

WOMEN IN CBRN: CHALLENGES AND SUCCESS STORIES FROM THE MIDDLE EAST DURING THE COVID-19 PANDEMIC

Interview with Dr Rana Baydoun - Researcher at the Environmental and Border Radiation Control Department of the Lebanese Atomic Energy Commission (LAEC)

Throughout the past decades, gender-based stereotypes have persisted in the Middle East, posing numerous challenges to women's career prospects and access to many work fields. A career in the field of Chemical, Biological, Radiological and Nuclear (CBRN) security has traditionally been associated with masculinity within the region, offering limited opportunities for women to join and demonstrate their capabilities as security analysts, researchers and officers partaking in the field missions. Moreover, during the past year, the COVID-19 pandemic has further exacerbated gender inequalities in many aspects and presented women with a novel set of challenges that continue to have a severe toll on their physical and mental wellbeing.

Notwithstanding the challenges, promising examples of Middle Eastern women who have succeeded in breaking the deep-rooted gender stereotypes before and during the pandemic, exist. In a recent interview with UNICRI, Dr. Rana Baydoun, Researcher at the Environmental and Border Radiation Control Department of the Lebanese Atomic Energy Commission (LAEC), briefly discusses her work in the field of CBRN, along with the opportunities and key challenges she has encountered as a female before and amidst the pandemic. Dr Baydoun, currently in charge of the National Environmental Radiation Monitoring Program, serves as a national trainer for the Lebanese first responder personnel in radiation safety, nuclear security, material out of regulatory control (MORC) and emergency preparedness and response. She is also a quality coordinator at the gamma spectroscopy laboratory. In addition, she has established a Radiocarbon Dating Lab at LAEC, the first of its kind in Lebanon. Besides her vast professional experience for the past two decades, in 2015, Dr Rana concluded her PhD in Environmental Chemistry. She was already well-published before her PhD, and has continued writing papers after it, all while fulfilling her roles as a wife and mother of two.

In terms of opportunities and challenges, how would you summarize your professional journey as a Middle Eastern woman working in the CBRN field?

My passion for science and research has been the catalyst throughout this journey. I first joined LAEC in 1997 as part of a small team responsible for many tasks across different departments. And while this might sound demanding and stressful for many, for me, this was a great opportunity to learn, thrive and progress within the CBRN field. When I started at LAEC I was more focused on the scientific aspects of the radiological and nuclear (RN) fields, but at later stages, I started building up experience in other RN and chemical safety and security aspects, including emergency preparedness and response, radiation safety and MORC.

In terms of challenges, I haven't faced many on the national level. On the contrary, since day one, I have always been supported and guided by my superiors and colleagues at LAEC as well as by my family. Nevertheless, I have experienced moments when I was anxious while assuming certain roles - notably, as a civilian female capacity building trainer for Lebanese military personnel, who were mostly men with middle to high ranks. Relatedly, during these trainings, it has also been challenging to bridge the gap between the scientific and security perspectives of the participants, but together with my colleagues, we have managed to eventually moderate very fruitful and diverse discussions.

On a regional level, unfortunately, as a female, I frequently faced resistance while participating in regional events with other Arab countries, i.e., in the International Atomic Energy Agency (IAEA) technical cooperation

events, especially at times when I was the lead counterpart on developing work plans for certain pre-project designs. Making decisions as a female was obviously irritating to many male participants to the extent that they would argue about the validity of the proposals and ideas that I suggested just for the mere fact of me being a woman.

Additionally, the practicalities of conducting field research have sometimes been physically challenging for me as a woman. This included conducting RN research sampling and field surveys, in addition to carrying huge backpacks of portable equipment, if outside LAEC, for very long distances in rough terrain. With the outbreak of the COVID-19 pandemic and the imposed lockdown measures, how has your CBRN work been impacted?

From an operational perspective, the work of the whole organization has been significantly impacted. National trainings and practical exercises, as well as international cooperation events, have been either halted or conducted online. Unexpectedly, the virtual approach for conducting events has been demonstrably effective in achieving some of the intended outcomes. However, with the practical nature of the CBRN capacity building activities, which should normally include Tabletop Exercises (TTX) and real-life scenarios, adopting the in-person approach is indispensable for ensuring the highest level of effectiveness and interaction. This unfortunately has not been an option so far.

Similarly, with the imposed lockdowns and the strictly designated working hours, the research component has also been severely affected and interrupted. Conducting high-quality scientific research in the applications of nuclear techniques normally requires the availability of certain working conditions, including a convenient, stress-free working environment, concentration, precision, and mind clarity. These have all been so difficult to obtain with the looming stress and anxiety associated with the spread of the COVID-19 virus. Additionally, there has been a suspension of the national laboratory and equipment installation projects that are conducted within the framework of technical cooperation with the IAEA. The imposed travel restrictions have prevented the IAEA experts from coming over to Lebanon to install the equipment and provide the necessary training for the staff.

