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EMAIL: binish4424@gmail.com

SKILLS

- Environmental Chemistry, Analytical Techniques, and Instrumentation
- Environmental Microbiology
- Statistics and Computer Applications in Environmental Science and Management
- Environmental Pollution and its control
- Environmental Laws, Policies, Information, Education and Communication
- Environment Management
- Remote Sensing and GIS
- Environmental Economics and Development
- Ecology and Environment Management
- Environmental Toxicology and Occupational Health Management
- Environmental Biotechnology and Waste Management
- Research and Analytical Methods in Environment Management
- Environmental Pollution Management
- Inductively coupled plasma mass spectrometry (ICP-MS)
- Direct Mercury Analysis System (DMA)
- Fourier-transform infrared spectroscopy (FT-IR)
- Gas chromatography-mass spectrometry

BINISH M B

Environmental Scientist

A highly organized and hard-working individual looking for research opportunities. Possess a Ph.D. degree in Environmental Science, M.Phil. degree in Environment Management, and an M.Sc. degree in Environmental Science. Experienced researcher in environmental science with over ten years of experience in environmental and polar-related research.

EXPERIENCE

National Centre for Polar and Ocean Research, Ministry of Earth Sciences

*April 2022-
Present*

Project Scientist I

- Creating research proposals.
- Planning and conducting experiments.
- participate in the Indian Scientific Expedition to Antarctica
- Collecting samples.
- Monitoring experiments.
- Recording and analyzing data.
- Collaborating with other researchers and academia to develop new techniques and products.
- Supervising junior staff

Sreedhanya Construction Company

*January 2022
to March 2022*

Environmental Manager

- preparing EIA, and ESMP reports
- implementing environmental policies and practices
- ensuring compliance with environmental legislation
- assessing, analyzing, and collating environmental performance data and reporting information to internal staff, clients, and regulatory bodies
- liaising with internal staff including senior managers and directors

Socio Economic Unit Foundation, Ernakulam, Kerala, India

*June 2021 to
December
2021*

Environmental Consultant

- Undertake short-term or long-term projects to address a variety of issues and needs
- Meeting with Government officials or appropriate staff to understand their requirements and prepare DPR
- Prepare detailed project report and submit to Local Self Government Institutions
- Prepare ongoing project monthly report and submit to the concerned authority
- Initiate research studies under legacy waste management, liquid waste management, etc.
- Participate and supervise various governmental schemes (Suchitwa Mission, Jal Jeevan Mission, Harithakeralam, etc.)

(GC-MS)

- Cold vapor atomic fluorescence spectroscopy (CVAFS)
- PCR Thermal Cycler and Gel Electrophoresis

LANGUAGES

English (Full professional proficiency), **Hindi** (Full professional proficiency), **Malayalam** (Native), **Tamil** (Speak)

ENVIS Centre, Amrita University, Tamil Nadu, India

*February 2020
to March 2021*

Information Officer

- Conducted outreach campaigns and Green Skill Development Program for tribal communities in Maharashtra, Tamil Nadu, and Kerala.
- Developed environmental informational documents such as brochures, flyers, and fact sheets.
- Contacted government officials, scientists, and researchers to conduct environmental awareness programs (Webinars, Workshops, etc.)
- Prepared detailed reports of ENVIS activities.

District Disaster Management Authority, Pathanamthitta, Government of Kerala

*November
2019 to
January 2020*

Emergency Operations Coordinator

- Handled communication devices like VHF communication, hotline, and landline. Developed team communications and information for meetings.
- Collaborated with the home department for the smooth functioning of the Emergency Operation Center.
- Worked closely with the revenue department to maintain optimum levels of communication to effectively and efficiently complete the pilgrimage season.
- Prepared daily reports Crowd Management and conducted mock drills.

