

Dr. Muhammad Nauman Ahmad

Office: Department of Agricultural Chemistry, The University of Agriculture
Peshawar, Peshawar-2510, Khyber Pakhtunkhwa, Pakistan ☎+92-3329262283

Home: House no. 1020, Street 38, Sector D-4, Phase 1, Hayatabad, Peshawar,
Pakistan

@ drnumanahmad@aup.edu.pk , numansherpao@gmail.com

CAREER OBJECTIVES

Dr. Ahmad has a PhD degree from University of York, UK and post doc from CSU, Australia with research experience from University College London, UK Wageningen University Netherlands and Hohenheim University Germany. Having published several peer reviewed articles in top ranked peer reviewed international journals. In addition, he also has experience of working climate change, air, and water and soil pollution analysis, environmental impact/risk assessments experiments in Pakistan, Australia, Netherlands and Germany. For the last 9 years he is working as Associate Professor in the Agricultural Chemistry Department, The University of Agriculture Peshawar. He is Primary Country Coordinator of Water Task force for HUC-ICIMOD and is also the **Regional Editor for 'Fluoride Journal'** in Pakistan and Afghanistan published by International society for fluoride research (ISFR). Moreover, he is the **member of UN-SDSN** in Pakistan on issues related to Sustainable Agriculture and food systems.

SUMMARY OF EXPERIENCE AND SKILLS

- 10 years of years of post-PhD research and teaching to undergraduate and postgraduates students.
- Extensive research and practical experiences in qualitative analyses of plants, GCMS QToF, HPLC, Atomic Absorption, Ion selective electrodes, OTC and EDU experiments sampling and assessments of nutrients and pollutants in the environments.
- Experience in conducting FAME, phenol analysis via GCMS-QToF
- Knowledge and research experience of the application of ozone (O₃) and fluoride (HF) evaluation in the environment.
- Planned, conducted and scientifically evaluated the results of crop impact assessments experiments like Open Top Chambers and EDU experiments
- Extensive research experience in *in vivo*, *in vitro* and *in situ* evaluation of the nutritional value of crops to changing climate.
- Planned, conduct climate change effects on waterborne pathogens in collaboration with Wageningen University, Netherlands
- Extensive experience in proximate chemical analysis, protein fractionation, carbohydrate fractionation, tannins and minerals analysis of plants and soil.
- Analyzed the plasma and blood content for vitamin A and carotene in leafy vegetables via HPLC
- Knowledge and experience in risk assessment of plants to Fluoride pollution
- Data analysis skills using general linear and mixed models, and multivariate analysis (principal component analysis, multiple regression and partial least square regression) in Statistical Analysis System
- Technical, scientific knowledge acquisition, communication and report-writing/scientific-publication skills

WORK EXPERINCE

- **Postdoc (Endeavour Research Fellowship), Charles Sturt University, Wagga Wagga, Australia 1st July, 2018 till 31 December, 2018.**
- **Associate Professor (Tenured), The University of Agriculture, Peshawar, Pakistan (November 22, 2018-Till date)**
- **Assistant Professor (Tenured Track System), The University of Agriculture Peshawar (January 2011-21st November 2018)**

I am an employee of the University of Agriculture Peshawar as a full time (45 hours/week) Tenured Asso. Professor since November 2018-Present. As an Asso. Professor, I worked keenly to achieve my goals proven by an A+ (> 90%) grade in quality evaluation report of the University. My main duties at the University include:

1. Teaching academic courses to Agricultural Chemistry graduates. I developed and taught the following courses to B.Sc. and Ph.D. students,

- a. Plant Biochemistry (AgCh-502)
- b. Food Security and Climate Change (AgCh-506)
- c. Agriculture and Environmental Pollution (AgCh-711)

2. Supervising post graduate thesis research projects. I have successfully supervised 1 PhD, 5 M.Sc students' projects. While, 2 PhD and 3 M.Sc. projects are in the process of completion. I also supervised internship studies of the undergraduate students.

