CURRICULUM VITAE

Engr. Prof. Dr. Altaf Ali Siyal
(Fulbright Scholar)

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

Faculty of Agricultural Engineering & Technology

Sindh Agriculture University, Tandojam

PAKISTAN

CURRICULUM VITAE

Jan. 2026

1. PERSONAL

Name: **Altaf Ali Siyal**

Designation: Professor

Nationality: Pakistani

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

Mailing Address: Faculty of Agricultural Engineering & Technology, Sindh Agriculture University, Tandojam, Pakistan

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

Email: siyal@yahoo.com; aasiyal@sau.edu.pk; siyal1990@gmail.com

2. EXPERIENCE

i. Administrative

2025 - to date **Vice Chancellor**, Sindh Agriculture University Tandojam [Dec. 17, 2025, to date]

2025 - 2025 **Acting Vice Chancellor**, Sindh Agriculture University Tandojam [Jan. – Dec.]

2022 - 2025 **DEAN,** Faculty of Agricultural Engineering, Sindh Agriculture University, Tandojam, Pakistan

2021 - 2022 **CHAIRMAN,** Department of Land and Water Management, Faculty of Agricultural Engineering, Sindh Agriculture University, Tandojam, Pakistan

2020 - 2022 **Director ORIC,** Sindh Agriculture University, Tandojam, Pakistan

2017 - 2020 **Thematic Head/Chairman**, Department of Integrated Water Resources Management, U.S.-Pakistan Centre for Advanced Studies in Water (USPCAS-W), Mehran University of Engineering & Technology, Jamshoro, Pakistan

2014 - 2014 **Incharge DEAN**, Faculty of Agricultural Engineering, Sindh Agriculture University, Tandojam, Pakistan [Mar. – May]

2011 - 2015 **Chairman**, Department of Land and Water Management, Sindh Agriculture University, Tandojam, Pakistan

2009-2011 **Director**, **Information Technology Centre**, Sindh Agriculture University, Tandojam

ii. Teaching

Thirty-five years of experience in Teaching and Research in the fields of Irrigation, Drainage, Flood Management, Climate Change, Land and Water resources management, and GIS & Remote Sensing.

2024 to date **Meritorious Professor**, Department of Land and Water Management, Faculty of Agricultural Engineering, Sindh Agriculture University, Tandojam, Pakistan.

2010 – 2024 **Professor**, Department of Land and Water Management, Faculty of Agricultural Engineering, Sindh Agriculture University, Tandojam, Pakistan.

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

3. ACADEMIC QUALIFICATION

Post-Doc. **i. CSIRO**, Land and Water, Australian Tropical Science, and Innovation Precinct (ATSIP), James Cook University, Townsville, QLD, **Australia**. Research in "Minimization of nitrate leaching from furrow irrigation system through HYDRUS-2D simulations".

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,".

Ph. D. (Soil & Water) Institute of Water and Environment, Faculty of Agricultural Engineering, Food Production and Rural Land Use, Silsoe College, **Cranfield University, United Kingdom**. Thesis on "Improving the salt leaching efficiency for reclamation of saline clay aggregated soils,".

M. E. (Irri. & Drain.) Department of Irrigation and Drainage, Sindh Agricultural University, Tandojam, Pakistan **(Second Position, 83.25%)**.

B. E. (Agri. Engg.) Sindh Agricultural University, Tandojam, Pakistan (**Second Position, 86.43%**).

4. ACHIEVEMENTS/AWARDS

Distinguished Engineer Award For remarkable contributions in the Engineering Education and for the Engineering community, awarded by the Institution of Engineers Pakistan (UEP), 2025

Netherlands Fellowship Program (NFP) 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 the Higher Education Commission, Islamabad, 2014

Borlaug Fellowship Award Two-month training on "Pakistan Satellite-Based Crop Monitoring and Reporting" at the University of Maryland, USA, 2013

Endeavour Fellowship Award Post-Doc Research from CSIRO, Townsville, QLD, Australia, 2011.

Fulbright Scholar Award 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 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. Lifetime Membership of **The Institution of Engineers Pakistan (IEP)**-M23363/HYD-246
ii. Member Governing Body (Sindh) of **Pakistan Engineering Council (PEC)** from 2024-27

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

6. COURSES TEACHING TO STUDENTS

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

7. FIELD OF INTEREST

Water Resources Engineering and Management; Land Reclamation; Flood Modelling and Management; Remote Sensing & GIS Applications; Agricultural Land Drainage; Soil and Water Conservation; Efficient Irrigation Methods; Wetlands; Mangroves, River Deltas; Hydrology and Hydraulics; Climate Change, Water flow and Solute transport in the vadose zone.