Advanced Centre of Environmental Studies and Sustainable Development, Kerala, India

*December
2018 to
October 2019*

Project Fellow

- Conducted research on molecular characterization of bacteria and earthworms
- Carried out field work in different forest ecosystems of Kerala, India
- Handled instruments like Direct Mercury Analyzer, PCR Thermal Cycler, Gel Electrophoresis
- Prepared reports of the projects

Mahatma Gandhi University, Kerala, India

*May 2017 to
May 2018*

Project Fellow

- Maintained detailed journals of all methods used in testing and research conducted by laboratory scientists.
- Conducted research on heavy metal remediation techniques.
- Carried out fieldwork in Vembanad Wetland Ecosystem and collected water, pore water, sediment, microplastic samples
- Handled sophisticated instruments like Direct Mercury Analyzer, ICP-MS, GC-MS, FTIR, PCR, etc.
- Published journal papers and prepared project reports.

**School of Environmental Sciences,
Kerala, India**

*April 2012 to
April 2017*

Research Fellow

- Collected water, sediment, and ice samples from Svalbard, Arctic
- Collected water, pore water, and sediment samples from Periyar river and Vembanad Lake, Kerala, India
- Isolated aerobic and anaerobic bacteria from the samples
- Molecular identification isolated bacteria
- Conducted research on the bacterial metal reduction
- Prepared the reports and published journal papers

EDUCATION

**Mahatma Gandhi University, Kerala,
India**

*April 2013 to
March 2018*

Ph.D.

Environmental Science

**Mahatma Gandhi University, Kerala,
India**

*October 2010
to October
2011*

Master of Philosophy

Environment Management (CGPA: 7.0)

**Mahatma Gandhi University, Kerala,
India**

*July 2008 to
June 2010*

Master of Science

Environment Science and Management (CGPA: 7.4)

**Mahatma Gandhi University, Kerala,
India**

*June 2005 to
March 2008*

Bachelor of Science

Zoology, Botany and Chemistry (Marks: 64%)

ACHIEVEMENTS

**Team Member Indian Scientific
Expedition to Arctic**

July 2018

Organized by National Centre for Polar and Ocean Research, Government of India

**Participant of major National
program on Survey and Exploration of
Hydrothermal sulphide vents/
deposits in parts of Central and
South-West Indian ridges**

*February 2017
to March 2017*

Organized by National Centre for Polar and Ocean Research, Government of India

Team Member Indian Scientific Expedition to Arctic

July 2015

Organized by National Centre for Polar and Ocean Research, Government of India

Awardee of UGC-RGNF

*April 2012-
March 2017*

COMPUTER PROFICIENCY

Microsoft office, SPSS Statistics, Clustal X, Bioedit, Mega VI

PUBLICATIONS

Distribution and ecological risk assessment of mercury, methyl mercury and other selected trace metals in the surface sediments of the Cochin Estuary, Southwest Coast of India

*September
2022*

Elsevier

Submitted the original research work in the journal Environmental Pollution

Potential of Anaerobic Bacteria in Bioremediation of Metal contaminated Marine and Estuarine Environment

*December
2021*

Elsevier

Microbial Biodegradation and Bioremediation (Second Edition): Techniques and Case Studies for Environmental Pollution, 2022, Pages 305-326

Microplastic pollution in the surface sediment of Kongsfjorden, Svalbard, Arctic

*December
2021*

Elsevier

Marine Pollution Bulletin, Volume 173, Part A, December 2021, 112986

Mercuric reductase gene (merA) activity in a mercury tolerant sulphate reducing bacterium isolated from the Kongsfjorden, Arctic

April 2021

Elsevier

Polar Science, Volume 30, December 2021, 100745

Mercury in the sediments of freshwater lakes in Nv-Ålesund.

July 2020

Arctic

Springer

Environmental Monitoring and Assessment volume 192, Article number: 538 (2020)

Metal content in zooplanktons of two Arctic fjords, Ny-Ålesund, Svalbard

August 2019

Elsevier

Environmental Nanotechnology, Monitoring & Management, Volume 12, December 2019, 100251

Polyphasic approach revealed complex bacterial community structure and function in deep sea sediment of ultra-slow spreading Southwest Indian Ridge

January 2019

Elsevier

Ecological Indicators; Volume 96, Part 1, January 2019, Pages 40-51

Changes in morphology and metabolism enable Mn-oxidizing bacteria from mid-oceanic ridge environment to counter metal-induced stress

March 2018

Wiley

Journal of Basic Microbiology, Volume 58, Issue 5, May 2018, Pages 390-402

Mercury tolerance and biosorption in bacteria isolated from Ny- Ålesund, Svalbard, Arctic

January 2018

Wiley

Journal of Basic Microbiology, Volume 58, Issue 4, Special Issue: Functional diversity, April 2018, Pages 286-295

Haematological Variations of Etroplus Suratensis with Respect to Heavy Metal Contamination in Two Distinct Regions of Vembanadu Estuary, South-West Coast of India.

