

CURRICULUM VITAE



Engr. Dr. Altaf Ali Siyal

Post Doctorate:	i. Fulbright Fellowship (USA) ii. Endeavour Fellowship (AUSTRALIA)
Ph.D.	Quaid-e-Azam Merit Scholarship (UK)
M.E.	Quaid-e-Azam Merit Scholarship (SAU, PAK)
B.E.	(SAU, PAK)



Faculty of Agricultural Engineering
Sindh Agriculture University, Tandojam
PAKISTAN

CURRICULUM VITÆ

May, 2021

1. PERSONAL

Name: Altaf Ali Siyal

Fathers' Name: Muhammad Ramzan Siyal

Designation: Professor

Year of birth: 1967

Nationality: Pakistani

Countries Visited: USA, UK, Australia, Turkey, Iran, Bangladesh, Oman, Singapore, Thailand, Macau (China), Nepal, Netherlands.

Google Scholar: <https://scholar.google.com.pk/citations?user=sSMbppcAAAAJ&hl=en>

ResearchGate: https://www.researchgate.net/profile/Siyal_Aa

Publons: <https://publons.com/author/1277295/altaf-ali-siyal#profile>

Facebook: <https://www.facebook.com/siyal1990>

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Mailing Address:

i. Office: Department of Land and Water Management, Faculty of Agricultural Engineering, Sindh Agriculture University, Tandojam, Pakistan

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2. EXPERIENCE

i. Administrative

2020- to date Director ORIC, Sindh Agriculture University Tandojam, Pakistan [Sept. 24, 2020 – to date]

2016- to 2020 Head of Department of Integrated Water Resources Management, U.S.-Pakistan Centre for Advanced Studies in Water (USPCAS-W), Mehran University of Engineering & Technology, Jamshoro, Pakistan [July 31, 2016 – to Jan. 14, 2020]

Mar. - May, 2014 Incharge Dean, Faculty of Agricultural Engineering, Sindh Agriculture University Tandojam, Pakistan [March 3, 2014 – May 28, 2014]

2011-2015 Chairman, Department of Land and Water Management, Sindh Agriculture University Tandojam, Pakistan [Nov. 04, 2011 to May 14, 2015]

2009-2011 Incharge Director, Information Technology Centre, Sindh Agriculture University Tandojam [Oct. 27, 2009 to June 05, 2011]

ii. Teaching

Thirty years' experience of Teaching and Research in the field of Irrigation, Drainage, Land & Water Recourses Management, and Soil Reclamation.

2020-to date Professor, Department of Land and Water Management, Faculty of Agricultural Engineering, Sindh Agriculture University, Tandojam Pakistan.

2015-2020 Professor & Thematic Head, U.S.-Pakistan Centre of Advanced Studies in Water (USPCAS-W), Mehran University of Engineering & Technology, Jamshoro, Pakistan

- 2010- 2015** Professor, Department of Land and Water Management, Faculty of Agricultural Engineering, Sindh Agriculture University, Tandojam Pakistan.
- 2006- 2010** Associate Professor, Department of Land and Water Management, Faculty of Agricultural Engineering, Sindh Agriculture University Tandojam, Pakistan.
- 2001-2006** Assistant Professor, Department of Land and Water Management, Faculty of Agricultural Engineering, Sindh Agriculture University Tandojam, Pakistan.
- 1997-2001** Assistant Professor in Agricultural Engineering, Z. A Bhutto Agricultural College, Larkana. Pakistan.
- 1990-1997** Lecturer in Irrigation and Drainage, Faculty of Agricultural Engineering, Sindh Agriculture University Tandojam, Pakistan.

iii. Chairman/Convenor of various Committees

- 2019** Member Pakistan Engineering Council (PEC) team for the Accreditation of Agricultural Engineering Degree Programs in Pakistan
- 2017-20** Member Advanced Studies & Research Board (ASRB), Mehran University of Engineering & Technology, Jamshoro
- 2014** Convenor, Plagiarism Standing Committee to investigate Plagiarism cases at the Sindh Agriculture University Tandojam
- 2014** Worked as a member of the 'Human Resources Development (HRD)' committee to select 9 MS and five Ph.D. student scholars to study in Land-Grant Universities in the United States under USAID /CIMMYT 'Agricultural Innovation Program (AIP) for Pakistan
- 2014** Convenor, Admission Committee of undergraduate program Khairpur College of Engineering & Technology, Khairpur Mirs.
- 2014** Convenor, Committee to conduct a written test of the candidates recruited on teaching & non-teaching gazetted posts at Sindh Agriculture University Tandojam and Khairpur College of Engineering & Technology, Khairpur Mirs.
- 2014** Chairman, Anomaly Committee, to consider the hardship case of teaching staff of Sindh Agriculture University Tandojam for up-gradation under a hardship basis.
- 2014** Chairman Admission Committee of undergraduate program Sindh Agriculture University, Tandojam

3. ACADEMIC QUALIFICATION

- Post-Doc**
- i. CSIRO**, Land and Water, Australian Tropical Science and Innovation Precinct (ATSIP), James Cook University, Townsville, QLD, Australia. Research on "Minimization of nitrate leaching from furrow irrigation system through HYDRUS-2D simulations", 2011.
 - ii. USDA-ARS**, US Salinity Laboratory and University of California Riverside, CA 92507, United States of America. Research on "Simulation of Water and Solute transport under Subsurface Irrigation System," 2007-2008.
- Ph. D. (Soil & Water)** Institute of Water and Environment, Faculty of Agricultural Engineering, Food Production and Rural Land Use, Cranfield University at Silsoe, Cranfield University, United Kingdom. Thesis on "Improving the salt leaching efficiency for reclamation of saline clay aggregated soils," 2001.
- M. E. (Irri. & Drain.)** Department of Irrigation and Drainage, Sindh Agricultural University Tandojam, Pakistan (Second Position, 83.25%), 1998.
- B. E. (Agri. Engg.)** Sindh Agricultural University Tandojam, Pakistan (Second Position, 86.43%), 1990.

4. ACHIEVEMENTS/AWARDS

- Netherlands Fellowship Program** For two weeks' short course training on "GIS and Remote Sensing Applications for Water Sector" at UNESCO-IHE, Delft, Netherlands, 2015
- Best University Teacher Award** Best University Teacher Award 2012-13 awarded by Higher Education Commission, Islamabad, 2014
- Borlaug Fellowship Award** For two-month training on "Pakistan Satellite-Based Crop Monitoring and Reporting" at the University of Maryland, USA, 2013
- Endeavour Fellowship Award** For Post-Doc Research from CSIRO, Townsville, QLD, Australia, 2011.
- Fulbright Scholar Award** For Post-Doc Research from USDA-ARS, U.S. Salinity Laboratory, and the University of California Riverside, United States of America, 2007-08.
- Quaid-e-Azam Merit Scholarship** For completing M. E. (Agri.) from Sindh Agriculture University, Tandojam and Ph.D. from Institute of Water & Environment, Cranfield University, United Kingdom, 1996-2001
- Chancellor's Medal** Silver Medal on First class Second Position (86.43% Marks) in B.E. (Agri.) 1990.

5. PROFESSIONAL ACTIVITIES/MEMBERSHIP

- i. Member of the Institution of Civil Engineers, UK. (Membership No. 60037859)
- ii. Lifetime Member of Pakistan Engineering Council (PEC) (Registration No. AGRI/1204)
- iii. Certified PEC Program Evaluation (PEV) Team Member
- iv. A lifetime member of Pakistan National Association of Fulbright Alumni (PAK-NAFA)
- v. Senior Member Asia-Pacific Chemical, Biological & Environmental Engineering Society (APCBEES)
- vi. Member Cranfield University Alumni Association, United Kingdom
- vii. Member Soil Science Society of Pakistan
- viii. Member Academic Council, Sindh Agriculture University Tandojam
- ix. Member Board of Advanced Studies and Research, Sindh Agriculture University, Tandojam
- x. Member Departmental Board of Studies, Department of Land, and Water Management. Sindh Agriculture University Tandojam
- xii. Member Faculty Board of Studies, Faculty of Agricultural Engineering, Sindh Agriculture University Tandojam

6. COURSES TAUGHT TO STUDENTS

- | | |
|---|-----------------------------------|
| i. Saline, Sodic, and Waterlogged Soils | ii. Soil Water Plant Relationship |
| iii. Soil Water and Salinity Management | iv. Groundwater Physics |
| v. Remote Sensing & GIS Applications | vi. Soil Physics |
| vii. Agricultural Land Drainage | viii. Digital Image processing |

7. FIELD OF INTEREST

Water flow and solute transport in the vadose zone; Remote Sensing & GIS applications in Natural Resources Management, Saturated, and Unsaturated Soil hydraulic properties; Reclamation of salt-affected soils; Soil & water conservation; Efficient use of irrigation water; Hydraulics.