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 Design (HTML) from City and Guilds, United Kingdom. Excellent computer skills in Office Automation, Networking, and Internet use.
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. 1997-TOEFL (550)
ii. 1997-IELTS (6.5)
iii. Certificate of participation in the Second Teachers Spoken English Course Part I & II organized by the English Language Development Centre (ELDC), Sindh Agriculture University, Tandojam.

b. Sindhi, Urdu, and Siraiki
Excellent Reading, Speaking, and Writing

10. TRAINING

i. RECEIVED

2025 One-week training on "Professional Development Program for the Vice Chancellors & Future Leaders", organized by Sindh HEC at NIPA, Karachi (Nov. 03 to 07)

2024 One-week training on "Advancing Leadership Capacities of Deans" under the Higher Education System Strengthening Capacity (HESSA) project funded by USAID at the University of Utah, Salt Lake City, USA (Jan. 29 to Feb. 02)

2021 Two Days online training on "Monitoring Coastal and Estuarine Water Quality Using Remote Sensing and In Situ Data" organized by NASA's Applied Remote Sensing Training Program (ARSET) (Nov. 30 & Dec. 7)

2021 Two Days online training on "Introduction to NASA Resources for Climate Change Resources" organized by NASA's Applied Remote Sensing Training Program (ARSET) (Sept. 29 & Oct. 6)

2020 One-day online training on "Black Marble Night Lights Data" organized by NASA's Applied Remote Sensing Training Program (ARSET) (Dec. 03)

2020 Three days online training on "Remote Sensing of Coastal Ecosystems" organized by NASA's Applied Remote Sensing Training Program (ARSET) (Aug. 25; Sept. 01 and Sept. 08)

2020 Four days of online training on "Forest Mapping & Monitoring with SAR Data" organized by NASA's Applied Remote Sensing Training Program (ARSET) (May 12, 14, 19 & 21)

2020 Four days of online training on "Satellite Remote Sensing for Agricultural Applications" organized by NASA's Applied Remote Sensing Training Program (ARSET) (April 14, 21, 28 & May 05)

2019 Five-day 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-day training on "Climate Vulnerability Assessment and Adaptation of Water Systems" at USPCAS-W, MUET, Jamshoro. May 11-12.

2017 Five-day 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 the 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 Sept. 09 to Nov. 02, 2013.

2012 One-month course training on "Geographic Information Systems (GIS)" from IDeAS, Hyderabad, Pakistan

2012 Five-day 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 a three-day 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)" at Iqra University Karachi, sponsored by NDP, held from November 1 to 30.

ii. RESOURCE/FOCAL PERSON/ORGANIZED

2023 Resource person in three-day training on "GIS" organized by Sindh Irrigation & Drainage Authority (SIDA) for fresh Engineers (Feb. 8-10)

2022 Organized and focal person of 3 days of training on "GIS and Remote Sensing Applications" for students and faculty members at Sindh Agriculture University Tandojam (Feb. 1-3, 2022)

2019 Organized and focal person of 3-day training on "Monitoring and Mapping of Forests Using Satellite Data for Clean and Green Pakistan" for young faculty members and postgraduate students at USPCAS-W, MUET Jamshoro in collaboration with Fulbright Foundation Pakistan (Nov. 27-29, 2019)

2019 Five-day International Training workshop on "Rehabilitation and Management of 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 of 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 of training on "GIS & Remote Sensing" organized by the 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 of training on "Capacity building of young faculty and postgraduate students in Geo-informatics" organized by USPCAS-W, MUET, Jamshoro, with financial support from the United States Educational Foundation in Pakistan (USEF) from April 5-7.

2014 Organized a five-day 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 Organized a one-day Seminar on World Water Day at Sindh Agriculture University Tandojam on Mar. 22.

2010 Organized & Resource Person a five-day training workshop on "Modelling Water Flow and Contaminant Transport in Soils and Groundwater" sponsored by the Higher Education Commission (HEC), 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

2021 Two-day Technical Workshop on "Design Sprint for Climate Water Information Portal" organized by FAO at Islamabad, from Dec. 09 & 10, 2021.