3. Ongoing:

- i) As PI: Quantifying the impact of flood on Nutrients export and concentration of waterborne pathogens in River Kabul (Rs. 3.6M). Funded by HEC (2016-18).

i) Completed Projects as PI:

- i) The impact of tropospheric ozone on mung bean using protective chemicals from January 2011-April 2012. Funded by Asian Institute of Technology-United Nations Environment Programme Regional Resource Centre for Asia and the Pacific (AIT-UNEP RRC.AP) in collaboration with Stockholm Environmental Institute (SEIY), The University of York, UK
- ii) Biomonitoring of traffic air pollution and its impacts on roadside crops. Funded by Higher Education Commission, Pakistan (HEC) April-December, 2011.
- iii) Assessing the effects of waterborne pathogens spread by floods. Directorate of Science and Technology (DoST), Peshawar 2015.
- iv) "Nutritional security of hill and mountain communities in Hindu-Kush Himalayan region". Funded by ICIMOD-HUC, Nepal (US\$10,000) in 2017-2018.
- v) As co-applicant: Rapid identification and effective communication of waterborne hazards in emergencies (£20,000) funded by Royal Academy of Engineering with collaboration with Newcastle University (Jan, 2020, Dec, 2020).

- ii) Published research articles in top international peer reviewed international scientific journals to date. I also contribute to the compilation of departmental progress reports, and reviewing student assignments, internship reports and theses.
- iii) Serving as an outreach coordinator and academic supervisor of the Agricultural chemistry department.

DISTINCTIONS/FELLOWSHIPS/AWARDS/HONORS

Endeavour Research Award (2018)

Post doc awarded by Australian Government for 6 months visit to Charles Sturt University, Wagga Wagga, Australia (2018)

Award for Research Grant to USA (2017)

Academic Sabbatical Under HEC Program: Pakistan Program for Collaborative Research (PPCR) to Illinois University, USA (6 months)

UN Membership (2015)

UN-SDSN (Sustainable Development Solutions Network) for Pakistan

DAAD Research Stays Award (2014)

The distinguished DRSA was awarded by DAAD Germany for a three months collaborative research visit to Hohenheim University, Germany in 2014.

HEC Outstanding Research Award (2014)

The prestigious award was granted in 2014 by Higher Education commission (HEC) of Pakistan for Best research paper of 2012.

HEC Travel Grant (2014)

Awarded by HEC for oral presentation 2nd International Conference on Environmental Science and Technology, 14-17 May, 2014 Antalya, Turkey

VIMICK visiting Fellowship (2011)

Awarded by Wageningen University, Netherlands for climate change water quality research

PRIMARY COUNTRY COORDINATOR HUC-ICIMOD

- Working as Country coordinator in Pakistan for thematic group on Water at HUC-ICIMOD, Nepal (2019-21)

RESEARCH JOURNAL EDITORIALSHIP

- Regional Editor ‘‘Fluoride’’ Journal (Published by International Society for Fluoride Research)

UNITED NATIONS MEMBERSHIP

- Member of UN-SDSN (Sustainable Development Solutions Network) for Pakistan

EDUCATION AND RESEARCH

- **Doctor of Philosophy (PhD) Environmental Sciences (2007-2011), University of York, UK.**

