

# DR. MUHAMMAD SAFDAR HUSSAIN

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## CORRESPONDENCE

Lecturer and HOD Department of Forestry and Rangeland  
Management, Kohsar University Murree,  
Governor House RD  
Kashmir Point Murree,



## PERSONAL PROFILE

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<b>Father Name:</b>	Ahmad Ali	<b>Place of Birth:</b>	Bahawalpur, Pakistan
<b>Date of Birth:</b>	September 03, 1992	<b>Gender:</b>	Male
<b>Nationality:</b>	Pakistani	<b>Marital Status:</b>	Unmarried
<b>Cell Number:</b>	+923336394250	<b>Email:</b>	safdarhussain@kum.edu.pk

## EDUCATIONAL BACKGROUND

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<b>Ph.D.</b>	University of Agriculture Faisalabad, Pakistan
Subject	Forestry
Supervisor	Dr. M. Ayyoub Tanvir
Passing Year	January 29, 2021

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<b>M.Sc. (Hons)</b>	University of Agriculture Faisalabad, Pakistan
Subject	Agriculture-Forestry
Supervisor	Dr. Muhammad Farrakh Nawaz
Passing Year	2016

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<b>B.Sc. (Hons)</b>	University of Agriculture Faisalabad, Pakistan
Subject	Agriculture-Forestry
Division	1 <sup>st</sup>
Passing Year	2014

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<b>Intermediate</b>	Moon System of Education H/S.S Bahawalpur, Pakistan
Subjects	Chemistry, Physics, Biology
Division	1 <sup>st</sup>
Passing Years	2010

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<b>Secondary School</b>	Pakistan Railway High School Sama Satta Bahawalpur, Pakistan
Subjects	Chemistry, Math, Physics, Biology
Division	1 <sup>st</sup>
Passing Year	2008

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## COMPITITIVE EXAMS PASSED

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**GRE Subject:** Passed with 88 Marks

**IPFP Assessment Test** Passed with 89 Marks

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## WORK EXPERENCE

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- 1 Worked in a Research Project as an **Interne** through grant number TT09/12, Endowment Fund Secretariat, University of Agriculture Faisalabad, Pakistan (Feb-2014 to June-2014)
  - 2 Worked in a Research Project as a **Research Assistant** under NRPU Project # 2459, Higher Education Commission (HEC) Pakistan (December-2014 to July-2016)
  - 3 Worked as a **Research Scholar** at School of Forest Resources & Conservation, University of Florida, USA, Institute of Food and Agricultural Sciences (IFAS) Under International Research Support Initiative Program for Ph.Ds. Funded by Higher Education Commission (HEC) Pakistan (May-2019 to November-2019)
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## EMPLOYEMENT

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- 1 Worked as an **Interne** in Environment Protection Authority, Faisalabad Pakistan under Prime Minister Pakistan youth internship program (October-2016 to April-2017)
  - 2 **Teaching Assistant**, Department of Forestry and Range Management, Faculty Agriculture, University of Agriculture Faisalabad, Pakistan (Winter-2017-18)
  - 3 **Research Associate**, Department of Agronomy, University of Agriculture Faisalabad, Pakistan under NRPU Project # 4706, Higher Education Commission (HEC) Pakistan (April-2017 to January-2021)
  - 4 **Lecturer (Visiting Faculty)**, Department of Forestry and Range Management Faculty Agricultural Sciences & Technology, Bahauddin Zakariya University Multan, Pakistan (Spring-2021)
  - 5 **Lecturer (Visiting Faculty)**, Department of Agronomy, Faculty Agricultural Sciences & Technology, Bahauddin Zakariya University Multan, Pakistan (Spring-2021)
  - 6 **Assistant Professor (IPFP Fellow)**, Department of Forestry and Range Management, Faculty Agricultural Sciences & Technology, Bahauddin Zakariya University Multan, Pakistan
  - 7 **Lecturer (BPS-18)**, Kohsar University Murree (since 16-03-2022)
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## COURSES TOUGHT

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1	FRW-707: Forestry and Environmental Pollution	3(2-1)
2	FRW-214: Integrated Land Use Management	3(2-1)
3	FRW-204: Biodiversity and Climate Change	3(2-1)
4	FRW-201: Forestry, Range and Watershed Management	3(2-1)
5	FOR-304: Fundamental of Ecology	3(3-0)