2017 Two-day workshop on "Climate Vulnerability Assessment and Adaptation of Water Systems" organized by the 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 the U.S.-Pakistan Centre for Advanced Studies in Water (USPCAS-W), Mehran University of Engineering & Technology, Jamshoro, Pakistan

2015 Three-day 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-day workshop on the 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. RESEARCH/ THESES/ BOOK/PROJECTS/REFEREEING

Google Scholar: [Citations = 2035, h-index = 25, i10 index = 49 - https://scholar.google.com.pk/ citations?user=sSMbppcAAAAJ&hl=en

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

ORIC ID: https://orcid.org/0000-0002-2058-0562

i. SCIENTIFIC PAPERS/PUBLICATIONS

Total impact factor = 80.55

1. Gao, Z.; Jorge, LA; Ahmad, MD; and **Siyal, AA.** 2025. Evaluation of Bayesian Hierarchical Modelling and Random Forest Regression Approaches for Remote Sensing-Based Salinity Mapping. Agricultural Water Management Journal. 309: 109318 **[IF = 6.9]**

2. **Siyal, A. A.**, Babiker, A. E., and Bainbridge, D. A. Subsurface porous clay pipe irrigation: A sustainable solution for agriculture in arid regions. Academia Journal of Agricultural Research. 12(1):001-007.

3. Solangi K. A; Abbasi, B; Solangi, F.; Khaskhali, S., **Siyal, A. A.** et al. 2024. Assessment of saturated hydraulic conductivity using soil particle size distribution: A comparative study of constant head and falling head methods. Global NEST Journal. 26 (6): 05833. **[IF = 1.0]**

4. Gao, L.; Xiangzhou, X.; Zhao, Y.; Li, Y.; Tarolli, P.**; Siyal, A. A.**; Xia, J.; and Li, Z. 2024. Assessing riverbank collapse with minimal lateral erosion for ecologically friendly erosion-resistant solutions. Environmental Earth Sciences. 38: 279 https://doi.org/10.1007/s12665-024-11547-9. **[IF = 2.8]**

5. Solangi, K.A.; Abbasi, B.; Solangi, F.; Khaskheli, S.; **Siyal, A. A.;** et al. 2024. Assessment of Saturated Hydraulic Conductivity Using Soil Particle Size Distribution: A Comparative Study of Constant Head and Falling Head Methods. https://doi.org/10.30955/gnj.005833. **[HEC Recognized in X Category]**

6. Soomro, S.; Solangi, G.S.; **Siyal, A.A**.; et al. 2023. Estimation of irrigation water requirement and irrigation scheduling for major crops using the CROPWAT model and climatic data. Water Practice & Technology. 18(3): 685-700. https://doi.org/10.2166/wpt.2023.024 **[IF = 1.6]**

7. Solangi, G.S.; **Siyal, A.A**.; Siyal, P. 2023**.** Indication of Subsurface Seawater Intrusion into the Indus Delta, Sindh, Pakistan. Mehran University Research Journal of Engineering and Technology, 24(1): 9-16. https://doi.org/10.22581/muet1982.2301.02. **[IF = 0.6]**

8. Mahmood, A.; Han, J.C.; Wajid, I., **Siyal, A.A.**; Ahmad, M; and Yousaf, M. 2022. Impact of Sediment Deposition on Flood Carrying Capacity of an Alluvial Channel: A Case Study of the Lower Indus Basin. Water. 14(20): 3321. https://doi.org/10.3390/w14203321. **[IF = 3.53]**

9. Solangi, G.S.; **Siyal, A.A**.; Siyal, Zain; Siyal, P.; Panhwar S.; Keerio, H.A. and Bhatti N.B. 2022**.** Social and ecological climate change vulnerability assessment in the Indus Delta, Pakistan.

Water Practice and Technology. 17(8): 1666-1678. https://doi.org/10.2166/wpt.2022.087 **[IF = 1.03]**

10. **Siyal, A.A.;** Solangi, G.S.; Siyal, Zain; Siyal, P.; Babar, M.M.; Ansari, K. 2022**.** Shoreline change assessment of Indus Delta using GIS-DSAS and satellite data. Regional Studies in Marine Science. 53: 102405. https://doi.org/10.1016/j.rsma.2022.102405 **[IF = 2.166]**

11. 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 **[IF = 0.483]**

12. Siyal, P.; Nafady, A.; Memon, R.; Sherazi; S. T. H., Nisar, J., **Siyal, A. A.**, ... & Bhagat, S. 2021. Highly selective, sensitive, and a simpler colorimetric sensor for Fe2+ detection based on biosynthesized gold nanoparticles. Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy, 254, 119645 **[IF = 4.098]**

13. Ippolito, J., Ullman, J. L., Awan, S., Ansari, K., Cui, L. **Siyal, A. A.** 2021. Biochars Reduce Irrigation Water Sodium Adsorption Ratio. Biochar. **3,** 77–87. https://doi.org/10.1007/s42773-020-00073-z **[IF = 11.452]**

14. 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. https://doi.org/10.3390/w12061656 **[IF = 2.524]**

15. 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. https://doi.org/10.1016/j.ecss.2020.106657 **[IF = 2.929]**

16. 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 Recognized in Y Category]**

