



ARAB INTERNATIONAL  
WOMEN'S FORUM  
المنتدى العربي الدولي للمرأة

WOMEN IN SUSTAINABILITY,  
ENVIRONMENT AND  
RENEWABLE ENERGY



An initiative by

MASDAR 

AIWF x WiSER REPORT & RECOMMENDATIONS

# On the Road to COP28:

## Women-Led Innovation in Climate, Sustainability & STEM



### Fostering UK-GCC-MENA Partnerships for Growth

An initiative of the Arab International Women's Forum (AIWF - UK) and Women in Sustainability, Environment and Renewable Energy (WiSER - UAE)



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# Key Findings & Summary of Recommendations

## *Women in agriculture and sustainable food systems*

1. Promote women's representation and leadership in agricultural, climate, and STEM policy, research, and innovation
2. Engage with women farmers to comprehend the unique challenges faced by women in rural economies
3. Create platforms for multi-stakeholder dialogue and action, with women and young people at the forefront
4. Build resilience of vulnerable communities and help women farmers and agriculturalists create sustainable livelihoods for the benefit of whole communities
5. Create international knowledge sharing programs and young farmer exchange opportunities to connect young and female farmers around the globe
6. Develop training programs providing climate education and literacy training for women farmers
7. Engage the private sector and multinational corporations in the food security and water resilience mission
8. Nurture and finance women's entrepreneurship and engagement with sustainable agriculture
9. Foster diversity within community resource management mechanisms and committees
10. Tailor capacity building initiatives to respect women's circumstances and challenges

## *Women in tech*

11. Bridge the industry-academia gap that is holding young STEM students back from meaningful careers in STEM sectors more broadly and tech in particular
12. Design interdisciplinary and cross-sectoral collaboration-driven initiatives that bring young women in tech together to create, innovate and inspire
13. Foster international collaboration and partnership between likeminded organizations that focus on promoting DEI in the tech sector, both regionally and globally
14. Use digital tools and social media technologies to platform role models so that women leaders become the norm in tech, and not the exception
15. Tech can be a lonely world for women leaders – build allies and amplify women's successes always (your own as well as others)

## *Women and clean energy innovation*

16. Gendered energy poverty requires gender-responsive solutions rooted in international and regional collaboration and multi-sectoral partnership
17. Clean energy projects and partnerships must be well-funded in order to be fully sustainable
18. Projects and partnerships must embed diversity and inclusion by default to ensure women's equitable representation in climate innovation and solutions-building
19. Climate education should be deeply embedded into school and university curricula throughout the region to scale up energy literacy and encourage youth-led climate innovation
20. Create spin-off platforms for young entrepreneurs to showcase youth-led climate projects from the region

### *Women and the future of work*

21. Mainstream lifelong learning as a concept and an opportunity in the MENA higher education and vocational training sectors
22. Legislative reform is needed to eliminate structural barriers for women in the world of work
23. Address gender disparities in the labor market by aligning education and economic policy with human-centered solutions focused on diversity, decent work and lifelong learning
24. Reform and revive the curriculum to embed core skills and literacies in MENA graduates so they are ready to hit the ground running when they enter the labor market
25. Address the ongoing challenge of youth unemployment and mitigate 'brain drain' by investing in apprenticeships, internships and entrepreneurship education
26. Prioritize decent work and quality of jobs over job creation and quantity of jobs
27. Build on lessons learned during the pandemic to improve social protections and make flexible, family-friendly working the norm rather than the exception
28. Hold corporations accountable for embedding DEI into working culture and practice to steer sustainable sectoral change

### *Women and climate finance*

29. Convene all stakeholders to ease the transition towards a more gender equal and green future
30. Raise awareness and profiles of successful female green entrepreneurs and the investors who have backed them
31. Finance climate solutions that are community-focused but scalable
32. Legislative reform is required to repeal discriminatory laws that prevent women from inheriting or owning assets to improve access to finance
33. Measure climate finance / gender metrics
34. Improve board leadership to diversify decision-making on finance
35. More female-led acceleration and incubation programs could achieve critical mass in climate-focused women's entrepreneurship

### *The Future We Want: Recommendations for young women leaders in the sustainability, climate and STEM sectors*

36. Acknowledge and address imposter syndrome; embrace adversity and reframe failures as lessons
37. Seek out community and support civil society
38. Steer organizational and institutional change in your working world in whatever way you can

# Foreword



## Haifa Al Kaylani

### President & Founder, Arab International Women's Forum

As President & Founder and on behalf of the Board of the Arab International Women's Forum (AIWF), I am delighted to share this report and recommendations emerging from our conference 'On the Road to COP28: Women-Led Innovation in Climate, Sustainability & STEM', hosted at the Royal Academy of Engineering by AIWF and Masdar's Women in Sustainability, Environment and Renewable Energy (WiSER) initiative. This was AIWF's second conference at the Royal Academy of Engineering following a major event held in 2017 on women in STEM in the MENA region, and we were exceptionally proud to be back at Prince Philip House in such an important year for women, for the climate, and for sustainability.

As the world looks for solutions to the climate crisis and ahead of the UAE hosting the UN Climate Change Conference COP28 in November / December 2023, AIWF and WiSER were proud to join forces to champion women's collective spirit for innovation. Following COP26 in Glasgow and COP27 in Egypt, our conference served as a vital platform for dialogue, discovery and cross-cultural business and leadership exchange in the run up to COP28 to be held in the UAE later this year. This initiative, which follows on from our MoU partnership with WiSER signed on International Women's Day in 2021, is designed to inspire critical conversations on climate and sustainability challenges, opportunities and outcomes.

I take this opportunity to commend the important work of our partners at Masdar and its vital contributions to clean energy innovation, the deployment of renewable energy projects and the realization of low-carbon urban development in the UAE and beyond. AIWF is honored to have always maintained exceptionally close links with the United Arab Emirates and its renowned and eminent women innovators and leaders in government, business, and entrepreneurship. We are greatly looking forward to the UAE's Presidency of COP28 this year and to the opportunity to champion greater empowerment, education and support for the women entrepreneurs, innovators and business leaders who are embracing the challenges of sustainability and climate change towards a better, more peaceful, prosperous and sustainable future.

As a key outcome of this initiative, AIWF together with WiSER are proud to publish this joint report and recommendations following our conference which we shall present to the UAE COP28 Leadership. Just ahead of COP28, this initiative could not have been timelier nor more relevant. The urgency of addressing climate change becomes ever clearer by the day, with mounting evidence showing its detrimental impacts on the environment, human health, and socio-economic systems. Climate change has prompted a climate refugee crisis in the MENA region that displaces 20 million people each year. The MENA is the world's most water scarce region with 60% of people living in high or extremely high water stressed areas and over 55 million people food insecure even before COVID-19. We also know that the consequences of climate change disproportionately affect the most vulnerable populations, and especially women, who often have the least resources to cope with its impacts.

Proactively addressing climate and sustainability challenges in the MENA region and globally can help stem further losses to natural capital and could also generate new economic opportunities in the transition to a low-carbon clean energy economy. Such transformations can also, importantly, correct deeply entrenched social and economic inequalities that have long held women back in MENA, a region where female labor force participation remains the lowest in the world in 2023 at just 20% and youth unemployment remains the number one development challenge. By ensuring women's full participation in all aspects of climate action, we can tap into a vast pool of talent, knowledge, and creativity to develop and implement innovative solutions that benefit everyone. And by bringing MENA women together with their international counterparts, as we did in London in May, we are taking decisive, collective action to tackle the very worst impacts of climate change and build a more sustainable, resilient, and equitable world for all through innovation, entrepreneurship and education.

Together, we aimed to support women-led innovation in STEM by bringing together remarkable women scientists, engineers, entrepreneurs, financiers, researchers and academics, media, policy makers, civil society and students to share valuable strategies for action on climate, sustainability and STEM empowerment, together with personal stories of learning and achievements that inspire us all. Throughout our program, we championed women's leadership at the intersection of sustainability and STEM in MENA and globally, recognizing and celebrating the women who are working to address sustainability challenges through innovation, education and entrepreneurship. We also examined women-led innovation in the context of food security and water resilience in the region, opportunities in AI, tech and the digital economy, in clean energy, environmental protection and climate action; the future of work and education in MENA; and financing sustainability, with a focus on impact investing and climate finance.

AIWF looks forward to working closely with our valued conference speakers, delegates and partners in the future, building on our initiative with WiSER by collaborating and further developing our shared mission to empower and support women in climate, sustainability and STEM in the UAE, the broader MENA region and globally.

# Foreword



## Dr Lamya Fawwaz

**Executive Director for Brand & Strategic Initiatives, Masdar,  
Program Director of WiSER**

As our conference title articulated, we are indeed 'on the road to COP28', a road that we have to travel with speed. In the latest IPCC report, the data and the science are clear. We do not have much time left to reach our goals. Yes, our world has finally accepted the climate science and approved clear climate targets. But wherever we look, we see hesitation and delays and with every month gone by, humanity's task gets even more daunting.

That is why this year's COP has to be a COP of climate action. And that is why we must talk about women-led innovation, not because women are among those worst affected by climate change, but because women around the world at every level of society are key to the climate solution. We are at the cutting edge. We understand the challenges ahead, we are the innovators, the entrepreneurs and the creators of opportunity.

During my work with WiSER I have met so many inspiring women, so many doers and change makers who all show what is possible. They demonstrate to the world how women are delivering climate action. These women and many more like them have the drive, the passion, and most importantly, the humanity to safeguard this planet for future generations. And to me, they are an inspiration.

In the United Arab Emirates, we have first-hand experience of the Power of Inspiration. The mother of our nation, Her Highness Sheikha Fatima Bint Mubarak, has been and continues to be a trailblazer for the empowerment of women. She has shown us what's possible by setting an example herself and by celebrating those who are bringing change. I believe our road to COP28 really should give recognition to women who are the change makers of climate action, so that they can inspire the world.

There are many different kinds of climate action, but they are all underpinned by the same thing, the power of knowledge. That is why upskilling, knowledge sharing and innovation are central to our initiatives and programmes at WiSER, where we are focused on the energy transition, of course, but just as importantly on food security, water resilience, responsible business, climate finance, the future of work and the digital economy. However, all these programmes can thrive only through partnerships and collaboration such as those you see in action between WiSER and the Arab International Women's Forum on this very special initiative, 'On the Road to COP28'.



# 1. Introduction

**On 10 May 2023, ahead of the UAE hosting the UN Climate Change Conference COP28 later this year, the Arab International Women's Forum and the Women in Sustainability, Environment and Renewable Energy platform (WiSER, an initiative of Masdar) joined forces to champion women's collective spirit for innovation at a major Conference at the Royal Academy of Engineering in London, 'On the Road to COP28: Women-Led Innovation in Climate, Sustainability & STEM'.**

'On The Road to COP28' was a major milestone in the AIWF x WiSER partnership, a unique and inclusive opportunity to facilitate new partnerships in the spirit of SDG17 ('Partnerships for the Goals') and to ensure women's voices are front and centre in global conversations about climate action, food security, water resilience, clean energy, the future of work, responsible business, financing sustainability and innovation, and technology and the digital economy. The initiative, designed to foster greater UK-GCC-MENA collaboration, was a vital and unique contribution from the AIWF and WiSER communities to the global dialogue on women's critical role in mitigating climate change and innovating sustainable, equitable and inclusive solutions towards a better future for people and planet.

We are most appreciative to all our valued speakers for taking time from extremely busy schedules to join us on this very special occasion. The programme welcomed outstanding Guest Speakers to the Opening Keynote Session, including **Haifa Al Kaylani**, President & Founder, Arab International Women's Forum, UK; **Dr Lamya Fawwaz**, Executive Director of Brand and Strategic Initiatives at Masdar, and Program Director of WiSER; **Lord Swire KCMG PC**, Deputy Chairman of the Commonwealth Enterprise and Investment Council, Member of the House of Lords; **Dame Judith Mayhew Jonas DBE**, Chair of the Trustees, Commonwealth War Graves Foundation, UK; and **Dr Hayaatun Sillem CBE**, CEO, Royal Academy of Engineering, UK.

Many of the core COP28 topics underpinned the program and recurred throughout the day's discussions: capacity-building, climate finance, climate technology, cooperative action on the SDGs, education, youth, gender and innovation.

Session 1, *Championing women-led innovation in MENA sustainable agriculture for a food-secure, water-resilient future*, chaired by **Haifa Al Kaylani**, examined the role of women and technology in sustainable agriculture for a food-secure, water-resilient future, water being the great climate connector. The speakers were **Julian Lampietti**, Manager for Global Engagement in the Agriculture and Food Global Practice, The World Bank, USA; **Dr Majd Alnaber**, Director of Science for Society Centre, Royal Scientific Society, Jordan; **Dr Dalal Al Ghawas**, Founder and Agrifood Consultant at SWAPAC, Singapore; and **Sarah Roberts**, CEO, Practical Action, UK.

Session 2, *Mainstreaming Diversity, Equity and Inclusion (DEI) in tech/ AI entrepreneurship and the digital economy*, chaired by **Dr Loubna Bouarfa**, Machine learning scientist and founder CEO of OKRA.AI and Advisory Board Member, Oxford Internet Institute, examined new opportunities for women innovators in tech / AI entrepreneurship and the digital economy. The speakers were **Fatima Hadj**, Chief Climate Investment Strategist, HSBC Asset Management, UK; **Margarete McGrath**, Global Advisory and Strategy Partner Lead, Dell Technologies, UK; **Jamila Saidi**, Global Head of Digital Commerce & Head of Retail & Luxury (Trade & Investment), Department for Business & Trade, UK; and **Elena Sinel**, Founder, Teens in AI, UK.

Session 3, *Women-led innovation in clean energy, environmental protection, and climate action: Creating new opportunities through partnership and collaboration*, chaired by **Olulana Nwosu**, Director of Policy & Markets, World Energy Council, UK, explored women's leadership in clean energy, environmental protection, and climate action. For this session, we had the pleasure of welcoming **Iman Ustadi**, Head of Negotiations-UAE Special Envoy for Climate Change & WiSER Pioneer 2023, UAE; **Phoebe Stone**, Partner-Head of Sustainable Investing, LGT Wealth Management, UK; and **Eleanor Webster**, Head of Secretariat, Mission Innovation, UK.

Session 4, *Preparing for the Future of Work: Empowering the next generation of sustainability leaders through education, skills and decent work*, chaired by **Chidi King**, Branch Chief, Gender, Equality, Diversity and Inclusion Branch (GEDI), in the ILO Conditions of Work and Equality Department, ILO, explored the need to prepare for the future of work in MENA, spotlighting the importance of education, skills and decent work. The session benefited from the insights of **Professor Yusra Mouzoughi**, President, Royal University for Women, Bahrain; **Noora AlMarzooqi**,

Board Member, Vice President-Group Strategic Investments at ADNOC; and **Karoona Ramah Sleightholme**, Head of Digital & IT Delivery, Vodafone, UK.