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## RESEARCH EXPERIENCE

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- Assessment of carbon sequestration rate in farm trees and associated Soils
  - Analyzing the effect of drought stress on different tree species
  - Assessment of reclamation potential and physiological response of major woody vegetation under salinity stress
  - Assessment of the rate of deforestation and associated drivers
  - Monitoring of salt-affected soils through high resolution satellite imagery
  - Monitoring of vegetation cover changes in irrigated forest plantation through GIS and Remote Sensing
  - Monitoring of land use land cover change triggered by the increase of urban living style using Landsat satellite Imagery
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## RESEARCH SKILLS

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- Tree Physiology and Biochemical Analysis
- Forest inventory and Biometrics (Tree height, age and girth measurement)
- Impacts of Drought and Salinity stresses and their managements
- GIS and Remote Sensing
- Spatial and Digital Monitoring of Land Use and Land Cover Changes
- Field Survey and Questionnaire based studies
- Forest Management
- Satellite Image Analysis
- Geostatistical Analysis
- Carbon Sequestration

## RESEARCH ARTICLES PUBLISHED

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1. **Hussain, M.S.**, Nawaz, M.F., Tanvir, M.A. and Hira, N., 2020. Comparative Effect of Drought on *Eucalyptus camaldulensis* and *Tamarix aphylla* at Early Stages of Growth. **Sarhad Journal of Agriculture**, 36(2), pp.559-566. (1<sup>st</sup> + **Corresponding Author**)
2. **Hussain, M.S.**, Naeem, M.S., Tanvir, M.A., Nawaz, M.F. and Abd- Elrahman, A., 2021. Eco-physiological evaluation of multipurpose tree species to ameliorate saline soils. *International Journal of Phytoremediation*, pp.1-13. (1<sup>st</sup> + **Corresponding Author**)

3. ARIF, A., RASHEED, F., **HUSSAIN, M. S.**, ASHRAF, I., NAWAZ, M. F., & TANVIR, M. A. ACCLIMATIZATION STRATEGY OF TWO COMMON TREE SPECIES UNDER WATER STRESS. *Pak. J. Bot*, 54, 3. (**Corresponding Author**)
4. Yasin, G., Ur Rahman, S., Farrakh Nawaz, M., Qadir, I., Zubair, M., Gul, S., **Safdar Hussain, M.**, Zain, M. and Athar Khaliq, M., 2021. Estimating carbon stocks and biomass accumulation in three different agroforestry patterns in the semi-arid region of Pakistan. *Carbon Management*, pp.1-10.

## **MANUSCRIPT UNDER PROGRESS**

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1. Forest utilization and perceptions of drivers of deforestation among residents of a multi-use forest region in Pakistan
2. Ion accumulation strategy of *Eucalyptus camaldulensis* in different plant organs: A tolerance mechanism tested under salinity stress
3. Monitoring salt-affected soils through GIS Modelling and High resolution SPOT Satellite Imageries

## **CONFERENCES/SEMINARS PRESENTATION/ATTENDED**

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- 1 **Muhammad Safdar Hussain**, Muhammad Farrakh Nawaz, Irfan Ahmad and Shazia Afzal. Comparative effect of drought on *Eucalyptus camaldulensis* and *Tamarix aphylla* at their early stages of growth. International conference on Major Environmental Constraints to Plants: Assessment and Reclamations. Department of Botany, Government College University, Faisalabad, Pakistan (**MECP-138**)
- 2 **Muhammad Safdar Hussain**, Muhammad Ayyoub Tanvir, Muhammad Farrakh Nawaz and Noor-E-Hira. Calculation of carbon sequestration rate and carbon stocks in farm trees under semi-arid climate of Punjab. 2nd international conference on plant sciences. Department of Botany, Government College University, Lahore, Pakistan (**ICPS-168-2018**)
- 3 Noor-E-Hira, Ihsan Qadir and **Muhammad Safdar Hussain**. Biomass production and nutritional composition of *Moringa oliefera* affected by nitrogen and irrigation applications. International Conference on Forestry and Environment: Challenges and Prospects. Department of Forestry and Range Management, University of Agriculture Faisalabad, Pakistan (2016)
- 4 Attended Workshop on “**Result of Agrobiodiversity Mapping in the Cotton Landscape**” (WWF, August 2021) Multan, Pakistan
- 5 Attended International online seminar/webinar on “**Mentoring: How does it connect to research ethics**” organized by Department of Plant Pathology, University of Agriculture Faisalabad, Pakistan. Speaker Prof. Dr. Mark L. Gleason, USA. (September 7, 2021)

