

## Curriculum Vitae

### Dr. Ishaq Ahmad Mian

Department of Soil & Environmental Sciences

Faculty of Crop Production Sciences

The University of Agriculture Peshawar

Khyber Pakthunkhwa, Pakistan

Cell: +923329844433 or +923329866633

**Present status:** Assistant Professor -TTS-UAP, PAK

Age: 39

Nationality: Pakistani

Marital status: Married

Date of Birth: 14/04/1978

Email: [ishaqmian@aup.edu.pk](mailto:ishaqmian@aup.edu.pk)

Fax: +92919216520

### Professional experience

Oct, 2010 – Present

**Assistant Professor (HEC APPROVED SUPERVISOR)**

Department of Soil & Environmental Sciences

The University of Agriculture Peshawar

June, 2013-Present

**Deputy Director ORIC**

The University of Agriculture Peshawar

Oct, 2000 – Sep, 2006

**PARC-ALP Research Fellow**

Department of Soil & Environmental Sciences,

The University of Agriculture Peshawar

Apr, 2007 – Sep, 2009

**Teaching Assistant**

Environment Department

The University of York, UK

### Education

Nov, 2015

**Post Doc in Soil & Environmental Sciences**

University of Berne, Switzerland.

Apr, 2012

**Post Doc in Soil & Environmental Sciences**

Rothamsted Research, UK

Oct, 2010

**PhD in Soil & Environmental Sciences**

Environment Department

The University of York, UK

Dec, 2002

**MSc (Hons) in Soil & Environmental Sciences**

Department of Soil & Environmental Sciences

The University of Agriculture Peshawar

Feb, 2001

**BSc (Hons) in Soil & Environmental Sciences**

Department of Soil & Environmental Sciences

The University of Agriculture Peshawar

### Funded projects

March, 2017

The assessment of soil Carbon Loss and Trade offs between climate change mitigation and delivering food security along CPEC route, Co-PI, (Ongoing) RS 7.78million. Sponsored by HEC.

Jan, 2016

Climate smart agriculture for steering food security by fostering cropping intensity in seasonal gaps. Co-PI, (Ongoing) budget RS 3.2 million. Sponsored by USPCAS,USA.

Aug, 2016

Development of water efficient hybrid wheat for Pakistan and China. Co-PI (Ongoing) RS 5.0 million. Sponsored by PSF

Jan, 2016 Climate smart agriculture for steering food security by fostering cropping intensity in seasonal gaps. Co-PI, (Ongoing) budget RS 3.2 million.

May, 2015 *(P.I) Charles Wallace Visiting Fellowship, British Council, United Kingdom*  
*“Trade-offs between climate change mitigation and delivering food security in UK and Pakistan”*

Mar, 2013 – Feb, 2014 *Principal Investigator (Higher Education Commission, Pak.)*  
*“Enhancing yield of wheat by priming seeds: effects of soil moisture deficit and limiting soil Nitrogen”*  
 The University of Agriculture Peshawar  
 (Grant Value Rs. 500,000/-)

Feb, 2011 – Apr, 2011 *(P.I) European Science Foundation- CLIM MANI Fellowship*  
*“GHG emissions under climate change in relation to soil parameters, land use & N-deposition rates of 51 European soils”*  
 FRTCF, (BFW), Unit of Soil Biology Vienna - Austria.

**Switzerland Government Excellence Post Doc Scholarship, 2014-15.**

Dec, 2014, *World Academy of Sciences Workshop Grant, “Sustainable Water Management”*

### **International Awards and Fellowships Won**

June, 2016 – May, 2017 **Honorary Research Fellow**, University of Aberdeen, UK.

March, 2016 – June, 2016 **Charles Wallace British Council** Visiting Fellow.

Nov, 2014 – Nov, 2015 **Switzerland Government Excellence Post Doc Scholarship-ESKAS**  
*“Exploring mechanisms of the biodiversity-N cycle relationship in grasslands with the help of <sup>15</sup>N tracer experiments”*

Dec, 2014 **World Academy of Sciences Workshop Grant**  
*“Sustainable Water Management”*

Oct, 2006 – Oct, 2010 **HEC Overseas PhD Scholarship of academic Excellence**  
*“Novel studies of the dynamics of mineral N species transformations and their mobilities relevant to assessing risks to drainage water”*  
 The University of York, UK

Mar, 2010 – May, 2010 **Worldwide University Network R.M.P. Award**  
*“Soil C&N development in reconstructed high biodiverse forest”*  
 The University of Western Australia