8. COMPUTER/MODELLING SKILLS

- i.** HEC-HMS, HEC-RAS, and STELLA Software
- ii.** ArcGIS, ERDAS Imagine, PCI GEOMATICA, Global Mapper, and Google Earth software.
- iii.** HYDRUS-2D/3D model for simulations of water, solute, and contaminant transport in the soil.
- iv.** WetUp model for soil wetting patterns with drip irrigation
- v.** Certificate in Web Page Designing (HTML) from City and Guilds, United Kingdom. Excellent computer skills of Office Automation, Networking, and use of the Internet.
- vi.** Certificate in “Information Technology (IT) and Management Information Systems (MIS)” from Iqra University Karachi.
- vii.** Good knowledge of MS Office automation, net surfing, graphics packages, and Mathematical software (Mathcad).

9. LANGUAGES

a. English

- i.** TOEFL (550)
- ii.** IELTS (6.5)
- iii.** Certificate of participation in Second Teachers Spoken English Course Part I & II organized by English Language Development Centre (ELDC), Sindh Agriculture University, Tandojam.

b. Sindhi, Urdu, and Siraiki

Excellent Reading, Speaking, and Writing

10. TRAININGS

i. RECEIVED

- 2020** Four days online training on “Satellite Remote Sensing for Agricultural Applications” organized by NASA’s Applied Remote Sensing Training Program (ARSET)
- 2019** Five Days training on “Outcome-Based Accreditation for Program Evaluators” organized by Pakistan Engineering Council (PEC) at NED University Karachi from Feb. 25 to Mar. 1.
- 2017** Two days training on “Climate Vulnerability Assessment and Adaptation of Water Systems” at USPCASW, MUET, Jamshoro. May 11-12.
- 2017** Five days training course on “Digital image processing using ERDAS IMAGINE Software” at SUPARCO, Karachi. Mar. 13-17, 2017.
- 2015** Two-week training on “GIS and Remote Sensing Applications for the Water Sector” at UNESCO-IHE, Delft, Netherlands. Oct. 26 to Nov. 06.
- 2015** One-week training for each of software HEC-HMS, HEC-RAS and STELLA at US-Pak Centre for Advanced Studies in Water (USPCAS-W), Mehran University of Engineering & Technology, Jamshoro, Pakistan
- 2014** Two-week training workshop on “Crop Information Portal Administration, Crop Information Portal use, Geospatial Data Management: Geo-network” at SUPARCO, Islamabad sponsored by FAO and USDA.
- 2013** Eight-week training on “Pakistan Satellite-Based Crop Monitoring and Reporting” at the University of Maryland, USA, held from 9th Sept. to 2nd Nov. 2013.
- 2012** One-month course training course on “Geographic Information Systems (GIS)” from IDeAS, Hyderabad, Pakistan
- 2012** Five days training course on ‘Programming for WebGIS’ arranged by the National Centre for Remote Sensing and Geo-Informatics (NCRG), SUPARCO, Karachi, Pakistan.

- 2007** Certificate of participation in three days training workshop on “Efficient Irrigation Management Practices” arranged by Mehran University of Engineering and Technology, Jamshoro, under the linkage program with Colorado State University, USA.
- 2002** One-month training course on “Information Technology (IT) and Management Information Systems (MIS)” from Iqra University Karachi sponsored by NDP held from 1st November to 30th November.

ii. RESOURCE/FOCAL PERSON/ORGANISED

- 2019** Organised and focal person of 3 days training on “Monitoring and Mapping of Forests Using Satellite data for Clean and Green Pakistan” for young faculty members, postgraduate students at USPCAS-W, MUET Jamshoro in collaboration with Fulbright Foundation Pakistan (Nov. 27-29, 2019)
- 2019** Five days International Training workshop on “Rehabilitation and Management Salt-affected Soils in the Indus Basin of Pakistan” for Faculty members, postgraduate students and professionals working in environment, water, agriculture, SIDA and other related sectors in collaboration with ICBA, Dubai and Islamic Development Bank (March 18-22) at USPCAS-W, MUET, Jamshoro
- 2018** Training workshop on “Introduction to Geographic Information System (GIS) and Remote Sensing using ArcGIS 10.3” for Faculty members, postgraduate students and professionals working in environment, water, agriculture, city/regional planning and other related sectors (March 26-30) at USPCAS-W, MUET, Jamshoro
- 2017** Organized and worked as a sole Resource person in Five days training on "Application of GIS & Remote Sensing in Water & Environment" with the collaboration of USPCAS-W, MUET, Jamshoro for the capacity building of its faculty members in GIS & RS tools (March 6-10)
- 2017** Worked as a sole resource person in Five days training on "GIS & Remote Sensing" organized by Civil Engineering Department, MUET, Jamshoro for the capacity building of undergraduate students of Mehran University of Engineering and Technology, Jamshoro in GIS & RS tools (January 9-13)
- 2016** Worked as a Focal and Resource person in three days training on, “Capacity building of young faculty and postgraduate students in Geo-informatics” organized by USPCAS-W, MUET, Jamshoro with financial support from United States Educational Foundation in Pakistan (USEF) from April 5-7.
- 2014** Five days training workshop on “Use of MAGIS, GLAM and Crop Portal” sponsored by SUPARCO in collaboration with FAO and Sindh Agriculture University Tandojam. December 8-12.
- 2014** Organised a one-day Seminar on World Water Day at Sindh Agriculture University Tandojam on March 22.
- 2010** Five days training workshop on “Modelling Water Flow and Contaminant Transport in Soils and Groundwater” sponsored by Higher Education Commission, Islamabad, for the teaching faculty.
- 2010** Organised five days training workshop on “Modelling Water Flow and Contaminant Transport in Soils and Groundwater” sponsored by Higher Education Commission, Islamabad.
- 2005** Training to Farmers on “Precision Land Levelling and Efficient Irrigation Methods” arranged by Sindh Agriculture University, Tandojam, under Project of “Efficient Use of Land & Water Resources for Poverty Alleviation.”
- 2005** Training to officers of “Sindh on Farm Water Management under National Program for Improvement of Watercourses (NPIW)”

iii. WORKSHOP ATTENDED

- 2017** Two days' workshop on "Climate Vulnerability Assessment and Adaptation of Water Systems" organized by U.S.-Pakistan Centre for Advanced Studies in Water (USPCAS-W), Mehran University of Engineering & Technology, Jamshoro, Pakistan
- 2015** Two days' training workshop on "Effective Teaching" at U.S.-Pakistan Centre for Advanced Studies in Water (USPCAS-W), Mehran University of Engineering & Technology, Jamshoro, Pakistan
- 2015** Three days' training workshop on "Flood Forecasting" at U.S.-Pakistan Centre for Advanced Studies in Water (USPCAS-W), Mehran University of Engineering & Technology, Jamshoro, Pakistan
- 2015** Three days' workshop on Fulbright Water-Energy-Food Nexus SAARC Regional Workshop held at Kathmandu, Nepal, from February 10-12.
- 2013** Two-week workshop on "Pakistan Satellite-Based Crop Monitoring" at the University of Maryland, USA.