- 6 Attended International online seminar/webinar on **“Plant Biodiversity and Ecosystem Services”** organized by Cholistan Institute of Desert Studies, Islamia University Bahawalpur, Pakistan. Speaker: Dr. Rickard Saudin Jooste Swedish Council, Stockholm, Sweden (September 8. 2021)
- 7 Attended live webinar on **“Effective Teaching and Teaching Philosophy”** under National Faculty Development Program NFDP-2021 organized by National Academy of Higher Education, Pakistan. Speaker: Dr. Sana Waheed, Department of Mechanical Engineering National University of Sciences & Technology, Islamabad Pakistan (09/22/2021 Time 08:00 AM to 10:00 AM)
- 8 Attended live webinar on **“Student Identity and Multiple Intelligences”** under National Faculty Development Program NFDP-2021 organized by National Academy of Higher Education, Pakistan. Speaker: Dr. Saima N. Sherazi, Senior Fellow of Higher Education Academy Queen Mary University of London, UK (09/23/2021 Time 08:00 AM to 10:00 AM)
- 9 Attended live webinar on **“Course Design and Policies”** under National Faculty Development Program NFDP-2021 organized by National Academy of Higher Education, Pakistan. Speaker: Dr. Shazia Awan, Ed.D. (University of Exeter, UK) Dalhousie University, Halifax, Canada (09/24/2021 Time 08:00 AM to 10:00 AM)
- 10 Attended live webinar on **“Academic Integrity”** under National Faculty Development Program NFDP-2021 organized by National Academy of Higher Education, Pakistan. Speaker: Dr. Shazia Awan, Ed.D. (University of Exeter, UK) Dalhousie University, Halifax, Canada (09/25/2021 Time 08:00 AM to 10:00 AM)
- 11 Attended live webinar on **“Assessment Instrument, Designing Rubric and Transparency in Higher Education”** under National Faculty Development Program NFDP-2021 organized by National Academy of Higher Education, Pakistan. Speaker: Dr. Saima N. Sherazi, Senior Fellow of Higher Education Academy Queen Mary University of London, UK (09/26/2021 Time 08:00 AM to 10:00 AM)
- 12 Attended live webinar on **“Citation and Avoiding Plagiarism”** under National Faculty Development Program NFDP-2021 organized by National Academy of Higher Education, Pakistan. Speaker: Dr. Saima N. Sherazi, Senior Fellow of Higher Education Academy Queen Mary University of London, UK (09/28/2021 Time 08:00 AM to 10:00 AM)
- 13 Attended live webinar on **“Lesson Planning and Learning Activities”** under National Faculty Development Program NFDP-2021 organized by National Academy of Higher Education, Pakistan. Speaker: Dr. Sana Waheed, Department of Mechanical Engineering National University of Sciences & Technology, Islamabad Pakistan (09/29/2021 Time 08:00 AM to 10:00 AM)

## **LAB INSTRUMENTS AND SOFTWARE USED AND SKILLS**

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1. Operating of Infrared Gas Analyzer (IRGA)
2. Operating of Spectrophotometer
3. Scholander Pressure Bomb
4. Flame Photometer
5. EC and pH meter
6. Leaf area meter
7. Relascope and Increment borer
8. ENVI Software (for Satellite Image and data Analysis)

9. ArcMap Software (for GIS Modelling)
10. Endnote (Reference Management)
11. Mendeley (Reference Management)
12. Statistix 8.1 (Data Analysis)
13. SPSS (Data Analysis)

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## **LANGUAGES**

- 1 Urdu
- 2 English
- 3 Saraiki
- 4 Punjabi

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## **ENGLISH LANGUAGES COURSE**

- 1 Completed English speaking course offered by TESL program, Department of Linguistic, University of Florida, USA (Spring 2019)

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## **MEMBERSHIP OF SOCIETIES**

- 1 Active member of Pakistan Society of Foresters (Department of Forestry and Range Management, University of Agriculture)
- 2 Active member of Society of Southern Foresters (Department of Forestry and Range Management Bahauddin Zakariya University Multan, Pakistan)

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## **COUNTRIES VISTED**

- 1 USA, under IRSIP Program funded by HEC Pakistan

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## **ACHIVEMENTS**

1. Higher Education Commission Pakistan IRSIP Scholarship for pursuing Ph.D. Research in University of Florida, USA
2. Award of Prime Minister Pakistan Laptop during PhD degree
3. Award of Prime Minister Tuition Fee Reimbursement Scholarship during whole Ph.D. degree
4. Award of Interim Placement of Fresh PhDs (IPFP) Fellowship (an equal position to Postdoctoral) by Higher Education Commission Pakistan by passing pre-assessment test and subsequent training

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## **ADDITIONAL INFORMATION/SKILLS**

- Experience in data organization, synthesis, analysis, and management
- Strong skills in scholarly and non-technical writing and oral communication skills in English
- Motivated self-starter with the ability to work independently and to participate creatively in collaborative teams across the laboratory
- Ability to function well in a fast-paced research environment, set priorities to accomplish multiple tasks within deadlines, and adapt to ever changing needs
- Highly interested in mentoring other students.
- Experience of training, teaching, and supervising other graduate students.

