

A portrait of Dr. Roshan Raj Shrestha, a middle-aged man with grey hair and glasses, wearing a dark blue zip-up jacket with a white geometric pattern on the chest. The background is a solid light blue.

# DR. ROSHAN RAJ SHRESTHA

DEPUTY DIRECTOR  
WATER, SANITATION  
AND HYGIENE

# DR. ROSHAN RAJ SHRESTHA

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I am a water and sanitation professional with over 35 years of experience advancing inclusive solutions across Asia and Africa. Since 2012, I have served as Program Officer, Senior Program Officer, and then as Deputy Director at the Bill & Melinda Gates Foundation, where I have shaped the global WSH landscape through strategic grant-making, policy advocacy, and partnerships with governments in South Asia and Sub-Saharan Africa, as well as development banks and development partners.

Over the last 13 years, my focus has been on scaling non-sewered sanitation, fecal sludge management, and citywide inclusive sanitation (CWIS) across South and Southeast Asia and Sub-Saharan Africa. I have led the Foundation's WSH program in advancing transformative sanitation through system strengthening, demonstration projects, capacity building, and enabling policies.

I played a central role in shaping the inclusive and non-sewered sanitation agenda in Asia—particularly in India, Bangladesh, and Nepal—by supporting governments and partners to embed inclusive sanitation into national programs. My work has strengthened institutions, improved service delivery, and expanded access for underserved communities. I was co-lead for the WSH India Program to provide technical assistance to the Government of India for the Swachh Bharat Mission, which enabled the scaling of Fecal Sludge Management and inclusive sanitation throughout the country and the South Asia region by cross learning.

In 2014, I helped establish the Sanitation Trust Fund at the Asian Development Bank (ADB), which has catalyzed over \$3 billion in inclusive sanitation investments. I also spearheaded the creation of key platforms, including the **Global Sanitation Graduate School (GSGS)** at IHE Delft, Netherlands, the **Global Water and Sanitation Center (GWSC)** at AIT, the **Regional Capacity Platform for Sanitation in Asia (ITN-BUET, Bangladesh)**, the **Global Sanitation Center of Excellence (GSCE)** at IIT Palakkad, and **India's National Capacity Building Platform for Sanitation at the National Institute for Urban Affairs (NIUA)**. I have also contributed to strengthening the institutional capacity of the **Eastern and Southern Africa Water and Sanitation Regulatory Association (ESAWAS)** and bringing their knowledge to South Asia to advocate for the WASH regulatory system.



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My guidance contributed to strengthening the capacity of municipal associations in Bangladesh and Nepal, **establishing 10 CWIS mentor cities in Bangladesh and five mentor cities in Nepal—similarly, Odisha and Tamil Nadu states, India**, which became a mentor state for inclusive sanitation.

I currently serve on the Board of Trustees at the **Asian Institute of Technology (AIT)** and chair the **Advisory Board of GWSC**, advancing water and sanitation innovation for low- and middle-income countries. In recognition of my contributions to the Foundation's mission, **I received the Bill Gates Sr. Award in 2023.**

Before joining the Foundation, I worked with **UN-Habitat as Regional Technical Advisor for South Asia** and as Settlement Improvement Advisor in Bangladesh. Earlier in my career, I founded the **Environment & Public Health Organization (ENPHO)** in Nepal in 1990, which became a pioneering NGO in the water and sanitation sector.

I am also known for developing household water treatment technologies such as PIYUSH and the Kanchan Arsenic Filter, decentralized wastewater treatment systems, and the eco-home concept integrating rainwater harvesting, greywater recycling, and waste management. I hold an M.Sc. from Tribhuvan University, Nepal, a postgraduate diploma in Limnology from Austria, and a Ph.D. in Applied Natural Sciences from the University of Natural Resources and Life Sciences (BOKU), Vienna, Austria.