Session 5, *Financing sustainability research, innovation and entrepreneurship for women and youth: Navigating access to finance and impact investing*, chaired by **Barbara Rambousek**, Director, Gender & Economic Inclusion, European Bank for Reconstruction and Development, UK, examined issues around access to finance and impact investing for women innovators and young leaders working in the sustainability spheres, with **Joumana Asso**, Founder & Managing Director, Clima Capital Partners, USA; **Iveta Tancheva-Nikolova**, Director – Investment Management, SANAD Fund for MSME, Germany; and **Marisa Drew**, Chief Sustainability Officer at Standard Chartered, joining us as panel speakers.

We were especially proud to spotlight the inspirational AIWF Young Arab Women Leaders alumni and WiSER Pioneers 2023 in a special session finale, *The Future We Want*, chaired by **Emma Cox**, Global Climate Leader, PwC and welcoming the following inspirational young leaders as speakers: **Heba Al Emara**, Managing Director Middle East, Vistra, UK/UAE; **Christelle Comair**, Policy Advisor on youth and women's empowerment, University of Paris-Saclay; 2021-2022 Research Fellow at the Women and Public Policy Program (WAPPP), Harvard Kennedy School; **Dr Mona Hamade**, Partnerships Development Manager at Meta, UK; **Shalom Iboh**, Field Engineering Operator Notore Plc & WiSER Pioneer 2023, Nigeria; **Hajer Ben Charrada**, Manager Corporate Strategy TAQA & WiSER Pioneer 2023, UAE; and **Monica Gao**, Solicitor (England & Wales) in Sustainability & WiSER Pioneer 2023, UAE.

The AIWF x WiSER Conference was attended by 120 senior and emerging women leaders working in government, the international institutions, ESG, STEM, finance, business, entrepreneurship, civil society representatives, academics and higher education leaders. We were also proud to welcome a number of Master's students and early career researchers, and AIWF members, guests, Fellows and delegates who joined us from across the UK, EU and the Arab world, many coming especially from the United Arab Emirates, Bahrain, Oman, Jordan, Lebanon, Tunisia and other MENA states as well as North Africa and Nigeria.

As ever, AIWF acknowledges with great appreciation our Global Partners PepsiCo, PwC and Pfizer for so generously supporting AIWF's global advocacy and action and for leading the way in driving gender diversity within their respective sectors in the MENA region and around the world.

AIWF always looks forward and aims to deliver positive and productive impact through all our initiatives that will benefit women and young leaders in the region and meaningfully support their economic and social inclusion towards a peaceful and more prosperous future for the MENA region overall. As **Her Excellency Razan Al Mubarak**, UN Climate Change High-Level Champion for the COP28 Presidency, has said: "A healthy environment, including its climate and biodiversity, is central to everyone's wellbeing. We must go beyond business as usual and elevate nature as an important solution to climate change. To accomplish this, we need everyone to contribute to global climate action, including women, youth, and indigenous people, as well as business, government, civil society, and academia."

Accordingly, the discussions and conclusions emerging from the conference panel sessions have been synthesized into this report and recommendations, which shall duly be presented to the COP28 leadership in the UAE who we commend for bringing nations together and seeking to unite the world towards agreement on bold, practical, and ambitious solutions to the most pressing global challenge of our time, putting us all on the right track to realizing critical climate goals as set out in the Paris Agreement and the SDGs.

## 2. Championing women-led innovation in MENA sustainable agriculture for a food-secure, water-resilient future

### 2.1 Introduction

Food, water and agriculture are key to achieving many of the sustainable development goals before the 2030 watershed – among them, women’s economic participation, gender equality, youth unemployment, poverty, sustainable energy, clean water, and creating a just equitable future for all. Yet the MENA region confronts considerable challenges concerning food and water security, stemming from climate change, water scarcity, agricultural inefficiencies, and heavy reliance on imports, which renders food supply vulnerable to geopolitical tensions, conflict, and economic shocks impacting availability and affordability. Elevated inflation and rising food prices continue to challenge regional economies, with political instability, inadequate infrastructure, economic issues, and environmental degradation exacerbating food insecurity.

Further barriers to innovation and sustainable agriculture solutions include limited investment in rural research, technology, infrastructure, and weak governance and institutional capacity. Multi-stakeholder strategies must focus on improving efficiencies and reducing waste through technology adoption, fostering innovation and digitization in food systems, and promoting human-centered solutions to looming food and water crises.

Championing gender equality and youth empowerment is crucial for realizing a food-secure, water-resilient future in MENA, but stakeholders should also prioritize investing in capacity building for the region’s human capital, particularly in women and youth; emphasize rural economic development, education, and entrepreneurship; enhance access to agritech finance and impact investment; support agribusiness research and technology adoption; and promote public-private partnerships addressing food insecurity and water scarcity.

The population of Arab states is expected to reach 480 million by the year 2025 and food production will have to increase by 70% in order to sustain the growing population. The looming scarcity of water in the Middle East is a huge challenge that requires an urgent response, as access to water is a fundamental need directly linked with food security, human health and agriculture. Championing gender equality and youth empowerment is therefore crucial for realizing a food secure water resilient future in the MENA region, and for propelling women into leadership roles in the agricultural sector. As the CGIAR has noted, ‘agriculture is the largest employer of women in the MENA region and the female share of the agricultural workforce increased from 30% in 1980 to almost 45% in 2010, exceeding 60% in Jordan, Libya, Syria and the occupied Palestinian Territory. However, women in the region still face significant challenges accessing land and benefitting from technologies and decent, equitable working conditions.’ Promoting gender equality by empowering women and girls through education, vocational training, and access to resources, especially in rural areas, is key to realizing a more equitable, just and community-focused prosperity for the region in the future.

Chaired by AIWF President & Founder **Haifa Al Kaylani**, this session examined innovative ideas and inventive solutions for the region’s critical sustainability challenges—food and water—specifically exploring how international organizations, research institutes, academia, and the private sector can collaboratively support innovation, technology, and inclusion in MENA’s sustainable agriculture by (i) improving women’s inclusion and leadership in decision-making processes related to food security and water scarcity; (ii) encouraging the adoption of technology by women to enhance agricultural productivity, resource management and climate resilience. The session also examined how the international development and business communities can collectively and strategically support, empower and finance women-led entrepreneurship and innovation to mitigate the adverse effects of food insecurity and water scarcity in the region. For this panel, AIWF and WiSER welcomed exemplary speakers, all experts in their field and internationally respected for their contributions to food, water, and sustainable agriculture in the MENA region and globally, including **Julian Lampietti**, Manager for Global Engagement in the Agriculture and Food Global Practice, The World Bank, USA; **Dr Majd Alnaber**, Director of Science for Society Centre, Royal Scientific Society, Jordan; **Dr Dalal Al Ghawas**, Founder and Agrifood Consultant at SWAPAC, Singapore; and **Sarah Roberts**, CEO, Practical Action, UK.

## 2.2 Challenges

The urgency of addressing climate change on a global scale becomes ever clearer by the day, with mounting evidence showing its detrimental impacts on the environment, human health and socioeconomic systems. Global average temperatures have risen significantly, leading to a higher frequency of extreme weather events, heat waves, droughts and storms, which have devastating consequences on ecosystems and human communities.

Climate change has prompted a climate refugee crisis in the MENA region that displaces 20 million people each year. The MENA is the world's most water scarce region, with 60% of people living in high or extremely high water stressed areas, and over 35 million people are food insecure, even before combat. Climate change poses further significant threats to food and water security by affecting agriculture, fisheries and freshwater availability, with changing precipitation patterns, leading to crop failures, reduced yields, and the spreads of pests and diseases.

The consequences of climate change disproportionately affect the most vulnerable populations, especially women, who often have the least resources to cope with its impacts. Proactively addressing climate and sustainability challenges in the MENA region and globally can help stem further losses to natural capital, and could also generate new economic opportunities for women, and indeed, all citizens in the transition to a low carbon clean energy economy.

Currently, women do not have equal access to men in relation to land, financial resources, access to technology or education. In the Global Multidimensional Poverty Index (MPI), an international measure of acute multidimensional poverty covering over 100 developing countries developed by the Oxford Poverty and Human Development Initiative, poverty is contextualized not only in terms of income, but also in terms of accessibility, affordability and availability of water and sanitation systems, as well as accessibility to adequate foods to clean energy to adequate health systems and education<sup>1</sup>. Adding to that, poverty should also be considered in relation to access to financial resources, technology and innovation.

In parts of the MENA and Asia, women have well-documented access challenges and insecurities related to food and water because of political tension and conflict which impacts human security and adversely exacerbates social inequalities which are already deep rooted in the region. There are different types of social inclusion when it comes to communities – inclusion within the community, and cohesion between communities and policymakers. When one considers the whole equation, it becomes clear that women, youth and refugees are the most vulnerable when it comes to the factors that the poverty index is framed upon. The question then becomes: how can we build the resilience of vulnerable communities, and enhance their participation in order to provide them with adequate access to food, water and opportunity to build sustainable food and water systems and livelihoods?

The speakers were in agreement: if one is working on poverty then one is working directly with the impacts of the climate crisis, and vice versa. Working on poverty and the climate crisis means working directly with sustainable agriculture, food security and water resilience. In many MENA countries, farmers are primarily women because men migrate for most of the year for economic reasons driven by the climate crisis. The numbers of internally displaced people due to increasing desertification is also cause for alarm. In 2023, there are more hungry people in the world than there were in 2015, and the greatest number of those going hungry are those who produce the world's food.

The global food system is also a major source of greenhouse gases, which are a leading cause of biodiversity loss and environmental pollution. Currently, the food system produces insecure jobs, unhealthy diets, and exacerbates tensions and socioeconomic inequalities. The system is indeed broken, and it is destroying the planet in the process. In 2015, SDG 2 was set to create a world free of hunger by 2030<sup>2</sup>, and as the United Nations highlights: 'Sustainable food systems don't just help to end hunger. They can help the world achieve critical progress on all

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<sup>1</sup> The Global Multidimensional Poverty Index (MPI) is an international measure of acute multidimensional poverty covering over 100 developing countries. It complements traditional monetary poverty measures by capturing the acute deprivations in health, education, and living standards that a person faces simultaneously. It is led by Sabina Alkire, Director of the Oxford Poverty and Human Development Initiative (OPHI) at the University of Oxford and was first developed by OPHI with the UN Development Programme (UNDP) for inclusion in UNDP's flagship Human Development Report in 2010. It has been published annually by OPHI and in the HDRs ever since. For more information, please see <https://ophi.org.uk/multidimensional-poverty-index/>

<sup>2</sup> UN, Sustainable Development Goals (Goal 2: Zero Hunger), Accessed at <https://www.un.org/sustainabledevelopment/hunger/>

17 Sustainable Development Goals<sup>3</sup>. Since 2015, no progress has been made and in fact, the world is entirely off track when it comes to the Zero Hunger pledge.

Nowhere is this more evident than in the Middle East and North Africa, home of the Fertile Crescent where the first settled agricultural communities of the Middle East and Mediterranean basin are believed to have originated, and where food systems as we know them today came into being. The MENA has suffered dramatically from climate change, conflict and fluctuating global oil and food prices, and it must urgently adapt and structurally evolve in order to ensure peace and prosperity in the region for the future<sup>4</sup>.

Another important dimension to the food security discussion is the issue of inequality of food supply and the quality of the food being supplied. The MENA food system is systematically failing people's health. One third of the calories people consume in the MENA region are wheat products subsidized by governments. According to the World Bank, between a quarter and one-third of the region's adult population is obese, whereas 'nearly half the children in Yemen and one-third in Djibouti are underweight for their age, with long-term consequences on their individual cognitive development and the economic trajectories of their countries'<sup>5</sup>.

## 2.3 Opportunities

*"The world's food system has the capacity to feed 8 billion people. There is plenty of food in the world, it is simply concentrated in the wrong places." – Julian Lampietti, The World Bank*

Women are involved across the globe at every step of the food system – from farms to the supply chains that connect farms and consumers, and very importantly, at the consumption points, in the markets and kitchens of the world managing how families and communities consume food. Women have always had a deep understanding of their community's needs and are more likely to develop and implement gender sensitive solutions that take into account specific vulnerabilities and capacities leading to more inclusive and equitable action. Women often play a crucial role in grassroot movements, and community-based initiatives that address climate change and promote sustainable practices. Their local knowledge and connections make them well positioned to mobilize communities and to drive change at the local level.

There is still significant gender bias within the agricultural sector and there is an urgent need to change the narratives on women's involvement in agriculture, which is the lifeblood of rural economies. However, women's ability to innovate in the sector is limited by the availability and accessibility of investment and funding for women-led sustainable agriculture. The speakers agreed that more government support is needed, as is access to capital through private equity and other forms of capital engagement, including angel investment. Women in the food and agriculture systems receive less than 3% of global funding, and women of color receive less than 1% of funding globally. This is not a matter of competence because we know that women entrepreneurs outperform male entrepreneurs in terms of management, transparency, and also accountability. The fact remains, however, that decision makers and investment committees that make funding decisions are still majority male so there is a risk that their own internal and unconscious biases may go unrecognized.

Agricultural funding mechanisms as they currently exist are not conducive to the creation of an inclusive, enabling environment for women to thrive and gain access to capital. This could be resolved with more women positioning themselves as angel investors with a specific focus on investment in women-led innovation of platforms, products and technologies that specifically address food, water and sustainable agriculture challenges. The point was also made that sustainable agriculture solutions must be interdisciplinary to make a lasting impact and help solve the problem of food insecurity and water scarcity in the region.

The speakers agreed that there is significant scope to provide gender sensitive services to women, especially on app-based platforms. Some of the best female-targeted apps that have become incredibly popular in the mobile / gig economy in recent years could be leveraged to eliminate cultural barriers around the utilization of technology in farming and especially for use by female farmers. Some of the digital technologies that are proliferating around us (such as Amazon and Uber) have an impact on the food system and the way that consumers in the region think

3 UN, Food Systems Summit x SDGs, Accessed at <https://www.un.org/en/food-systems-summit/sdgs>

4 Ferid Belhaj & Ayat Soliman, MENA Has a Food Security Problem, But There Are Ways to Address It, The World Bank Blog (September 2021), Accessed at <https://www.worldbank.org/en/news/opinion/2021/09/24/mena-has-a-food-security-problem-but-there-are-ways-to-address-it>

5 Ferid Belhaj & Ayat Soliman, MENA Has a Food Security Problem, But There Are Ways to Address It, The World Bank Blog (September 2021)

about food. One of the really unique aspects of these digital technologies is that there is zero marginal cost of replication – once the app is built, the cost of using the service is essentially nil and public services can easily be built in this mobile / digital space.

The speakers were agreed that the use of apps and mobile-first education and service platforms could transform the way people and women especially, access information that will be valuable to them to innovate agriculture and the food system around them. The opportunities for sustainable agriculture in the mobile / app economy are as yet largely unrealized in the region, and the emergence of hackathons and digital bootcamps focused on sustainable agriculture solutions are to be encouraged and fully funded to support critical innovation in this space.