11. CONSULTANCY

- 2006** Consultant for the project entitled, "Pilot Project for Promotion of Water Conservation Technologies through Introduction of High-Efficiency Irrigation System in Sindh." Department of Agriculture Engineering, Ministry of Agriculture, The government of Sindh, Pakistan.
- 2020** Worked as 'National Irrigation and Flood Management Specialist' (individual consultancy) in Sindh Coastal Resilience Project (SCRIP), funded by Asian Development Bank (ADB) - December 04, 2020 to Feb. 28, 2021.
- 2021** Worked as 'National Coastal and Flood Management Specialist' (individual consultancy) in Sindh Coastal Resilience Project (SCRIP), funded by Asian Development Bank (ADB). March 04, 2021 to June 15, 2021.

12. RESEARCH/ THESES/ BOOK/PROJECTS/REFEREEING

i. SCIENTIFIC PAPERS/PUBLICATIONS

Total impact factor = 39.6

- 1. Siyal, A.A.; Solangi, G.S.; Ansari, K.; Babar, M.M.; Ijaz, M.W. 2020. Assessment of the shoreline changes along the Indus Delta using Geospatial techniques. Arabian Journal of Geosciences (Under review). [Impact factor = 1.327]**
- 2. Soomro, S. A.; Chen, K.; Siyal A. A. et al. 2021. Implications of variability in mechanical characteristics of rice straw under different moisture, variety and loading rate. Fresenius Environmental Bulletin, 30(9): 10049 - 10456 [Impact factor = 0.483]**
- 3. Siyal, P., Nafady, A., Memon, R., Sherazi, S. T. H., Nisar, J., Siyal, A. A., ... & Bhagat, S. 2021. Highly selective, sensitive, and simpler colorimetric sensor for Fe²⁺ detection based on biosynthesized gold nanoparticles. Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy, 254, 119645 [Impact factor = 4.098]**
- 4. Ippolito, J., Ullman, J. L., Awan, S., Ansari, K., Cui, L. Siyal, A. A. 2020. Biochars Reduce Irrigation Water Sodium Adsorption Ratio. Biochar. <https://doi.org/10.1007/s42773-020-00073-z>**
- 5. Arfan, M., Ansari, K., Ullah, A., Hassan, D., Siyal, A. A., & Jia, S. 2020. Agenda Setting in Water and IWRM: Discourse Analysis of Water Policy Debate in Pakistan. Water, 12(6): 1656. [Impact factor = 2.524]**
- 6. Wajid, I.; Mahar, R. B.; Ansari, K.; Siyal, A. A.; Anjum, M. N. 2020. Integrated Assessment of Contemporary Hydro-geomorphologic Evolution of the Indus River Estuary, Pakistan in Context to Regulated Fluvial Regimes. Estuarine, Coastal, and Shelf Science. 236: 106657 [Impact factor = 2.929]**

7. Memon, S.M.; Khadim, U.; **Siyal, A.A.**; Leghari, N.; et al. 2020. The effect of different raised bed sizes under furrow irrigation method on salt distribution in the soil profile and yield by Hydrus (2/3D). *Pakistan Journal of Agricultural Research*. 33(1): 113-125 [**HEC Recognised in Y Category**]
8. Bristow, K.L., Šimůnek, J., Halalia, S.A., and **Siyal, A.A.** 2020. Numerical simulations of the effects of furrow surface conditions and fertilizer locations have on plant nitrogen and water use in furrow irrigated systems. *Agricultural Water Management*. 232, 106044. <https://doi.org/10.1016/j.agwat.2020.106044>. [**Impact factor = 4.516**]
9. Solangi, G.S.; **Siyal, A.A.**; Babar, M; and Siyal, P. 2020. Temporal Dynamics of Vegetative Cover and Surface Water Bodies in the Indus Delta, Pakistan. *Mehran University Research Journal of Engineering and Technology*. 39(1): 133-144 [**HEC Recognised in X Category**]
10. Solangi, K.A; **Siyal, A.A.**; Wu, Y.; Abbasi, B.; Solangi; Lakhari, I.A; Zhou, G. 2019. An Assessment of the Spatial and Temporal Distribution of Soil Salinity in Combination with Field and Satellite Data: A Case Study in Sujawal District. *Agronomy*. 9(12), 869 [**Impact Factor: 2.603**]
8. Solangi, G.S.; **Siyal, A.A.**; Babar, M.M.; Siyal, P. 2019. Application of Water Quality Index, Synthetic Pollution Index, and Geospatial tools for the Assessment of Drinking-water Quality in the Indus Delta, Pakistan. *Environmental Monitoring and Assessment*. 191-731 <https://doi.org/10.1007/s10661-019-7861-x> [**Impact Factor: 1.959**]
9. Bhatti N.B; **Siyal, A.A.**; Qureshi, A.L.; Solangi G.S. 2020. Impact of small dam's construction on groundwater quality and level using a water-quality index model (WQI) and GIS in the Nagarparkar area of Sindh, Pakistan. *Human and Ecological Risk Assessment: An International Journal*. 26(10): 2586-2607. DOI: 10.1080/10807039.2019.1674634 [**Impact factor = 2.012**]
10. Solangi, G.S., **Siyal, A.A.**, Siyal, P. 2019. Spatiotemporal Dynamics of Land Surface Temperature and its impact on the Vegetation. *Civil Engineering Journal*. 5(8): 1753-1763 [In ISI Master List-Equivalent to **X Category** in HEC recognized journals]
11. Solangi, G.S.; **Siyal, A.A.**; and Siyal, P. 2019. Analysis of Indus Delta Groundwater and Surface water Suitability for Domestic and Irrigation Purposes. *Civil Engineering Journal*. 5(7): 1599-1608 [In ISI Master List-Equivalent to **X Category** in HEC recognized journals].
12. Solangi, G.S.; **Siyal, A.A.**; Babar, M; and Siyal, P. 2019. Evaluation of drinking water quality using the water quality index (WQI), the synthetic pollution index (SPI), and geospatial tools in Thatta district, Pakistan. *Desalination and Water Treatment*, 160(2019): 202-213 [**Impact factor = 1.234**]
13. Solangi, G.S.; **Siyal, A.A.**; Babar, M; and Siyal, P. 2019. Spatial Analysis of Soil Salinity in the Indus River Delta, Pakistan. *Engineering, Technology & Applied Science Research*. 9(3): 4271-4275. [In ISI Master List-Equivalent to **X Category** in HEC recognized journals].
14. Wajid, I; Mahar, R. B.; Ansari, K. and **Siyal, A. A.** 2019. Optimization of salinity intrusion control through freshwater and tidal inlet modification for the Indus River Estuary. *Estuarine, Coastal, and Shelf Science*. 224: 51-61. [**Impact factor = 2.611**]
15. Bhatti N.B; **Siyal, A.A.**; Qureshi, A.L.; Bhatti, I. A. 2019. Land Covers Change Assessment After Small Dam's Construction Based on Satellite Data. *Civil Engineering Journal*, 5(4): 810-818. DOI <http://dx.doi.org/10.28991/cej-2019-03091290> [In ISI Master List-Equivalent to **X Category** in HEC recognized journals].
16. Solangi, G.S.; **Siyal, A.A.**; Babar, M; and Siyal, P. 2019. Groundwater Quality Evaluation using the Water Quality Index (WQI), the Synthetic Pollution Index (SPI), and Geospatial tools: A case study of Sujawal district, Pakistan. *Human and Ecological Risk Assessment: An International Journal*. 26(6): 1529-1549. <https://doi.org/10.1080/10807039.2019.1588099>. [**Impact factor = 2.012**]
17. Bhatti N.B; **Siyal, A.A.**; Qureshi, A.L.; Bhatti, I. A. 2019. Socio-Economic Impact Assessment of Small Dams Based on the T-Paired Sample Test Using SPSS Software. *Civil Engineering Journal*. 5(1), 153-164. [In ISI Master List-Equivalent to **X Category** in HEC recognized journals].

