

Dr. Waqar-Un-Nisa**Assistant Professor of Environmental Science**

Centre for Interdisciplinary Research in Basic Sciences (CIRBS)

International Islamic University, Islamabad.

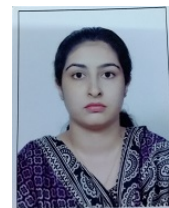
Specialization: Environmental Remediation and Toxicology

Education:

M.Phil. in Environmental Sciences, PMAS-Arid Agriculture University Rawalpindi, Pakistan (2010)

Ph.D. in Environmental Sciences, PMAS-Arid Agriculture University Rawalpindi, Pakistan (2015)

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**Background or Introduction:**

Dr. Waqar-Un-Nisa joined department of Environmental Science, International Islamic University, Islamabad as Assistant Professor (IPFP) in October, 2015. She joined Centre for Interdisciplinary Research in Basic Sciences (CIRBS), International Islamic University, Islamabad in November, 2019. She did her M.Phil. in Environmental Sciences with specialization in Assessment of toxic Organic pollutants and occupational hazards from PMAS-Arid Agriculture University Rawalpindi, Pakistan. She completed her PhD in Environmental sciences with specialization in Environmental remediation from PMAS-Arid Agriculture University Rawalpindi, Pakistan. During her Ph.D. she was awarded by Local fellowship under Indigenous 5000 Ph.D. fellowship program (2011) by higher education commission (HEC), Pakistan and also awarded by Higher Education Commission (HEC) Pakistan scholarship for research work in James Hutton Research Institute Aberdeen, Scotland in November 2013.

During working in James Hutton Institute, she worked with different analytical techniques Polycyclic aromatic analysis (PAHs) of plants and soil by GC-MS, Alkanes analysis of soil samples by GC, Alcohols analysis by GC MS, also worked on the application of molecular microbial ecology tools to discern the influence of plants on degradation processes in hydrocarbon contaminated soils. Dr. Nisa also contributed to James Hutton project on the use of molecular microbial ecology methods in soil forensic science. Nisa received practical training in protocols on DNA extraction from soils, polymerase chain reaction assays (PCR) targeting microbial community diversity and analysis of microbial communities by terminal restriction fragment polymorphism (T-RFLP). Training included teaching on principles in DNA extraction, PCR and statistical methods of microbial community analysis. Dr. Waqar-Un-Nisa teaches different courses in Environmental Sciences at PhD, MS and BS levels. She has supervised and successfully produced 5 MS students and 8 BS students in Environmental Sciences. One Ph.D., 8 MS and two groups of BS research students are working under Dr. Nisa's supervision.

Research Interests and Focus:

Environmental Bioremediation and biotechnology, Environmental toxicology, wastewater treatment, Dr. Waqar-Un-Nisa is interested in investigating environmental contaminants behavior (source, transport and fate), removal, effect and risk assessment of organic contaminants including endocrine disrupting compounds (EDCs), persistent organic pollutants (POPs) and emerging organic contaminants (e.g. pesticides, pharmaceutical and personal care products). Also, she is interested in developing new analytical and monitoring techniques for emerging organic contaminants of different environmental matrices with an emphasis on compounds entering the food chain and having an effect on environmental quality, animal and human health.

Research Grants/Awards/Honors:

- SRGP research grant (Rs. 0.455 million) from Higher Education Commission (2016) *Assessment of phytoremediation potential of different grass species to degrade Hexachlorinated cyclohexanes (HCHs) in agricultural soils of Phothohar Region of Pakistan* (PI: Dr. Waqar-Un-Nisa)

Current Research Students:

MS Research Student

Student name	Status
MushrafShaheen (Env. Sci Department)	Research and Thesis write up
Sadaf Naureen(Env. Sci Department)	Research and Thesis write up
Sammer Nawaz(CIRBS)	Research
Nimra Awan(CIRBS)	Research
Asmoon Qamar	Research
Sana Arif	Research
Ayesha Kanwal	Research
Kainnat Liaqat	Research

Ph.D. Research Student

Talat Ara(Env. Sci Department)	Research
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Research Publications:

- Climate change perceptions and adaptive actions by Pastoral community on the Tibetan plateau, China. *Applied Ecology and Environmental Research*, 17(4) 2019: 7987-8009.
- Effect of compost application on the physico-chemical characteristics of diesel contaminated soil and its influence on the growth performance of *Vetiveria zizanioides*. *Soil Environ.*, 35(1) 2016: 91-98.
- Characterization of Rhizobacteria isolated from Velvet bean (*Mucuna pruriens*) to enhance plant growth. *Pakistan journal of botany*, 48 (4) 2015: 1697-1702.
- Potential of Vetiver Grass in Removing Selected PAHs From Diesel Contaminated Soil. *Pakistan journal of botany*, 47(1) 2015: 291- 296.

Conferences and Workshops:

- Participated in seminar on “Genomic Applications of PCR, qPCR and NGS” held on December 11, 2019 at Islamabad Club.
- Participated in 8th International Conference on Environmentally Sustainable Development held on August 21-23, 2019 at Comsats University Islamabad, Abbottabad Campus.
- Participated in International Conference on “Training and Capacity Building in Sustainable Agricultural Water Management to Address Food Security and Social Instability in Pakistan” held on June 27-29, 2018 at PMAS- Arid Agriculture University Rawalpindi, Pakistan.
- Participated in 6th International Conference on Environmentally Sustainable Development held on April 25-27, 2016 at CIIT Abbottabad.
- Regional Training Workshop on “GIS for Agriculture Monitoring” at PMAS Arid Agriculture University, Rawalpindi, 28-30th March 2016.
- Participated in “16th International Congress of Soil Science on Healthy Soils for Food Security”, at PMAS Arid Agriculture University, Rawalpindi, 15-17th March 2016.
- Participated and organized a conference on “Sustainable Agriculture Water Management In A Changing Environment: A Special Focus On Olive Tree” 30 September -02 October 2015, held at PMAS Arid Agriculture University Rawalpindi.