“Although air pollution levels are increasing, there is no knowledge of air pollution effects on agricultural crops in the Peshawar region of Pakistan. The aim of this study was to assess the impact of ozone (O₃) and hydrogen fluoride (HF) on agricultural crops in Peshawar through a combination of field work and experiments. The mean monthly O₃ concentration in Peshawar, measured using passive samplers, was between 25-30ppb in February and March, but increased to 35-55ppb in April and May; it fell to 15-20ppb in November/December. O₃ injury was found on potato (black flecking), onion (leaf tipburn) and cotton (white stipples) in a survey in April/May, but was absent from many other crops. No O₃ injury was found on any crops during a winter survey. O₃ fumigation experiments on spinach (*Beta vulgaris*) and onion (*Allium cepa*) in open-top chambers in UK showed that high O₃ concentrations can affect both species in terms of visible injury and growth. However, onion is at greater risk in the field as it is a summer crop and is likely to be exposed to high O₃ concentrations, unlike spinach, which is grown in the winter season. An EDU experiment on spinach under field conditions in Peshawar showed no effect on growth during winter season. However, elemental contents of spinach were significantly reduced in EDU treated plants. The HF concentrations in Peshawar, measured using passive samplers were higher in summer than in winter in areas close to brick kiln fields. The mean summer concentration was 0.2µg HF m⁻³, with maximum of 0.3µg HF m⁻³ in May. HF was below detection limits of <0.1µg HF m⁻³ in November-December. Severe HF injuries to mango, apricot and plum leaves, in form of necrotic leaf margins and tipburn, were found near the brick kiln fields. Tomato, maize, wheat and sugarcane were found to be less sensitive, but also showed some HF injury. The fluoride content of fruit leaves, wheat grains and spinach was significantly higher in the brick kiln area than at control sites. There was no significant difference between the soil fluoride content of wheat fields in the brick kiln area and at control sites. Wheat grown at different NaF levels in alkaline soils similar to those in Peshawar, in a greenhouse experiment in the UK showed no effect of fluoride on growth. The degree of powdery mildew infestation increased with increased fluoride concentrations in the soil and ear emergence was also delayed in all treatments except the control. It was concluded that O₃ and HF are significant pollutants in Peshawar, especially for summer crops. More detailed studies should be conducted to determine the magnitude of damage caused by these pollutants in the Peshawar region.

PUBLICATIONS

2022

1. **Ahmad MN**, Zia A, van den Berg L, Ahmed Y, Mahmood R, Dawar KM, Alam SS, Riaz M, Ashmore M. Effects of soil fluoride pollution on wheat growth and biomass production, leaf injury index, powdery mildew infestation and trace metal uptake. Environmental Pollution. 2022 Jan 7:118820. <https://doi.org/10.1016/j.envpol.2022.118820>

2021

2. Dawar. K., S. Fahad, M. M. R. Jahangir, I. Munir, S. S. Alam, S.Khan, I. A. Mian, R. Datta, S. Saud, J. Banout, M. A, **M. N. Ahmad**, A. K., R. Dewil, M. H. Rahman, M. J. Ansari & S. Danish. 2021. Biochar and urease inhibitor mitigate NH₃ and N₂O emissions and improve wheat yield in a urea fertilized alkaline soil. Sci Rep 11, 17413 (2021). <https://doi.org/10.1038/s41598-021-96771-0>.
3. Shakil Ahmed, Maryam Karamat, Azeem Haider, **M N Ahmad**, Fareeha Jabeen, Madeeha Ansari, Sundas Babar, Asma Zulfiqar, Anwar Ali Shad, Saleemullah. 2021. ALLEVIATIVE EFFECTS OF

EXOGENOUS SALICYLIC ACID ON SOME ANTIOXIDATIVE ENZYMES OF PISUM SATIVUM L. UNDER SODIUM FLUORIDE STRESS. Fluoride 54(1):77-89.

4. Shakil Ahmed, Maryam Karamat, Azeem Haider, **MN Ahmad**, Fareeha Jabeen, Madeeha Ansari. ASSESSMENT OF THE EFFECTS OF SALICYLIC ACID ON THE YIELD AND THE YIELD CHARACTERISTICS OF PISUM SATIVUM L. UNDER FLUORIDE STRESS. Fluoride 54(1):27-36.