## EXECUTIVE SUMMARY

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## FIELD OF EXPERIENCE

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- Citywide Inclusive sanitation, non-sewered sanitation, and fecal sludge management
- Sanitation financing and capacity building
- Water and environmental sanitation planning in urban slums and small/medium towns
- Water and sanitation governance
- Community-managed water and sanitation technologies
- Constructed Wetland for Wastewater Treatment
- Ecological Sanitation
- Water Quality Assessment and Treatment
- Rainwater Harvesting
- Point of Use Drinking Water Treatment
- Sanitation marketing
- Arsenic Mitigation
- Solid Waste & Medical Waste Management Environmental Analysis
- Limnological Investigation
- Experience in working with I/NGOs, private sectors, Local Authorities, Development Banks and UN-Agencies
- Global working experiences (US, South Asia, Southeast Asia, and Sub-Saharan Africa).

## ACADEMIC QUALIFICATION

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- **Ph.D. in Applied Natural Sciences**, Department for Sanitary Engineering and Water Pollution Control, University of Agricultural Sciences, Vienna, Austria, 1999.
- **Postgraduate Course on Limnology**, Institute of Limnology, Mondsee, Austria, 1993.
- **M.Sc., Botany-Ecology**, Tribhuvan University, Nepal, 1988

## TRAININGS

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- International Training Course on **Ecological Alternatives in Sanitation**, Sweden, (July 30 to August 31, 2001). Organized by the Department of Water and Environmental Studies, Linköping University, Sweden. Course consists of (i) Water and nutrients cycles; (ii) Management options for improved urban environmental sanitation, especially dry systems and ways to utilize nutrients in human waste as a resource in urban agriculture; (iii) Risk assessment including hygiene risks in handling sanitized urine and faecal matter, as well as residents and professional's attitude and norms concerning such risks; (iv) Environmental costs and benefits of dry sanitation systems compared with current alternatives; and (v) Safe excreta disposal and protection of well water.



- Training on **Arsenic Contamination in Groundwater and its effect on the human body** (10 to 17 September 2000), Dhaka. Organized by NIPSOM, Dhaka, Bangladesh
- **“Medical Waste Treatment Technologies**, Environmental Exchange Program # 570” May 18 - 22, 1998. Mt. Kisco, New York. Organized by USAEP, USAID, and IIE.
- Regional Training for Asia/Pacific on **“Adopting, Applying and Operating Environmentally Sound Technologies for Urban Management”** (8-13 December 1997), Perth, Western Australia. The workshop focused mainly on wastewater treatment technologies. Organizer: UNEP International Environmental Technology Center (IETC) and the Institute for Environmental Science of Murdoch University, Western Australia.

## MEMBERSHIP IN PROFESSIONAL SOCIETIES —

- Member, International Water Association (IWA), London.
- Member, Rotary International, Yela Club, Kathmandu, Nepal
- Honorary Member, Society of Public Health Engineers, Nepal
- Member, International Association of Theoretical and Applied Limnology (SIL). Austria.
- Founder and Patron of Environment & Public Health Organization (ENPHO), Kathmandu, Nepal
- Board Member, Nepal Seattle Society.
- Founder Chairman and NGO Forum for Urban Water & Sanitation, Kathmandu, Nepal
- Life Member, Nepal Red Cross Society.

## LANGUAGE PROFICIENCY —

| Language | Reading   | Writing   | Speaking  |
|----------|-----------|-----------|-----------|
| Nepali   | Excellent | Excellent | Excellent |
| English  | Excellent | Excellent | Excellent |
| Hindi    | Excellent | Excellent | Good      |
| Urdu     | Non       | Non       | Good      |
| Bangla   | Non       | Non       | Fair      |
| Newari   | Excellent | Excellent | Excellent |