Do you think that going to the office in the middle of a pandemic has triggered any unpleasant emotions of fear and anxiety for yourself?

Of course. Going to the office has been risky, especially because some of my colleagues tested positive throughout the last year. However, the LAEC was very strict in applying all the necessary precautions at the workplace to prevent the spread of the virus, including wearing face masks and adopting social distancing measures. So, eventually, I haven't experienced so much fear for myself at the workplace, but I have indeed been anxious about transmitting the virus to my family and children. In January 2021, I tested positive for COVID-19 and spread the virus to the rest of my family. However, I didn't catch the virus from my workplace. What additional challenges have you encountered as a working female during such an unpredictable turbulent period?

Working from home while setting work-life boundaries and definite working hours has hardly been attainable. Women and mothers are normally expected to shoulder much of the burden at home in contrast with men who can easily manage to isolate themselves at home and set clear, uninterrupted work schedules. Also, while my husband has been fully supportive during this period, as a wife and a mother, I felt more entitled to address all the lockdown-induced mental and physical distress that my children and husband have

been going through.

Do you think the pandemic has exacerbated existing stereotypical gender norms and roles?

Yes indeed. In addition to the inconvenience of working from home for women like myself, whose children are grownups, many other female colleagues with younger children were struggling to balance their work and life roles. With the closure of nurseries and schools during the lockdown, mothers were expected to fulfil their entitled babysitting and care roles, which unfortunately impacted their work and career progress vis-a-vis men.

Have you felt supported during such time at your workplace? What kind of support did you receive?

Of course, my colleagues and I have been constantly supported and encouraged. Most importantly, we have received an abundance of appreciation for efficiently keeping up with the work demands during this unsettling period.

Taking the lead on implementing the CONTACT Middle East activities, how do you evaluate the whole experience in terms of opportunities, risks, and challenges that this brought forward?

Honestly, at the very beginning, I was a bit uncertain about the feasibility of implementing the project activities online whilst achieving the intended outcomes. However, the experience of virtually conducting both the Train-The-Trainer session and the National training turned out to be an absolute success. Despite the odds, it presented a unique opportunity for both the trainers and trainees to engage in interactive fruitful discussions and exchange experiences on the topics of preventing the trafficking of radiological and nuclear material in the Middle East.

The key challenge, I would say, was to ensure that all the COVID-19 necessary precautions were in place to protect the participants.

How do you evaluate your experience as a female team leader in a male dominated team of trainers? Did you face any resistance or specific challenges in this regard?

Not at all. I decided to present a leadership model that would adopt "teamwork" as an approach to carry out the mission. With this, everyone was encouraged to actively contribute their part to achieve the overall team objectives. Also, as a team, we made sure to provide constant guidance and support to each other throughout the whole coordination and feedback process.

What policies/practices do you think could promote, support and empower women working in the CBRN field during the pandemic and beyond?

It all starts with the female herself. Breaking the social taboos and advancing women's right to access the security field should evolve from a female's genuine confidence that "she can".

Many women across the region possess the necessary knowledge, skills, and capabilities to pursue their career goals, however without addressing the psychological barriers, including fear and underestimation, other policies will not achieve their intended objectives. I suggest that capacity building is an extremely effective tool in this regard.

The government is also responsible for addressing existing gender inequalities by offering equal opportunities for both women and men to pursue their careers and hold decision making roles within the CBRN field.

Rana Baydoun, PhD, is a Researcher at the Environmental Radiation Control Department - Lebanese Atomic Energy Commission, National Council for Scientific Research. She holds a PhD in Environmental Chemistry. She is in charge of the National Environmental Radiation Monitoring Program. She had experience in radionuclide analysis and public dose assessment arising from internal and external exposure. She is Quality Coordinator at the gamma spectroscopy laboratory, and depute of quality manager, and she is experienced in establishing and implementing quality management system according to ISO 17025 standard for calibration and testing laboratories. She is national trainer for first responders. She attended several meetings, conference, workshops and training course in the fields of radiation safety, nuclear security and emergency preparedness and response.

She is involved in the analysis of Materials Out of Regulatory Control, radioisotope identification and activity calculation. Her research interests are in the field of application of nuclear techniques in cultural heritage

valorization (Radiocarbon Dating, Thermoluminescence/Optical Simulated Luminescence dating, Uranium/Thorium dating)