Within academia, the region is already seeing a transition in agricultural education and research with courses and training opportunities in food, water and sustainability entrepreneurship becoming more available and accessible, both as extracurricular offerings and as part of structured degree programs. The support of higher education institutions and research centers to commercialize innovative technologies and support entrepreneurs with the right skill sets is crucial to mainstreaming the use of technology in sustainable agriculture in the region. Every region in the world now has very specialized entrepreneurship courses integrated into the higher education offering, and there is a significant opportunity for stakeholders in the international food and water development community to engage more meaningfully and bridge existing gaps with rural communities so that young farmers are trained and equipped with the digital skills to develop and leverage new technologies to the region's advantage.

For young female farmers, access to networks of likeminded entrepreneurs in the agricultural sector should be encouraged so they may model their innovations within farmer cooperatives and in rural communities, test their applications live and tweak them to very precisely address the problems that MENA farmers are keen to solve. Technological development must be built from the needs of farming communities, from a genuine understanding of the way the community works and of the finance and business model that will make that technology viable, sustainable and scalable. When building new technologies for sustainable agriculture, entrepreneurs must understand the various types of farming that different people in MENA communities engage with and the supply chains that impact their operations.

There is significant capital currently flowing from investors who want to work with women and young farmers in different parts of Africa to realize a more regenerative agricultural future that creates decent jobs for young people, promotes food security, and importantly, prevents brain drain and youth migration to the cities and to other countries. Technology has to work for people and for the supply chains they are engaged with, and it must be sustainable (in terms of its business and finance model) in order to ensure it is viable and scalable in the future.

On the question of how best to finance women's entrepreneurship in the agricultural space in MENA and provide finance for women's projects addressing food security and water scarcity, it was noted that governments of the world currently spend three quarters of a trillion dollars annually in agricultural subsidies. Most of that money goes to the very systems that are destroying food and water resilience. The speakers agreed that if part of that money could be redirected to the women who are stewards of the land, the impact on food and water systems would undoubtedly be positive and incredibly progressive.

The question that remains, of course, is how to push the governments of the world to spend that money on women-led innovation and programs and to do so in a way that will produce better outcomes for women, young people and communities. The speakers agreed that the best channel to achieve this is through women directly, supporting them to evaluate risk and manage investment in agriculture differently than men have done in the past. An important part of this is the use of technology to create systems that allow women to engage with banking services that can help bridge the access to capital gap and support greater investment into regenerative types of agricultural innovation, and to do so in a way that can be scaled quickly and inexpensively because of the zero marginal cost feature of innovative digital and app technology. To achieve this, women's financial literacy in the agricultural sectors should also be addressed as part of higher education in agricultural schools and university programs, with community outreach by financial institutions themselves to bring more women into a confident state of financial literacy.

In the experience of the Royal Scientific Society in Jordan and others, women entrepreneurs are very willing to learn how to run their businesses more efficiently. However, women have to work ten times as hard as men to fundraise efficiently or to even raise the same amount of capital, and so being fully trained on how to fundraise

and receive investment and funding, budgeting it, accounting for it, reporting on outcomes, are all incredibly important components of women's financial literacy as recipients of funding. Investors in the region are already more involved in creating female-led venture capital firms and female-led investment programs, and these are excellent vehicles for women to gain access to capital, especially if these vehicles prioritize projects that address the sustainable agriculture, food and water challenges in the region.

## 2.4 Solutions & Recommendations

### **Increase women's representation in agricultural policy, research and innovation**

Ensure that women have a strong voice in agricultural policy formation so that policy is designed with a clear sense of what women are doing in the farming sector and what their specific needs are in terms of the technology, finance and innovations that will enable them to develop their farming and create new solutions to deal with the consequences of the climate crisis. Women's representation in policy and decision-making processes is critical to ensuring that climate policies and actions are gender-responsive, and address the specific needs of both men and women. By empowering women and assuring their full participation in all aspects of climate action, we can tap into the vast pool of talent, knowledge and creativity to develop and implement innovative solutions that benefit everyone. And bringing men or women together with their international counterparts is extremely important because we are taking decisive collective action to tackle the very worst impacts of climate change and build a more sustainable, resilient and equitable world for all.

### **Work with women farmers and agriculturalists to understand the innate needs of women in rural economies**

Policymakers and other stakeholders must deeply understand the needs and the realities of the communities they are working for, or the empowerment programs they deliver will simply not support women in the way they need to. It is not possible to put the right technologies in place if there is no clear understanding of what women farmers need and the value chains they urgently need access to, or the financial products they need to be able to benefit from, given that women do not have the same level of collateral as men in many MENA countries due to discriminatory property ownership and inheritance laws. This needs to change through legislation. Laws are not always fully implemented or enforced with a critical, gender sensitive lens, and this should be considered when developing policies that are as integral to human flourishing as those related to food and water, both essential for life and, for many, for livelihoods. Public awareness education campaigns should also be designed to ensure that barriers to equal access to finance and financial supports / products are eliminated and women innovators are no longer arbitrarily held back.

### **Create platforms for multi-stakeholder dialogue and action**

Stakeholders should convene in strategic and highly specialized forums that enable cohesive, gender-transformative collaboration. It is only through multi-stakeholder dialogue and action that we can correct deeply entrenched social and economic inequalities that have long held women back in the MENA region, where female labor force representation participation remains the lowest in the world in 2023, at just 20%, and youth unemployment remains the number one development challenge. By empowering women and young leaders to play a leading role in finding viable, sustainable, equitable solutions, we can correct inequalities and rethink the harm that is being done to the planet, people, peace and prosperity. Women and young people are an important part of the equation, and we will not be able to solve global climate and sustainability crises without women bringing forward their unique perspectives, experiences and ideas that can foster innovation in sustainability and climate solutions.

### **Build resilience of vulnerable communities and help women farmers and agriculturalists create sustainable livelihoods for the benefit of whole communities**

Recognize that women are most vulnerable and disproportionately impacted by climate-driven food and water insecurity and identify peace-building and resilience initiatives already operated, or implemented by, women living in affected communities. Use these existing initiatives to bring local partners together to support resilience building for women farmers, provide training in cutting-edge food production, sourcing, technologies and techniques, and build knowledge on global logistics, shipping and transportation systems which takes women farmers beyond the farm.

There is potential for international knowledge sharing programs and farmer exchange opportunities which connect young and female farmers and sustainable agriculturalists from around the globe to benefit from on-the-

job training, cultural exchange opportunities and valuable technology and innovation incubation opportunities focused on sustainable agriculture with a regional focus. There is also great scope for working with agricultural colleges and university faculties to involve young and female agriculture students in such exchange programs, giving them valuable opportunities to learn farming production, marketing and sustainability techniques from agricultural schools and expertise in other markets.

This approach is certainly ambitious, but equally very exciting because it draws international and regional partners in to become part of a solution focused on resilience building, knowledge sharing, experience exchange, and community cohesion on a very local level. Importantly, such an approach can engage and excite young farmers and agricultural students who are the future of our global food systems. International and regional partners should have the passion and the vision to tackle complex problems with the input of young farmers and agriculturalists, who are champions for new, innovative and creative thinking, aligned with the need to deploy the latest technologies and champions for a more inclusive, equitable role for women and young people in sustainable agriculture and the future of food.

### **Specialist education and literacy training for women farmers**

Although most of the world can be said to be 'aware' of climate change and its complex relationship with food, water and human security, it must be remembered that this applies primarily to scientific communities, policymakers, and academics. Women in local and very rural communities do not have the same level of awareness as this is determined by their literacy and level of education. Education and specialized training for women and young farmers – both formally within higher education and informally through community-based programs – is a critical priority in the mainstreaming of gender quality in sustainable agriculture. Infusing agricultural education with perspectives and input from grassroots advocates to more effectively understand the needs, challenges and opportunities ahead for female and young farmers is essential to increasing their capacity, resilience and creativity for the generation of innovative ideas which may well transform agritech in the region, for the benefit of women, families and communities.

### **Engage the private sector and multinational corporations in the food security and water resilience mission**

Large conglomerates and cooperatives alike can do more to encourage diversity and inclusion and eliminate exploitation or any other adverse human rights impacts within their supply chains, within their organizations and leadership structures, with full auditing, accountability and compliance with international mechanisms such as the UN Guiding Principles on Business and Human Rights. Specialized schemes within corporate environments to develop and inspire women's leadership in food and water systems, at every stage of the supply chain, can pave a new way forward for the next generation that is underpinned with a rights-based approach to food security and water resilience.

### **Nurture and finance women's entrepreneurship and engagement with sustainable agriculture**

Supporting women's entrepreneurship and involvement in food systems and in the agricultural sector overall can help create new economic opportunities, reduce poverty, and empower women. In the venture capital world, there are numerous organizations that are committed to supporting women with investment and creating mechanisms such as mentorship programs and providing career advice and guidance. This alone, however, is not enough, and it could be argued that the region is at saturation level with mentorship programs. What is missing from the value chain is funding, and championship. When it comes to fundraising as an entrepreneur, women entrepreneurs need to understand their sector, their market, their investor, and themselves, to think about their presence, and what they are projecting. It is also advisable for women entrepreneurs in this space to find investors with the patience and capital to support projects long-term, as agricultural technology solutions will often take a long time to scale. Women entrepreneurs may be best advised to look for specialized climate tech, food security or food technology investors who know how to plug in and support projects and the entrepreneur through the fundraising journey. Additionally, there should be people within every organization and network, in capital cities and in the most rural of communities, that will champion women throughout their journeys to ensure that they have the confidence, capacity and growth opportunities to mainstream women's entrepreneurship within the food sector, from farms to global forums.

### **Diversity within community resource management mechanisms and committees**

To ensure gender sensitivity in future agricultural policymaking in the region, we need to make certain that women have an equal voice at the table by empowering them with a fertile environment where they can contribute actively and meaningfully to policy debate and decision making, in both national and local arenas. Resource management mechanisms at the community level must have representation from different parts of



the community and there must be women in senior positions within these networks. Their involvement in such committees and networks must be genuine, non-token participation, so that women are able to get their points of view across and champion a 'new normal' where women are just as likely and capable of taking the helm as men in their communities, cooperatives and corporations. When you have a female chair of a network or committee, there tends to be a greater proportion of women within that organization, who then tend to go on and take up other leadership positions and move eventually into the policy spheres. Women should be prepared for resistance, sometimes from men (who overall need to demonstrate better allyship towards women) but also sometimes from women themselves.

### **Tailored capacity building initiatives that respect women's circumstances and challenges**

Some capacity building initiatives should be conducted in female-only spaces, depending on the cultural context, as this is sometimes the only way that women are genuinely comfortable with receiving support and programming capacity building in ways that work alongside their other responsibilities. There should also be consideration for the restrictions on free movement / travel that continue to hold women back in some parts of MENA, and there must be political will and action to ensure that women can own, access, borrow and inherit in the same way as men in every context and in every country in the region. Here, civil society becomes instrumental in advancing legislative progress that will remove arbitrary and outdated barriers to their full, rightful and fruitful inclusion in the MENA region's economy, in all sectors and spheres.



# 3. Mainstreaming Diversity, Equity and Inclusion (DEI) in tech / AI entrepreneurship and the digital economy

## 3.1 Introduction

The MENA region has experienced rapid growth in the tech sector in recent decades, and there is increasing recognition of the need for diversity and inclusion in tech entrepreneurship and AI innovation. Women have a vital role to play in shaping the future of the digital economy in the MENA region, yet they currently represent a significant and largely untapped talent pool in the region.

Encouraging more women to participate in the thriving tech and AI market can help address skills shortages, drive innovation, and foster economic growth, leading to more diverse perspectives which is particularly important in AI, where the data and algorithms used should reflect diversity to prevent the entrenchment of bias. Women's inclusion is also critical to economic growth and job creation in this vibrant sector, and towards the realization of sustainability goals for the region as female entrepreneurs are often more focused on social impact, which could yield a promising future for the development of tech-based solutions and AI-powered tools that address pressing societal challenges in areas such as education, healthcare, and the environment.

Empowering more women to pursue careers and entrepreneurship in tech and AI can inspire future generations and create role models for women in the region. But to capitalize on this potential, we need to work collaboratively and strategically to provide the necessary framework of support and resources for women entrepreneurs in the tech and AI market in MENA and a commitment to mainstreaming Diversity, Equity, and Inclusion (DEI) in tech/ AI entrepreneurship and the digital economy in the region. This requires a multi-faceted approach that involves various stakeholders and ultimately, starts with the education system which must embed STEM enthusiasm and engagement in young girls from the earliest ages, rather than continuing with the deeply-rooted institutional and gendered assumption that future technologists, scientists, engineers and doctors will be male.

To mainstream DEI in the tech and AI sector, industry leaders should work more closely together to create a more inclusive environment in the tech sector, both in the MENA region and globally. This must include world class education and training in STEM, mentorship and capacity building, as well as access to networks and to much-needed 'seed and scale' funding. This could be achieved by setting up industry consortiums to share best practices, developing and sponsoring mentorship programs, prizes, hackathons, and collaborating on initiatives that help bridge the diversity gap in technology innovation and entrepreneurship. For women in tech innovation, mentorship programs and networking opportunities bringing entrepreneurs and professionals together from diverse backgrounds can especially help to foster deep connections, provide support, and facilitate the exchange of ideas, experiences and opportunities. Role modeling, visibility and recognition is also vital to mainstreaming narrative change around women in tech and AI, and can be achieved by highlighting the success stories of women tech entrepreneurs and professionals across the region.

How can we best promote digital literacy, STEM education and tech entrepreneurship as a career option to girls in schools and universities, with a particular focus on reaching under-represented communities? How do we encourage the inclusion of tech and AI innovation-driven courses in STEM curricula in the MENA higher education and continued professional development space, and how might scholarships, apprenticeships, paid internships and executive / entrepreneurship education help to bridge the empowerment gap experienced by students from backgrounds that we know are under-represented in the tech industry (globally)? As industry leaders and as organizations committed to championing women-led innovation in tech and AI, what can we do to inspire each other and build critical momentum for women's success in the sector?

On the subject of international collaboration and partnership between like-minded organizations that focus on promoting DEI in the tech sector, both regionally and globally, there are positive signs in the region that women-founded tech businesses are increasingly of interest to venture capital firms, impact investors, and business angel networks, keen to capitalize on the untapped talent, knowledge, and potential of the region's women leaders in tech. However, venture capital interest tends to be concentrated in urban areas and major Arab cities and

throughout the GCC, as well as Lebanon, Morocco, Egypt and Tunisia, where there are already many thriving business incubators, clusters, and entrepreneurship acceleration programs. There is also huge uptake on digital hackathons, online web communities, entrepreneurship training programs, mentorship initiatives, as well as funding competitions specifically targeted at women entrepreneurs and with a special focus on those in tech innovation and social enterprise. How can international and regional organizations and initiatives work more closely, strategically and meaningfully together in order to amplify impact and momentum and deliver more opportunities to women in MENA by bringing them together with women entrepreneurs in tech in the UK, the EU and the wider international tech community?