## COUNTRY OF WORKING EXPERIENCE —



# EMPLOYMENT RECORD

**BILL & MELINDA**  
**GATES** *foundation*

## **BILL & MELINDA GATES FOUNDATION, SEATTLE, USA**

**DEPUTY DIRECTOR / Lead Asia Program; Water, Sanitation & Hygiene,**  
**November 1, 2021 to date**

- Scale the citywide inclusive sanitation (CWIS) and promote transformative technologies in the Asian region with deeper engagement in selected countries like India, Bangladesh, and Nepal.
- Establish a partnership with key development partners – Multilateral and Bilateral, as well as development banks, to optimize their funding for CWIS and transformative sanitation technologies in the region.
- Identify and establish reliable private sector and commercial partners for the development of sanitation industries and commercialization of the transformative sanitation technologies in the region.
- Provide TA to the key government partners to create an enabling environment for CWIS and innovative technologies for the safe and managed sanitation system.
- Guide team members in managing portfolios of foundation investments (grants and contracts), and work with external partners to drive progress.
- Lead in the development of annual investment plans and budgets, develop, modify, and implement a strategy under the guidance of the Director.
- Work with foundation leadership as requested to address cross-cutting issues and improve functions and performance.
- Provide strategic guidance in crafting grants and contracts that require complex research or analytics.
- Accountable for the identification and assessment of key portfolio risks and the development and management of mitigation/contingency plans at the portfolio level.
- Advise, mentor, and support colleagues within the foundation and their grantees in the design, enhancement, and execution of projects, initiatives, and engagements.

## **BILL & MELINDA GATES FOUNDATION, SEATTLE, USA**

**DEPUTY DIRECTOR / Lead, Urban Sanitation Market (USM)**  
**Water Sanitation & Hygiene Water Sanitation & Hygiene**  
**May 2018 to 30 October 2021**

- Develop a strategy to promote Citywide Inclusive Sanitation globally and establish partnerships with both global and regional key actors



- Guide team members in managing portfolios of foundation investments (grants and contracts), and work with external partners to drive progress.
- Manage relationships with grantees, contractors, and key partners to achieve the foundation's desired impact.
- Facilitate the development of annual investment plans and budgets, develop, modify, and implement a strategy under the leadership of the Director. Work with foundation leadership as requested to address cross-cutting issues and improve functions and performance.
- Provide strategic guidance in crafting grants and contracts that require complex research or analytics.
- Accountable for the identification and assessment of key portfolio risks, and the development and management of mitigation/contingency plans at the portfolio level.
- Advise, mentor, and support colleagues within the foundation and their grantees in the design, enhancement, and execution of projects, initiatives, and engagements. Manage partnerships and grantee relationships to achieve impact, for example, by conducting site visits, convening meetings of key stakeholders, and monitoring and evaluating components of grants.

## **BILL & MELINDA GATES FOUNDATION, SEATTLE, USA**

**SENIOR PROGRAM OFFICER / Technical Lead, South Asia, Water, Sanitation & Hygiene**  
May 2015 to May 2018

- Technical Lead for South Asia to implement the WSH strategy of the Bill & Melinda Gates Foundation.
- Co-led the India engagement to support the Government of India's flagship program on sanitation – Swaccha Bharat Mission.
- Lead the Bangladesh program to demonstrate fecal sludge management and innovative sanitation intervention
- Relationship manager for Asian Development Bank (ADB) for efficient operationalization of Sanitation Trust Fund to scale non-sewered sanitation and FSM
- Shape and manage grants and contracts to create an enabling environment for the roll-out of appropriate innovative sanitation technologies. This can include investments to: demonstrate at scale sanitation as a profitable, sustainable business, make fecal sludge management and non-waterborne solutions an integral part of sanitation planning,
- Professionalize and increase the competitiveness of key sector actors.
- Act as a conduit between grantee partners developing technologies and grantee partners that could adopt, commercialize, and deploy such technologies, with particular attention to private sector actors.
- Create partnerships between developers and field-based actors, including supporting the development and management of a portfolio of business case assessments