2020

5. Yaseen Ahmad, **MN Ahmad**, Afia Zia, Syed Sartaj Alam, Raja Asad Ali Khan and Muhammad Riaz. Biocontrol of economically important weed species through endophytic fungi isolated from Parthenium hysterophorus (Family: Asteraceae). Egyptian Journal of Biological Pest Control 2020 30:138
6. Zia, A., LVD. Berg, M. Riaz, M. Arif, D. Zia, SJ. Khan, **MN. Ahmad**, Attaullah, M. Ahsmore, 2020. Nitrogen induced DOC and heavy metals leaching: Effects of nitrogen forms, deposition loads and liming. Environmental Pollution. 265, part B114981. <https://doi.org/10.1016/j.envpol.2020.114981>
7. Shakil Ahmed, Maryam Karamat, Azeem Haider, Fareeha Jabeen, **MN Ahmad**, Madeeha Ansari, Asma Zulfiqar, Abudllah Jalal, Aleena Nizame. 2020. AMELIORATIVE EFFECTS OF SALICYLIC ACID ON DRY BIOMASS AND GROWTH OF PISUM SATIVUM L. UNDER SODIUM FLUORIDE STRESS. Fluoride 53(2 Pt 2):335-355.
8. Mudassar Iqbal, M Suleman, Saleem Ullah, Hamida Bibi, Hassan Wahab, Zafar Iqbal, Khadim Muhammad Dawar, Said Wahab, **MN Ahmad**. 2020. PURIFICATION OF SIMULATED FLUORIDE-CONTAMINATED WATER USING SILVER NANOPARTICLES SYNTHESIZED BY XANTHIUM STUMARIUM AS A BIO-TEMPLATE. Fluoride 53(1 Pt 2):112-123

2019

9. Shakil Ahmed, Irma Saleemi, Fareeha Jabeen, Afia Zia, **MN Ahmad**, Azeem Haider, Aftab Ahmad Khan, Syed S Alam. 2019. ASSESSING THE EFFECT OF FOLIAR AND SOIL FLUORIDE STRESS ON TURNIP (BRASSICA RAPA L.). Fluoride 52(3 Pt 1):273-283.
10. Sadaf Qasim, **MN Ahmad** and M. Suleman. 2019. RESPONSE OF LOCAL CROPS TO HYDROGEN FLUORIDE POLLUTION EMITTED FROM BRICK KILNS IN THE VICINITY OF PESHAWAR, PAKISTAN. Fluoride 52(4):517-526
11. Shakil Ahmed, K Khalid, F Jabeen, **MN Ahmad**, Afia Zia, Maha Muhajid, Dania Zia, A Haider. 2019. PRODUCTIVITY ASSESSMENT OF OKRA UNDER SODIUM FLUORIDE STRESS. Fluoride 52(3 Pt 2):348-353.
12. Shakil Ahmed, K Khalid, F Jabeen, **MN Ahmad**, Afia Zia, A Haider, Maha Mujahid, Dania Zia, Noor Paio Khan. THE EFFECTS OF FLUORIDE STRESS ON OKRA (ABELMOSCHUS ESCULENTUS L.). Fluoride 52(3 Pt 2):354-361.

2018

13. Zia, A., L. van den Berg, **M.N. Ahmad**, M. Riaz, D. Zia, and M. Ashmore. 2018. Controls on accumulation and soil solution partitioning of heavy metals across upland sites in United Kingdom (UK). J. Environ. Manage. 222:260–267. doi:10.1016/j.jenvman.2018.05.076.
14. Nausheen Ameer, Ghulam Mustafa, Imran Khan, Muhammad Zahid, Maimoona Yasinzai, Surraya Shahab, Nazia Asghar, Ikram Ullah, Afaq Ahmed, Iqbal Munir, Afia Zia, Hamayoon Khan, Saeed

Badshah, Imran Shahid, **MN Ahmad**, and Shakil Ahmed . Chemical sensors: promising tools for the online monitoring of fluorides. 2018. Fluoride 51(3)252–266.

15. Ahmad MA, H Bibi, I Munir, **MN Ahmad**, G Mustafa, I Ullah, I Khan. 2018. FLUORIDE TOXICITY AND ITS EFFECT ON TWO VARIETIES OF SOLANUM LYCOPERSICUM. Fluoride 51(3)267–277.
16. Manzoor, N, A. Zia, **MN Ahmad**, RahmatUllah, S Alam, S Jalil, D Zia. 2018. Assessing foliar application of chitosan and humic acid on soil-solution partitioning of Pisum sativum. Int. J. Biosci. 12(1), 252-265.

