

MUHAMMAD SHAHBAZ ALI

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ABOUT ME

Master's researcher in Environmental Sciences at KFUPM, specializing in Life Cycle Assessment of electricity generation technologies and decarbonization transition scenarios in Saudi Arabia. My research integrates process LCA (SimaPro, ecoinvent, ReCiPe 2016 Midpoint H) with explainable machine learning to model and interpret environmental trade-offs across approximately 30,000 electricity mix scenarios aligned with Saudi Arabia's Net Zero 2060 commitments.

ACADEMIC QUALIFICATION

Jan 2025 – CURRENT (Expected grad. Dec – 2026)

Master's in Environmental Sciences

Department of Geosciences, King Fahd University of Petroleum and Minerals (KFUPM), Dhahran, Saudi Arabia.

RESEARCH EXPERIENCE

Master's Research - Life Cycle Assessment of Energy Systems in Saudi Arabia

King Fahd University of Petroleum and Minerals, Dhahran, Saudi Arabia

PUBLICATIONS

1. Batool, Fatima, **Muhammad Shahbaz Ali**, Sabir Hussain, Muhammad Shahid, Faisal Mahmood, Tanvir Shahzad, Muhammad Qasim, and Qudrat Ullah. "Bioreduction and biosorption of chromium: Unveiling the role of bacteria." In *Bio-organic Amendments for Heavy Metal Remediation*, pp. 279-296. Elsevier, 2024.
2. **Ali, Muhammad Shahbaz**, Farrukh Azeem, Muhammad Shahid, Faisal Mahmood, Tanvir Shahzad, Yasir Bilal, Muhammad Bilal, Muhammad Talha Khokhar, and Sabir Hussain. "141 Ameliorative Role of Endophytes in Mitigating Biotic and Abiotic Stresses in Medicinal Plants." In *Symbiotic Association of Microorganisms with Medicinal and Herbal Plants*, pp. 141-172. CRC Press, 2025.