18. **Siyal, A.A.**; Lakhair, I.; Babar, M.M.; Siyal, P.; Solangi G.S. 2018. Study of Soil, Water, and Cropping Pattern in Danastar Wah (Manchar Lake) Command Area Using Geospatial tools. *Mehran University Research Journal of Engineering and Technology*, 37(4): 655-668 [**HEC Recognised in X Category**]
19. Solangi, G.S.; **Siyal, A.A.**; Babar, M. and Siyal, P. 2018. Evaluation of surface water quality using the Water Quality Index (WQI), and the Synthetic Pollution Index (SPI): A case study of the Indus Delta region of Pakistan. *Desalination and Water Treatment*. 118: 39-48. DOI: 10.5004/dwt.2018.22407 [**Impact factor = 1.234**]
20. Bhayo, W.A; **Siyal, A.A.**; Soomro, S.A and Mashori, A.S. 2018. Water saving and crop yield under pitcher and wick irrigation methods. *Pak. J. Agri., Agri. Engg., Vet. Sci.*, 34 (1): 68-78 [**HEC Recognised in Y Category**]
21. Bhatti, N.B.; **Siyal, A.A.**; Qureshi, A.L. 2018. Groundwater Quality Assessment Using Water Quality Index: A Case Study of Nagarparkar, Sindh, Pakistan. *Sindh University Research Journal*. 50(2): 227-234. [**HEC Recognised in X Category**]
22. Memon, M. S., Ali, K., **Siyal, A. A.**, Guo, J., Memon, S. A., Soomro, S. A., ... & Ji, C. 2018. Effects of plastic sheet on water saving and yield under furrow irrigation method in a semi-arid region. *International Journal of Agricultural and Biological Engineering*, 11(1), 172-177. [**Impact factor = 1.349**]
23. Memon, M.S.; **Siyal, A.A.**; Changying, J.; Tagar, A.A.; Ara S.; Soomro, S.A.; Khadim U.; Fahim, U.; and Memon, N. 2017. Effect of irrigation methods and plastic mulch on yield and crop water productivity of okra. *Journal of Basic & Applied Sciences*. 13: 616-624. [**HEC Recognised in X Category**]
24. Wajid, I.; Mahar, R. B.; **Siyal, A. A.**; Anjum, M. N. 2018. Geospatial analysis of creeks evolution in the Indus Delta, Pakistan using multi-sensor satellite data. *Estuarine, Coastal, and Shelf Science*. 200: 324-334. <https://doi.org/10.1016/j.ecss.2017.11.025>. [**Impact factor = 2.611**]
25. Solangi, G.S.; **Siyal, A.A.**; Babar, M; and Siyal, P. 2017. Groundwater Quality Mapping using Geographic Information System: A Case Study of District Thatta, Sindh. *Mehran University Research Journal of Engineering and Technology*. 36(4): 1059-1072 [**HEC Recognised in X Category**]
26. Sarki, A., Mirjat, M.S., **Siyal, A.A**, Rajpar, I. and Mangio, H.R. 2017. Movement of effluent discharge towards lateral drain under different impervious layers and water table depths. *Pak. J. Agri., Agril. Engg., Vet. Sci.*, 33 (1): 57-64. [**HEC Recognised in Y Category**]
27. Wajid, I.; **Siyal, A. A.**; Mahar, R. B.; Waqas A. and Anjum, M.A. 2017. Detection of hydromorphologic characteristics of Indus River Estuary, Pakistan using Satellite and field data. *Arabian Journal for Science and Engineering*. 42(6): 2539-2558. DOI 10.1007/s13369-017-2528-9. (**Impact factor = 1.092**)
28. **Siyal, A. A.**; Siyal, A. G. and Mahar, R. B. 2017. Spatial and temporal vegetation dynamics of Pai forest, Sindh, Pakistan using Remote Sensing and GIS. *Journal of Forestry Research*. 28(3): 593-603. DOI:10.1007/s11676-016-0327-x. [**Impact factor = 0.748**]
29. **Siyal, A. A.**, Mashori, A. S., Bristow, K. L. and van Genuchten M. Th. 2016. Alternate furrow irrigation can radically improve the water productivity of Okra. *Agricultural Water Management*, 173: 55-60 [**Impact factor = 2.848**]
30. **Siyal, A. A.**; Siyal A.G.; Siyal, P; Solangi, M. and Khatri, I. 2016. Pitcher irrigation: Effect of pitcher wall properties on the size of soil wetting front. *Science International*. 28(2): 1299-1304. [**HEC Recognised in Y Category**]
31. Šimůnek, J., Bristow, K.L., Halalia, S.A., and **Siyal, A.A.** 2016. The effect of different fertigation strategies and furrow surface treatments on plant water and nitrogen use. *Irrigation Science*. 34(1): 53-69 [**Impact factor = 1.822**].

32. Soomro, A., **Siyal, A. A.**, Mirjat, M.S., Gandahi, A.W., and Gandahi, R. 2015. Seasonal Evaluation of Trace Metals in Irrigated Soils at Various Sites in Phuleli Command Area (Sindh), Pakistan. *Journal of Basic and Applied Sciences*, 11: 604-610. [**HEC Recognised in Z Category**]
33. **Siyal, A. A.**; Dempewolf, J. and Becker-Reshef, I. 2015. Rice yield estimation using Landsat ETM+ Data. *Journal of Applied Remote Sensing*. 9(1): 095986. DOI: 10.1117/1.JRS.9.095986 [**Impact factor = 0.937**]
34. **Siyal, A. A.**; Soomro, S. A., and Siyal, A. G. 2015. Performance of Pitcher irrigation with saline water under high evapotranspiration rates. *Journal of the Chinese Soil and Water Conservation*. 46(1): 61-69.
35. **Siyal, A. A.**; Siyal, A. G. and Mahar, R. B. 2015. Remote sensing and GIS-based wheat crop acreage and yield estimation of District Hyderabad, Pakistan. *Mehran University Research Journal of Engineering and Technology*. 34(1): 33-39. [**HEC Recognised in X Category**]
36. Soomro, A., **Siyal, A. A.**, Mirjat, M. S., Gandahi, A. W., Qureshi, A. L. 2014. Seasonal Variation of Groundwater Quality Assessment for Irrigation and Drinking Purpose in Phuleli Canal Command Area (Sindh), Pakistan. *International Water Technology Journal*. 4(4): 222-237.
37. **Siyal, A. A.**; Faisal, M. and Siyal, A. G. 2014. Estimating hydraulic properties of some soil series of Sindh. *Pakistan Journal of Agriculture, Agricultural Engineering, and Veterinary Sciences*. 30(2): 205-215.
38. Soomro, A., **Siyal, A. A.**, Mirjat, M. S. and Sial, N. B. 2014. Seasonal variations of trace elements and heavy metal concentrations in Phuleli canal water (Sindh), Pakistan. *Sarhad Journal of Agriculture*, 30(1): 73-83.
39. Soomro, A., **Siyal, A. A.**, Mirjat, M. S. and Sial, N. B. 2013. Seasonal variability of Trace and Heavy Metals concentration in groundwater and its quality for drinking and irrigation purpose under Phuleli Canal Command Area (Sindh). *Journal of Basic & Applied Sciences*, 9: 550-561. [**HEC Recognised in X Category**]
40. **Siyal, A. A.**, and A. G. Siyal. 2013. Strategies to Reduce Nitrate Leaching under Furrow Irrigation. *International Journal of Environmental Science and Development*. 4(4): 431-434. DOI: 10.18178/IJESD
41. **Siyal, A. A.**; van Genuchten, M. Th, and Skaggs, T. H. 2013. Solute transport in a loamy soil under subsurface porous clay pipe irrigation. *Agricultural Water Management*. 121: 73-80
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42. **Siyal, A. A.** Bristow, K. L., and Šimůnek, J. 2012. Minimizing nitrogen leaching from furrow irrigation through novel fertilizer placement and soil management strategies. *Agricultural Water Management*. 115: 242-251. [**Impact factor = 2.203**]
43. **Siyal, A. A.**, Siyal, A. G., and Hasini, M. Y. 2011. Crop production and water use efficiency under subsurface porous clay pipe irrigation. *Pakistan Journal of Agriculture, Agricultural Engineering, and Veterinary Sciences*. 27(1): 39-50
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45. Tagar, A. A., **Siyal, A. A.**, Brohi, A. D., and Mehmood, F. 2010. Comparison of Continuous and Intermittent leaching methods for reclamation of saline soils. *Pakistan Journal of Agriculture, Agricultural Engineering, and Veterinary Sciences*. 26(2): 36-47.
46. **Siyal, A. A.**, van Genuchten, M. Th, and Skaggs, T. H. 2010. Reclamation of Saline Soils by Partial Ponding: Simulations for Different Soils. *Vadose Zone Journal*. 9(2): 486-495 [**Impact factor = 2.133**]
47. **Siyal, A. A.**, van Genuchten, M. Th, and Skaggs, T. H. 2009. Performance of pitcher irrigation systems. *Soil Science*. 174(6): 312-320 [**Impact factor = 0.974**]