This panel, chaired by **Dr Loubna Bouarfa**, Machine learning scientist and founder CEO of OKRA.AI and Advisory Board Member, Oxford Internet Institute, explored opportunities and outcomes for mainstreaming diversity in tech/AI entrepreneurship and the digital economy in the MENA region, discussing strategies that governments, universities, and the private sector could implement to DEI in the tech sector and inspire young girls and women to consider tech careers in what is still largely a male-dominated sector. The session welcomed as speakers **Fatima Hadj**, Chief Climate Investment Strategist, HSBC Asset Management, UK; **Margarete McGrath**, Global Advisory and Strategy Partner Lead, Dell Technologies, UK; **Jamila Saidi**, Global Head of Digital Commerce & Head of Retail & Luxury (Trade & Investment), Department for Business & Trade, UK; and **Elena Sinel**, Founder, Teens in AI, UK.

## 3.2 Challenges

In the MENA region and beyond, technologists are acutely aware of the need for diversity in development teams, and of the role of technology as a strong proponent of sustainability. Although big tech has always been a predominantly male sector, all over the MENA region the younger generation have, for much of the last decade, broken down numerous structural and cultural barriers around tech entrepreneurship, levelling the playing field for women and young innovators in big data, tech and AI which is a sector growing by 5-6% per annum<sup>6</sup> and is rapidly expanding with the swift pace of developments in AI<sup>7</sup>. The sector is witnessing some regression following the pandemic, so it is imperative at this critical juncture that young women are fully trained, supported, incentivized and mentored to not just compete, but also to lead in tech, from coding to commerce to AI and robotics. At the time of writing, there are simply not enough women in senior roles in technology across the board to achieve that all-important critical mass.

Ensuring greater representation in technology and the technology solutions we create can only be achieved by ensuring diverse workplaces and workforces. Progress is present but piecemeal, and women in the sector share a concern that not enough is being done to mitigate regression of gender equality in the tech sector. The speakers agreed that this is linked with under representation generally in STEM, and that when visiting schools, universities, and accelerators in the EU and the MENA region, representation is scattered and still relatively poor. In MENA especially, there are prominent women leaders who are highly respected in the international business arena. But we need more role models in high-level STEM positions that are more visible on social media and in all the digital networking spaces where young people spend their time, where they consume much of their information and where they source their inspiration. Collectively, we must consistently and continually promote the fact that we need more diverse talent in STEM, and that we need concerted, collaborative action to achieve more equal representation, in STEM education and the influential STEM sectors.

There is overwhelming support in our education systems and from government policy makers for nurturing young people in STEM – especially women. In MENA, women are achieving more STEM degrees per capita than their counterparts in the US and Europe and up to 57% of all STEM graduates in Arab countries are women, according to UNESCO, from Morocco, Egypt, Jordan and Tunisia to Saudi Arabia and the UAE. This is remarkable when considered that women account for around 35% of all undergraduate STEM degrees in the United States, or that there are roughly twice as many STEM male graduates as there are female graduates in EU countries. When it comes to the labor market, recruitment practices in the technology sector are still rooted in hiring models developed in the 1980s and 1990s. Decision making around recruitment in the sector generally lies with a male director and can be fragmented in terms of diversity and inclusion. One of the speakers relayed a

6 Euronews, How are tech companies changing the way we consume and interact? (August 2023), Accessed at <https://www.euronews.com/next/2023/08/16/how-are-tech-companies-changing-the-way-we-consume-and-interact>

7 MIT Technology Review Insights, Embracing the rapid pace of AI (May 2021), Accessed at <https://www.technologyreview.com/2021/05/19/1025016/embracing-the-rapid-pace-of-ai/>

recent experience opening up a technology solutions role for a cybersecurity project, and receiving 35 applications from male candidates within minutes (and no female applicants). The speaker reiterated the urgent need for tech companies to ensure they are driving more diverse and inclusive approaches to recruitment, and consciously working to address unconscious bias and update recruitment practices. One solution, potentially, is blind recruitment where CVs do not indicate candidates' names nor do they indicate whether the applicant is male or female.

The speakers agreed that one of the reasons for the regression of women in tech has been the emergence - particularly in the influential US market at present - of several dominant 'macho' technologists who are highly visible and highly exclusionary to young women who aspire to careers in tech. Meaningful and genuine narratives around diversity and inclusion and gender balance are missing from the sector, and from social media where many of the 'big tech' personalities and thought leaders air their perspectives to impressionable young people at scale.

Funding is another serious challenge for women in tech in the region, as it is in many other regions. There is limited understanding among young tech entrepreneurs about how funding, finance and venture capital systems work, and much more needs to be done to ensure that women understand the funding journey, how investment culture operates, and how to access capital as young female founders. That said, there is very limited female funding available, a phenomenon which is not exclusive to the MENA region but also present in Europe, the United States and Southeast Asia, so women need to be smarter and more strategic about how they compete for this funding.

### 3.3 Opportunities

**For technology to truly fulfill its promise of transforming our world, it needs to embrace diversity wholeheartedly. The MENA region, with its vibrant youth and rich legacy of resilience, is well-poised to lead this change. The onus is on all stakeholders - from educational institutions to corporates, from policymakers to influencers - to come together and champion the cause of gender diversity in tech.**

As we move from globalization to digitization, rapid improvements in technology infrastructure and widespread use of technology for life, business, and education have opened windows of opportunity for women entrepreneurs in the dynamic and fast-growing tech sector and the app economy. Technology has revolutionized women's entrepreneurship in the region; it has enabled women entrepreneurs to navigate cultural constraints and avoid childcare costs while they start up, raise funds, generate sales, build brands, and scale up.

Across the board, technology has been a game changer for Arab women. The digital economy, quite simply, is the future of women-owned enterprise in the MENA region. Indeed, the internet's "work-anywhere capability" has created the perfect conditions for flourishing female talent in the MENA. One in three tech startups in the Arab world are run by women, significantly higher than in Silicon Valley according to the IFC, which notes that "because the tech industry is still relatively new in the Arab World, there is no legacy of it being a male dominated field. Many entrepreneurs from the region believe that technology is one of the few spaces where everything is possible, including breaking gender norms, and is therefore a very attractive industry" for entrepreneurial women redefining and innovating traditional business models to cater to the needs of the regional market in valuable and highly innovative ways. As we emerge on the other side of COVID-19 and the world restarts for business, it is clear that tech innovation, e-commerce and the app economy in the MENA region are set for staggering growth - representing a remarkable opportunity and a wide open market for women entrepreneurs. This is especially the case in digital marketing, advertising, games, education technology platforms, e-commerce websites, fashion retail, and publishing of online magazines, apps and software.

There are also positive signs that women-founded tech businesses are increasingly of interest to venture capital firms, impact investors, and business angel networks, keen to capitalize on the untapped talent, knowledge, and potential of the region's women leaders in tech. However, venture capital interest tends to be concentrated in urban areas and major Arab cities and throughout the GCC, as well as Lebanon, Morocco, Egypt and Tunisia, where there are already many thriving business incubators, clusters, and entrepreneurship acceleration programs, such as Astrolabs in Dubai, Berytech in Beirut, Injaz in Jordan or TechnoPark in Morocco, and even a coding academy at the tech hub and co-working space Gaza Sky Geeks in Gaza City.

Across the region there is huge uptake on digital hackathons, online web communities, entrepreneurship training programs, mentorship initiatives, as well as funding competitions specifically targeted at women entrepreneurs and with a special focus on those in tech innovation and social enterprise. However, we all know that there is still some way to go when it comes to funding. According to McKinsey & Company, among the top 1,000 tech companies by revenue, only 1% are located in MENA, compared with 44% in Asia Pacific and 36% in the United States. Furthermore, a recent report from The Mohammed Bin Rashid Establishment for SME Development in the UAE, found that only 14% of deals were investments into start-ups founded by women.

Although initiatives to support women in tech entrepreneurship are very much concentrated in the urban parts of the region, governments and institutions are investing significantly in the development of a thriving tech-based entrepreneurial culture not only in major Arab cities, but also among the region's rural food producing areas. There is a growing movement towards technology adoption in rural areas to support much-needed sustainability and improved efficiency and, therefore, resilience in agriculture and food systems.

**Given the vast and untapped potential of women's increasing participation in the economy, which by 2025 could add an estimated \$2.7 trillion to the whole of the region's economy, the growing trend of women launching viable, innovative and scalable start-ups in the region could be truly transformative for the Middle East economy and for the prosperity of women and young people, families and communities throughout the region.**

We are currently witnessing a profound transition in history from the third to the fourth industrial revolution, with a rapid expansion of technologies and artificial intelligence, moving to an unprecedented phase where work is not carried out by humans, or by machines, but by humans and machines working hand in hand. Industry and academia are already working more closely together to design more proactive measures to promote diversity in tech and tech ethics, which is important to ensure that technologies under development are unbiased, inclusive and equitable, leveraging the power of AI for good and not harm. Ethics in AI is still largely undefined and it is imperative that women take the lead in this conversation from the earliest stages to ensure that gender sensitivity is embedded into the development of codes, conduct, norms and standards around the development and regulation of AI-powered tools and platforms.

More needs to be done to get women involved, at the youngest ages, in the tech and AI sector, and to encourage greater participation in the innovation and development of climate technologies. Filling the skills gap and promoting women-led innovation in this important sector is pivotal to creating economic prosperity in the region. Strategies to excite young girls to become a part of the tech and AI revolution must be interlinked with programs to attract more female entrepreneurs, and to drive vital change in climate and social tech by mainstreaming gender balance at every level of the sector.

In larger corporations, more needs to be done to ensure that boards and governance committees have stronger representation of women in leadership positions to influence the elimination of unconscious biases. It may seem obvious to state that gender diversity can be achieved by putting more women around the table, but getting more women around the table is not as straightforward as it might seem when the pipeline of leaders aspiring to career growth has been dominated by men for much of the last few decades. The lack of diversity in tech is not limited to gender but also extends to ethnicity and other protected characteristics.

In the development of girls and young women, it is vital that we model cross-border, cross-cultural collaboration and partnerships, as this mirrors the way the tech sector operates in practice. The speakers agreed that empowerment initiatives need to focus both on young leaders who are rising through the ranks in the sector, and those who have not yet even entered the world of tech. 'Young Leaders in AI', an initiative founded in 2018 at the United Nations AI for Good Global Summit, provided a case study of a good practice example of how to get young people interacting, gaining first-hand knowledge and understanding how the world of AI is changing, helping them to explore the possibilities and opportunities open to them to participate in the shaping of new technologies, tech cultures and attitudes.



Technology also presents unprecedented opportunities for women in trade, through digital commerce and tech entrepreneurship in retail, publishing, and the app economy. Governments from the UK to the UAE and across the MENA region are championing the digital economy as an enabler of mutually beneficial free trade, with the ultimate goal of economic growth and prosperity for all. The speakers were agreed that the digital economy presents many incredible opportunities for women, but there are deep-rooted digital divides that need to be addressed for women to take full advantage of the opportunities that lie ahead. By 2050, it is estimated that half of global trade will be digital, so it is imperative that empowerment initiatives and organizations pay attention to the digital gender divide.

Globally, in 2020, 57% of women used the internet compared with 62% of men. Of the estimated 2.7 billion people currently unconnected, the majority are women and girls. In the least developed countries, only 19% of women use the internet, as opposed to 31% of men. In Arab states, that figure is 56% of females and 68% of males. Women face various challenges in being able to fully reap the rewards that the digital economy has to offer, including having fewer opportunities to develop digital skills. UNESCO has found that only 35% of STEM students in higher education globally are women. As we head towards a 'digital by default' economy and infosphere, which encompasses not only retail but also public services and education, we really don't want women to be left behind. Without the digital divide being bridged, the potential for a thriving digital economy cannot be fully realized, in MENA or anywhere else.

More needs to be done to develop opportunities for female founders to become global digital entrepreneurs. Public and private sector collaboration could lead to more inclusive and sustainable digital economic development where everyone can benefit from what UNCTAD has described as 'the biggest economic transformation of our times'<sup>8</sup>. We already know that women in many parts of the MENA region are embracing the digital economy and setting up exciting new apps, services and online portals to meet consumer needs and tap into new ideas and markets. But more needs to be done to support women to use e-commerce technologies, which are rapidly advancing and becoming increasingly sophisticated, to get their products and services to the world and to develop the core entrepreneurial skills and resilience to strategize and scale into the future.

<sup>8</sup> UNCTAD, *Fostering Women Entrepreneurship in the Digital Economy, Insights from UNCTAD's eTrade for Women Advocates (2019-2021 Cohort)*, Accessed at <https://unctad.org/es/isar/publication/fostering-women-entrepreneurship-digital-economy>

Many young girls have an inherent sense of wanting to change the world, to find purpose in their futures, and do something that is meaningful. The speakers agreed that this is one area where formal education systems, in MENA and around the world, are letting young people down, because they fail to nurture this strong sense

of social justice and wanting to be a part of a mission to protect people and the planet – a prime example being climate<sup>9</sup>. The question remains: How can we bridge the gender gap and embed climate action into the development of innovative new technologies, including those powered by AI? The speakers agreed that embedding diversity in terms of gender, ethnicity and age can support the development of climate technologies that bring new ideas and solutions that address challenges experienced by minority or marginalized groups of people.

With half of global trade expected to be digital by 2050, women risk being left behind if they do not skill up with the digital and entrepreneurial skills to leverage and fully benefit from new opportunities in the economy. This is a transformative era where entrepreneurs can achieve scale with a fraction of the effort that previous generations had to apply. The ease of moving digital goods and services across borders transcends the complexities of international trade. The speakers agreed that the term ‘technology’ when it comes to entrepreneurship should be used in the broadest sense possible, to encompass AI, web / mobile / app commerce and social commerce, with new storefront platforms coming to market every day.

One of the limiting factors discussed by the panel is the challenge around infrastructure and access to mobile in some of the world’s least developed countries, but the inconsistent availability of entrepreneurship education is a more pervasive challenge that presents a barrier for women entrepreneurs in many MENA economies. Without entrepreneurship education, women entrepreneurs may struggle to overcome country-specific barriers to starting up. A silver lining of the COVID-19 pandemic, the speakers agreed, was that the use of virtual conferencing technologies such as Zoom and Teams has meant webinars have been able to reach many more women than pre-Covid times and to facilitate training opportunities on (for example) how to start an online business, how to market, how to scale, how to get your products or services into a particular market. Trade missions also continue to be a popular mechanism by which government departments (such as the UK Department for Trade and the UAE’s Chambers of Commerce) bring women together with their international counterparts for mentorship, networking and business development opportunities, as well as knowledge and experience exchange.

The speakers agreed that formal education, especially at secondary and higher education levels, should integrate entrepreneurship education into the core curriculum to encourage young girls to consider starting up over other more traditional career paths. This requires more collaboration between governments and education ministries with the private sector and with schools and universities, to design effective programs that support and nurture future entrepreneurs with the necessary skill sets embedded into core curriculum at the earliest stage possible. It is also important that these stakeholders align with nonprofit organizations to prioritize diversity within these programs, as policies created in a vacuum rarely work. The potential to improve diversity in tech and entrepreneurship overall is an exciting aspect of these programs, especially if they are targeted towards young people from under-represented backgrounds who have the ideas and the ambition and the creativity but not the support networks and access to resources to implement their ideas and try out their innovations.

