

Moza Al-Kuwari
PhD in Engineering Management,
College of Engineering – Qatar University

To begin with, Moza, could you introduce yourself and tell us about your academic and professional journey, and the key milestones that shaped your research interests?

I am Dr. Moza Abdullah Al-Kuwari, a PhD holder in Engineering Management from Qatar University and Assistant Director of the Quality and Conformity Department at the Qatar General Organization for Standardization. My career combines quality, conformity assessment, and standardization with a strong research interest. Exposure to challenges facing the industrial sector inspired me to focus on sustainability, decision-making, and practical research-based solutions.

You obtained a PhD in Engineering Management. What motivated you to choose this specialization, and how has it influenced your academic and professional path?

I chose Engineering Management because it combines engineering, management, and decision-making, all of which are closely related to my professional role. The specialization strengthened my analytical and research skills and enabled me to address challenges from technical, economic, environmental, and social perspectives.

Through your experience in managing national conformity programs, what are the key achievements or initiatives you are most proud to have contributed to?

One of the initiatives I am most proud of was my participation in a project linked to Qatar's National Manufacturing Strategy 2023–2027, which focused on assessing the quality infrastructure of national factories. During 2023, I participated in field visits to manufacturing facilities to collect data, evaluate the implementation of quality and conformity requirements, and identify challenges and opportunities to enhance industrial competitiveness. These visits generated valuable indicators on manufacturers' needs for standardization, conformity assessment, accreditation, and metrology, supporting initiatives to strengthen Qatar's national quality infrastructure.

Your research focuses on performance indicators for carbon capture technologies. What is the idea behind this research? What are its key findings, and how can its outcomes contribute to sustainability and decision-making in the industrial sector?

The core idea of my research is to develop a localized multi-criteria decision-support framework for carbon capture, utilization, and storage (CCUS) technologies, which are among the most important solutions for reducing emissions in heavy industries. The study involved experts from government, academia, and industry in Qatar to identify priorities and challenges associated with implementing these technologies.

The findings showed that technology selection should not rely solely on economic or technical considerations but must also account for environmental and social factors, as well as supply chain readiness. As a result, an integrated framework was developed to help decision-makers evaluate different technology options according to the specific needs of each industrial sector. To enhance the practical relevance of the research, I also proposed a regulatory framework for CCUS-related standards, supporting the development of a national standardization approach and contributing to sustainability goals and the transition to a low-carbon economy.

What are your future academic and professional aspirations, and what message or advice would you like to give to students and young researchers who aim to use scientific research to serve society and create a positive impact?

I aspire to continue contributing to sustainability and environmental research while promoting collaboration between academia, government, and industry to develop practical solutions.

My advice to young researchers is to focus on real-world challenges, remain persistent, embrace continuous learning, and collaborate across disciplines to create meaningful and lasting impact.