48. **Siyal, A. A.**, and Skaggs, T. H. 2009. Measured and simulated wetting patterns under porous clay pipe subsurface irrigation. *Agricultural Water Management*. 96(6):893-904. **[Impact factor = 2.016]**
49. Tagar, A. A., **Siyal, A. A.**, Siyal, A. G., and Memon, S. 2007. Effect of water quality and methods of water application on the leaching efficiency of saline soil. *Pakistan Journal of Agriculture, Agricultural Engineering, and Veterinary Sciences*. 23(1):47-52
50. **Siyal, A. A.**; Siyal, A. G., Abro, Z. A. and Abro, A. H. 2005. Effect of soil aggregate density on the solute effective diffusion coefficient. *Pakistan Journal of Agriculture, Agricultural Engineering, and Veterinary Sciences*. 21 (2): 37-43
51. **Siyal A. A.**; Siyal, A. G and Abro, Z. A. 2005. Effect of dry bulk density on the sorptivity of the soil aggregates. *Pakistan Journal of Agriculture, Agricultural Engineering, and Veterinary Sciences*. 21 (1): 45-48.
52. **Siyal, A. A.**; Siyal, A. G.; Siyal, A.W. and Memon R. 2003. A solute transport study for salt diffusion in non-spherical (irregular) aggregates. *Pakistan Journal of Agriculture, Agricultural Engineering, and Veterinary Sciences*. 19(2): 44-47
53. **Siyal, A. A.**; Siyal, A. G.; Siyal, A.W. and Memon, R. 2003. Solute displacement in clay soil under two modes of water application at different evaporation rates. *Pakistan Journal of Agriculture, Agricultural Engineering, and Veterinary Sciences*. 19(1): 39-41
54. **Siyal, A. A.**; Siyal, A. G.; Siyal, A.W. and Memon R. 2003. Reclamation of saline clay soil with different leaching methods. *Journal of Engineering and Applied Sciences (ISSN 1023-862)*. 22(1): 108-110
55. **Siyal, A. A.**; Siyal A. G. and Abro, Z. A. 2002. Micropore solute transport: Study of diffusion and mass transfer models. *Pakistan Journal of Agriculture, Agricultural Engineering, and Veterinary Sciences (ISSN 1015-3055)*. 18(1-2): 47-52
56. **Siyal, A. A.**, Siyal, A. G., and Abro, Z. A. 2002. Salt-affected soils their identification and reclamation. *Journal of Applied Sciences*. 2(5): 537-540
57. **Siyal, A. A.**, Siyal, A. G.; Abro, Z. A.; Siyal, A. W. Memon, R., and Oad, F. C. 2002. Desalinisation of aggregated saline soil: Experiments on columns of spherical aggregates. *Journal of Applied Sciences*. 2(4): 444 – 447
58. **Siyal, A. A.**, Siyal, A. G., and Abro, Z. A. 2002. Modeling of solute transport from single soil aggregate. *Journal of Applied Sciences*. 2(4): 470 – 473
59. **Siyal, A. A.**; Leeds-Harrison, P. B.; Youngs, E. G.; Oad, F. C and Abro, Z. A. 2002. Numerical solution of the diffusion equation for non-stirred bathing solutions. *Journal of Applied Sciences*. 2(3): 277-280
60. Oad, F. C.; Abro, Z. A., Siyal, A.G., Oad, N. L. and **Siyal, A. A.** 2002. Water depletion effects on water infiltration rate, salt behavior, and leaching requirements in saline soil. *Journal of Applied Sciences*. 2(3): 351-354
61. Abro, Z. A., Oad, F.C.; Siyal, A.G.; Oad, N. L. and **Siyal, A. A.** 2002. Water depletion effects on the behavior of salts in saline soils. *Journal of Applied Sciences*. 2(2): 186-190.
62. **Siyal, A. A.**, Siyal A. G., Abro, Z. A., and Oad, F. C. 2002. Determination of hydraulic properties of soil as a porous medium. *Journal of Applied Sciences (ISSN 1607-8926)*. 2(1): 120-124

ii. PAPER PRESENTATIONS IN INTERNATIONAL CONFERENCES

1. **Siyal, A. A.**, Bhatti, A. M., Babar, M. M., Ansari, K., Saher, R., & Ahmed, S. (2019). Environmental Impact of Conversion of Natural Wetland into Reservoir: A Case Study of Chotiari Reservoir in Pakistan. In *World Environmental and Water Resources Congress 2019: Watershed Management, Irrigation and Drainage, and Water Resources Planning and Management* (pp. 15-27). Reston, VA: American Society of Civil Engineers. Held at Pittsburgh, USA (May 19-23, 2019).

2. Ahmed, A.; **Siyal, A. A.**; & Zaidi; A. Z. (2018). Impact of 2010 super flood on rice crop of the Larkana Division, Pakistan. In AGU Fall Meeting Abstracts. Washington DC., USA Dec. 10-14.
3. **Siyal, A.A.**; Dhanji M. M; Dars, G. H., and Ahmad, S. 2018. Application of GIS and Remote Sensing for Identification of Potential Runoff Harvesting Sites: A Case Study of Karoonjhar Mountainous Area, Pakistan. Emerging and Innovative Technologies. ASCE World Environmental and Water Resources Congress, Minneapolis, Minnesota, USA. ISBN (PDF): 9780784481394.
4. Abbasi, N. and **Siyal, A.A.** 2018. Estimation of the area under major crops and corresponding irrigation requirements in district Tando Allahyar using field, historical, and satellite data. Geophysical Research Abstracts. Vol. 20, EGU2018-1152. EGU General Assembly, 2018. Vienna, Austria (April 8-13).
5. **Siyal, A. A.**; Solangi, G.S.; Ansari, K.; Babar, M.M. 2017. Assessment of the shoreline changes along the Indus Delta using geospatial techniques. Science-Policy Conference on Climate Change (SP3C), Islamabad. December 18-20, 2017.
6. **Siyal, A. A.**; Šimůnek, J.; Bristow, K.L. 2016. Use of the HYDRUS model to improve irrigation practices. 16th International Congress of Soil Science (ICSS-2016) held at Rawalpindi/Islamabad from 15-17th March, 2016.
7. Bristow, K.L., **Siyal, A. A.** & J. Šimůnek. 2013. Strategies to improve water and nitrogen use in furrow irrigated systems. ASA-CSSA-SSSA International Meeting, Tampa, Florida, USA, 3-6 November 2013 (Agron. Abstr. 2013 CD-ROM)
8. **Siyal, A. A.**, and A. G. Siyal. 2013. Strategies to Reduce Nitrate Leaching under Furrow Irrigation. Fourth International Conference on 'Environmental Science and Technology (ICEST),' 17-18 March 2013, Macau, China (Best paper awarded)
9. **Siyal, A. A.** 2011. Effect of subsurface porous clay pipe irrigation on solute dynamics in a loamy soil. Paper presentation at International Conference on "Agricultural Engineering" organized by Thai Society of Agricultural Engineering (TSAE), Pattaya, Thailand (March 31st - April 01, 2011).
10. **Siyal, A. A.** 2011. Porous clay pipe irrigation: A tool for sustainable agriculture under arid conditions. Paper presentation at International Conference on "International Perspective on Water Resources and the Environment (IPWE-2011)", January 4-6, 2011, National University of Singapore, Singapore.
11. **Siyal, A. A.** 2010. Desalinization by partial ponding: Sand tank simulations with Hydrus-2D/3D. Paper presentation at International Conference on "Management of Soil and Groundwater Salinization in Arid Regions" January 11-14, 2010, Sultan Qaboos University, Muscat, Oman.
12. **Siyal, A. A.**, Abro, Z. A. and Siyal, A. G. 2007. Use of pitcher irrigation for sustainable crop production in water-scarce areas. Paper presentation at International Conference on "Water and Flood Management (ICWFM)." March 12-14, 2007, Bangladesh University of Engineering and Technology, Dhaka, Bangladesh.
13. Chandio, A. S., Mirjat, M. S., and **Siyal, A. A.** 2006. Management of saline water upcoming into overlying shallow fresh groundwater aquifers using a three-dimensional finite element model. Paper presentation at 14th International Soil Conservation Organization Conference on 'Water Management and Soil Conservation in Semi-Arid Environments. May 14-19, 2006, Marrakech, Morocco.
14. **Siyal, A. A.**, Siyal, A. G., and Abro, Z. A. 2005. Cropping and tillage techniques to increase the leaching efficiency of saline clay soil. Paper presentation at International Conference on "Human Impacts on soil quality attributes in arid and semiarid regions" at Isfahan University of Technology, Isfahan, Iran from September 12-16, 2005.
15. Paper presentation at 10th Congress of Soil Science Society of Pakistan on "Management of Natural Resources for Food Security" held at Sindh Agriculture University Tandojam, Pakistan from March 16-19, 2004.