- Collaboration with foreign researchers
- Passion for understanding the new technological ways of research of natural resource management and other relevant fields

## **SUPERVISED/HELPED STUDENTS FOR RESEARCH WORK (VOLUNTEER WORK)**

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1. **Mr. Azeem Sabir** (Ph.D.) Department of Forestry and Range Management, University of Agriculture Faisalabad Pakistan
2. **Mr. Arslan Arif** (Ph.D.) University College of Agriculture & Environmental Sciences (UCA&ES), The Islamia University of Bahawalpur Pakistan
3. **Mr. Muhammad Waseem** (Ph.D.) Department of Forestry and Range Management Bahauddin Zakariya University, Multan, Pakistan
4. **Mr. Sheikh Talah** (M.Phil.) Department of Forestry and Range Management, University of Agriculture Faisalabad Pakistan
5. **Mr. Usama Waseem** (M.Phil.) Department of Forestry and Range Management, University of Agriculture Faisalabad Pakistan
6. **Miss Wusqa Arshad** (M.Phil.) Department of Forestry and Range Management, University of Agriculture Faisalabad Pakistan
7. **Miss Seerat Arif** (M.Phil.) Department of Forestry and Range Management, University of Agriculture Faisalabad Pakistan
8. **Mr. Rashid** (M.Phil.) Department of Forestry and Range Management Bahauddin Zakariya University, Multan, Pakistan

## **Thesis/Dissertations qualified**

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1. Calculation of carbon sequestration rate and carbon socks in farm tress of tehsil Bhalwal and Sahiwal District Sargodha (**MSc Hons- 2016**)
2. Assessment of Reclamation Potential and Physiological Response of Major Woody Vegetation to Salt Affected Soils under Semiarid Climate of Punjab (**Ph.D.-2021**)

## **ACADEMIC/PROFESSIONAL REFERENCES**

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- 1 **Dr. Amr Abd-Elrahman**  
Associate Professor-Geomatics  
School of Forest Resources and Conservation,  
Gulf Coast Research and Education Center,  
University of Florida USA  
**Email:** [aamr@ufl.edu](mailto:aamr@ufl.edu)  
**Phone:** +1-8137572283
- 2 **Dr. John W Groninger**  
Acting Associate Dean,

College of Agricultural, Life, and Physical Sciences  
Professor, Forestry Program, School of Agricultural Sciences  
Southern Illinois University  
Carbondale, IL 62901 U.S.A.  
Office: 200 Agriculture Building, 1205 Lincoln Drive  
**Email:** [groninge@siu.edu](mailto:groninge@siu.edu)  
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**3. Dr. Kofi Akamani**

Associate Professor  
Department of Forestry  
Southern Illinois University  
Carbondale, IL 62901, USA  
Email: [k.akamani@siu.edu](mailto:k.akamani@siu.edu)  
Phone: +1618-453-7464

**4. Dr. M. Ayyoub Tanvir**

Department of Forestry and Range  
Management, University of Agriculture  
Faisalabad, Pakistan  
**Email:** [ayyoub.tanvir@uaf.edu.pk](mailto:ayyoub.tanvir@uaf.edu.pk)  
**Phone:** +92-3216687415

**5. Prof. Dr. Muhammad Tahir Siddiqui**

Ex. Chairman Department of Forestry and Range  
Management, University of Agriculture  
Faisalabad, Pakistan  
**Email:** [tsiddiqui@uaf.edu.pk](mailto:tsiddiqui@uaf.edu.pk)  
**Phone:** +92-3007900797

**6. Dr. Muhammad Farrakh Nawaz**

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University of Agriculture Faisalabad  
Pakistan

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**7. Ihsan Qadir**

Professor, Forestry,  
Department of Forestry and Range Management,



Faculty Agricultural Sciences & Technology,  
Bahauddin Zakariya University Multan, Pakistan  
**Email:** [drbhabha@bzu.edu.pk](mailto:drbhabha@bzu.edu.pk)  
**Phone:** +923007218504