

RUTUJA MALI

M.Sc. Environmental Science | Environmental Researcher & Sustainability Professional

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PROFESSIONAL SUMMARY

Motivated and detail-oriented Environmental Science postgraduate with strong academic grounding and hands-on experience in environmental research, fieldwork, and community engagement. Skilled in applying scientific principles to real-world sustainability challenges including water resource management, climate change, and public health. Proficient in tools such as OpenLCA, QGIS, ENROADS, CROPWAT. Proven track record in interdisciplinary research, digital environmental communication, and data-driven analysis. Seeking opportunities to contribute to impactful environmental research, policy, and sustainability initiatives.

INTERNSHIPS & TRAINING

Research Intern – JALMULYA Project

May – July 2025

Centre for Sustainable Development (CSD), Gokhale Institute of Politics & Economics (GIPE), Pune

- Contributed to the JALMULYA project focused on water cost rationalisation in the Pune Metropolitan Region.
- Assisted in policy research, stakeholder mapping, and economic analysis related to urban water resource management.
- Gained hands-on exposure to interdisciplinary sustainability research methodologies and policy frameworks.

Social Media & Communications Intern

Aug – Oct 2025

Bhujal Abhiyaan Trust (NGO), Pune

- Developed and managed environmental awareness content across digital platforms, including website articles and social media campaigns focused on groundwater conservation.
- Created communication materials on rainwater harvesting and groundwater management for public outreach.
- Designed posters and infographics to enhance stakeholder engagement and public environmental awareness.

On-Job Training – Industrial Environmental Management

May – Jun 2025

Shri Datta Shetkari Sakhar Karkhana, Shirol

- Gained practical exposure to industrial wastewater treatment systems including Sewage Treatment Plant (STP), Effluent Treatment Plant (ETP), and Condensate Polishing Unit (CPU).
- Conducted laboratory analyses including COD, DO, pH, hardness, and volatile acidity testing.
- Observed operations of sugar processing and distillery units, developing understanding of industrial environmental compliance.

Science Communicator – Science for All

Shikshanganga Foundation

- Facilitated environmental science communication through structured school outreach programmes.
- Conducted interactive demonstrations and designed educational activities to promote scientific literacy among school students.

RESEARCH & PROJECTS

Gamified Footprint Reward Platform & Behavioural Impact Evaluation

2024 – 2026

M.Sc. Final Year Research Project | Supervisor: Dr. Amir Mulla

- Developed a full-stack web platform integrating carbon and water footprint calculators with a gamified reward system (points, leaderboard, eco-coupons) to promote pro-environmental behaviour.
- Conducted pre- and post-intervention surveys with approximately 210 participants to measure shifts in environmental awareness, motivation, and sustainable behavioural intent.
- Applied scientific emission and water-usage calculation formulas; performed Pearson correlation analysis between demographic variables and footprint behaviour.
- Keywords: Carbon Footprint Tracking · Gamification · Reward-Based Behaviour Change · Survey Analysis · Attitude–Behaviour Gap

Microbial Quality Assessment of Fresh Fruit Juice (MPN Method)

2023 – 2024

B.Sc. Final Year Research Project | Supervisor: Dr. Rupali Gaikwad (HOD, EVS Dept.)

- Evaluated hygiene and microbial contamination levels in street-vended fresh fruit juices using the Most Probable Number (MPN) method.
- Designed and administered vendor surveys to assess hygiene practices, awareness, and associated risk factors.
- Proposed targeted public health interventions and vendor awareness initiatives based on analytical findings.

Climate Change Impacts on Agriculture & Adaptation in Western Maharashtra

2024 – 2026

Districts: Kolhapur, Sangli, Satara & Pune | Supervisor: Dr.Santosh Pharande Dr. Priti Aphale

- Conducting field-based research to document climate variability and its impacts on agricultural productivity across four districts.
- Analysing climate trends, crop yield data, and adaptive strategies adopted by farming communities in response to changing weather patterns.

Application of Biofertilisers in Sustainable Agriculture – FLORA 2022

2022

- Investigated the role of microbial fertilisers in enhancing soil fertility, crop productivity, and reducing chemical input dependency.
- Developed exhibition materials and presented findings during academic science showcases.

SKILLS

Environmental Tools	QGIS 3.28, OpenLCA, ENROADS, CROPWAT 8.0, CLIMWAT 2.0, HYSPLIT, PAST 4.03, NFMS, MS Excel
Sustainability	LCA, BSAT, NZAAT, SAFA Tool, Carbon & water footprint calculation, FAO Fishtat , Noise Monitoring,
Laboratory techniques	COD, BOD, DO, MPN method, pH, hardness, volatile acidity, UV spectrophotometry, titration, calorific value, water analysis, soil analysis, Sludge Volume
Research & Analysis	Survey design, Pearson correlation, stakeholder mapping, policy analysis, SWOT analysis, Regression, Map gradient, City Prosperity Index, Energy audit , Cost benefit analysis, Shannon and Simpson Diversity Index,
Communication	Science communication, digital content creation, infographic design (Canva, Adobe Photoshop)
Languages	English (Fluent) • Marathi (Fluent) • Hindi (Fluent)

CERTIFICATIONS & COURSES

- Safely Managed Sanitation – World Health Organization (WHO)
- Environment, Climate Change and Health (ECH) – World Health Organization (WHO)
- Introduction to ESG – Corporate Finance Institute
- GIS & Machine Learning: Prediction Mapping Using GIS Data
- Smart Cities and Sustainable Mobility – D.Y. Patil International University
- NSG Implementation in Research (Online)
- National Science Day 2026 Competition – COEP Technological University

EDUCATION

M.Sc. Environmental Science 2024 – 2026
Fergusson College, Pune

B.Sc. Environmental Science 2021 – 2024
Fergusson College, Pune

Higher Secondary Certificate (HSC) – Science 2021
Gowtham Junior College, Hyderabad

Secondary School Certificate (SSC) 2019
Sanjeevani English Medium School

OTHER ACHIEVEMENTS

- Ranked among the Top 3 candidates in the M.Sc. Environmental Science Entrance Examination.
- Topped the 10th Board Examination at the school level.
- Served as Vice Head Girl in school.
- Volunteered in plastic waste collection and awareness drives, promoting responsible waste management and environmental conservation.
- Volunteered in the organization and management of college festivals and events, coordinating with teams and assisting in event execution.
- Participated in community outreach and environmental awareness activities.

CORE COMPETENCIES

Environmental Research & Analysis • Scientific Communication • Data Interpretation & Reporting • Public Speaking & Community Outreach • Interdisciplinary Collaboration • Critical Thinking & Problem Solving • Project Management • SWOT Analysis • Time Management • Environmental Monitoring • Environmental Compliance • Wastewater Treatment • Sustainability Assessment • Climate Change Adaptation • Carbon Footprint Assessment • Water Resource Management • GIS Mapping • Data Analysis • Scientific Report Writing • Stakeholder Engagement • Field Research