17. 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 on plant nitrogen and water use in furrow irrigated systems. Agricultural Water Management. 232, 106044. https://doi.org/ 10.1016/j.agwat.2020.106044. **[IF = 4.516]**

18. 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. https://doi.org/10.22581/muet1982.2001.13 **[HEC Recognized in Y Category]**

19. Solangi, K.A; **Siyal, A.A.**; Wu, Y.; Abbasi, B.; Solangi; Lakhair, 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. https://doi.org/10.3390/agronomy9120869. **[IF = 2.603]**

15. 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. 191731 https://doi.org/10.1007/s10661-019-7861-x **[IF = 1.959]**

16. 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. https://doi.org/10.1080/10807039.2019.1674634 **[IF = 2.012]**

17. Solangi, G.S., **Siyal, A.A**., Siyal, P. 2019. Spatiotemporal Dynamics of Land Surface Temperature and its Impact on Vegetation. Civil Engineering Journal. 5(8): 1753-1763. https://doi.org/10.28991/cej-2019-03091368. **[IF = 1.5]**

18. 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. https://doi.org/10.28991/cej-2019-03091356. **[IF = 1.5]**

19. 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. https://doi.org/10.5004/dwt.2019.24241. **[IF = 1.234]**

20. 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. https://doi.org/10.48084/etasr.2818 [In ISI Master List-Equivalent to **Y Category** in HEC recognized journals].

21. 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. https://doi.org/10.1016/j.ecss.2019.04.039 **[IF = 2.611]**

22. Bhatti N.B; **Siyal, A.A.**; Qureshi, A.L.; Bhatti, I. A. 2019. Land Cover Change Assessment After Small Dam's Construction Based on Satellite Data. Civil Engineering Journal, 5(4): 810-818. DOI http://doi.org/10.28991/cej-2019-03091290 **[IF = 1.5].**

23. 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. **[IF = 2.012]**

24. 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. https://doi.org/10.28991/cej-2019-03091233 **[IF = 1.5]**

25. **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. https://doi.org/10.22581/muet1982.1804.17 **[HEC Recognized in X Category]**

26. 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. https://doi.org/10.5004/dwt.2018.22407 **[IF = 1.234]**

27. 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. https://pjaaevs.sau.edu.pk/index.php/ojs/article/view/256 **[HEC Recognized in Y Category]**

28. 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. http://doi.org/10.26692/sujo/2018.06.0040 **[HEC Recognized in X Category]**

29. 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 the furrow irrigation method in a semi-arid region. International Journal of Agricultural and Biological Engineering, 11(1), 172-177. **[IF = 2.4]**

30. 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. **[IF = 2.611]**

31. 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 Recognized in X Category]**

32. 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. https://doi.org/10.22581/muet1982.1704.30. **[HEC Recognized in X Category]**

33. 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. https://pjaaevs.sau.edu.pk/index.php/ojs/article/view/82 **[HEC Recognized in Y Category]**

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36. **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. https://doi.org/10.1016/j.agwat.2016.04.026 **[IF = 2.848]**

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39. 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. http://dx.doi.org/10.6000/1927-5129.2015.11.81 **[HEC Recognized in Z Category]**

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42. **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 Recognized in X Category]**

43. 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 Purposes in Phuleli Canal Command Area (Sindh), Pakistan. International Water Technology Journal. 4(4): 222-237.

44. **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.

45. 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. http://aup.edu.pk/sj_pdf/9%20168-2013.pdf. **[HEC Recognized in X Category]**

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51. Mirjat, M. S., Jiskani, M. M., **Siyal, A. A.,** and Mirjat, M. U. 2011. Mango production and fruit quality under properly managed drip irrigation. Pakistan Journal of Agriculture, Agricultural Engineering, and Veterinary Sciences. 27(1): 1-12. **[HEC Recognized in Y Category]**

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53. **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. https://doi.org/10.2136/vzj2009.0129 **[IF = 2.133]**

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57. **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 **[HEC Recognized in Y Category]**

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60. **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 **[HEC Recognized in Y Category]**

61. **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

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66. **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. Pakistan Journal of Applied Sciences. 2(3): 277-280. https://doi.org/ 10.3923/jas.2002.277.280

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68. Abro, Z. A., Oad, F.C.; Siyal, A.G.; Oad, N. L. and **Siyal, A. A.** 2002. Water depletion affects the behavior of salts in saline soils. Pakistan Journal of Applied Sciences. 2(2): 186-190.

