



Call for Project Positions

For a DST project titled “Sustainability in Water for Emerging India by ConvergenT ApproaCHes: A Perundurai Model (SWITCH4INDIA)”

About the project:

Sustainability in Water for Emerging India by ConvergenT ApproaCHes: A Perundurai Model (SWITCH4INDIA) is a sponsored research project of DST and it suggests a comprehensive water management model for rural India, led by a team of investigators from IIT Madras, CSIR-CLRI, KMCH Research Foundation Coimbatore, IISER Bhopal, IIT Tirupati and International Centre for Clean Water. The project is headed by Padma Shri Prof. T. Pradeep of IIT Madras (<https://pradeepresearch.org/>).

The study site is Nallampatti and surrounding villages in Perundurai taluk of Erode district, Tamil Nadu. Nallampatti is a farming village depend on ground water and water from lower Bhavani canal for irrigation. In recent years, there has been increased salinity and depletion of ground water. Based on our previous studies, we have shown the correlation between toxic environmental chemicals particularly agrochemicals and prevalence of diseases in Nallampatti. Our comprehensive survey among one lakh people from different villages indicated the prevalence of similar scenario all over India and Nallampatti is not an exception.

At the core of SWITCH4INDIA is a multi-tier strategy that includes a water audit to assess resource availability and consumption patterns and strategies such as groundwater recharge and rainwater harvesting to enhance water sustainability. The study will also document the spatial and temporal changes in water, soil and wastewater using real time sensors and analytical methods. Based on the identified contaminants, new materials will be developed and community water purification systems will be established with equitable access through a water distribution network. The other key component of the initiative is wastewater treatment and reuse. Sewers and sewage collection systems will be integrated with a sewage treatment plant. The treated water will be repurposed for irrigation, enhancing soil health and agricultural productivity.

Beyond water management, SWITCH4INDIA embraces a One Health framework, linking human, animal, plants, microbes and environment together. Wastewater-based epidemiology will enable to predict community health risks by analyzing community microbiome changes, pathogen loads and emerging chemical contaminants. The health of aquatic ecosystems, soil, crops, livestock, and human populations will be periodically assessed before and after implementation of water sustainable technologies to ensure a holistic impact.

By integrating scientific research, engineering solutions, and community participation, SWITCH4INDIA envisions a scalable model for sustainable water management, offering insights into water conservation, disease surveillance, and environmental sustainability for emerging economies.

The work will happen in close collaboration with the village community and friends of the village for collective learning. The results will be made available to everyone for similar efforts everywhere and for greater synergy. The project is expected to create new ideas and start-ups.

Are you interested to join this mission?

We are looking for multidisciplinary individuals to lead this project.

Key aspects:

- The tenure of all positions is for three years
- The positions are temporary
- All the positions involve field work and travelling
- We will have a camp site in the village and all support will be available, especially for women

1. Project Manager: Project Coordinator (PCO)

Lead, Inspire and Drive a Transformative Project for Sustainable Development! 🚀 👤 🇮🇳

Project Coordinator will lead and oversee all project activities—from field operations and research to engineering and community engagement. The person must interact with all the investigators and people involved with the project. The PCO should manage teams, liaise with government bodies, secure additional funding, and present outcomes to stakeholders. Be the driving force behind sustainable solutions and scientific impact.

Eligibility: Doctorate in Science/ Masters in Social Work/ Management/ Agriculture /Bachelors in Engineering with minimum 10 years of experience in research and management.

Work Site: IIT Madras & Study villages

Monthly emoluments: Rs. 1,25,000/- p.m (Consolidated)

2. Principal Project Associate: Site Manager (PSM)

Lead Community Impact! 🌱 🏠 Site Manager will oversee all activities in the study sites, coordinate with Panchayat officials and government authorities on the execution of the study. Handle official permissions and ensure smooth execution of field operations. Planning and management of all the research activities on the field will go through PSM. *Be the driving force on the field behind impactful change!*

Eligibility: Doctorate in Science/ Masters in Social Work/ Management/ Agriculture /Bachelors in Engineering with minimum 05 years of experience in research and management.

Work Site: Study villages

Monthly emoluments: Rs. 49,000/- + HRA

3. Principal Project Associate: Site Engineer (PSE)

Enjoy implementation! Site Engineer will plan and execute the civil work, including groundwater recharge pits, rainwater harvesting, water distribution networks and wastewater treatment plants. Oversee labour coordination and manage the fabrication, installation, maintenance, and operation of real-time sensors, water purification units, and sewage treatment plants. Join us for a sustainable future!



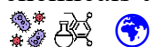
Eligibility: Bachelors in Civil Engineering/ any Engineering subject with minimum 05 years of experience in construction and similar activities. Preference will be given to those who has experience in the study area.