16. Poster presentation at "British National Committee of Irrigation and Drainage Research Meeting" held at HR Wallingford, United Kingdom, 2001.
17. Paper presentation at "International Conference on the Future of the Mediterranean Rural Environment: Prospectus for Sustainable Land Use and Management" held at GDRS Meneman, Izmir, Turkey, 2000.
18. Paper presentation at "First Postgraduate Research Conference" held at Cranfield University at Silsoe, United Kingdom, 2000.

iii. PAPER PRESENTATIONS IN NATIONAL CONFERENCES

1. **Siyal, A.A.** 2019. Water Conservation Techniques in Agriculture. International Conference on Water & Security & Sustainability. Expo Centre Karachi. Nov. 06, 2019
2. **Siyal, A.A.** 2019. Wetlands of Sindh: Issues and Options. Paper presentation as a keynote speaker in the 1st Two Days International Conference on "Agricultural Engineering and Technologies (ICAET-2019). Organized by the Faculty of Agricultural Engineering, Sindh Agriculture University Tandojam, Sindh, Pakistan, Nov. 05-06, 2019.
3. **Siyal, A. A.; Solangi, G. S, and Siyal, P.** 2019. Indus Delta: Issues and Options. Paper presentation as invited keynote speaker in 2nd Three Days International Conference on Water Scarcity and Sustainable Agriculture in Pakistan: Challenges and Solutions. Organized by the Department of Geography, Shah Abdul Latif University, Khairpur, Sindh, Pakistan, Mar. 05-07, 2019.
4. **Siyal A.A.** 2019. Remote Sensing and GIS Applications. Paper presentation in International Water Technology Workshop (IWTW) on 'Strategic Strengthening of Flood Warning and Management Capacity of Pakistan' at NUST, Islamabad. Feb. 21-22, 2019.
5. **Siyal A.A.** 2019. Degrading Deltas: A case study of Indus Delta. Paper presentation as an invited keynote speaker in the 4th International Conference on Agriculture, Food and Animal Sciences (ICAFAS)" organized by Sindh Agri. Uni. Tandojam from Jan. 21-22, 2019.
6. **Siyal A.A.** 2018. Shrinking Indus Delta: Current Status and Way Forward. One day National Seminar on Indus delta. March 2, 2018, at USPCAS-W, Mehran University of Engineering & Technology, Jamshoro
7. **Siyal, A. A.** 2017. Application of Field and Satellite Data for Determining Soil, Water and Cropping Pattern in Danister Wah Command area. International Conference on Geographical Evaluation of Agriculture in Pakistan: Challenges and Remedies (GEAP 2017) organized by the Department of Geography, Shah Abdul Latif University, Khairpur, Pakistan from 27-29 November 2107
8. **Siyal A. A.** 2017. Environmental issues of Indus Delta. Paper presented in a Public Awareness Seminar on "Environmental Issues of Sindh and their solutions." Held at Indus Hotel, Hyderabad on Nov. 21, 2017, organized by Environment, Climate Change and Coastal Development (Sindh).
9. **Siyal, A. A.** 2016. Soil, Water, Environment, and Socio-economic conditions of Indus Delta under seawater intrusion and climatic change scenario. WEF National Conference on "Water and Environment: Sustainable Development in Changing Climate" held at Marriot Hotel, Islamabad, from 17-19th October 2016.
10. **Siyal A. A.** 2014. Space Technology for Monitoring of Agriculture in Pakistan. Presentation given at 11th Annual Fulbright & Humphrey Alumni Conference on "Vision 2025: Our Plan of Action" held at Fulbright Centre, Lahore, on December 05-07.
11. **Siyal A. A.** 2013. Floods 2010 and 2011 in Sindh: Climate change or bad governance. The presentation was given at 10th Annual Fulbright & Humphrey Alumni Conference on "New solutions to old problems" held at Lahore University of Management Sciences (LUMS), Lahore on November 22-24.

12. **Siyal, A. A.** 2010. "Water Conservation through traditional subsurface irrigation methods". International Conference on "Sustainable Water Management" organized by Mehran University of Engineering and Technology Jamshoro, Pakistan from September 15 to 17, 2010.
13. **Siyal, A. A.** 2009. "Coping with water Scarcity in arid regions of Pakistan". Second Regional Workshop on "Sustainable Water Management" organized by Sindh Agriculture University, Tandojam under DelPHE project sponsored by British Council at Indus Hotel Hyderabad on 4th and 5th August.
14. Paper presentation at "2nd National Conference on Agricultural and Animal Sciences" at Sindh Agriculture University Tandojam, Sindh, Pakistan, Nov. 23-25, 2005.
15. Paper presentation at "1st National Conference on Agricultural and Animal Sciences" at Sindh Agriculture University Tandojam, Sindh, Pakistan, Nov. 23-25, 2004.

iv. **PARTICIPATION IN SCIENTIFIC MEETINGS**

- 2008 Technical Committee Annual Meeting of W1188 Soil Physics Multi-State Research Group at Las Vegas, the USA, on January 2-4.
- 2001 Annual Gerald Lacey Memorial Lecture on "The World Water Forum and its Implications for ICID," London on 16th May.
- 2001 British National Committee of Irrigation and Drainage Research Meeting at HR Wallingford, the UK on 21st March.
- 2000 British National Committee of Irrigation and Drainage Research Meeting at HR Wallingford, the UK, on 20th March.
- 1999 British National Committee of Irrigation and Drainage Research Meeting at HR Wallingford, on 17th March.
- 1999 Annual Conference, Luncheon and Awards Ceremony, at Royal Agricultural College, Cirencester, the UK on 11th May.
- 1999 Annual Gerald Lacey Memorial Lecture on "Is there still the role of soil physics?" London on 19th May.
- 1999 Conference on Management of Saline Soils, arranged by British Soil Water Group at the University of Newcastle Upon Tyne, UK, on 2nd June.

v. **BOOKS**

- a. Siyal, A.A., and Chavez, J. L. (2019). Use of Multi-Level Remote Sensing to Evaluate Salinity on Irrigated Lands. US-Pakistan Center for Advanced Studies in Water (USPCAS-W), MUET, Jamshoro, Pakistan. ISBN 978-969-7970-01-8.
- b. Siyal, A.A. (2018). Climate Change: Assessing the impact of seawater intrusion on soil, water, and environment on Indus delta using GIS & remote sensing tools. US-Pakistan Center for Advanced Studies in Water (USPCAS-W), MUET, Jamshoro, Pakistan. ISBN 978-969-23238-2-6.

vi. **THESIS**

Higher Education Commission (HEC) recognized for supervising Ph. D. Students in the field of Water Resources Management from 2018-2021.

a. **Personal**

2001- "Improving the leaching efficiency for reclamation of saline clay aggregated soils." A thesis submitted to Cranfield University, the United Kingdom for the fulfillment of the requirement for the degree of Doctor of Philosophy (Ph.D.)