## **BILL & MELINDA GATES FOUNDATION, SEATTLE, USA**

**PROGRAM OFFICER / Water, Sanitation & Hygiene**

**November 2012 to May 2015**

- Grant making: Identify, develop, structure, and execute new grants that identify sustainable fecal sludge management business models that generate economic/ financial benefits along the sanitation value chain and promote the adoption of innovative technologies. Rigorous scrutiny of business proposals similar to what would be expected in the social venture space.
- Partner relationships: Scan the sector to find the most promising opportunities; engage relevant actors not currently in sanitation to engage with the sector as innovations are developing. Expand the pool of partners involved with sanitation that serves the poor.
- Support measurement of our results: Develop projects with clear, measurable outcomes and milestones that can form the basis of a results-based relationship with the foundation. Analyze and synthesize results from these grants to sharpen the WSH team strategy and our ability to report on progress and value for money.
- Feedback from the field: Via lessons learned and opportunity assessments, improve the target product profile of innovative technological solutions.
- Engage on questions of both economics and finance: Support efforts to assess complete welfare impacts of changes in models for sanitation service delivery, not only financial implications for particular service providers. Making links between regulation and private sector service provision, and enhancing the quality of regulation, will be an active topic for research and exploration.
- Represent the foundation to key external constituencies, including participation in conferences and meetings. Disseminate our emerging experience and approach to WS&H.
- Internal Communications: Prepare clear, concise, and insightful written analyses on new grants and progress reports on existing grants. Communicate effectively with senior management through memos, meetings and field visits.



## **UN-HABITAT**

**SETTLEMENT IMPROVEMENT ADVISOR**

**Urban Partnership for Poverty Reduction Program**

**March 2011 to October 2012**

- Provision of technical assistance, coordination, and facilitation of the settlements improvement component of the Urban Partnerships Poverty Reduction program aligned with UN-HABITAT's mandate, objectives, focus areas, and expected results. The main duties and responsibilities include:
- Provides technical assistance and implementation support to the Community Development Committees (CDCs), field staff of the program, and the national staff to ensure the successful implementation of Output 2 of the UPPR projects, focusing on the improvement of living conditions of the urban poor and extreme poor in the informal settlements in 23 (later 30) cities.



- Provide support to the project team and CDCs to improve the quality of the physical infrastructure and in contract management
- Provide support to the UPPR staff to improve and strengthen the community action planning process and identification of priority physical improvement activities to be implemented
- Review community contracts submitted by the CDCs for its adherence to UPPR implementation guidelines and recommend for funding
- Provide support to the UPPR staff and CDCs to improve the security of tenure and housing conditions
- Organize training programs to build the capacity of the field staff to provide adequate and timely support to the CDC in implementing the community contracts
- Assist in preparing the Work Plan and Budget for the utilization of the Settlements Improvement Fund in the town
- Provide innovative ideas on the improvement of water, sanitation, drainage, footpaths, and roads
- Undertake regular participatory monitoring and supervision of project activities

## **UN-HABITAT**

**REGIONAL TECHNICAL ADVISOR / South Asia (Nepal, India, Pakistan, Bangladesh and Bhutan), Water for Asian Cities Program**  
**May 2008 to March 2011**

Responsible for coordinating the development of regional and country plans relating to water and sanitation. The main duties and responsibilities include:

- Formulate and develop plans for implementation of Water for Asian Cities Program activities in collaboration with requesting governments and civil society partners.
- Plan resource requirements and set priorities for the implementation of activities and the allocation of inputs.
- Monitor emerging needs at the city/country level and offer assistance in meeting those needs or review Program activities accordingly.
- Identify need for complementary actions during program implementation, design proposals for these actions, and formulate implementation modalities.
- Coordinate overall WAC South Asia Program implementation, provide guidance for the implementation of activities under the Program and coordinate output production.
- Monitoring and evaluation of program performance in relation to approved work plans and objectives and taking corrective measures as required.
- Technical Supervision and guidance in water and sanitation infrastructure



- Assist in the preparation of guidelines, manuals, and operating procedures for the WAC South Asia Initiatives.
- Assist in the control of the projects executed under the Program, including preparation/revision of budgets.
- Contracting of services/supplies at the city/country level and facilitating the provision of logistics, as appropriate, to ensure effective program implementation.
- Assist with the organization/implementation of the capacity-building activities of the Program