This brought the panel to the subject of social entrepreneurship and the need for women entrepreneurs to develop the confidence and skills needed to network in UN-type settings and with global corporates without intimidation. The speakers acknowledged that for entrepreneurs of any age it is incredibly challenging to be in front of a CSR or DEI leader representing a major multinational or a senior leader from a UN agency or international NGO.

For women who prefer to remain in salaried corporate environments but who take a maverick approach to innovation and equality in their working culture, their intrapreneurial style should be encouraged and indeed incentivized, because out of the box thinking is a key strategy to embedding DEI into the corporate rulebook, which has been largely written by men over many decades, and breaking down unconscious biases and implicitly discriminatory policies (over, for example, parental leave). The speakers agreed that women are well past the stage where they need to convince people of their value or ability as leaders, and that they simply need to

<sup>9</sup> For more on the UN’s recognition that climate change is having an adverse impact on children and their rights, with one billion children at ‘extremely high risk’ from the impact of climate change, please see UNICEF’s new report, *The Climate Crisis Is a Child Rights Crisis: Introducing the Children’s Climate Risk Index*, the first comprehensive analysis of climate risk from a child’s perspective. It ranks countries based on children’s exposure to climate and environmental shocks, such as cyclones and heatwaves, as well as their vulnerability to those shocks, based on their access to essential services. Visit [https://www.unicef.org.uk/wp-content/uploads/2021/08/UNICEF\\_CCRI\\_report\\_EN.pdf](https://www.unicef.org.uk/wp-content/uploads/2021/08/UNICEF_CCRI_report_EN.pdf)

demand their place at the table. If a woman is ignored or rejected, she should simply create her own table and invite other women to join it. That is the beauty and freedom of entrepreneurship.

## 3.4 Solutions & Recommendations

### **Bridge the industry-academia gap that is holding young STEM students back from meaningful careers in STEM sectors more broadly and tech in particular**

Promote digital literacy, STEM education and tech entrepreneurship as a career option to girls in schools and universities, with a particular focus on reaching under-represented communities. Include tech and AI courses in STEM curricula in the MENA higher education and continued professional development space, and ensure that scholarships, apprenticeships, paid internships and executive / entrepreneurship education offerings are available to bridge the empowerment gap experienced by students from backgrounds that we know are under-represented in the tech industry.

### **Design interdisciplinary and cross-sectoral collaboration-driven initiatives that bring young women in tech together to create, innovate and inspire**

Set up industry consortiums to share best practices, developing and sponsoring mentorship programs, prizes, hackathons, and collaborating on initiatives that help bridge the diversity gap in technology innovation and entrepreneurship, foster deep connections, provide support, and facilitate the exchange of ideas, experiences and opportunities. Establish well-funded mentorship programs to reach young female talent in schools and universities with accelerators, internships and apprenticeships and have big tech corporations behind them as visible, engaged sponsors and partners.

### **Foster international collaboration and partnership between like-minded organizations that focus on promoting DEI in the tech sector, both regionally and globally**

International and regional organizations and initiatives should work together more closely, strategically and meaningfully, in order to amplify impact and momentum and deliver more opportunities to women in MENA by bringing them together with women entrepreneurs in tech in the UK, the EU and the wider international tech community.

### **Use digital tools and social media technologies to platform role models so that women leaders become the norm in tech, and not the exception**

Elevating role models and increasing visibility is essential to shift perceptions about women in tech and AI. Amplifying success stories of women tech entrepreneurs and professionals in the region can inspire change. To attract young girls to STEM and tech, diverse role models beyond the typical older white male archetype are crucial. While there are numerous accomplished women in tech, efforts to enhance their visibility are paramount. Women should command a larger presence on platforms and in campaigns, underscoring the importance of diversity from early on.

### **Tech can be a lonely world for women leaders - build allies and amplify women's successes always (your own as well as others)**

Building a diverse network of allies, both male and female, is crucial for women, especially given that pivotal career decisions might be made in their absence. Cultivating such alliances entails being an ally oneself, advocating emphatically for other women, particularly in male-centric sectors like tech. An organizational shift is observable when women constitute a minimum of 30% of participants. It is vital to highlight women's achievements, including your own, balancing pride with authenticity and humility.





# 4. Women-led innovation in clean energy, environmental protection, and climate action: Creating new opportunities through partnership and collaboration

## 4.1 Introduction

Women in the MENA region are disproportionately affected by climate change due to persistent social, economic, cultural and environmental factors including water scarcity. As water sources become scarcer, women and girls face increased labor and time burdens, as well as increased exposure to violence during water collection, according to UN Women<sup>10</sup>. Climate change also impacts agriculture which plays a significant role in the livelihoods of many MENA women, with changing rainfall patterns, increasing temperatures, and more frequent extreme weather events, continuing to threaten agricultural productivity and food security, per FAO research<sup>11</sup>.

Throughout the region and indeed globally, energy poverty is a phenomenon that has a strong gender dimension, according to OECD research on women and SDG7 research on affordable and clean energy, which has noted that in developing countries, lack of access to energy is an obstacle to women's and girls' wellbeing and economic opportunities, strongly affecting their living conditions and time-use, and undermining their educational and economic opportunities.

By empowering women and ensuring their participation in decision-making processes, especially in climate impacted areas such as the MENA region, we can work toward more sustainable and equitable solutions, mitigating the impacts of climate change in all regions, championing women's contributions to an inclusive and sustainable global green economy. Fully involving women in the environmental, technical, scientific and business transformations that lie ahead is the most important strategy in laying down important tracks for the next generation of women leaders in climate action and clean energy towards the realization of SDG7 - ultimately closing the gender gap in the transition to energy security and climate-neutrality.

Mainstreaming women's leadership to address climate change and ensure women's voices are heard in the transition to sustainable energy is critical to this topic. The MENA region is particularly vulnerable to climate change, with extreme temperatures, water scarcity, and desertification among the key challenges. The shift towards clean, secure energy supplies in the MENA region and efforts to tackle climate change will largely depend on several key factors being addressed - one of which is the inclusion and mainstreaming of women's leadership in sustainable energy development and more opportunities for this generation of women in STEM and the next to develop the technical solutions required to mitigate, address and reverse the climate crisis.

This session, chaired by the World Energy Council's **Olulana Nwosu** (Director of Policy & Markets), explored the growing role and opportunities for women in fighting energy poverty and climate change through sustainable energy and ensuring access to affordable, reliable, modern energy for all, which is key to realizing a 'just transition'. The session welcomed **Iman Ustadi**, Head of Negotiations-UAE Special Envoy for Climate Change & WiSER Pioneer 2023, UAE; **Phoebe Stone**, Partner-Head of Sustainable Investing, LGT Wealth Management, UK; and **Eleanor Webster**, Head of Secretariat, Mission Innovation, UK.

## 4.2 Challenges

Women-led innovation in clean energy and climate action can create new job opportunities and foster economic growth, benefiting the region as a whole and addressing two intersectional development challenges for the Arab world - the low rate of participation for women in the MENA workforce, and the persistently high unemployment

<sup>10</sup> UN Water, Water and Gender, Accessed at <https://www.unwater.org/water-facts/water-and-gender#:~:text=Women%20and%20girls%20usually%20have,school%20or%20earning%20an%20income>

<sup>11</sup> Food and Agricultural Organization of the United Nations, Climate change and food security: risks and responses (2015), Accessed at <https://www.fao.org/3/i5188e/i5188E.pdf>

rate for young people in the region. Accordingly, the key questions explored in this session were: how can we empower and inspire women in the region to contribute their talent, drive and ambition towards climate action and developing sustainable energy innovations towards the just transition? How might doing so mitigate the related interlinked challenges of women's economic inclusion and youth unemployment?

Energy poverty is a worldwide phenomenon, although it is most intense in developing countries and especially affects women, who are the main users and producers of household energy. In some OECD countries, it is estimated that up to 30% of households live in energy poverty, limiting the access of women and girls to education and economic opportunities, and disproportionately exposing them to health risks, despite the fact that, according to the OECD, 'women can play a central role in the transition to clean energy as consumers, helping to shift energy consumption - and by leading transformative change in the energy industry'<sup>12</sup>.

As the OECD further notes, SDG 7 (Affordable and Clean Energy) interacts with many other SDGs as energy is needed for many elements of basic wellbeing, from Goal 2 (Zero Hunger), Goal 3 (Good health and Wellbeing); Goal 4 (Quality Education); Goal 9 (Industry, Innovation and Infrastructure); and Goal 12 (Responsible Consumption and Production).<sup>13</sup> Lack of access to energy creates a development and poverty trap, whilst ensuring affordable energy for all supports the achievement of SDG 1 (Eliminating Poverty). Poverty is a profound challenge across the world, and there are numerous connection points around poverty and gender. A growing supply of renewable, clean energy is also essential for achieving sustainable economic growth (SDG 8), building sustainable cities (SDG 11), ensuring sustainable consumption and production patterns (SDG 12) as well as the transition towards a low-carbon economy and the achievement of SDG 13 on climate action.

Energy poverty refers to a situation where individuals or households are not able to adequately provide basic energy services for their daily living needs. The gendered effects of energy poverty can be significant, with women and girls often facing unique challenges due to socio-cultural norms, traditional roles, and structural inequalities. Women in many cultures are traditionally responsible for collecting fuel, especially in rural areas where biomass is the primary source of energy. This can require many hours of labor each day, reducing the time available for education, economic activities, or rest. The use of solid fuels, such as wood, crop residues, and animal dung, can lead to indoor air pollution when burned in open fires or simple stoves. Women and children, who spend more time indoors, are often more exposed to these pollutants, leading to respiratory diseases, eye problems, and other health issues. The over-reliance on biomass can contribute to deforestation and environmental degradation, and as primary resource collectors, women can be directly affected by environmental changes, which may increase their workload or expose them to new vulnerabilities. Collecting firewood or other fuels can expose women and girls to risks of physical and sexual violence, especially in conflict zones where the scarcity of resources can also lead to further disputes. The scale of this issue is made clear by the sobering statistic that one quarter of the global population lives in conflict-affected countries<sup>14</sup>.

A lack of access to modern energy services can hinder women's opportunities for economic activities, such as starting a small business. This can perpetuate their economic dependence on male family members. There are also significant educational impacts on young people in households affected by energy poverty. Without electricity, students might lack the lighting necessary for evening studies. Given that girls often have household responsibilities, they may particularly benefit from having the flexibility to study at night. Additionally, without electricity, women may have reduced access to media, such as radio or television, limiting their exposure to vital information, from health to current events.

In many MENA states, as in other regions of the world, decisions about energy purchases or infrastructure are largely made by men, even if women bear most of the energy collection and usage responsibilities. This can limit the relevance and effectiveness of energy interventions. As the World Bank notes: "The energy sector remains a male-dominated field across the world, and this is no different in the MENA region, [where women] already have a generally low participation rate in the labor force, with only 20% of women employed or seeking employment (less than half of the global average). In the energy sector, that figure is even lower, despite MENA having 50% of female graduates in STEM fields. In many MENA countries, women represent less than 10% of the energy

12 OECD, Women and SDG 7 - Affordable and Clean Energy: Ensure access to affordable, reliable, sustainable and modern energy for all, Accessed at <https://www.oecd-ilibrary.org/sites/c7cbe91b-en/index.html?itemId=/content/component/c7cbe91b-en#:text=Women%20can%20play%20a%20central,in%20the%20renewable%20energy%20secto>

13 UN, The 17 Goals, Accessed at <https://sdgs.un.org/goals>

14 UN Secretary General, 'War's Greatest Cost Is Its Human Toll', Secretary-General Reminds Peacebuilding Commission, Warning of 'Perilous Impunity' Taking Hold (March 2022), Accessed at <https://press.un.org/en/2022/sgsm21216.doc.htm#:text=As%20we%20meet%20today%20one,viole%20and%20human%20rights%20violations>

workforce, and an average of 5% in technical fields or in management. In Jordan and Egypt, the difference between women in renewables vs in overall energy sector is only 1%<sup>15</sup>. Further, it is estimated that the global energy market will grow 44% by 2050 – with 80% of these jobs in renewables, compared to 11% in fossil fuels, and 5% in nuclear energy.

The World Bank has noted that the exclusion of women comes at a cost to the overall economy; the IMF has estimated that addressing gender gaps could add up to 20% to the region's GDP and other reports show that companies with 30% of women in leadership roles are much more likely to succeed in STEM-related sectors than companies without female representation. 'In this context', the World Bank notes, 'the promise of equality in the energy workforce should be harnessed as an urgent imperative. The drive for energy transition and clean energy development in MENA countries will likely create more and different types of jobs, with the majority in the renewable market'<sup>16</sup>. The OECD further finds: 'Achieving greater gender diversity in company boards and senior management positions could help to accelerate the green transition, as it would allow for a more effective integration of environmental and gender goals'<sup>17</sup>.

Multi-stakeholder strategies need to be designed and implemented now to create jobs in the green economy. One pathway to realizing this is to improve women's entrepreneurship in clean energy so that innovative solutions can be developed as closely as possible to the communities which need to consume that energy. The speakers agreed that women have a way of designing innovations that find clever, viable ways around the most salient issues. As such, they are perfectly positioned to impact clean energy solutions through a lens of innovation born of the necessity to fight energy poverty and climate change. The other pathway is to improve women's leadership and inclusion in the energy sector overall, through participation on energy boards and higher visibility in the global energy arena, so that this might positively nurture women's engagement with clean energy and climate action in the future. Empowering women, and ensuring their participation in the decision-making process, actually accelerates the energy transition process, but the challenges of diversity and inclusion remain especially limiting in this sector.

## 4.3 Opportunities

**“Inclusion is a key pillar and the key driver for COP28. We will ensure that all voices are heard and accounted for, including but not limited to civil society, youth and indigenous people and most importantly, women.”** – Iman Ustadi, Head of Negotiations, COP28

The COP28 strategy is focused on shaping progress, delivering climate mitigation and adaptation strategies and solutions, and accelerating the energy transition towards renewable energy and the adoption of clean and low-carbon solutions. The speakers agreed that underpinning the energy transition is the urgent need for an affordable and accessible climate finance agenda to drive every pillar across the climate context. They also discussed the importance of working in the international community to ensure that developing countries, especially the most vulnerable ones, have the right workforce skills and policies in place to adapt to climate change consequences. There is, the speakers shared, great hope but there is lack of trust when it comes to climate finance.

Interest in sustainable investment is at an all-time high, with a dramatic increase in investment from ultra-high net worth clients and women wanting to work with clients to help them allocate their money, capital and wealth towards climate (a very modern phenomena) and poverty (which has been called 'a phenomenon as old as human history'<sup>18</sup>), and importantly, the interconnectedness between both phenomena. Capital markets are crucial to solving these challenges. The cost of solving or tackling the UN Sustainable Development Goals goes into the many trillions, and there isn't enough capital, even today, being allocated by governments or philanthropists. The speakers were agreed that filling the funding gap to address climate change is the most important role of capital markets today.