1998- "Determination of hydraulic properties of soil as a porous medium" A thesis submitted for the partial fulfillment of the requirement for the degree of M. E. (Agri.) in Irrigation and Drainage.

1990- "Assessment and Analysis of Drainage Projects of Sindh." Project report submitted for the partial fulfillment of the requirement for the degree of B. E. (Agri.).

b. Supervisor/Co-supervisor of Undergraduate and Postgraduate Theses/Projects

S#	B.E./M.E./MS/Ph. D.	Name of student	Title	University	Year	Supervisor/Co-supervisor
1	Ph. D.	Nabi Bux Bhatti	Hydrological, water quality and socio-economic assessment of small dams in Nagarparkar area using Field and Satellite data	MUET	2020	Supervisor
2	Ph. D.	Ghulam Shabir Solabgi	Impact assessment of seawater intrusion on soil, water, and vegetation of the Indus Delta using field and satellite data	MUET	2019	Supervisor
3	Ph.D.	Wajid Ijaz	Predictive Modelling of Salinity Intrusion in the Indus River Estuary, Pakistan	MUET	2019	Co-supervisor
4	Ph.D.	Assadullah Sarki	Optimizing zone leaching for salinity control in layered soils: Experimental and Model Simulations	SAU	2017	Co-supervisor
5	Ph. D.	Ms. Ashifa Soomro	Impact of the use of polluted water of Phuleli Canal on soil properties, groundwater quality, and human health	SAU	2014	Supervisor
1	MS	Sarwan	Soil Salinity Mapping using EM-38 and ESAP software	MUET	2020	Supervisor
2	MS	Faiza Kalhoro	Assessment of temporal variation in water quality of RBOD-I (MNVD drain) and its role in the degradation of Manchar lake	MUET	2020	Supervisor
3	MS	Waqas Inam	Assessing the impact of land drainage on soil salinity and vegetation using GIS and Remote sensing tools: A case study of Mardan SCARP	MUET	2020	Supervisor
4	MS	Arslan Mahmood	Enhancing the flood-carrying capacity of the below Kotori barrage reach of the Indus river using Geospatial tools and Hydraulic modeling	MUET	2020	Supervisor
5	MS	Amir Bhatti	Conversion of natural wetlands into reservoirs: A case study of Chotiari reservoir	MUET	2019	Supervisor
6	MS	Tahir Ali Shaikh	Assessing Hydrologic, Environmental and socio-economic impacts of Thar Coal Field: A case study of Gorano dam	MUET	2018	Supervisor
7	MS	Vipin Kumar Oad	Determining climate change impact on sowing and harvesting dates, crop period and yield of rice crop using geospatial tools: A case study of Larkana district	MUET	2018	Supervisor
8	MS	Muhammad Salman Mohsin	Assessment of Hydroclimatic Impact on Tidal Floodplains of The Indus Delta using Remote Sensing & Geospatial Techniques	MUET	2018	Supervisor
9	M.E.	Shoukat Ali Shah	GIS-Based Approach for Estimation of Area under Wheat and other Major Rabi Crops in District Ghotki and corresponding Irrigation Water Requirements	MUET	2018	Supervisor
10	M.E.	Muhammad Raza	Mapping of Soil Salinity in District Thatta Using GIS and Remote Sensing Tools	MUET	2017	Supervisor

11	M.E.	Kashif Solangi	Assessment of Spatial and Temporal Distribution of Soil Salinity in District Sujawal using Field and Satellite data	MUET	2017	Supervisor
12	MS	Dhanji Misrani	GIS-based decision support system for identification of runoff harvesting potential sites: A case study of Karoonjhar mountainous area	MUET	2017	Supervisor
13	MS	Aftab Ahmed	Remote Sensing and GIS Application for Flood Management: A Case Study of Larkana division	MUET	2017	Supervisor
14	M.E.	Bilawal Abbasi	Estimation of the area under major crops and corresponding crop water requirements of district Tando Muhammad Khan using the field, historical and satellite data	MUET	2016	Supervisor
15	M.E.	Imran Lakhair	Study of soil, water and cropping pattern of Danstar Wah (Manchar Lake) command area using field and satellite data	MUET	2016	Supervisor
16	M.E.	Bhagat Kanwar Ram	Application of Remote sensing and GIG in wheat cropped area estimation and crop water requirements at district Umerkot	SAU	2016	Supervisor
17	M. E.	Naseer Ahmed Abbasi	Estimation of Area Under Major Crops and Corresponding Irrigation Requirements in District Tando Allahyar Using Field, Historical and Satellite Data	SAU	2015	Supervisor
18	M. E.	Khadimullah	Effect of size of the raised bed in bed-furrow irrigation on crop water productivity and yield	SAU	2014	Supervisor
19	M. E.	Muhammad Sohail Memon	Effect of plastic mulching on crop water productivity and crop yield under furrow and alternate furrow irrigation methods	SAU	2014	Supervisor
20	M. E.	Kausar Ali	Use of plastic sheet for in furrow irrigation method for efficient use of water	SAU	2014	Supervisor
21	M. E.	Faisal Mehmood	Determination of hydraulic properties of soils using numerical models	SAU	2013	Supervisor
22	M. E.	Shoukat Ali Soomro	Effect of saline water on soil properties and yield of bottle gourd using the pitcher irrigation method	SAU	2013	Supervisor
23	M. E.	Abdul Sattar Mashori	Evaluation of the performance of the Alternate Furrow Irrigation under climatic conditions of Sindh	SAU	2013	Supervisor
24	M. E.	Waqar Ahmed Bhayo	Water saving and crop yield under pitcher and wick irrigation methods	SAU	2013	Supervisor
25	M. E.	Ms. Kiran Zaheer	Determination of the effect of hydraulic conductivity and size of the pitcher on the radius of soil wetting zone	SAU	2007	Supervisor
26	M. E.	Wali Muhammad Daudpoto	Evaluation of groundwater quality in district Tando Muhammad Khan	SAU	2007	Supervisor
27	M. E	Muhammad Yakoob Hasini	Runoff water harvesting technology for domestic and livestock use in Barkhan district of Balochistan	SAU	2006	Supervisor
28	M. E	Ahmed Ali Tagar	Effect of water quality and methods of water application on the leaching efficiency of a saline soil	SAU	2006	Supervisor
1	B. E	Group of Students	Preparing Geo-referenced tree population database of Sindh	SAU	2015	Supervisor

			Agriculture University Tandojam Campus			
2	B. E.	Group of Students	Estimation of the area under major crops in district Hyderabad using Geo-referenced field and Satellite data	SAU	2014	Supervisor
3	B. E.	Group of Students	Use of wastewater in agriculture in the pre-urban areas of Hyderabad city	SAU	2004	Supervisor
4	B. E.	Group of Students	Effect of soil aggregate density on the solute effective diffusion coefficient	SAU	2003	Supervisor
5	B. E.	Group of Students	Study of a free hydraulic jump in a rectangular horizontal channel	SAU	1991	Co-supervisor

vii. RESEARCH PROJECTS

- 2019-20** Nine-month study on “*Calibration of Gauges and Development of rating curves of 115 distributaries/minors of Nara Canal AWB for flow measurement*” of Rs. 8.3 million funded by the Water Sector Improvement Project (WSIP), Government of Sindh
- 2018-19** Eighteen months research project, entitled “*Use of Multi-Level Remote Sensing to Evaluate Salinity on Irrigated Lands*” of Rs. 3.0 million funded by USAID through USPCASW, Mehran University of Engineering & Technology, Jamshoro
- 2019** Completed a three-month study on “*Wetlands of Sindh*” of Rs. 1.4 million funded by the Water Sector Improvement Project (WSIP), Government of Sindh.
- 2018-19** Completed a six months study on “*Impact of Climate Change in the Indus River Delta and Coastal Region of Pakistan*” of Rs. 1.2 million funded by Global Change Impact Studies Centre (GCISC), Islamabad
- 2016-17** Completed successfully a 1.5-year research project, entitled “*Climate Change: Assessing the impact of seawater intrusion on Soil, Water and Environment on Indus delta using GIS & Remote Sensing tools*” of Rs. 2.46 million funded by USAID through USPCASW, Mehran University of Engineering & Technology, Jamshoro
- 2006-2009** Completed successfully a 3-year research project entitled “*Use of Subsurface Irrigation System to meet the water crises in the country*” of Rs. 1.058 million funded by Higher Education Commission (HEC) under NRPDU.