## **UN-HABITAT**

### **CHIEF TECHNICAL ADVISOR / Water for Asian Cities Program**

**May 2005 to April 2008**

- Formulation and implementation of the Water for Asian Cities Program in Nepal according to the agreed project document with the Government of Nepal and the Asian Development Bank.
- Responsible for assisting the government of Nepal to develop and demonstrate innovative programs to improve the urban water and sanitation situation in Nepal.
- Responsible for the selection of national partners like NGOs and government departments for the implementation of the program.
- Provide technical support to strengthen the technical capacity of government and NGO partners in different water and sanitation technologies.
- Provide support in strengthening the capacity of the water and sanitation users' committee and guide NGO and local authorities in the community contracting process for sustainable implementation of the project.
- Provide technical advice and assistance for the WAC regional program in other countries as needed.
- Assist the government in the formulation of policies related to water, sanitation, urban environment, and solid waste management.

## **UN-HABITAT**

### **NATIONAL CONSULTANT / Water for Asian Cities Program**

**November 2004 to April 2005**

- Conduct a rapid assessment of the water and sanitation situation in secondary urban centers in Kathmandu Valley;
- Identify a few secondary urban centers that could lend themselves to a demonstration project on water and sanitation improvements and be linked to investments from other development partners, such as ADB. Develop a phased strategy for supporting the improvement of water and sanitation in secondary urban centers in Kathmandu Valley.
- For Phase I of this initiative, develop a proposal for improvement of water and sanitation in one secondary urban center in Kathmandu Valley, including investment and capacity building plans





## **ENVIRONMENT AND PUBLIC HEALTH ORGANIZATION (ENPHO)**

### **EXECUTIVE CHAIRMAN**

**September 1999 to April 2005**

- Overall management, strategic direction, and fundraising for the organization.
- Supervise and provide guidance in the field of research, development, marketing, and advocacy
- Develop marketing strategy and promotion of ENPHO products like water quality testing kits and water purification options.
- Acts as an expert and resource person in water and sanitation projects.
- Lead NGO Forum for Urban Water and Sanitation as chairperson of the forum on behalf of ENPHO

(Some of the specific projects are explained below)



## **KATHMANDU MUNICIPAL CORPORATION (KMC)**

### **MEMBER OF CITY PLANNING COMMISSION**

**July 1997 to Dec 1998**

- Responsible for supporting the Mayor in designing plans and programs related to the environment and public health.
- Monitoring the activities of the Environment and Public Health Departments.

## **ENVIRONMENT & PUBLIC HEALTH ORGANIZATION (ENPHO)**

### **DIRECTOR / Environmental Monitoring and Management Division & Member-Secretary of Executive Board**

**August 1994 to June 1997**

- Responsible for overall management of Environmental Research Laboratory
- Develop a research plan and proposal related to water, environmental sanitation, and air quality
- Responsible for organizational development, resource mobilization, and networking
- Engage with civil societies by establishing a citizen monitoring system of the city water supply to advocate for supplying clean drinking water in Kathmandu Valley



## **SIRAHA DRINKING WATER, HEALTH EDUCATION AND SANITATION PROJECT / PROJECT OFFICER / November 1992 to July 1994**

- Under the funding of DiSvi-International Cooperation (an Italian NGO), this project was implemented at 13 VDCs of Siraha district. Installation of shallow tube-wells for drinking water, carrying out non-formal education especially for women groups, health and sanitation education, and health post support were the major activities in this project.

## **ENVIRONMENT & PUBLIC HEALTH ORGANIZATION (ENPHO)**

**RESEARCH OFFICER / Member-Secretary of the Executive Board**

**January 1991 to October 1992**

- Development of research proposals;
- Carry out physico-chemical, biological, and microbiological investigations of fresh water systems;
- Identification of zoobenthos and phytoplankton;
- Development and investigation of water quality improvement options;
- Preparation of reports and papers.

## **DISVI INTERNATIONAL CO-OPERATION (AN ITALIAN INGO)**

**RESEARCHER / LAB TECHNICIAN**

**November 1988 to December 1990**

- Chemical and biological analysis of freshwater bodies; pollution monitoring of rivers and city water supply system, and preparation of reports and papers.