2017

17. Shahab S, I Khan, M Zahid, M Yasinzaï, N Ameer, N Asghar, I Ullah, A Nadhman, A Ahmed, I Munir, A Mujahid, T Hussain, **MN Ahmad**, G Mustafa and SS Ahmad. EFFECTS OF FLUORIDE TOXICITY ON ANIMALS, PLANTS AND SOIL HEALTH: A REVIEW Fluoride 50 (4)393–408.
18. Iqbal, MS, **MN Ahmad** and N Hofstra. 2017. The Relationship between Hydro-Climatic Variables and E. coli Concentrations in Surface and Drinking Water of the Kabul River. AIMS Environmental Science, 4(5): 690-708.
19. Jan I, S Ullah, W Akram, NP. Khan, SM. Asim, Z Mahmood, **MN Ahmad**, SS. Ahmad. 2017. Adoption of improved cookstoves in Pakistan: A logit analysis. Biomass and Bioenergy, 103, 55-62.
20. Alim, H., MA Ahmad, I Khan, I Munir, G Mustafa, I Ullah, **MN Ahmad**, M Yasinzaï. EFFECT OF DIFFERENT CONCENTRATIONS OF FLUORIDE ON GROWTH AND NUTRITIONAL VALUE OF TWO ELITE GENOTYPES OF TRITICUM AESTIVUM. Fluoride 50 (1 Pt 2)143–150.

2016

21. Nawsherwan, RK Chawla, M Arif, **MN Ahmad**, H Wasila, I Ulhaq, A Khan, A Zia, AA Mian, RU Shah, I Khan (2016) Risk factors associated with teeth discoloration in district Malakand, Pakistan. Fluoride. 49(3 Pt 1):253-262.
22. Ullah K, SS Ahmad, **MN Ahmad**, S Khan, R Urooj, MS Iqbal, A Zia and NA Khan (2016) Biomonitoring of fluoride pollution via Gladiolus plant in the vicinity of brick kiln field of Lahore. Fluoride 49(3):245-252.
23. Khan MA, JA Khan, Z Ali, I Ahmad and **MN Ahmad** (2016). The challenge of climate change and policy response in Pakistan. Journal of Environmental Earth Sciences. 75:412.
24. Urooj, R, SS Ahmad, **MN Ahmad**, H Ahmad and M Nawaz (2016) Ordinal classification study of vegetation analysis around wetland area: A case study of Mangla dam, Azad Kashmir, Pakistan. Pak. J. Bot., 48(1): 115-119.
25. Atta, MI, A Wahid, M Nawaz, **MN Ahmad**, SS Ahmad, M Ishtiaq (2016) Understanding leaf biochemical traits for Sunflower (*Helianthus annuus* L.) cultivars grown in chromium stressed environment. Int. J. Biosci 8(2) 195-202.

2015

26. SS Ahmad, **MN Ahmad**, R Urooj, M Nawaz and A Khan (2015) Treacherous impacts of hydrogen fluoride around brick kilns: A review. *Jr. of Industrial Pollution Control* 31(2)(2015) pp 335-340.
27. Urooj, R, SS Ahmad, **MN Ahmad** and S Khan (2015) Ordinal classification of vegetation along Mangla dam, Mirpur AJK. *Pak. J. Bot.*, 47(4): 1423-1428.
28. si, M, **MN Ahmad**, B Ahmed Khan, A Zia, SS Ahmad, HU Shah, NA Khan IM Qazi (2015) Effects of soil fluoride on the growth and quality of two tomato varieties grown in Peshawar. *Fluoride* 48 (2) 174-178.
29. Ahmad, S, SS Ahmad, **MN Ahmad**, RU Shah, and M Nawaz (2015) Bioaccumulation of fluoride at three flowering stages in different plant parts of mustard. *Fluoride* 48 (2)169-173
30. Ahmad SS, R Murtaza, R Shabir and **MN Ahmad** and TA Shah (2014) Environmental diversification and spatial variations in riparianvegetation: A case study of Korang River, Islamabad. *Pak. J. Bot.*, 46(4): 1203-1210.