69. **Siyal, A. A.,** Siyal A. G., Abro, Z. A., and Oad, F. C. 2002. Determination of hydraulic properties of soil as a porous medium. Pakistan Journal of Applied Sciences (ISSN 1607-8926). 2(1): 120-124. https://doi.org/ 10.3923/jas.2002.120.124.

ii. PAPER PRESENTATIONS IN INTERNATIONAL CONFERENCES

1. **Solangi G. S. Siyal, A.A.** and Bhatti, N. B. 2022. Impacts of climate change and seawater intrusion on socio-economic conditions of the Indus Delta community. 6th Ankara International Congress on Scientific Research held in Ankara, Turkey. April 1-3, 2022 (online)

2. **Siyal, A.A.** 2021. The Role of Check Dam on the Pothohar Plateau of Pakistan. Focused Group Discussion of International Forum on Land Degradation, Soil Conservation and Sustainable Development (LASOSU 2021) at Dalian, China. August 21-23 (online)

3. **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 in Pittsburgh, USA (May 19-23, 2019).

4. Ahmed, A.; **Siyal, A. A**.; & Zaidi; A. Z. 2018. Impact of the 2010 super flood on rice crop of the Larkana Division, Pakistan. In AGU Fall Meeting Abstracts. Washington DC., USA Dec. 10-14.

5. **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.

6. 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).

7. **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.

8. **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.

9. 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)

10. **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)

11. **Siyal, A. A.** 2011. Effect of subsurface porous clay pipe irrigation on solute dynamics in a loamy soil. Paper presentation at the International Conference on "Agricultural Engineering" organized by Thai Society of Agricultural Engineering (TSAE), Pattaya, Thailand (Mar. 31st – Apr. 01, 2011).

12. **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)", Jan. 4-6, 2011, National University of Singapore, Singapore.

13. **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" Jan. 11-14. 2010, Sultan Qaboos University, Muscat, Oman.

14. **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.

15. 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.

16. **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 the International Conference on "Human Impacts on soil quality attributes in arid and semi-arid regions" at Isfahan University of Technology, Isfahan, Iran from Sep. 12-16, 2005.

17. 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 Mar. 16-19, 2004.

18. Poster presentation at "British National Committee of Irrigation and Drainage Research Meeting" held at HR Wallingford, United Kingdom, 2001.

19. 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.

20. 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.** 2022. Water Conservation in Agriculture. National Conference on **"**Integrating Climate Smart Agriculture and Water, Energy and Food Nexus for Sustainable Development and Food Security under Changing Climate held at Dawood University of Engineering & Technology, Karachi. Aug. 19-20, 2022.

2. **Siyal, A.A.** 2019. Water Conservation Techniques in Agriculture. National Conference on Water & Security & Sustainability. Expo Centre Karachi. Nov. 06, 2019

3. **Siyal, A.A.** 2019. Wetlands of Sindh: Issues and Options. Paper presentation as a keynote speaker at 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.

4. **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.

5. **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.

6. **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.

7. **Siyal A.A.** 2018. Shrinking Indus Delta: Current Status and Way Forward. One day, the National Seminar on Indus delta. Mar 2, 2018, at USPCAS-W, Mehran University of Engineering & Technology, Jamshoro

8. **Siyal, A. A.** 2017. Application of Field and Satellite Data for Determining Soil, Water and Cropping Patterns in the Danistar 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 Nov. 27-29, 2107

9. **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).

10. **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" was held at the Marriot Hotel, Islamabad, from Oct. 17- 19, 2016.

11. **Siyal A. A.** 2014. Space Technology for Monitoring of Agriculture in Pakistan. The presentation was given at the 11th Annual Fulbright & Humphrey Alumni Conference on "Vision 2025: Our Plan of Action" and was held at the Fulbright Centre, Lahore, on Dec. 05-07.

12. **Siyal A. A.** 2013. Floods 2010 and 2011 in Sindh: Climate change or bad governance? The presentation was given at the 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.

13. **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 Sept. 15 to 17, 2010.

14. **Siyal**, A. A. 2009. "Coping with water Scarcity in arid regions of Pakistan". The second Regional Workshop on "Sustainable Water Management" was organized by Sindh Agriculture University, Tandojam, under the DelPHE project sponsored by the British Council at Indus Hotel Hyderabad on Aug. 4 and 5.

15. Paper presentation at "2nd National Conference on Agricultural and Animal Sciences" at Sindh Agriculture University Tandojam, Sindh, Pakistan, Nov. 23-25, 2005.

16. 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

2022 Technical Meeting on Floods 2022 in Sindh, organized by the World Bank at Islamabad on Dec. 09, 2022

2008 Technical Committee Annual Meeting of W1188 Soil Physics Multi-State Research Group at Las Vegas, the USA, on Jan. 2-4.

