2016-03-10.

<http://timesofindia.indiatimes.com/city/bengaluru/Oxygen-levels-in-Ulsoor-Lake-way-below-limit-ammonia-content-high/articleshow/51335562.cms>

- **2016 March:** Newspaper, English, The Hindu, Majority of polluters go unpunished, Lakes, Pollution, Wastewater, 2016-03-10. <http://www.thehindu.com/news/cities/bangalore/majority-of-polluters-go-unpunished/article8333330.ece>
- **2015 August:** Newspaper, English, The Times of India, Sewage treatment in Bengaluru inefficient: ATREE, 2015-08-16. <https://timesofindia.indiatimes.com/city/bengaluru/Sewage-treatment-in-Bengaluru-inefficient-ATREE/articleshow/48505577.cms>
- **2015 July:** Newspaper, English, The Times of India, State of water pipelines a health risk, 2015-07-06. <http://timesofindia.indiatimes.com/city/pune/State-of-water-pipelines-a-health-risk/articleshow/47951717.cms>
- **2015 May:** Newspaper, English, Times of India, Oxygen levels change through the day, 2016-05-15. <http://timesofindia.indiatimes.com/city/bengaluru/Oxygen-levels-change-through-the-day/articleshow/52274692.cms>
- **2015 April:** Newspaper, English, The Hindu, Vrishabhavati sewage treatment plant inefficient, says study, 2015-04-30. <http://www.thehindu.com/news/cities/bangalore/vrishabhavati-sewage-treatment-plant-inefficient-says-study/article7155178.ece>

F. Other recognition

a. Involvement of faculty in other academic activities:

1. Journal reviewer / grant reviewer

- Water and Environment Journal, Reviewer
- Physics and Chemistry of the Earth, Reviewer
- Water and Environment Journal, Reviewer
- Journal of Environmental Management, Reviewer
- Current Science, Reviewer
- Drinking Water and Science Journal , Reviewer

2. Any other professional activities

- Invited by KSPCB along with several members from various organisation to formulate guidelines for the Bangalore Lakes watchdog committee
- ATREE signed an MOU with Karnataka state pollution control board (KSPCB). In the MOU, ATREE seeks help from KSPCB to conduct a pollution monitoring study on urban river

b. Academic Visitors hosted:

- **Supratik Guha**, Professor, University of Chicago, United States of America, Partnership involving water quality monitoring of Jakkur Lake-Part of Water to Cloud Project, **April 2018**.
- **Paolo Bombelli**, Post-doctoral fellow, Department of Biochemistry, University of Cambridge, United Kingdom, Joint project on wastewater treatment using BES systems, **April 2018**.

- **Carvalho Laurence**, Professor, Centre for Ecology and Hydrology, Edinburgh, UK, Partnership involving monitoring of GHG from Lakes in and around Bangalore- Part of SUNRISE Project, **February 2018.**
- **Neil Robertson**, Professor, University of Edinburgh, UK, Partnership involving assessing the effectiveness of photocatalytic beads for disinfecting drinking water-part of Global Innovation project (JHI), **February 2018.**
- **Gary Fones**, Professor, University of Portsmouth, Portsmouth UK, Joint project on Passive sampling devices for water quality monitoring, **May 2017.**
- **M. S. Mohan Kumar**, Professor, Department of Civil engineering, Indian Institute of Science Bangalore, hosted visit to attend workshop on Surface water quality monitoring: Key issues, challenges and the way forward, ATREE, **May 2017.**
- **Richard Alan**, Business Sector Lead: Environment at the James Hutton Institute, hosted visit to attend ATREE@20: Conference on Conservation Science and Sustainable Development, **January 2017.**