viii. REFEREEING

- a. Agricultural Water Management
- b. Journal of Irrigation and Drainage Engineering
- c. Journal of Agricultural Science and Technology, Iran
- d. Journal of Hydrologic Engineering
- e. Journal of Hydrology
- f. Soil and Tillage Research
- g. Asian Journal of Geographical Research
- h. Mehran University Research Journal of Engineering & Technology (ISSN 0254-7821).
- i. Editor, Pakistan Journal of Agriculture, Agriculture Engineering, and Veterinary Sciences (ISSN 1015-3055).
- j. Soil and Environment, Faisalabad

13. ARTICLES PUBLISHED IN NEWSPAPERS/MAGAZINES

S#	Name of Newspaper/ magazine	Language	Date of publication	Title
1	KAWISH	SINDHI	Oct. 25, 2020	Monsoon Rainfall & LBOD
2	KAWISH	SINDHI	Oct. 26, 2020	Is LBOD responsible for disaster?
3	KAWISH	SINDHI	June 13, 2020	Delta of Indus & its vanishing villages
4	KAWISH	SINDHI	May 16, 2020	Degrading Forests of Sindh & REDD+
5	FRONTIER POST	English	April 14, 2020	Sindh Barrage: Bane or Boon

6	KAWISH	SINDHI	March 21, 2020	National Water Policy & Observations of Sindh
7	KAWISH	SINDHI	Sept. 25, 2019	Fears on Sindh Barrage
8	DAWN	ENGLISH	Nov. 13, 2017	How we can revive the shrinking Indus Delta
9	SINDH EXPRESS	SINDHI	October 15, 2017	Shrinking Indus Delta
10	SINDH EXPRESS	SINDHI	August 17, 2017	Relics of Indus Civilization under threat
11	THE EXPRESS TRIBUNE	ENGLISH	May 20, 2017	Flood threat at the ancient city
12	KAWISH	SINDHI	May 12, 2017	Why black gold cannot make Sindh prosperous
13	SINDH EXPRESS	SINDHI	April 21, 2017	Thar Coal Boon or Ban
14	DAWN	ENGLISH	April 03, 2017	Social Impact of Coal Mining in Thar
15	SINDH EXPRESS	SINDHI	August 19, 2016	Why Emphasis on Kalabagh Dam
16	BRAT	SINDHI	April 06, 2015	The prosperity of Sindh with Sindhu
17	SINDH EXPRESS	SINDHI	March 22, 2015	Sindhu & Drying Sindh
18	IBRAT	SINDHI	July 21, 2014	Use of Space Technology in Agriculture
19	DAWN	ENGLISH	July 16, 2012	Left Bank Outfall Drain: a friend or foe
20	IBRAT	SINDHI	April 02, 2012	Pineapple can be grown in Sindh!
21	DAWN	ENGLISH	Feb. 21, 2011	Irrigation mode for better mango fruits
22	IBRAT	SINDHI	April 10, 2010	Discussion about drainage
23	DAWN	ENGLISH	Sept. 21, 2009	Low-cost irrigation for arid regions
24	DAWN	ENGLISH	Dec. 29, 2008	RBOD: Fears and Expectations
25	DAWN	ENGLISH	Dec. 22 2008	Water-saving clay pipe irrigation system
26	KHABROON & KOSHISH	SINDHI	Oct. 14-15, 2005	The science behind the earthquakes
27	KOSHISH	SINDHI	Aug. 12, 2005	Will SIDA bring revolution in Irrigation System?
28	KOSHISH	SINDHI	July 27, 2005	National Program for Improvement of Watercourses
29	DAWN/SCI-TECH WORLD	ENGLISH	July 09, 2005	Science behind the calamity
30	KHABROON & KOSHISH	SINDHI	May 22, 2005	Why Sindh lags behind in the race of agricultural progress?
31	DAWN/SCI-TECH WORLD	ENGLISH	January 08, 2005	Intruding ever-so-silently
32	KHABROON	SINDHI	Dec. 09, 2004	Indus delta: Vanishing mangroves
33	DAWN/SCI-TECH WORLD	ENGLISH	Nov. 13, 2004	Wastewater for Agriculture: Health risks (Cover Story)
34	KHABROON	SINDHI	August 03, 2004	Effects of contaminants in the water on human health
35	KHABROON	SINDHI	June 15, 2004	Suggestions for the betterment of Education System
36	KHABROON	SINDHI	June 05, 2004	Use of wastewater for Irrigation
37	KHABROON	SINDHI	March 26, 2004	Will SIDA bring reforms in the irrigation system of Sindh?
38	KHABROON	SINDHI	March 19, 2004	Image of Prosperous Sindh and Different Views
39	DAWN	ENGLISH	March 15, 2004	Risks in SIDA Reforms
40	KOSHISH	SINDHI	Feb. 26, 2004	Search of a lost river
41	DAWN & KOSHISH	ENGLISH	Feb. 23, 2004	Pitcher irrigation: a water-saving technique
42	KOSHISH	SINDHI	Jan. 31, 2004	Knowledge of terms used in water measurement
43	KAWISH	SINDHI	Dec. 31, 2003	How to find the solution of River conflicts
44	IBRAT	SINDHI	Oct. 23, 2003	Where life flourishes?
45	IBRAT	SINDHI	May 27, 2003	Soil Science
46	IBRAT	SINDHI	May 07, 2003	Why is Sindh poor: Few Reasons
47	SCIENCE	SINDHI	Jan. 1994	Sprinkler Irrigation

14. OTHER SCIENTIFIC AND TECHNICAL RESPONSIBILITIES

- 2017-2020** Member Advanced Studies and Research Board (ASRB), Mehran University of Engineering & Technology, Jamshoro
- 2015** Member organizing committee for organizing “2nd International Conferences on Agriculture Food and Animal Husbandry” held at Sindh Agriculture University Tandojam, Sindh, Pakistan
- 2014** Member Selection Board of the Sindh Agriculture University Tandojam
- 2011 to 2015** Member, Board of Advanced Studies and Research, Sindh Agriculture University, Tandojam
- 2013 to 2015** Member Board of Studies of Institute of Water Resources Engineering & Management, Mehran University of Engineering & Technology, Jamshoro, Sindh, Pakistan
- 2011 to 2015** Coordinator Postgraduate Program, Faculty of Agricultural Engineering, Sindh Agriculture University, Tandojam, Sindh, Pakistan
- 2011, 12 & 13** Member admission and Prospectus Committee for the graduate program of Sindh Agriculture University, Tandojam, Sindh, Pakistan
- 2009-10 & 2013-14** Member Higher Education Commission (HEC) Syllabus Revision Committee for the discipline “Water Management” offered at graduate and postgraduate level
- 2002 to 2015** Member, Faculty Board of Studies, Faculty of Agricultural Engineering, Sindh Agriculture University Tandojam, Sindh, Pakistan
- 2002 to 2015** Member, Departmental Board of Studies, Department of Land and Water Management, Faculty of Agricultural Engineering, Sindh Agriculture University, Tandojam, Sindh, Pakistan
- 2002 to 2007** Member, Departmental Board of Studies, Department of Irrigation and Drainage, Faculty of Agricultural Engineering, Sindh Agriculture University, Tandojam
- 2003 to 2004** Coordinator Undergraduate Program, Faculty of Agricultural Engineering, Sindh Agriculture University, Tandojam, Sindh, Pakistan
- 2004 & 2005** Member organizing committee for organizing “1st & 2nd National Conferences on Agricultural and Animal Sciences” held at Sindh Agriculture University, Tandojam, Sindh, Pakistan.
- 2000** Member organizing committee for organizing “First Postgraduate Research Conference” held at Cranfield University at Silsoe, United Kingdom.

15. REFERENCES

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