## **ACADEMIC EXPERIENCE** —————

**INVOLVED AS A GUEST LECTURER, COURSE COORDINATOR, THESIS SUPERVISOR, AND EXTERNAL EXAMINERS FOR MASTER STUDENTS FROM DIFFERENT UNIVERSITIES**

- Supervisor of Ph.D Student from Asian Institute of Technology (AIT), Bangkok on Urban Sanitation Planning 2016 to date.
- Supervisor for M.Sc. student from the Institute of Engineering, Department of Environmental Science
- Supervisor of Master Student from IHE Delft on Pathogen Die off on Ecosan Toilet 2004.
- Regular Guest Lecturer for International Training Course on Ecological Alternatives in Sanitation, Sweden.
- Supervisor for an M.Sc. student from the Faculty of Aquatic Ecotechnology Hogeschool Zeeland, The Netherlands, for the thesis (September to October 2001).
- Supervisor for an M.Sc. student from the Faculty of Earth Sciences, Vrije Universiteit, Amsterdam, The Netherlands, for the thesis (September 1999 to April 2000).
- Supervisor for M.Sc. Environment Engineering from the Institute of Engineering, Tribhuvan University, Nepal, for the thesis. (April 1999 to March 2000).
- Course Coordinator on Public Health & Sanitation of Diploma Course in Town Planning, Institute of Engineering (from Jan 4 to 23, 2000).



## VIDEOS AND DOCUMENTS

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- Water Crisis in Kathmandu and my work by Kantipur Television, 2004.
- Jalpari – movie on water management at Household Scale based on my home – also called Eco Home
- Human Values Based Water Education
- Water Optimization
- A clip on Bill Sr Award by Bill Gates
- My presentation at Annual Employee Week 2024 at the Gates Foundation
- My note at the Annual Employee Week, 2024 at the Gates Foundation
- My biography by Image Channel Nepal, 2023
- What Nepal Achieved on Sanitation
- Water Doctor Story: Bill Gates sr Award
- A grateful reflection from Roshan Shrestha

## PUBLICATIONS

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### Author or Primary Author :

1. Rainwater Harvesting and Groundwater Recharge for Water Storage in the Kathmandu Valley. Sustainable Mountain Development No. 56. ICIMOD, winter 2009. Pp. 27 to 30.
2. Constructed wetland for wastewater treatment – A manual UN-Habitat. Jan 1,2008 <https://unhabitat.org/constructed-wetlands-manual>
3. Community level wastewater management UN Habitat – 2008 [http://unwac.org/new\\_unwac/pdf/countrywise/Nepal/cl\\_broc.pdf](http://unwac.org/new_unwac/pdf/countrywise/Nepal/cl_broc.pdf)
4. Eco-Home for Sustainable Water Management: A case study in Kathmandu, Nepal Paper presented in International Conference on Sustainable Sanitation: “Food and Water Security for Latin America” – 25-28 November 2007, Fortaleza, Ceara, Brazil.
5. Pro-poor sanitation initiative in Kathmandu Valley. Paper presented in International Conference on Sustainable Cities and Villages 27-31 August 2007. Dongsheng, Inner Mongolia, China
6. Water Harvesting. SPACES July-August 2005 Issue. pp78-80. Impression Publishing Private Ltd. Kathmandu.
7. Sustainable Water Management Practice: A Case Study in Kathmandu. ENPHO Magazine. World Water and Earth Day 2005 Issue. Environment & Public Health Organization, Kathmandu Nepal.
8. Fecal Sludge Management through Constructed Wetland System in Nepal: Concern & Quest. Proceeding on 9th International Conference on Wetland Systems for Water Pollution Control. Avignon, France – 26 to 30th September 2004. IWA/ASTEE.