15 Husam Beides & Elisabeth Maier, Getting more women into the energy sector: A RENEW'ed approach for MENA, The World Bank Blog (July 2022), Accessed at <https://blogs.worldbank.org/arabvoices/getting-more-women-energy-sector-renewed-approach-mena#:~:text=The%20energy%20sector%20remains%20a,half%20of%20the%20global%20average>

16 Husam Beides & Elisabeth Maier, Getting more women into the energy sector: A RENEW'ed approach for MENA, The World Bank Blog (July 2022), Accessed at <https://blogs.worldbank.org/arabvoices/getting-more-women-energy-sector-renewed-approach-mena#:~:text=The%20energy%20sector%20remains%20a,half%20of%20the%20global%20average>

17 OECD, Women and SDG 7 - Affordable and Clean Energy: Ensure access to affordable, reliable, sustainable and modern energy for all, Accessed at <https://www.oecd-ilibrary.org/sites/c7cbe91b-en/index.html?itemId=/content/component/c7cbe91b-en#:~:text=Women%20can%20play%20a%20central,in%20the%20renewable%20energy%20sector>

18 Britannica, Entry for 'Poverty', Accessed at <https://www.britannica.com/topic/poverty>

Climate finance is not just about doing the right thing from a moral perspective. There are positive financial and economic benefits from doing so as well. Climate Risk is a key financial risk and for an investment manager not to consider climate risk is, in itself, a significant financial risk which will impact generations to come. Investing in climate change solutions, at the same time, was described as 'the single biggest opportunity in terms of generating further wealth ... if you're not aware of it, then you're missing out on a massive opportunity'.

In terms of energy poverty, as of today, the poorest nations account for over half of the world's population, but account only for 12% of the global emissions with 800 million homes having zero access to energy. This is a very disappointing figure but it demonstrates the true impact of energy poverty and how many people are suffering from it. Behind these numbers, there are families, women who deserve and want to have a better life either for themselves or their family, and for the generations to come. It emphasizes the importance of having available, affordable, and sustainable energy that can accommodate everyone.

When we speak about energy transition, we must do better at linking it to justice. Keeping justice and equality at the heart of the energy transition means keeping people at the heart of sustainable development. If we fail to have a pragmatic, inclusive energy transition strategy that delivers energy in an efficient, effective and equitable way, then eventually the consequences of energy poverty will be devastating, particularly in relation to the effects of gender discrimination, which are often overlooked and underestimated. In designing energy justice strategies, we need to consider the motivations and situations of women in developing countries, in the most vulnerable communities and especially in the Global South, where they are very much engaged in the home and family care and most closely linked with the use of energy in household settings. Having zero access to energy will make them much more vulnerable to the implications of energy poverty.

The health, safety and wellbeing of women experiencing energy poverty was also highlighted, as women are fully engaged in the collection and burning of firewood and biomass fuels, which has a direct and devastating impact on women's health. A WHO report in 2019 states that indoor air pollution kills around 4 million people every year, around 50% of the mortality rate being women. This shows the impact of energy poverty, particularly within the community and on women.

In the much-needed shift towards a low carbon economy and renewable energy, accessible and affordable clean technologies should be a priority and inclusion a key pillar. Energy poverty is no longer an issue that exclusively affects developing countries, because of the global financial situation, it also impacts those living in developed countries, with women usually being responsible for managing the household finances. As a result, they are usually the ones disproportionately impacted by energy costs rising at the same time as the cost of living increases and spending power decreases.

It should be noted that energy poverty is an issue for many women in the developed world, as well as in the developing world. We have seen some groundbreaking commitments made in terms of spending by countries to mitigate the adverse impacts of inflation, including in the US, but these legislative remedies are often denounced as being too far left / on the liberal end of the political spectrum and as such can be divisive and partisan. Some countries have incentivized companies to invest in the green transition and to create green jobs through the use of tax credits, a strategy mirrored in the EU to stem any drain of resources of R&D and of capital. Climate finance is an area where there is great importance placed on partnerships between government policy and capital being allocated on the ground. This is crystallized in the action taken in several states to speed up permits, enabling infrastructure spending to happen more effectively and efficiently. The speakers agreed that the days of waiting an entire decade (as has been the case in the EU in the past) to get clean energy projects off the ground appear to be over, given mainstream acceptance of the urgency surrounding the need for infrastructure and investment. A concrete example of collaboration in the UK was given, where energy companies have partnered up with financial institutions to identify individuals and families in the UK struggling to meet energy costs. This is indicative of a social responsibility commitment from businesses in the financial sector that are profit-making but also reflecting and understanding how the cost of energy adversely impacts women and families.

In the MENA region, there is significant scope for promoting public-private collaborations and projects to promote innovation in clean energy. Where much of the funding is concentrated in multinational organizations and governments, the innovation is largely emerging from young people, especially women, and is centered on clean energy. The question then becomes: how do you bridge the gap between finance and R&D resources for young entrepreneurs who have ambitious ideas and the motivation to make clean energy a huge success and the transition truly just?

The speakers discussed the question of securing more meaningful contributions from companies to the energy transition other than, and in addition, to carbon offsetting, especially in the form of support for young and female entrepreneurs with the innovations and creativity to accelerate the energy transition. They discussed the need to implement frameworks that capture all the different types of carbon capture and offsetting so that it can be carried out effectively, transparently and openly. They agreed that AI and data-driven technology can provide a number of solutions to promote transparent offsetting in the future as real time data is more accurate and viewed more confidently and with trust.



ARAB INTERNATIONAL WOMEN'S FORUM  
المنتدى العربي الدولي للمرأة

WOMEN IN SUSTAINABILITY: ENVIRONMENT AND RENEWABLE ENERGY

WISER

MASDAR

### Session III Women-led innovation in clean energy, environmental protection, and climate action: Creating new opportunities through partnership and collaboration

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## 4.4 Solutions & Recommendations

### **Gendered energy poverty requires gender-responsive solutions rooted in international and regional collaboration and multi-sectoral partnership**

To effectively address energy poverty, strategies must be gender-responsive, integrating the distinct needs, preferences, and roles of both genders to craft equitable solutions. A concrete step includes introducing energy-efficient cookstoves which reduce women's time and labor burden while mitigating health risks and environmental impacts. Moreover, by implementing decentralized renewable energy solutions, we can offer safer, cleaner, and more reliable energy sources, simultaneously empowering women with fresh economic and educational opportunities.

### **Clean energy projects and partnerships must be well-funded in order to be fully sustainable**

Reforming climate finance is a cornerstone discussion in light of the COP28 agenda, to ensure that it is available, affordable and accessible. No matter how much we talk about mitigation solutions, no matter how much we talk about adaptation opportunities, if there is no finance, there is no pathway forward. For sustainable climate partnerships, scalability, viability, robust support, and funding are pivotal. Prioritizing initiatives that enhance education access, technology, and capacity building is key to helping constituents globally understand and experience climate change impacts. Effective climate finance entails not just capital availability, but also its accessibility. Addressing prevalent trust deficits and cynicism is essential. Promoting bankable projects that cater to climate adaptation and mitigation ensures transparency in funding outcomes, stimulating innovative solutions and fostering further collaboration.

### **Projects and partnerships must embed diversity and inclusion by default to ensure women's equitable representation in climate innovation and solutions-building**

Without the inclusion of women and young people, there is no future for climate innovation, because inclusion is what will drive more ambitious, creative climate projects that are viable, sustainable and bankable. To improve women's representation in climate action in all spheres, we need to embed diversity and inclusion and a clear commitment to women's empowerment, with monitoring and performance tracking indicators aligned with key priorities and targets. Closing the gendered funding gap for women climate innovators is especially necessary. Partnerships and initiatives should be designed to ensure equal participation of women in dialogue and policy design, with tailored grants available for viable climate projects led by women and by youth.

### **Climate education should be deeply embedded into school and university curricula throughout the region to scale up energy literacy and encourage youth-led climate innovation**

With the UAE hosting COP28 this year and bringing key actors together, including multinational corporations, universities and youth advocates themselves, it is a core recommendation of AIWF and WiSER that climate education, environment education and energy literacy should be deeply embedded into the formal school and university curriculum throughout the region.

### **Create spin-off platforms for young entrepreneurs to showcase youth-led climate projects from the region**

COP28 prominently features youth, with the Green Zone spotlighting venture capital, entrepreneurs, SMEs, and youth initiatives. Youth will not just observe but actively partake, representing crucial delegations from both the Global North and South. Their inclusion in the climate dialogue is vital; as beneficiaries of climate funding, their perspectives will shape the future climate impact regionally and globally. AIWF and WiSER will continue the dialogue well after COP28 and urge all stakeholders to do the same, establishing spin-off platforms and opportunities for young leaders to convene and carry their conversations at COP forward.

# 5. Preparing for the Future of Work: Empowering the next generation of sustainability leaders through education, skills and decent work

## 5.1 Introduction

In 2017, the International Labour Organization (ILO) created a Global Commission to examine the urgent need to prepare for the future of work by empowering the next generation of sustainability leaders through education, skills, and decent work. The world of work has rapidly evolved in the last few decades, and part of that change results from innovations driven by technology and digitalization, as well as other disruptive factors such as climate change and conflict. The ILO brought together Global Commissioners from around the world, with AIWF President & Founder **Haifa Al Kaylani** the only Commissioner to represent the Arab world. The Commission produced a report in January 2019 in honor of the Centenary of the ILO, *Work for a brighter future*, which the ILO still uses as its benchmark report in all spheres and arenas on the future of work, including in climate discussions<sup>19</sup>.

The report called for a human-centered agenda which places women and men and the work they perform at the center of economic and social policy and business practice. This approach re-orientates the economy towards human-centered growth, economic and social policy and business practice, to strengthen and revitalize the institutions of work. It is focused around three pillars of action: Investing in people's capabilities; investing in the institutions of work; and investing in decent and sustainable work.

The first pillar calling for investing in people's capabilities includes an investment in lifelong learning, skills building, reskilling and upskilling. This pillar is now imperative in the post-pandemic economic recovery efforts, with millions of people needing to reskill to regain employment following massive job losses in many countries globally. The second pillar involves investing in the institutions of work including regulatory frameworks, labor administration and labor inspectorates. The third pillar focuses on investing in decent and sustainable work, decent work defined as the ILO's shorthand for what it takes for a worker to be able to fulfill themselves on the job, come home safely, have an adequate income, enjoy adequate social protection and have a voice at work.

Investing in skills development initiatives will require increased investment in the institutions, policies and strategies that support people through what the report calls "future of work transitions", in order to offset the impact of automation and technology that threaten job losses in some sectors and promise gains in others. When we talk about the future of work, in the context of gender equality, diversity and inclusion, there are excellent opportunities to reform the deep, ingrained barriers and obstacles that working women have faced in recent decades. How can women take advantage of these opportunities? After the pandemic, how can we ensure that women do not regress due to the limitations that were placed on them during the global public health crisis, including the assumption of a disproportionate care burden when home schooling children? With work from home culture embedded in many working cultures and practices to support employees' work/life balance, especially that of working parents, how can we ensure women who are less present in the physical office environment are not left behind when it comes to promotion and career progression?

As we innovate through digital digitization and technology, we know that education and skills are going to be fundamental. AIWF has long advocated for the gap between industry and academia to be bridged in the MENA region, and this will become imperative in the near future to ensure that girls and young women are not left behind as the world of work continues to rapidly evolve in the years ahead. A 2022 report from the Majid Al Futtaim Group and McKinsey has warned that automation could displace nearly 29 million jobs, or a fifth of the total labor market, by 2030<sup>20</sup>. This makes future of work skills and lifelong learning critical to ensuring that young people are not blindsided by the phenomenal pace of advancements in AI and automation that threaten traditional jobs and, at the same time, are rapidly creating new jobs that did not even exist a few short years ago.

<sup>19</sup> International Labour Organization, *Work for a brighter future* (January 2019), Accessed at <https://www.ilo.org/global/topics/future-of-work/brighter-future/lang--en/index.htm>

<sup>20</sup> Daniel Bardsley, Higher education investment needed to halt Middle East's student 'brain drain', *The National* (June 2022), Accessed at <https://www.thenationalnews.com/mena/2022/06/08/higher-education-investment-needed-to-halt-middle-east-student-brain-drain/>

In the MENA region, where we have seen gender gaps nearly eliminated in formal education, the vastly improved rates of female graduates have not translated into increased representation or greater labor force participation for women. Given the demographic shifts in the different countries in the region, and the large and growing youth population, how can we best invest in education and skills for the future that employers and governments need graduates to have? How do we integrate more human centered skills or 'soft skills' into formal education curricula and into continued professional development, skills such as creative thinking, critical thinking, people management skills, and emotional intelligence – all of which are going to be essential to our future and current world of work?

The session, which was chaired by **Chidi King**, Branch Chief, Gender, Equality, Diversity and Inclusion Branch (GEDI), ILO Conditions of Work and Equality Department, International Labor Organization, explored key strategies for bridging the industry-academia skills gap in MENA through a lens of equality, diversity and inclusion, noting that diversity also means looking beyond gender and at the different situations of women with disabilities, for example. The panel benefited greatly from the insights of **Professor Yusra Mouzoughi**, President, Royal University for Women, Bahrain; **Noora AlMarzooqi**, Board Member, Vice President, Group Strategic Investments at ADNOC; and **Karoonah Ramah Sleightholme**, Head of Digital & IT Delivery, Vodafone, UK.

## 5.2 Challenges

Youth unemployment in the region has long presented a critical challenge for policymakers in the Arab world, with over 26% of young people unemployed against the global youth unemployment rate of 13.6% (according to a 2020 ILO report). For more than 25 years, youth unemployment rates in MENA have been the highest in the world. Nearly 30% of young Arabs (21.8 million youth) are not in employment, education or training, in a region where half of the population are under 25 years old. The youth unemployment rate for men is 23% whereas, for young women, it is 39%.

The World Bank estimates that in the next 20 years about 300 million young workers in MENA will join the labor force, aspiring to decent work and decent income; but it warns that, "if nothing changes, the potential demographic dividend that large, young populations can provide countries will be squandered". Unlike unemployment in many other regions, youth unemployment in MENA tends to impact young people at all levels of education. University graduates make up a significant proportion, with many suffering from long-term unemployment.

Throughout the pandemic, young people faced the prospect of becoming a "lockdown generation", due to forced disruption to their education and to training opportunities, mass unemployment and income reduction – especially the large numbers of youth in the MENA region employed informally (with the ILO having estimated that 64% of total employment in the region is informal and lacking in security or any form of social protection). In October 2020, the Arab Youth Survey revealed that 1 in 5 young people were reporting job losses, and 72% of the young people surveyed indicated it had become very difficult to secure a job in the region. It should serve as a call to action for to all of us in the international and regional community that the Arab Youth Survey 2020 reported that nearly half of young Arabs may leave their home country because of corruption, poor leadership and widespread economic failure.

This is especially alarming because MENA is the world's second youngest region behind Sub-Saharan Africa with close to 60 per cent of the population under 30. Addressing the youth unemployment crisis through education reform (towards the realization of SDG 4 in the region) should be the utmost strategic priority in the post-Covid agenda for economic recovery and growth. Despite significant investment by Arab governments in education over the last two decades, young people in the Arab region are still graduating from universities with degrees and skills that do not necessarily reflect the needs of the evolving and largely digitized Arab labor market, leaving them totally unprepared for an extremely competitive jobs market, as well as for the digitalized future of work that will be highly dependent on technology, AI and automation. The traditional preference among young graduates for 'safe' public sector employment over private sector jobs or entrepreneurship is still prevalent. And there is a cultural hesitance to engage in entrepreneurship, compounded by an exceptionally weak entrepreneurial ecosystem in the region.