2001 Annual Gerald Lacey Memorial Lecture on "The World Water Forum and its Implications for ICID," London, on May 16.

2001 British National Committee of Irrigation and Drainage Research Meeting at HR Wallingford, the UK on Mar. 21.

2000 British National Committee of Irrigation and Drainage Research Meeting at HR Wallingford, the UK, on Mar. 20.

1999 British National Committee of Irrigation and Drainage Research Meeting at HR Wallingford, on Mar 17.

1999 Annual Conference, Luncheon and Awards Ceremony, at Royal Agricultural College, Cirencester, the UK on May 11.

1999 Annual Gerald Lacey Memorial Lecture on "Is there still the role of soil physics?" London on May 19.

1999 Conference on Management of Saline Soils, arranged by British Soil Water Group at the University of Newcastle Upon Tyne, UK, on June 2.

v. BOOKS Published

a. **Siyal A. A.** & Siyal P. 2025. A book chapter, "The Delta of River Indus" published in "The Indus Water System" book (ISBN: 978-969-9119-02-6). National Centre of Excellence in Geology, University of Peshawar, Peshawar-25130

b. **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.

c. **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.

d. **Siyal, A.A;** Leeds Harrison, P.B; Youngs, E.G. (2018). Improving the leaching efficiency for the reclamation of saline clay-aggregated soils. LAP Lambert Academic Publishing. ISBN 978-3659421839. https://www.amazon.com/Improving-leaching-efficiency-reclamation-saline/dp/3659421839

vi. REPORTS

a. **Siyal. A.A.** (2019). Wetlands of Sindh. A technical Report submitted to PCMU, Irrigation Department, Government of Sindh, Karachi

b. Rendle, E.J., **Siyal, A.A.** and Soofi, K.H. (2020). Sindh Coastal Resilience Project; Stakeholder engagement and subproject longlist generation and readiness report. Resilient Coasts Ltd report for ADB TA-9634. Available online: https://tinyurl.com/2p85zuc7

vii. THESES

Higher Education Commission (HEC) recognized for supervising Ph. D. Students in the field of Water Resources Management from 2018 to 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 fulfilment of the requirements 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 fulfilment 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 fulfilment 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**.	Waqar Ahmed Bhayo	Hydrological, Environmental, and Socio-Economic Assessment of Conversion of Natural Wetland into a Reservoir: A Case Study of Chotiari Wetland	SAU	-	Supervisor
2	**Ph.D.**	Cheetan Kumar	Investigating the effect of supplementary irrigation and plastic mulch colors strategies for Guar (Cyamopsis tetragonoloba L.) productions in rain-fed area of Tharparkar	SAU	2025	Co-Supervisor
3	**Ph.D**.	Arfan Choudhary	Assessing the water governance policy framework for improving Participatory Irrigation Management (PIM) Reforms	MUET	2023	Co-Supervisor
4	**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
6	**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
7	**Ph.D.**	Wajid Ijaz	Predictive Modelling of Salinity Intrusion in the Indus River Estuary, Pakistan	MUET	2019	Co-supervisor

8	**Ph.D.**	Asadullah Sarki	Optimizing zone leaching for salinity control in layered soils: Experimental and Model Simulations	SAU	2017	Co-supervisor
9	**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
		Mir Ali Talpur		SAU	2025	Supervisor
		Saif Hashmi		SAU	2025	Supervisor
1	**MS**	Sadia Allah Ditta	Vanishing wetlands of Sindh: a case study of Drigh and Langh Lakes	MUET	2021	Co-supervisor
2	**MS**	Tayyaba Suhail	Mapping riparian vegetation using satellite data- a case study of Sukkur-Kotri Indus reach	MUET	2021	Co-supervisor
3	**MS**	Shahtaj Keerio	Mapping of Waterlogging and Soil salinity using Remote Sensing and Geospatial tools: A case study of district Shaheed Benazirabad	MUET	2021	Co-supervisor
4	**MS**	Sarwan	Soil Salinity Mapping using EM-38 and ESAP software	MUET	2020	Supervisor
5	**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
6	**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
7	**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
8	**MS**	Amir Bhatti	Conversion of natural wetlands into reservoirs: A case study of Chotiari reservoir	MUET	2019	Supervisor
9	**MS**	Tahir Ali Shaikh	Assessing Hydrologic, Environmental and socio-economic impacts of Thar Coal Field: A case study of Gorano dam	MUET	2018	Supervisor
10	**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
11	**MS**	Muhammad Salman Mohsin	Assessment of Hydroclimatic Impact on Tidal Floodplains of The Indus Delta using Remote Sensing & Geospatial Techniques	MUET	2018	Supervisor
12	**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
13	**M.E.**	Muhammad Raza	Mapping of Soil Salinity in District Thatta Using GIS and Remote Sensing Tools	MUET	2017	Supervisor
14	**M.E.**	Kashif Solangi	Assessment of Spatial and Temporal Distribution of Soil Salinity in District Sujawal using Field and Satellite data	MUET	2017	Supervisor
15	**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