Jan, 2010 **NitroEurope IP Secretariat Conference Grant**  
*“NitroEurope IP 5th General Assembly and Open Science Conference, Solothurn, Switzerland”*

Dec, 2009 **Gilchrist Educational Grant, UK**  
 The University of Western Australia

2008-2009 **British Society of Soil Science, Conference Grant Award**

Oct, 1996 – Sep, 2002 **Agriculture Academic Excellence Scholarship**  
 The University of Agriculture Peshawar

## BOOK:

Fahd Rasul, Ashfaq Ahmad, Muhammad Arif, **Ishaq Ahmad Mian**, Kawsar Ali, Muhammad Farooq Qayyum, Qaiser Hussain, Muhammad Aon, Shahzad Latif, Ruben Sakrabani, Muhammad Saghir, Genxing Pan, and Simon Shackley. *Biochar for Agriculture in Pakistan*. 2017. *Sustainable Agriculture Reviews 22, Chapter 4, Pages57-114, Springer International Publishing*.

## Publications

### International (Impact Factor Peer Reviewed Journals)

- Muhammad Arif, Farooq Shah, Aamir Shehzad, Fazal Munsif and **Ishaq Ahmad Mian**. 2017. Improvement in maize growth and quality through integrated use of biochar. *Pakistan Journal of Botany*. 49(1): 85-94.
1. Mahnaz Roohi & Muhammad Riaz & Muhammad Saleem Arif & Sher Muhammad Shahzad & Tahira Yasmeen & Muhammad Arslan Ashraf & Muhammad Atif Riaz & **Ishaq A. Mian**. 2016. Low C/N ratio raw textile wastewater reduced labile C and enhanced organic-inorganic N and enzymatic activities in a semiarid alkaline soil. *Environ Sci Pollut Res*, DOI 10.1007/s11356-016-8102-2.
  2. Fatima Naseer, Jamila Baig, Saif-Ud-Din, Maisoor Ahmed Nafees, Abida alam, Nazia Hameed, Muhammad Adnan, Muhammad Arshad, Mushtaq Ahmad Khan, Muhammad Romman, Ishaq Ahmad Mian, Syed Rizwan Ali Shah. Impact of water quality on distribution of macro-invertebrate in Jutial nallah, Gilgit-Baltistan, Pakistan
  3. 2016. *International Journal of Biosciences*, 9, 6, 451-459.
  4. Naseem Khan, Zahir Shah, Muhammad Adnan, Murad Ali, Bushra Khan, **Ishaq Ahmad Mian**, Azaz Ali, Muhammad Zahoor, Muhammad Roman, Lesen Ullah, Abdul Khaliq, Waqas Ali Khan and Aftab Alam. 2016. Evaluation of Soil For Important Properties And Chromium Concentration In The Basin of Chromite Hills In Lower Malakand. *Advances in Environmental Biology*, 10(7): 141-147.
  5. Muhammad Adnan, Zahir Shah, Hidayat Ullah, Bushra Khan, Muhammd Arshad, Ishaq Ahmad Mian, Gohar Ali Khan, Mukhtar Alam, Abdul Basir, Inayat-Ur- Rahman, Murad Ali and Wasif Ullah Khan. 2016. Yield response of wheat to nitrogen and potassium fertilization. *Pure Appl. Biol.*, 5(4): 868-875.
  6. Basir, A., M.T. Jan, M. Alam, A.S. Shah, K. Afridi, M. Adnan, K. Ali and **I.A. Mian**. 2016. Impacts of tillage, stubble management and nitrogen on wheat production and soil properties. *Canadian Journal of Soil Science*, 10.1139/CJSS-2015-0139.
  7. Muhammad Adnan, Zahir Shah, Muhammad Arif, Muhammad Jamal Khan, **Ishaq Ahmad Mian**, Muhammad Sharif, Mukhtar Alam, Abdul Basir, Hidayat Ullah, Inayat-ur-Rahman and Nouman Saleem. 2016. Impact of rhizobial inoculum and inorganic fertilizers on nutrients (NPK) availability and uptake in wheat crop. *Can. J. Soil Sci.* 96: 169–176 (2016) [dx.doi.org/10.1139/cjss-2016-0012](https://doi.org/10.1139/cjss-2016-0012).
  8. Farhat Nabeela, Waheed Murad, Imran Khan, **Ishaq Ahmad Mian**, HazirRehman, Muhammad Adnan, AzizullahAzizullah. 2015. Effect of wood ash application on the morphological, physiological and biochemical parameters of Brassica napus L. *Plant Physiology and Biochemistry*, 95, 15–25.