There is much that has already been achieved in terms of growing the critical mass of women in the workplace in work and on boards, especially in the MENA region where multinationals are steering working culture and practices to align with international standards and expectations on diversity and inclusion. In recent decades, Arab women have become increasingly prominent in high-level leadership positions previously dominated by men, challenging gender bias in every sector, especially STEM. They command an ever-greater presence on corporate boards, in the top jobs at multinationals, as CEOs and family business leaders, as small business owners, academics and civil society change agents.

In the MENA, as in all other economies, there are millions of highly successful women, but many millions more who are marginalized in the informal economy, without a safety net, often suffering exploitation, sexual and financial abuse, and gender violence, and often having limited mobility, autonomy and no prospect of decent work. Women disproportionately shouldered the brunt of economic, social and familial burdens during COVID-19 which greatly exacerbated pre-existing inequalities in the MENA region and globally. Harvard research has found that women's jobs were 1.8 times more vulnerable during the crisis than men's: women make up 39% of global employment but accounted for 54% of overall job losses as of May 2020. Additionally, studies have confirmed that men were three times more likely to be promoted during the pandemic than women<sup>21</sup>.

Thus far, much of the research dialogue on the future of work in the MENA region has focused on creating new jobs to employ the youth population that constitutes more than half of the population, and ensuring a just transition from heavy carbon industry-based economies to low carbon or carbon neutral, green, knowledge-based and tech-driven economies that protect people as well as our planet. The jobs that need to be created must be founded on rights at work, social protection and social dialogue, and based on a human centered approach where opportunities are for productive work that delivers fair income, provides security in the workplace, and social protection for all, with prospects of personal development and social integration. Gender equality, inclusion and non-discrimination are cross-cutting aspects.

Women in the workplace have for decades tried to 'blend in' with male-dominated sectors and adapt to behaviors that are inherently masculine in nature, as these have long been mistakenly aligned with 'leadership qualities'. At a certain point, the speakers agreed, women come into their own and gain the confidence to live and work by their values, and shed the pressure to behave in masculine ways in order to complete on strength of knowledge, brainpower and interpersonal skills. Before the Industrial Revolution, men's physical strength was an advantage which goes some way to explaining why there are deeply entrenched inequalities in the world of work that have lasted centuries and must be very deliberately and consciously unpacked and retired. After the Industrial Revolution and the Information Revolution as well, there is yet to be any conscious acknowledgment of the fact that in the current working world, competition in the workplace is based on knowledge and brain power, not physical strength. If we recognize that consciously, it leads us to a very different place in the workplace in terms of addressing unconscious bias towards women in leadership positions.

<sup>21</sup> Michelle Fox, Men have been promoted 3 times more than women during the pandemic, study finds, CNBC (October 2020), Accessed at <https://www.cnbc.com/2020/10/13/pandemic-fallout-men-got-3-times-more-promotions-than-women.html>

## 5.3 Opportunities

Post-pandemic, governments and the private sector are taking a more urgent view of the need to help women lift themselves out of poverty and unemployment, and to contribute meaningfully to economic recovery and growth through entrepreneurship and inclusion in the workforce, which has historically been exceptionally low in the region with less than 25% of Arab women participating in the workforce. There is a new understanding after COVID that shared economic prosperity benefits women, their children, and whole communities. There is a new momentum, a new energy that we are seeing towards empowering women and young people, with economic inclusion through decent work, education and entrepreneurship the key priorities in many of the region's 'Visions' towards meeting the SDGs by 2030.

In the MENA region, it is important to look beyond this goal of job creation towards ensuring that the jobs that are created are for decent work with an opportunity to empower and support both individuals and their families and communities and narrow poverty gaps and the poverty crisis. To achieve this in MENA, all stakeholders have an important role – whether it's government, policymakers, industry or private sector. The speakers were asked for their perspectives on how to ensure these much-needed jobs in the region are representative of decent work, with

the right level of income, insurance and the opportunity to grow and develop personally and professionally. Resilient jobs are key; the mindset should be: 'If we have a job today, and things change or shift tomorrow, we need to be able to skill, upskill, and reskill the workforce to adapt. With governments across the region focusing their 2030 Visions on the need to upskill and reskill their workforce to mitigate future of work challenges, there is great optimism that MENA will be able to achieve decent jobs for the workforce. This is especially vital in the Arab world where young people (aged under 30) constitute more than half (55%) of the population across MENA, compared with 36% of the population across OECD countries<sup>22</sup>.

The role of universities in the region in mainstreaming women's leadership and the expectation that jobs will represent decent work cannot be underestimated. As the President of the Royal University for Women in Bahrain stated, the role of higher education in helping young girls make choices and decisions about their professional values and future while at university is an important one, because these are the formative and highly impressionable years of a young woman's life. When they leave high school, they are still very young, and they have largely been protected and cocooned in their childhood, so the opportunity to give them exposure, broader perspectives and a breadth of experiences is critical to embedding and developing confidence and capacity at the juncture where they leave education and enter the world of work. Young girls must be assured that whatever they decide to do for themselves, whether they work or not, or set up their own companies and become entrepreneurs, work in the public or the private sector, there's always a place for the educated mother, and there's always a place for the educated entrepreneur. Similarly, the private and the public sectors both value and reward education, so education is what gives a woman choice and autonomy.

It is important that women learn, while still in higher education, to carry those values forward so they can continue to think about sustainability, innovation, global citizenship and the contributions they could make towards solving critical challenges. A 2022 study by the Majid Al Futtaim Group and McKinsey found that 8% of the world's university students come from the Middle East<sup>23</sup>. According to the World Bank, there are around 220 million tertiary education students in the world, up from 100 million in 2000<sup>24</sup>, representing a significant captive audience. The speakers agreed that those tertiary learners should be the 'starting block for addressing wicked problems' which are multifaceted. Educators and higher education institutions can inspire the university students they engage with so they are conscious that they can make a difference. Educators in the region have a responsibility to facilitate options for young women, making sure they are aware of how to create and unlock opportunities, going beyond the day to day in order to create something for the future. If we can capture the interest and engagement of this generation of university students, some of the future of work problems in the region will have been addressed in the process.

The speakers agreed that education does not end at university and the ILO report makes strong recommendations about lifelong learning. Lifelong learning opportunities include, but are not limited to, continued

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22 OECD, Youth Empowerment in the MENA Region, Accessed at <https://www.oecd.org/mena/governance/promoting-youth-inclusion-and-empowerment>

23 Daniel Bardsley, Higher education investment needed to halt Middle East's student 'brain drain', The National (June 2022), Accessed at <https://www.thenationalnews.com/mena/2022/06/08/higher-education-investment-needed-to-halt-middle-east-student-brain-drain/>

24 The World Bank, Higher Education, World Bank Blog, Accessed at <https://www.worldbank.org/en/topic/tertiaryeducation>

professional development training that corporate employers provide. Increasingly, they include heutagogical (self-taught) learning, with the advent of digital education technology and the rise, both globally and in the region, of usage of online course platforms such as Coursera, which has over 4.8 million learners in the MENA region alone<sup>25</sup>.

There are numerous education systems in the region that have designed initiatives to bridge the skills gap, but most of the innovative practices are being offered by private sector multinationals with advanced HR and Learning and Development (L&D) resources. However, the speakers agreed, that digital and human skills must be acquired throughout the education system, and not left to the private sector to provide remedial training to graduates who are poorly equipped with the soft skills or digital skills to effectively compete in the increasingly digitized global markets. The speakers agreed that globally, vocational training and vocational education needs to start at a much earlier stage, and MENA has an opportunity at this juncture to provide a best practice benchmark for reforming education systems to address the skills the market considers to be in severe shortage.

Integration and collaboration between various stakeholders both internal and external to the education system itself, including government and policy makers, academics, educational institutes, research centers and private

sector actors, is integral to creating solutions that aren't 'one time use'. Solutions that are sustainable and strategic enough to address challenges both now and in the future, and encompass the early formal education phases of a learner's life and continuous learning, lifelong learning and the need for workers to upskill and reskill throughout the different cycles of their professional lives, especially in a world where conditions rapidly change with advances in technology and AI.

The speakers considered that we are now in the Fourth Industrial Revolution, which is very much distinct from previous revolutions because it is very much knowledge-based. As we shift towards carbon-neutral or low-carbon economies and industries, the norms that shaped our previous World of Work should also be shifting, because the skill sets required in this revolution are very different from those inherent in previous iterations.

Moving beyond outdated categorizations of skills as being 'masculine' or 'feminine', soft skills are no longer considered to be primarily and inherently possessed by women (the skills of empathy, relationship-building, critical thinking, creativity) as they are considered to be 'skills of the future' in the world of work. There is now an unprecedented opportunity, the speakers agreed, to transform gendered relations in the workplace so they are based on equity and inclusion.

The speakers also highlighted the need for honest, frank and inclusive dialogue between employers and employees to identify skills gaps in the sector, to anticipate changing skills needs and ensure that the workforce is well equipped to meet skills that will be in demand in the future. A somewhat complicating factor is that people no longer have one career for life and will typically change careers in a lifetime between 5-7 times, according to the World Economic Forum<sup>26</sup>.

Looking at the environment around us with all the changes that are happening and the advancements in technology and AI that carry an enormous risk of displacing large portions of the workforce, flexibility and adaptability needs to be embedded deeply into working culture, regardless of whether in the public or private sectors. Resilience, adaptability and flexibility – and importantly, inclusivity – need to be built into MENA working culture so that continuous learning becomes deeply embedded in every worker's professional life. Although technology and AI represents, to an extent, the potential for seismic job losses, we need to talk about the opportunities these technological developments represent for women. Such developments are welcome after women were greatly disadvantaged during the pandemic when the care and homeschooling burden fell squarely onto their shoulders. There are more women tech entrepreneurs in MENA than in Silicon Valley, so it is worth exploring further (in a follow up to the panel) how women can most effectively leverage the new opportunities presented by tech and AI and find their own work/life balance by starting up and scaling up their own businesses, creating valuable new jobs in a variety of tech-driven sectors in the process.

The speakers acknowledged that the MENA region is a vast, non-homogeneous part of the world and it is important not to label each MENA state as though it is identical to other nations in the region. There is extreme wealth in the MENA region, but there is also extreme poverty. There is extreme stability in many parts of the

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25 Anthony Tattersall, Coursera doubles down on Middle East with new leadership, content and platform features (October 2021), Accessed at <https://blog.coursera.org/coursera-doubles-down-on-middle-east/>

26 World Economic Forum, Having many careers will be the norm, experts say (May 2023), Accessed at <https://www.weforum.org/agenda/2023/05/workers-multiple-careers-jobs-skills/>

region, and extreme instability and conflict in other parts. There are extreme opportunities on the one hand, and very limited or poor opportunities on the other. There are women who are supported, and women who are invisible. In this ecosystem, it is worth taking a reality check when discussing how policies can be viable, institutionally supported, and importantly, enforced. This is a big challenge for such a complex part of the world.

When we talk about gender, inclusion and diversity, the same applies – women are also not homogeneous, and women themselves are very diverse. The speakers were asked for a strategic, cohesive and targeted intervention that could be implemented to address some of these persistent gender disparities in education and the labor market across the MENA region in all its diversity. In what ways could an inclusive and adaptable workforce, where women were truly empowered and valued, contribute to sustainable development and social progress across the region?

In every region of the world, there is insufficient provision to prepare university graduates and adult learners for what is currently underway - the greatest upheaval in the world of work since the last Industrial Revolution. There is an urgent need for economies to skill, upskill, and reskill workers to adequately prepare them for the workforce of the future, and to equip workers to succeed in careers where the jobs of the future are being created – largely, in the green, knowledge and digital economies. We already know that the future of education and skills in the MENA region will be shaped by its demographics, with a large and growing youth population. Governments need to invest in formal education, teacher training, university infrastructure and research and world-class academics. They also need to embed skills development deeply into education from primary through to tertiary and vocational offerings, to harness the potential of the demographic dividend, reduce unemployment and promote social cohesion.

The MENA region has fully embraced future of work priorities and understands the need to diversify towards sustainable, people-centered, knowledge-based, and highly digitized economies to maximize productivity and harness the region's human capital which has been under-utilized for decades, with the world's lowest rate of female labor force participation and the world's highest rate of youth unemployment. We are in the home stretch of the journey to 2030, and MENA countries are revitalizing their efforts, post-pandemic, to achieve vital goals on gender equality and education.

In global corporations and organizations, it is relatively straightforward to drive workplace policy and cultural change in all the markets that the company operates in, whether it is in the Middle East, Asia, Europe, or America, by cascading corporate policy on a trickle-down basis, but there needs to be more attention paid to critical mass in corporations and organizations in the SME ecosystem. The speakers discussed quotas and engaging 'sympathetic' men, getting men on board with women's leadership. This is important because men, whether we like it or not, are more likely to have access to funding, are more likely to be decision makers or the louder voice in decision making, and are more likely to be present. If we can engage with men, and have them understand the cause and appreciate the benefits of a more equal and more diverse board or diverse employee profile, that goes a long way to shortening the road that women of the next generation have ahead of them.

The speakers spotlighted the UAE as an example of best practice in the region and shared lessons learned in terms of what the UAE as a country has achieved, and the formula of engagement at the company level. At the country level, there is tremendous integration between the regulators, the government, the public sector, and the private sector. There are quota-based policies at government level, in terms of the number of women that should sit at a board level, or the number of women that should be CEOs or female ministers, or the number of female students that should be enrolled into priority disciplines in higher education (resulting in 43% of applicants to UAE University being women applying for STEM majors). As a result, there are a number of female ministers who are exceptionally young in age, so the strategy not only diversifies leadership in terms of gender but also in terms of multi-generational diversification. This is important to ensure that young leaders have a voice in designing the change they want to see in the future world of work, from policy to workplace practice and working culture. Their input is critical in policy design to address major structural issues such as social norms, care responsibilities, access to education, access to finance, protection from gender-based violence and harassment in the workplace.

The speakers agreed that there is no one size fits all and each country in the MENA region has unique needs and cultural contexts. Alongside bringing men on board as crucial partners in the journey for a more equitable and diverse workforce, there must be a mix of policy, legislation and institutional reform to drive change forward for women who work and for the future of work overall.

## 5.4 Solutions & Recommendations

### **Mainstream lifelong learning as a concept and an opportunity in the MENA higher education and vocational training sectors**

Much of the region's future prosperity hinges on its ability to educate its youth and equip them fully with the competencies and advanced digital skills aligned with the needs of future labor markets. This is reliant on lifelong learning (which involves skilling, upskilling, reskilling and continuous education, tailored to address the challenges of labor markets of the future and equip workers of the future to successfully compete, adapt and participate in the economies of the future). Workers also need to acquire the 'soft skills' that employers in the private sector increasingly require, including empathy, problem solving, and effective communication. Lifelong learning is not just for new graduates and new labor market entrants, older workers need to adapt if their jobs become obsolete and the work of the future demands skills they have not acquired.