2014

31. Wahid A, SS Ahmad, **MN Ahmad**, B Khaliq, M Nawaz, S Qasim and RU Shah. 2014. Assessing the effects of hydrogen fluoride on mango (*mangifera indica* l.) in the vicinity of brick kiln field of Southern Pakistan. *Fluoride* 47(4): 307-314.
32. **Ahmad MN**, SS Ahmad, A Zia, MS Iqbal, HU Shah, AA Mian, RU Shah (2014) Hydrogen fluoride effects on local mung bean and maize cereal crops from peri-urban brick kilns in South Asia. *Fluoride* 47(4): 315-319.
33. Javed F, **MN Ahmad**, H. Shah, MS Iqbal, A Wahid and SS Ahmad (2014) Effects of seasonal variations on physicochemical properties and concentrations of faecal coliform in River Kabul. *World Applied Science Journal* 29 (1): 142-149.

2013

34. **Ahmad MN**, LJVLD Berg, HU Shah, A Wahid, S Khalid, P Bükler, L Emberson, S Power and M Ashmore. 2013. Effects of ozone on peri-urban vegetable crops in South Asia. *Environmental Pollution* (174), 244-249.

2012

35. **Ahmad MN**, LJVLD Berg, HU Shah, T Masood, P Bükler, L Emberson and M Ashmore. 2012. Hydrogen fluoride damage to fruit trees in the vicinity of brick kiln factories in Asia: an unrecognised environmental problem? *Environmental Pollution*, 162 (1): 319-324.

2006-7

36. **Ahmad MN**, HU Shah, S Khan and M Suleman. 2007. Determination of beta carotene carotene in fresh vegetables using high performance liquid chromatography. *Sarhad J. Agric.* Vol. 23(3): 767-770.
37. Khan S, **MN Ahmad**, HU Shah and IA Khalil. 2007. Serum retinol level of human subjects fed carotene rich diet. *Sarhad J. Agric.* Vol. 23(3): 759-762.
38. Khan S, HU Shah, **MN Ahmad** and M Suleman. 2006. Proximate composition and bio physical characteristics of local Soya bean cultivars. *Sarhad J. Agric.* 22 (1): 151-153.

39. Zia A, HU Shah, S Khan, **MN Ahmad** & MS Siddiqi. 2006. Evaluation of Heavy metals and Pathogenic microorganisms in drinking water of Peshawar Valley. J. Asian Environmental Technology, vol. 10, (4): 08-09.

Books

1. Iqbal, MS., **MN, Ahmad** and Saleemullah (2016) Production of bio fuel from non-renewable carbon sources: A step towards renewable fuel. Lambert Academic Publishing, Germany.