9. Muhammad Arif, Mohammad Tariq Jan, **Mian, I. A.S.A.** Khan, Philip Hollington and David Harris. **2014**. Evaluating the Impact of Osmopriming Varying with Polyethylene Glycol Concentrations and Durations on Soybean. *International Journal of Agriculture and Biology*, **16(2)**, 359–364.
10. Riaz, M., **I. A. Mian** and M. S. Cresser. **2012**. How much does NH-N contribute to mineral-N losses in N-impacted acid soils under grassland in the UK? A microcosm study. *Chemistry and Ecology*, **24**, 259-267.
11. **Mian I. A.**, Riaz M. and Cresser M.S. **2011**. How stable are soils for the determination of available N? *Communications in Soil Science and Plant Analysis*, **42** (8): 896-904.
12. Riaz, M., **I. A. Mian** and M. S. Cresser. **2011**. How important is plant litter to the regulation of mineral-N leaching to streams in winter? An observations-led experimental approach. *Soil Use and Management*, **27(1)**: 10-17.
13. **Mian, I. A.**, S. Begum, M. Riaz, C. McClean, M. Ridealgh and M. S. Cresser. **2010**. Spatial and temporal trends in nitrate concentrations in the River Derwent, North Yorkshire, and its need for NVZ status. *The Science of the Total Environment*, **408**, 702-712.
14. Riaz, M., **I. A. Mian**, Ambreen Bhatti and M. S. Cresser. **2010**. An exploration of how litter controls drainage water DIN, DON and DOC dynamics in freely draining acid grassland soils. *Biogeochemistry*, **76**: 3936-3942.
15. Riaz, M., **I. A. Mian** and M. S. Cresser. **2010**. Litter effects on ammonium dynamics in an acid soil under grassland. *Geoderma*, **159**:198–208.
16. **Mian, I. A.**, M. Riaz and M. S. Cresser. **2009**. The importance of ammonium mobility in nitrogen- impacted unfertilized grasslands: A critical reassessment. *Environmental Pollution*, **157**, 4, 1287-1293.
17. Riaz, M., **I. A. Mian** and M. S. Cresser. **2009**. Controls on inorganic N species transformations and potential leaching in freely drained sub-soils of heavily N-impacted acid grassland. *Biogeochemistry*, **92**:263-279.
18. M. Riaz., **I. A. Mian** and M. S. Cresser. **2008**. Extent and causes of 3D spatial variations in potential N mineralization and the risk of ammonium and nitrate leaching from an N-impacted permanent grassland near York, UK. *Environmental Pollution*, **156**, 3, 1075-1082.
19. Malcolm S. Cresser, Matthew J. Aitkenhead and **I. A. Mian**. **2008**. A reappraisal of the terrestrial nitrogen cycle: What can we learn by extracting concepts from Gaia theory? *The Science of the Total Environment*, **400**, 1-3, 344-355.
20. **Mian, I. A.**, M. Riaz and M. S. Cresser. **2008**. What controls the nitrates flush when air dried soils are rewetted? *Chemistry and Ecology*, **24**, 259-267.

#### **National HEC Recognized Journals (Peer Reviewed)**

1. Khan, F., Hayat, Z., Ahmad, W., Ramzan, M., Shah, Z., Sharif, M., **Mian, I. A.** and Muhammad, H. **2013**. Effect of slope position on physico-chemical properties of eroded soil. *Soil & Environment*, **32(1)**, 22-28.
2. Khatam, A., Khan, Z.M., Nawab K., **Mian, I.A.**, Hanif M. **2013**. Effect of position on physico-chemical properties of eroded soil. *Soil & Environment*, **32**-22-28.
3. Tariq M, Saeed A, Nisar M, **Mian I. A.** and Afzal M. **2011**. Effect of potassium rates and sources on the growth performance and on chloride accumulation of maize in two different textured soils of Haripur, Hazara Division. *Serhad Journal of Agriculture*, **27**:215-422.
4. Khan M, Khan M. Q., Rehman S, Naimatullah M., Sadiq M and **Mian I. A.** **2011**. Characterization of Rod Kohi soils of D.I.Khan, Pakistan. *Serhad Journal of Agriculture*, **27**:591-594.
5. Inamullah, Naveedur Rehman, Nazeer Hussain Shah, Muhammad Arif, Muhammad Siddiq and **Ishaq A Mian**. **2011**. Correlations among grain yield and yield attributes in maize hybrids at various Nitrogen levels. *Serhad Journal of Agriculture*, **27**:531-538.
6. M. S. Sarir, M. I. Durrani and **I.A.Mian**, **2006**. Effect of the source and rate of humic acid on phosphorus transformations. *Journal of Agricultural and Biological Science*, **1**, 29-31.
7. Zahir Shah and **I.A.Mian**. **2006**. Effect of integrated use of farm yard manure and urea on yield and nitrogen uptake of wheat. *Journal of Agricultural and Biological Science*, **1**, 60-65.