16	**MS**	Aftab Ahmed	Remote Sensing and GIS Application for Flood Management: A Case Study of Larkana Division	MUET	2017	Supervisor
17	**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
18	**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
19	**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
20	**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
21	**M. E.**	Khadimullah	Effect of size of the raised bed in bed-furrow irrigation on crop water productivity and yield	SAU	2014	Supervisor
22	**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
23	**M. E.**	Kausar Ali	Use of plastic sheet in furrow irrigation method for efficient use of water	SAU	2014	Supervisor
24	**M. E.**	Faisal Mehmood	Determination of hydraulic properties of soils using numerical models	SAU	2013	Supervisor
25	**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
26	**M. E.**	Abdul Sattar Mashori	Evaluation of the performance of the Alternate Furrow Irrigation under climatic conditions of Sindh	SAU	2013	Supervisor
27	**M. E.**	Waqar Ahmed Bhayo	Water saving and crop yield under pitcher and wick irrigation methods	SAU	2013	Supervisor
28	**M. E.**	Ms. Kiran Zaheer	Determination of the effect of hydraulic conductivity and size of the pitcher on the radius of the soil-wetting zone	SAU	2007	Supervisor
29	**M. E.**	Wali Muhammad Daudpoto	Evaluation of groundwater quality in District Tando Muhammad Khan	SAU	2007	Supervisor
30	**M. E**	Muhammad Yakoob Hasini	Runoff water harvesting technology for domestic and livestock use in Barkhan district of Balochistan	SAU	2006	Supervisor
31	**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 Agriculture University Tandojam Campus	SAU	2015	Supervisor
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/DEVELOPMENT PROJECTS

2024-25 One-year project on "Installation, Monitoring and Management of Eddy Flux Tower at SAU, Tandojam" of Rs. 5.6 million funded FAO.

2022 One-year project on "*Establishment of GIS and Remote Sensing Center for Monitoring of Natural Resources*" of Rs. 11.545 million funded by the Government of Sindh (GoS) through ADP2022

2021 One-year project on "*Assessment of Time series Agricultural Drought in rainfed areas of Sindh Province through application of indices and mapping using Google Earth Engine cloud Platform*" of Rs. 0.5 million funded by SAU, Tandojam, under Small Grant Research Projects (SGRP)

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-month 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-month study on "*Impact of Climate Change in the Indus River Delta and Coastal Region of Pakistan*" of Rs. 1.2 million funded by the 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 the Higher Education Commission (HEC) under NRPU.

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

12. ARTICLES PRINTED IN NEWSPAPERS/MAGAZINES

S#	Name of Newspaper/ Magazine	Language	Date of publication	Title
1	Pahanji Akhbar	SINDHI	Dec. 24, 2025	A Century-Old Barrage: What Sindh Should Plan?
2	Pahanji Akhbar	SINDHI	Oct.29, 2024	Does the Indus Water Treaty need any amendment?
3	Pahanji Akhbar	SINDHI	Jun. 20, 2024	Is Sindh ready for another Flood?
4	Pahanji Akhbar	SINDHI	Apr. 06, 2024	Do not poison the water of the Indus