9. Constructed Wetlands in Nepal: Chronicle, Continuance and Challenges. Proceedings of the 9th International Conference on Wetland Systems for Water Pollution Control. Avignon, France – 26 to 30th September 2004. IWA/ASTEE.
10. Development & Promotion of Innovative Techniques for Household Scale Drinking Water Treatment in Nepal. Workshop Proceedings on Promoting Best Practices for Safe Drinking Water in Developing Countries. Trieste, Italy – 24 to 26 August 2004. TWNSO/UNDP/WMO.
11. Measuring Effectiveness of SODIS in Nepal. Proceedings of the Fourth National Conference on Science and Technology (March 23 to 26, 2004). Royal Nepal Science & Technology.
12. Improved Biosand Filter : A Promising Technology for Removal of Arsenic in Nepal. Proceedings of the Fourth National Conference on Science and Technology (March 23 to 26, 2004). Royal Nepal Science & Technology.
13. Implementation of ECOSAN in Kathmandu Suburbs Proceeding Fourth National Conference on Science and Technology (March 23 to 26, 2004). Royal Nepal Science & Technology.
14. Value-Based Water Education – A Manual. Environment & Public Health Organization (ENPHO). ISBN : 99933-59-98-X. November 2003.
15. Point of Use Drinking Water Treatment Initiatives in Nepal. Proceeding: International Symposium: “Safe Drinking Water in Indonesia – Challenges for 21st Century” – 22nd to 23rd October, 2003. Ministry of Health Indonesia/WHO/GTZ
16. A Report on Measuring Effectiveness of SODIS in Nepal. A research finding under joint collaboration with DWSS, UNICEF, EAWAG/SANDEC, and ENPHO. August 2003.
17. An Overview of Arsenic Contamination and Its Mitigation in Nepal Red Cross Society Program Areas. Drinking Water Quality Improvement Program. NRCS/JRCS/ENPHO – July 2003.
18. A Comprehensive report on Ground Water Arsenic Contamination – RWSSSP. Nepal FINNISH Cooperation – 2003
19. Water Crisis: Global & National Perspective. Jeevan Monthly Vol.4 No. 16. July/Aug-2003. pp 54-55
20. Septage Treatment: A First Step to Clean Bagmati River. ENPHO Magazine. World Water Day 2003 Issue.
21. Experiences of Constructed Wetlands for Wastewater Treatment in Nepal. ENPHO Magazine. World Water Day 2003 Issue.
22. Rural Water Supply and Water Quality Status in Nepal. ENPHO Magazine. World Water Day 2003 Issue.
23. Groundwater Arsenic Contamination, Its Health Impact and Mitigation Program in Nepal. Journal of Environmental Science and Health Part A – Toxic/Hazardous Substances & Environmental Engineering. Vol A38. No –1, pp. 185-200, 2003.
24. Groundwater Arsenic Contamination in Nepal: A New Challenge for the Water Supply Sector. Proceedings of the 5th International Conference on Arsenic Exposure and Health Effects, San Diego, California, USA. July 14 to 18, 2002 (pp- 25 to 37).