### **Professional Bodies Memberships:**

Dr Ishaq Ahmad has been selected as member of the Oeschger Climate Change Centre (OCCC) of the University of Berne, Switzerland and member of the German Soil Science Society. During his Postdoc training, Dr. Ahmad has attended different departmental seminars and workshops delivered by graduate students. He has keenly participated in the conferences and guest presentations organized by the OCCC, University of Berne.

- Member of South Asian Network for Development and Environmental Economics, Kathmandu, Nepal.
- Member of Soil Science Society of Pakistan.
- Member of Oeschger Centre, Climate Change Research, Bern, Switzerland.
- Member of Germany Soil Science Society (DBG)
- Member of British Soil Science Society, UK
- Life Member Weed Science Society of Pakistan.
- Life Member Pakistan Society of Agronomy.
- Member British Alumni Association Pakistan.
- Member Danish Development Research Network
- Member of Aquacorp.
- Member of Water Education Foundation.
- Member Decision support system of AgrotransferTechnology.

### **Professional Training & Techniques:**

My primary research interests are in plant-soil interactions: soil biogeochemical cycling, Global change impacts on ecosystems, Soils and agricultural options to mitigate climate change, Soil and agricultural sustainability, Ecosystem modeling and plant and microbial genetics. Much of my work focus on nutrient cycling. I have a particular interest in drying and rewetting of soils and the elements it strongly interacts with, including phosphorus, nitrogen and carbon. State-of-the-art analytical approaches, such as HPLC-ICP-MS, Atomic Absorption, Isotopic labeling techniques, Spectrophotometer, CN Elementar.

Whilst undertaking my postdoctoral research, I successfully attended one-week professional course on *“Use of Isotope Methods in Soil Research”* organized by the internationally renowned Professor, Yakov Kuzyakov, Georg-August University Göttingen, Germany. Furthermore attended the IESP workshop *“Soil - An Essential Resource”* in April 2015 organized by the Technische Universität München, Germany. I tried my best to learn the application of several state-of-the-art analytical techniques including elemental analysis-isotope ratio mass spectrometry (EA-IRMS) and trace-gas preconcentration-isotope ratio mass spectrometry (Tracegas-IRMS).

### **Conferences/Seminars/Workshops**

- **Mian, I. A.,**Riaz, M., and M. S. Cresser. 2010. Do plants evolve to regulate their own soil N supply? Paper presented at CAPER 2010, The University of York, UK. Monday 29<sup>th</sup> - Wednesday 31<sup>st</sup> March 2010.
- Seminar on “EU (FP7) Research Funding: Maximising the Opportunities” The University of York, UK (10/28/2010-10/28/2010).
- Conference on "Post graduate Environment Department Research Conference" Food and Environment Research Agency, Sand Hutton, York, UK (2/23/2010-2/25/2010)
- Riaz, M., **I. A. Mian,** and M. S. Cresser. 2010. Litter effects on N dynamics and potential leaching in acid grassland soils? Poster presented at 19th World Congress of Soil Science, Soil Solutions for a Changing World – 6 August 2010, Brisbane, Australia.
- Workshop on "Environment Yes 2009 Competition" University of Oxford (10/15/2009-10/15/2009).
- Workshop on "Workshop on "Plant Soil Interactions. A joint meeting of the Scottish Root Group and the Scottish Soils Discussion Group of the British Society of Soil Science " The Macaulay Land Use Research Institute, Aberdeen, Scotland (11/3/2009-11/3/2009).