5	Pahanji Akhbar	SINDHI	Mar. 27, 2024	Corporate Farming & Agriculture of Sindh
6	DAWN	ENGLISH	Dec.18, 2023	Low-Cost Innovative Methods of Farming
7	The Nation	ENGLISH	Nov.10, 2023	Water Policy of Sindh
8	DAWN	ENGLISH	Aug. 28, 2023	Enhancing Crop Water Productivity
9	Pahanji Akhbar	SINDHI	Aug. 21, 2023	Sindh Irrigation System & Sindh Water Policy
10	DAWN	ENGLISH	May 01, 2023	Sindh's Shrinking Forests
11	Pahanji Akhbar	SINDHI	Apr. 18, 2023	How to save Sindh from Floods?
10	DAWN	ENGLISH	Apr. 03, 2023	Suffering caused by Climate Change
11	Pahanji Akhbar	SINDHI	Oct. 17, 2022	Will the Indus Delta be swallowed by the sea?
12	KAWISH	SINDHI	Jan. 30, 2022	Sindh Agriculture Policy: Issues & Options
13	KAWISH	SINDHI	Oct. 25, 2020	Monsoon Rainfall & LBOD
14	KAWISH	SINDHI	Oct. 26, 2020	Is LBOD responsible for the disaster?
15	KAWISH	SINDHI	Jun. 13, 2020	Delta of Indus & its vanishing villages
16	KAWISH	SINDHI	May 16, 2020	Degrading Forests of Sindh & REDD+
17	FRONTIER POST	English	Apr. 14, 2020	Sindh Barrage: Bane or Boon
18	KAWISH	SINDHI	Mar. 21, 2020	National Water Policy & Observations of Sindh
19	KAWISH	SINDHI	Sep. 25, 2019	Fears about the Sindh Barrage
20	DAWN	ENGLISH	Nov. 13, 2017	How can we revive the shrinking Indus Delta
21	SINDH EXPRESS	SINDHI	Oct. 15, 2017	Shrinking Indus Delta
22	SINDH EXPRESS	SINDHI	Aug. 17, 2017	Relics of the Indus Civilization under threat
23	THE EXPRESS TRIBUNE	ENGLISH	May 20, 2017	Flood threat to the ancient city
24	KAWISH	SINDHI	May 12, 2017	Why can't black gold make Sindh prosperous
25	SINDH EXPRESS	SINDHI	Apr. 21, 2017	Thar Coal Boon or Ban
26	DAWN	ENGLISH	Apr. 03, 2017	Social Impact of Coal Mining in Thar
27	SINDH EXPRESS	SINDHI	Aug. 19, 2016	Why Emphasis on Kalabagh Dam
28	BRAT	SINDHI	Apr. 06, 2015	The prosperity of Sindh with the Sindhu
29	SINDH EXPRESS	SINDHI	Ma. 22, 2015	Sindhu & Drying Sindh
30	IBRAT	SINDHI	July 21, 2014	Use of Space Technology in Agriculture
31	DAWN	ENGLISH	July 16, 2012	Left Bank Outfall Drain: a friend or foe
32	IBRAT	SINDHI	Apr. 02, 2012	Pineapple can be grown in Sindh!
33	DAWN	ENGLISH	Feb. 21, 2011	Irrigation mode for better mango fruits
34	IBRAT	SINDHI	Apr. 10, 2010	Discussion about drainage
35	DAWN	ENGLISH	Sep. 21, 2009	Low-cost irrigation for arid regions
36	DAWN	ENGLISH	Dec. 29, 2008	RBOD: Fears and Expectations
37	DAWN	ENGLISH	Dec. 22 2008	Water-saving clay pipe irrigation system
38	KHABROON & KOSHISH	SINDHI	Oct. 14-15, 2005	The science behind the earthquakes
39	KOSHISH	SINDHI	Aug. 12, 2005	Will SIDA bring revolution to the irrigation system?
40	KOSHISH	SINDHI	July 27, 2005	National Program for Improvement of Watercourses
41	DAWN/SCI-TECH WORLD	ENGLISH	July 09, 2005	The science behind the calamity
42	KHABROON & KOSHISH	SINDHI	May 22, 2005	Why does Sindh lag in the race for agricultural progress?
43	DAWN/SCI-TECH WORLD	ENGLISH	Jan. 08, 2005	Intruding ever-so-silently
44	KHABROON	SINDHI	Dec. 09, 2004	Indus delta: Vanishing mangroves
45	DAWN/SCI-TECH WORLD	ENGLISH	Nov. 13, 2004	Wastewater for Agriculture: Health Risks (Cover Story)
46	KHABROON	SINDHI	Aug. 03, 2004	Effects of contaminants in the water on human health
47	KHABROON	SINDHI	June 15, 2004	Suggestions for the Betterment of Education System
48	KHABROON	SINDHI	June 05, 2004	Use of wastewater for irrigation
49	KHABROON	SINDHI	Mar. 26, 2004	Will SIDA bring reforms to Sindh's irrigation system?
50	KHABROON	SINDHI	Mar. 19, 2004	Image of Prosperous Sindh and Different Views

51	DAWN	ENGLISH	Mar. 15, 2004	Risks in SIDA Reforms
52	KOSHISH	SINDHI	Feb. 26, 2004	A search of a lost river
53	DAWN & KOSHISH	ENGLISH	Feb. 23, 2004	Pitcher irrigation: a water-saving technique
54	KOSHISH	SINDHI	Jan. 31, 2004	Knowledge of terms used in water measurement
55	KAWISH	SINDHI	Dec. 31, 2003	How to find the solution to River conflicts
56	IBRAT	SINDHI	Oct. 23, 2003	Where does life flourish?
57	IBRAT	SINDHI	May 27, 2003	Soil Science
58	IBRAT	SINDHI	May 07, 2003	Why is Sindh poor? A few reasons
59	SCIENCE	SINDHI	Jan. 1994	Sprinkler Irrigation

13. REFERENCES

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