September 2017

Isaac Scientific Publishing

Environmental Pollution and Protection, Vol. 2, No. 3, September 2017

Distribution of Nutrients in the Soils of a Unique Tropical Agroecosystem

June 2017

Isaac Scientific Publishing

Effect of Heavy Metals (Pb, Cd, Cu) on the Growth of Sulphate Reduction associated Bacterium Clostridium bifermentans Isolated from Cochin estuary, Southwest coast of India

*September
2015*

Biopublisher

The international journal of marine science, 2015; Volume 5

CONFERENCES/SEMINARS ATTENDED

International Conference on Frontiers in Marine Science - Challenges and Prospects (MARICON 2019) in Kochi, India

*December 16-
20, 2019*

School of Marine Science, Cochin University of Science and Technology, Kerala, India

Presented one paper "Role of sulfate-reducing bacteria in the transport and transformation of mercury in Arctic fjords- a study from Kongsfjord"

National Conference on Polar Sciences (NCPS-2019)

*August 20-22,
2019*

National Centre for Polar and Ocean Research (NCPOR), Ministry of Earth Sciences, Government of India

Presented one paper "Mercuric reductase gene (merA) in mercury tolerant Sulphate reducing bacterium from the sediments of Kongsfjorden, Svalbard"

Global Organic Meet 2018

*April 22-24,
2018*

Inter University Centre for Organic Farming and Sustainable Agriculture, Mahatma Gandhi University, Kerala, India

Presented on paper "Distribution of Heavy metals in Pokkali fields: the salt marsh rice ecosystem of Kerala, India"

State Level Training cum Workshop on Wetland Monitoring 2018

*March 7-10,
2018*

School of Environmental Sciences, Mahatma Gandhi University, Kerala, India

Successfully completed the workshop

Third International Conference on Mass Spectrometry (ICMS 2017)

*December 11-
14, 2017*

Inter University Instrumentation Centre (IUIIC) and School of Environmental

Sciences, Mahatma Gandhi University,
Kottayam, Kerala, India

Presented on paper "Heavy metal contamination in the sediments of Vembanad lake, India- an ICP-MS approach"

**International Conference on
Photochemistry and its application
(ICPA-2017)**

*November 10-
13, 2017*

Inter University Instrumentation Centre
and School of Environmental Sciences
Mahatma Gandhi University, Kottayam,
Kerala, India

Presented one paper "Biosorption of Mercury by Metal Tolerant Bacteria Isolated From Tundra Sediments, Ny-Ålesund"

**National Conference on Polar
Sciences 2017 (NCPS2017)**

*May 16-17,
2017*

National Centre for Polar and Ocean
Research (NCPOR), Ministry of Earth
Sciences, Government of India

Presented one paper "Mercury Reduction Potential of Bacteria Isolated from Melt Water Streams, Ny-Ålesund, Svalbard"

**29th KERALA SCIENCE CONGRESS
2017**

*January 28-
30, 2017*

Kerala State Council for Science
Technology and Environment,
Government of Kerala

Presented one paper "Heavy metal (Mercury, Cadmium, Copper and Zinc) tolerance of psychrophilic bacteria Leifsonia rubra strain MM16 isolated from Ny-Ålesund, Svalbard, Arctic"

**28th KERALA SCIENCE CONGRESS
2016**

*January 28-
30, 2016*

Kerala State Council for Science
Technology and Environment,
Government of Kerala

Presented one paper "Mercury tolerance of Sulphate Reducing Bacteria isolated from sediments of Cochin Estuary, South West Coast of India"

REFERENCE

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