- Riaz, M., **I. A. Mian**, and M. S. Cresser. 2009. What controls the inorganic N species production and leaching in freely drained sub-soils of heavily N-impacted unfertilized acid grassland? Poster presented at The 16<sup>th</sup> Nitrogen Workshop (2009) Torino Incontra Congress Centre, Turin.
- **Mian, I. A.**, Riaz, M., and M. S. Cresser. 2009. The importance of ammonium mobility in nitrogen-impacted unfertilized grasslands: A critical reassessment. Poster presented at The 16<sup>th</sup> Nitrogen Workshop (2009) Torino Incontra Congress Centre, Turin.
- Riaz, M., **I. A. Mian**, S. Begum, A. Bhatti and M. S. Cresser. 2009. Ammonium: a mobile cation in N- impacted soils? Poster presented at CAPER 2009, Manchester University, Chancellors Hotel and Conference Centre. Monday 6<sup>th</sup> - Wednesday 8<sup>th</sup> April 2009.
- Conference on "Soil Quality = Environment Quality Conference " Johnstown Castle, Wexford, Ireland (10/9/2009-11/9/2009).
- Conference on Soil Organic Matter" Rothamsted Research, Harpenden, UK (6/23/2009-6/23/2009).
- Workshop on "Second Nitro Europe Summer School "Newbattle Abbey College, Edinburgh, Scotland (6/1/2008-6/14/2008).
- Seminar on "Committee on Air Pollution Effects Research (CAPER)" Manchester, UK (4/6/2008-4/8/2008).
- Workshop on "Using isotope data to better quantify the components of N cycle" The University of Bristol, UK (10/26/2007-10/26/2007).

### **Research interest**

Dr. Mian's personal career lies in the field of a) soil biogeochemistry and fertility, soil organic carbon and nitrogen determination along with their stable isotopes by CHN auto-analyser coupled with isotope ratio mass spectrometry, soil microbial biomass b) develop and formulate crop, soil and fertilizer management technologies that enhance soil nutrient reserves and utilize nutrients within soil-plant systems effectively and efficiently, maintain optimum economic sustainable crop productivity and minimize damage to the environment. c) Develop novel techniques/management practices and products to improve yield and quality of agronomic crops. In my University life, The applicant have lead several projects with different key stakeholders including international government agencies, NGO's, Universities and Higher Education Commission.

### **Independent thinking, leadership qualities, and capacity to transfer knowledge**

My academic background confirms my ability to generate outstanding results of the high standard required by the high impact journals. Keeping the passion of PhD, by publishing every chapter in different journal of Soil Science, the proposed breakthrough research has been published in diverse international journals. My research experience has given me a wide range of research skills, which have resulted in production of 18 research papers in high quality journals and several presentations at national/international conferences. I have a strong wish now to demonstrate that I can work effectively as an independent researcher, applying my skills in an important area of my own choosing. I also wish to develop additional skills over the timescale of the scholarship in methodology for quantification of environmental impact to interactive components of ecosystems (i.e. ecosystem functions) with a view to producing a robust scientific method that is readily usable by decision makers and in development of pollution management strategies for policy makers. After completion of my PhD, Higher Education Commission Pakistan selected me on merit as Assistant Professor, Department of Soil & Environmental Sciences, The University of Agriculture Peshawar Khyber Pakhtunkhwa as Assistant Professor and have been sharing and passing my research and academic experiences with the faculty and post graduate students. Currently, I am major supervisor of 2 PhD students, 3 MSc students and 4 undergraduate students. In the meanwhile, I am teaching three subjects including Soil Salinity, Soil Chemistry and Municipal Waste Management. I am also the organizer of departmental seminars and conferences. My leadership skills motivate me towards research goals by getting international fellowships and national projects awarded by different agencies. Currently I am the Principal Investigator of one national projects targeting the area of "C, N & P dynamics towards soil fertility and wheat sustainability". Due to my academic excellence, I am honorary selected as Board of Studies External Member of Agronomy Department, which evaluates postgraduate thesis and synopsis and data manipulation. I am also selected as member of "Staff Proctorial Board" supervising students for maintaining discipline

in academic and co-curricular activities. The Selection Board and finally Senate of The University of Agriculture Peshawar award me the maximum, four advanced increments due to my research productivity and academic excellence. I am selected for additional administration duties as Deputy Director of The 'Office of Research, Innovation and Commercialization (*ORIC*) at The University of Agriculture, Peshawar. My research has attracted funding from DEEWR Australia, European Science Foundation, Pakistan Agriculture Research Council, World Wide Universities Network, UK, The University of Western Australia, BBSRC, UK, TWAS, British Council, UK British Society of Soil Science, UK etc.