25. ECO-SAN Solution to Water Pollution. Sunday Post. March 31, 2002.
26. New Approach for Sanitation: Current Global Demand. Paper presented on a talk program organized by Environment & Public Health Organization (ENPHO), 15 Jan 2002
27. Ground Water Arsenic Contamination and its Mitigation in Nepal. ENPHO Magazine was published on the occasion of World Water Day: environment & Public Health Organization (ENPHO), 2002.
28. A new step towards wastewater treatment in Nepal. ENVIRONMENT A journal of the Environment. His Majesty's Government, Ministry of Population and Environment. Vol 6, 200
29. Water Pollution in Kathmandu Valley, Paper presented at the Regional Conference on Environmental Pollution and Its Control, 2nd – 3rd December 2001. Organized by Kathmandu Ecological Campaign
30. Can We Clean Up the Bagmati and Bishnumati Rivers? Nepal Development Forum, Monthly magazine. Vol 3, January 2001. pp25 to 26.
31. Application of Constructed Wetland for Wastewater Treatment in Nepal, Water Science and Technology Vol 44 No. 11-12 pp375-380, 2001.
32. Greywater Treatment: An option for Water Recycling. ENVIRONMENT A journal of the Environment. His Majesty's Government, Ministry of Population and Environment. Vol 5, No. 6 pp 97
33. Approach of Constructed Wetland Technology Transfer to Nepal, Water Science and Technology Vol 43 No. 11 pp345-350, 2001.
34. Constructed Wetlands for Wastewater. Sunday Post – August 8, 1999, Kathmandu Post
35. Application of Constructed Wetlands for Wastewater Treatment in Nepal. A dissertation for the fulfillment of the degree of Doctor of Applied Natural Sciences. University of Agricultural Sciences, Vienna, Austria (1999).
36. Constructed Reed Bed – Technology Introduced for the First Time in Nepal. A paper presented at the national workshop on the 9th National Plan and Implementing Strategy in the WSS sub-sector. 22-23 March 1998, Kathmandu.
37. Environmental Conditions of Kathmandu Metropolitan City. Proceedings on a Workbook for Training in Adopting, Applying and Operating Environmentally Sound Technologies. Regional Workshop, 8-13 December 1997, Perth
38. Report on the water source-monitoring program for the Shivapuri Watershed by assessing water quality (First Phase). Report prepared for HMG/FAO Shivapuri Integrated Watershed Development Project (GCP/NEP/048/NOR) –1996.
39. Bacteriological Quality of Drinking Water in Kathmandu and Patan City (1988 – 1995). A paper presented at a National conference on Environmental Sanitation and Water Supply (March 22 – 24, 1996).
40. Trend of Degrading Water Quality of the Bagmati River (1988-1995). A paper presented at the Bagmati Environmental Seminar (March 22-24, 1996).
41. Limnological investigation of Gosainkunda and Bhairabkunda lakes and impact of Janai Purnima festival. IUCN – Wetland Conservation Program, Nepal. 1996



42. A manual on drinking water quality assessment and management: A guidebook prepared for a training program organized by Planete Enfants (A French Organization)-July, 1995.
43. Surface Water Treatment Plant for Rural Water Supply. ENPHO News Bulletin No. 1, 1995
44. Contaminated Drinking Water and its Precautions: A paper presented in the National Seminar on Summer Health Problem – Causes and Precautions – 21 May 1995.
45. Drinking water problem and water-borne diseases in Kathmandu Valley, ANJULEE, Nepali Newsletter of ENPHO, No. 1, 1995.
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## AWARDS

- Bill Gates Sr. Award 2023 – An outstanding performance at the Bill & Melinda Gates Foundation, awarded by Bill Gates.
- A team member in receiving the Top 10 Award on Kyoto World Water Prize, World Water Forum, Mexico, 2008.
- Kathmandu Environment Award 2004 by Kathmandu Metropolitan City (April 2004)
- A team member in receiving the World Bank Development Marketplace Global Competition Award for the Arsenic Bio-sand Filter design and implementation scheme
- Mahendra Bidhya Bhushan “Class A” Gold Medal by the King of Nepal (Feb, 2000).
- Third World Academy of Sciences Award (TWAS) - March, 2000 by Royal Nepal Academy of Science and Technology (RONAST).
- Runner-up award for Fresh Ideas on International Competition regarding improvement of water supply and sanitary conditions for rural or slum areas in developing countries. Awarded by: Water fund SIMAVI, The Netherlands (March, 2000).
- Ph.D Fellowship awarded by the Austrian Academic Exchange Service, Austria (1996-1999).
- Postgraduate study in Limnology, Austria (March, 1993). Awarded by the Austrian Academy of Sciences and UNESCO.



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## CERTIFICATION

I, the undersigned, certify that to the best of my knowledge and belief, this bio-data correctly describes my qualifications, my experience, and myself

SIGNATURE

May 19, 2023

DATE OF SIGNING

E-mail: [roshan.shrestha@gatesfoundation.org](mailto:roshan.shrestha@gatesfoundation.org) / [rrshrestha712@gmail.com](mailto:rrshrestha712@gmail.com)

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