Work Site: Study villages

Monthly emoluments: Rs. 49,000/- + HRA

4. Research Associate II: (PRA)

Explore the intersection between chemistry and biology in different environments. We're hiring an analytical chemist or molecular biologist to profile chemical contaminants using ICP-MS, GC-MS, and LC-MS/MS in different samples while performing molecular profiling including antimicrobial resistance genes through PCR and next generation sequencing. Uncover how interplay between chemicals and microbes drive the world in soil, water, wastewater and how it reflects on one health.




Eligibility: Doctoral degree in Chemistry/ Microbiology/ relevant subject with two years of post-doctoral research experience. Preference will be given to those with experience on analytical chemistry or molecular biology.

Work Site: KMCH Research Foundation, Coimbatore and study villages

Fellowship: Rs. 61,000/- + HRA

5. Project Scientist I: Data Scientist (PDS)


Transforming data science into creating meaningful solutions for the community! We're hiring a Data Scientist to develop advanced hydroinformatics maps by integrating water, soil, wastewater, and One Health data on a geographical information system. Uncover meaningful patterns, derive new correlations, and drive data-driven solutions for sustainable resource management. Join us to turn complex data into impactful insights! 

Eligibility: Doctoral degree in Computer Science/ Data Science/ relevant subject or Master's Degree in Engineering or Technology with relevant experience. B.E./B.Tech. with experience will also be eligible.

Work Site: IIT Madras

Monthly emoluments: Rs. 56,000/- + HRA

6. Project Associate II: Water (PAW)


Are you worried about the quality of water bodies and interested to improve the water quality? Here is the opportunity! We're seeking passionate individuals to map water bodies, conduct water audits, and promote groundwater recharge and rainwater harvesting. Be part of field sampling, real-time water quality monitoring, and water purification system management. Let us ensure provision of clean water for communities - *apply today and make a splash in sustainability!* 

Eligibility: Masters in Chemistry or any life sciences/ Bachelors in Engineering or Technology.

Work Site: Study villages

Fellowship: Rs. 31,000/- + HRA

7. Project Associate II: Soil & Agriculture (PAS)

Are you passionate about eco-friendly farming and cared about the nature? This may be the possibility! Interact with farmers and execute survey on farming practices, do experiments on soil health, and implement microbial and treated wastewater-based irrigation to reduce chemical use. Assess the changes on soil health, crop productivity and nutritional status upon implementation of sustainable technologies. *Be part of the change—apply today!* 

Eligibility: M.Sc., in Agriculture/ Botany/ Plant Biotechnology or any life science subject with experience on plant sciences. Preference will be given to those have experience on field work and agriculture.

Work Site: Study villages

Fellowship: Rs. 31,000/- + HRA

8. Project Associate II: Biology (PAB)

Are you passionate on understanding the interplay between the environment and one health? Here is the opportunity! Execute health surveys and experiments on assessing the health of humans, cattle & aquatic life and correlate with the changes in the environment before and after implementation of water sustainable technologies. Conduct wastewater analysis, and monitor community health trends through wastewater epidemiology. *Make a lasting impact - empower people, protect ecosystems, and promote healthier communities. Apply now!* 🌿 📖

Eligibility: M.Sc., in Zoology/ Environmental Sciences/ any other life science or Master of Social Science. Preference will be given to those who has interest and experience on ecology and environmental studies.

Work Site: Study villages

Fellowship: Rs. 31,000/- + HRA

9. Junior Research Fellow (JRF)

Join the Fight Against Antimicrobial Resistance in the perspective of One Health! We're hiring a Junior Research Fellow for the understanding the role of environmental chemicals on emergence of antimicrobial resistance, which is defined as the top ten global threats for public health. Contribute to profiling of emerging contaminants and antimicrobial resistance genes in soil, water, wastewater, plant, cattle and human samples, conduct experiments and whole genome sequencing on model strains of pathogens, and analyze resistance patterns. Be part of impactful research for a healthier future—apply today! 🦠 🧬 🌐

Eligibility: M.Sc., in Botany/ Zoology/ Biochemistry/ Microbiology any other life science. Preference will be given to those who has interest and experience on microbiology and molecular biology.

Work Site: KMCH Research Foundation, Coimbatore and Study villages

Fellowship: Rs. 37,000/- + HRA

JRF positions exist also with all the other participating investigators at IIT Madras, CSIR-CLRI, IISER Bhopal, IIT Tirupati and International Centre for Clean Water as well. See below for email and other details.

How to apply?

- Those who are interested in the above positions, please write to us with your CV (Email: switch4india@gmail.com) before 20th June, 2025. The appointments are likely to start from 01 July, 2025.
- Please mention your interested and eligible position title in the email subject by clearly mentioning the three-letter code. For example, if you are applying for the position of Data Scientist, mention in the subject as “*Application for PDS*”.
- Please send separate emails if you are interested to apply for more than one post.
- Only the shortlisted candidates will be called for the interview. No TA/DA will be provided for participation in the interview.