International Conferences/Seminar/Workshops

1. **HUC-ICIMOD Workshop:** Focal person from Pakistan on HUC thematic working group ICIMOD, 6-7 December, 2019, Kathmandu, Nepal.
2. **Participation in Conference:** ICRC-CORDEX conference on regional climate change held at Beijing, China from 13-19 Oct, 2019. Fully funded by APN, Japan
3. **Participant in Workshop:** Frontiers of Development: Royal Society of Engineering, UK on Sustainable Urban Cities, Putra Jaya, Malaysia (23-26 July, 2019). Fully Funded RAEng, UK
4. **Oral Presentation:** National Soil congress, Past, Present and Future, Canberra, Australia (18-22 September, 2018) Partially Funded by HEC, Pakistan.
5. **Oral Presentation:** Invitation to Himalayas University Consortium “Members meeting Pakistan” (27-28 February, 2018), PARC Islamabad. Fully Funded ICIMOD, Nepal
6. **Certificate of Participation:** Two day International Conference on ‘Innovation and Agriculture’ (28-29 March, 2017). University of Agriculture, Peshawar.
7. **Certificate of Appreciation:** Two day Seminar on Statistical Facts and data analytics of child nutritional status in Flood Hit areas of KP (5-6 Jan, 2017). The University of Agriculture, Peshawar
8. **Resource Person:** Two weeks summer camp (10-16 Aug, 2016) at Baragali Campus, arrange by Environment Department, University of agriculture, Peshawar. Fully Funded by UoP.
9. **Session Chaired:** 4th Environment Science conference on water and Food Security in a changing Climate (8-10 Aug, 2016) Baragali Campus, University of Peshawar.
10. **Certificate Participation:** 4th Environment Science conference on water and Food Security in a changing Climate (8-10 Aug, 2016) Baragali Campus, University of Peshawar. Fully Funded by UoP
11. **Conference Participation:** Thinking climate change adaptation in water and farming (28-30 Nov 2017) CCC, University of Agriculture, Peshawar.
12. **Resource Person:** Two weeks 32nd Postgraduate Training Course on Use of Nuclear and other techniques in Food and Agricultural Research (19-30 Sep, 2016) at NIFA, Tarnab, Peshawar.
13. **Certificate of Participation:** Bliss School 2016. “SDG 12- Ensuring Sustainable Consumption and Production Patterns” (18-22 April, 2016) TERI University, New Delhi, India, Fully Funded by TERI, India
14. **Oral Presentation:** 6th SACAM meeting on Impact of Climate Change on Natural Ecosystems, December 03-05, 2014 at Islamabad, Pakistan arrange by UNESCO. Fully Funded SACAM
15. **Participation:** 25th National and International Chemistry conference by Chemical Society of Pakistan at University of Punjab, Lahore on October 20-22, 2014 Fully funded by HEC
16. **Oral presentation:** Assessing the effect of ozone on mung bean using ethylene diurea as a soil drench. 2nd International Conference on Environmental Science and Technology, 14-17 May, 2014 Antalya, Turkey. Fully Funded by HEC
17. **Oral presentation and Session Chair:** ‘Hydrogen fluoride damage to fruit trees in the vicinity of brick kiln factories in Asia: an unrecognized environmental problem? 1st National Conference on Prospects and Opportunities for Agricultural Development in Pakistan at University of Haripur from June 25-27, 2013.
18. **Workshop Participation:** Water quality and quantity assessment in Pakistan. 16-18 Oct, 2012. COMSTECH, Islamabad. Fully Funded by COMSTEC
19. **Oral presentation:** Climate change effects on high altitude ecosystems. 3-5 Sep, 2012. COMSTECH Institute, Islamabad. Fully Funded by COMSTECH

20. **Conference Participation:** Climate Change: A challenge for Agriculturist. 28-30 May, 2012. The University of Agriculture, Peshawar, Pakistan

SUPERVISED MSC AND BSC (HONS)

Muhammad Ali MSc (2014): *Response of mineral in River Kabul to flow rate, pH and temperature over a period of 6 months.*

Maria Saleem (2014) MSc (Hons): *Response of two tomato varieties to different soil fluoride levels. Funded by PSF, Pakistan*

Waqar Aman (2014) MSc (Hons): *The effect of ozone on the nutritional quality of mung bean using protective chemical (EDU) funded by UNEP/SIDA*

Faryal Javed MSc (Hons) (2013): *Effect of climate change on water borne pathogens in flood affected areas of Nowshera.*

Yasar Basar (2013) MSc (Hons): *Effects of roadside pollution on agricultural crops in Peshawar.*

Ziad Ahmad (2011) MSc (Hons): *The purification of Kabul River water for drinking to be use as a future alternate clean water source for Peshawar city*

Fatima Khattak (2011) BSc (Hons): *Response of road side crops to heavy metals emitting from vehicular emissions*

Safina Khattak (2011) BSc (Hons): *The heavy metal analysis of agricultural soil near roadside of Peshawar.*

PHD STUDENTS SUPERVISED

Shahid Iqbal PhD (2017) Joint-supervision: *Quantifying the effects of climate change on water quality in River Kabul funded by NUFFIC, Netherlands*

Sadaf Qasim Shah PhD (2019): *Response of O₃ and HF on agricultural crops of Northern Pakistan fully funded by HEC, Pakistan through Indigenous scholarship*

MEMBERSHIPS

- International Society for Fluoride research (ISFR), New Zealand (Life time member)
- Chemical Society of Pakistan (Life time member)
- British Ecological Society (BES), UK
- British Soil Science Society (BSSS), UK
- Pakistan Society of Biochemistry and Molecular Biology, Pakistan
- Society of Zoological Sciences, China (Life time member)
- British Council Alumni (Life time member)