### **Legislative reform is needed to eliminate structural barriers for women in the world of work**

Governments, the private sector, and civil society can collaboratively champion legislative reforms for women's economic inclusion and workplace equality by enacting and enforcing laws ensuring equal pay, anti-discrimination, and equal opportunities, and implementing gender quotas in leadership roles, both in corporations and political spheres. Businesses can foster gender-sensitive environments through training, promoting an inclusive culture, and collaborate with banks to design financial products tailored for women, ensuring their entrepreneurial ventures are supported. Civil society can elevate the importance of gender inclusivity, emphasizing the societal and economic benefits of women's full participation, and establishing transparent mechanisms for tracking gender inclusivity, ensuring accountability. It is essential to regularly convene multi-stakeholder forums to address challenges and refine strategies, ensuring women's voices shape policy decisions.

### **Address gender disparities in the labor market by aligning education and economic policy with human-centered solutions focused on diversity, decent work and lifelong learning**

Align economic and education policies with future of work solutions centered on lifelong learning, continuous professional development, skilling and a new emphasis on human skills, towards the realization of an inclusive, multigenerational, just and equitable future labor market of decent work. Implement close monitoring of the impact on women's economic inclusion in the workforce and on youth unemployment, which remain two of the MENA region's most salient and interlinked development challenges. Women leaders and youth advocates need to engage more meaningfully with regulators, to ensure that policies and regulations are up to date with the needs of labor markets and the aspirations and capacity of women graduating from national universities and entering the national workforce.

### **Reform and revive the curriculum to embed core skills and literacies in MENA graduates so they are ready to hit the ground running when they enter the labor market**

Reform curricula in the region from primary through to tertiary and vocational education to embed digital, financial and other key literacies, as well as promote the development of advanced interpersonal (human, or so-called 'soft' skills) to reduce unemployment and promote social cohesion. Improve access to quality education, including and especially in rural and conflict-affected areas. Expand and modernize vocational training programs to equip young people with market-relevant skills by leveraging greater public-private collaboration and making a conscious, cohesive commitment to bridging the industry-academic gap.

### **Address the ongoing challenge of youth unemployment and mitigate 'brain drain' by investing in apprenticeships, internships and entrepreneurship education**

STEM education and entrepreneurship education should be embedded within degree programs to help encourage young people to start up their own sustainability-focused businesses and social enterprises. Provide accessible funding, business plan support, financial advice, and invaluable networking and mentorship opportunities, which are vital to building communities of innovative startups that are youth-led and focused on addressing social, climate and sustainability challenges (social enterprises). Implement apprenticeship programs, paid internships, and entrepreneurship education to encourage young people to acquire the digital, financial and business skills to help them succeed in the tech-driven innovation economy. This can also mitigate 'brain drain' migration of young people to other countries, as well as endemic and deep-rooted lack of employment opportunities and decent jobs in the region. Open up valuable economic opportunities for young people in sectors that are vital to economic survival (such as agriculture), which have traditionally excluded youth.

### **Prioritize decent work and quality of jobs over job creation and quantity of jobs**

Look beyond 'job creation' in the region to focus efforts on creating opportunities for 'decent work', and implement clear and transparent monitoring and performance reporting mechanisms to measure the quality and performance of employment and employer practices in the region. Policy makers and private sector professionals, educators and civil society leaders need to come together more strategically and cohesively to promote narrative change from the quantitative 'job creation' to 'decent work' that empowers individuals and supports people, families and communities. The potential to narrow the poverty crisis and other gendered human rights challenges in the region, including gender-based violence, is a clear societal benefit of doing so.

### **Build on lessons learned during the pandemic to improve social protections and make flexible, family-friendly working the norm rather than the exception**

The pandemic compelled many positive advances in terms of greater social protection and a safety net for workers who have lost their incomes, improved flexibility in the labor market and more family-friendly working models, as well as a renewed emphasis on a more 'human-centered' approach to skills development both within and beyond the formal education system and throughout a learner's life. The COVID-19 pandemic also greatly accelerated the speed of change with respect to the impact of technology on business, on jobs, on workers, and a rapid increase in remote learning, e-commerce, virtual working and communication. It has fast-tracked the inevitable transformation to the future of work, especially the transition to virtual, flexible working and a renewed focus on the mental wellbeing and dignity of workers. Let us build on lessons learned and make the coming decade one where people *and* planet are valued and protected.



# 6. Financing sustainability research, innovation and entrepreneurship for women and youth: Navigating access to finance and impact investing

## 6.1 Introduction

Entrepreneurship in the MENA region is, per OECD research, a major untapped source of growth in a region where the number of existing enterprises and the rate of business creation are well below those in other developing regions. Female entrepreneurship still represents a major challenge in a region with one of the lowest rates of entrepreneurial activity overall (with less than 9% of the adult population engaged in early-stage entrepreneurial activity, compared with 12.3% in Asia and 17.6% in Latin America). This is slowly but surely changing. In MENA, women-owned SMEs are on the rise. In the GCC, Jordan, Tunisia, and Egypt especially, women have been launching their own businesses in record numbers for several years now.

Supporting women's economic advancement could add US\$12 trillion to global GDP by 2025. Simply increasing women's labor force participation and eliminating discriminatory barriers could raise productivity by as much as 25% in some economies. The MENA region alone would benefit from a 50% boost in economic output if women participated in the workforce to the same extent as men. The figure would be potentially higher in the GCC because of significant investments in infrastructure and education. Now is the optimum time to invest in an enabling environment for economic growth that rightfully empowers women and supports their success and prosperity. To invest in an environment that engages women as partners in private sector growth, as business leaders, entrepreneurs, producers, innovators and investors. An environment that recognizes and rewards all Arab citizens with the education, experience, ideas, ambition and aptitude to make a real difference to the economic future of the Arab world.

Despite growing global recognition of the importance of promoting gender equality and empowering the younger generation, women and youth still face significant barriers in accessing critical funding and venture capital finance for sustainability-focused research, innovation, and entrepreneurship. Women entrepreneurs often face stereotypes, biases, and expectations that limit their opportunities and access to funding. For example, women may be perceived as risk-averse or lacking in technical expertise, while young entrepreneurs might be considered inexperienced or unreliable. Women entrepreneurs may also have limited access to professional networks, industry connections, and information on available funding opportunities, which can hinder their ability to secure funding.

In the MENA region and internationally, there is a growing movement of investors who strategically support businesses and social enterprises founded by women in order to create positive social and environmental outcomes. More attention is being paid to the unique challenges faced by women entrepreneurs in accessing finance and other support mechanisms for sustainability-focused ventures. Funding models are undergoing innovation of their own, with new and creative ways to finance the SDGs. These include green bonds, crowdfunding, and blended finance to help fund climate action and development goals and taking a 'gender lens' Investing approach (defined as 'investing that takes into consideration gender-based factors across the investment process to advance gender equality and better inform investment decisions' per the Global Impact Investing Network). Impact investing is increasingly being used to unlock private capital to address deep-rooted societal and sustainability challenges. In addition, governments, financial institutions and non-profit organizations are working in public-private partnership to develop a more inclusive and equitable financing ecosystem for women and youth in the sustainability sector.

Session 5, *Financing women-and youth led sustainability research, innovation and entrepreneurship: Navigating access to finance and impact investing*, was chaired by **Barbara Rambousek**, Director, Gender & Economic Inclusion, European Bank for Reconstruction and Development, UK, and examined issues around access to finance and impact investing for women innovators and young leaders working in the sustainability spheres, with **Joumana Aso**, Founder & Managing Director, Clima Capital Partners, USA; **Iveta Tancheva-Nikolova**, Director -

Investment Management, SANAD Fund for MSME, Germany; and **Marisa Drew**, Chief Sustainability Officer at Standard Chartered, speaking on the panel.

The session explored how innovative finance models connect to climate action, the SDGs and the gender and youth dimensions. It examined how access to finance could transform the entrepreneurial landscape in the MENA as well as contribute to a cleaner planet and more equal opportunities for all. The session also explored the current landscape of impact investing and highlighted innovative access to finance initiatives, programs and mechanisms. It examined forward-thinking and inclusive strategies for women and youth, innovating and disrupting the sustainability space through entrepreneurship, to promote a more inclusive and equitable financing ecosystem for sustainability initiatives. The session also covered access to finance for women (barriers and the business case); the challenge of climate finance; the need to integrate gender into climate finance; the wider policy environment and the need to build capacity and shape awareness for 'gender agnostic' climate finance in the region; and the potential of public-private partnerships to promote faster action and change.

## 6.2 Challenges

The call for a green economy tops the global policy agenda as a key strategy for sustainable development, commanding the attention of governments and the international business and global development communities. At the "intersection between environment and economy", to quote the Secretary General of the UN, a green economy "not only improves human well-being and lessens inequality but also reduces environmental risks and ecological scarcities" – an economy, therefore, that is "low-carbon, resource efficient and socially inclusive"<sup>27</sup>.

The transition to green growth is a much-needed response to the many developmental and environmental crises that the world is experiencing, including climate change, economic instability, deep-rooted social and economic inequalities, and the refugee crisis. Climate change creates a lot of challenges, but we also know the transition into the green economy presents a wealth of opportunities for women. There are new markets, emerging green skills, green jobs, and new entrepreneurship opportunities on the horizon for women. However, these require finance to come to fruition and access to finance for women is historically challenging in the region, as it is in nearly every region of the world. Hence, one of the most critical barriers to women's entrepreneurship in the MENA region is related to financial inclusion, and the difficulty in accessing startup capital and financing.

Financial inclusion facilitates job creation, stimulates investment, supports economic growth, alleviates poverty, and empowers female agency. However, according to the OECD, in most countries women have significantly lower financial literacy rates than men and in nearly all Arab States there is a significant gap in financial literacy between men and women. There is also a lack of advisory support and business skills training in the region, which is down to the relative infancy of entrepreneurship education and incubation / innovation culture (a situation which is changing fast due to the surge of excellent startup support initiatives and incubation programs emerging all over the region).

Financial inclusion and literacy for women is not just a MENA problem but a universal challenge to women's entrepreneurship and broader economic participation. More than 70% of female-led, small and medium enterprises (SMEs) across every region are either unserved or underserved financially, according to the IFC<sup>28</sup>. This limits finance options and financial services for men and female entrepreneurs alike, and restricts access to credit and formal external sources of funding which has been identified as a significant, if not the number one, challenge for women entrepreneurs.

Beyond financial literacy, women entrepreneurs often face additional gender-specific constraints because they lack sufficient collateral security to meet lending requirements and secure start-up capital, and they may be relatively inexperienced in approaching potential lenders with credible business plans. In the MENA region, women's access to finance is further complicated by the fact that they have fewer opportunities in the region for paid employment in the labor market and have less in the way of savings. Women also inherit less than male family members, so generally they will not be able to put up property as collateral for credit. Financial institutions in all regions are also neglecting what the OECD has called the "missing middle" – women

<sup>27</sup> José Antonio Ocampo, *The Transition to a Green Economy: Benefits, Challenges and Risks from a Sustainable Development Perspective*, UNEP, Accessed at <https://www.unep.org/resources/report/transition-green-economy-benefits-challenges-and-risks-sustainable-development>

<sup>28</sup> *Strengthening Access to Finance for Women-led SMEs in Developing Countries*, Global Partnership for Financial Inclusion and International Finance Corporation (October 2011)



entrepreneurs who have passed the start-up stage and are in the scale-up phase. Women-led businesses that have moved beyond the micro-financing stage are typically not the targeted clientele of commercial banks or credit providers, and there is a real lack of loan programmes or financial packages available to these women to take their businesses to the next stage of growth.

What does it take to ensure not just a sustainable green future, but a future that also shares the opportunities, entrepreneurship opportunities and access to finance for women and young people? We know that climate change creates a lot of challenges, but we also know that the transition into the green economy presents a wealth of opportunities for women. There are new markets, emerging green skills, green jobs, and new entrepreneurship opportunities on the horizon, but these require finance to come to fruition.

The Paris Agreement in which every country committed to reducing certain amount of GHG emissions, sets out the targets for mitigation, and some action priority sectors for adaptation. However, climate adaptation has received much less attention in global climate discourse and research than mitigation – for every \$3 allocated to mitigation, there is only \$1 allocated for adaptation. In certain countries in Africa, the ratio is \$14 for mitigation and \$1 for adaptation. Adaptation needs are seriously undervalued. This may be because it is very difficult to assess the cost of resilience and adaptation.

On the other hand (and here is where one can draw a parallel with gender issues), it is very difficult to formulate projects and funding proposals for adaptation projects because they need long term cash flow. They require patient capital as they do not show profitability immediately, which makes it difficult to find investors and financiers willing to invest. The problem with financial institutions in developing countries is that maturities are very small (5-6 years) and adaptation projects need 10-15 years. The speakers agreed that climate adaptation has been treated as a 'second class citizen', with clear parallels with the problem of accessing finance for women because women-led projects tend to be subsets of other priorities, primarily because of lack of pipeline of projects for gender.

The other dimension is scale. Women-led projects tend to be very small scale. This is where blended finance comes in. Blended finance is a structuring technique for public and private sector funding where the public sector takes a subordinated role, providing concessional funding, longer maturity, preferential interest rates, and all other types of incentives to attract the private sector to invest and banks to provide that guarantee. But how do we do that, if we don't have a sizable pipeline of projects?

Barriers to accessing venture capital for women must be more stringently and honestly examined. There is still deeply entrenched bias towards women-led startups. Even in the investment process, the questions women are asked are very different to the questions a male business owner will be asked. For example, women are asked how much time they can have away from the family to dedicate themselves to the business, rather than 'what is the potential return on investment of the business?'. Much of this bias would arguably be eliminated by changing the narrative and addressing persistent misconceptions of how a women-led business might be different from a male-led business and what bearing the gender of an owner has on profitability and on sustainability. That will need to happen over time, and it requires a lot of work on a sector basis, with all stakeholders taking an active part in calling out bias and changing the system.

There remains a perception in the investment community that women-owned businesses will focus only on business activities that benefit women. But climate is relevant to everybody. One of the core streams of COP28 is fostering innovation, whether it's incubation or getting capital to climate innovators, and this is largely gender-agnostic from a conceptual point of view, because we are all beneficiaries of it. This circles back, the speakers agreed, to reframing the narrative.

## 6.3 Opportunities

As the world looks towards a 'green recovery' after the COVID-19 pandemic, and in line with huge global demand for more eco-friendly jobs to address salient development challenges around job creation and sustainability, there are significant investments in the pipeline that will create much-needed eco-friendly jobs in the green economy, especially in the areas of renewable energy and digital agriculture.

Research shows that over 65 million jobs could be available globally in low-carbon sectors by 2030. For the MENA region, where women are still vastly under-represented in the workforce and where youth unemployment rates have been the highest in the world for over 25 years, 'greening' the economy would increase labor demand, build vital foundations for long-term economic growth and prosperity in MENA, and address some of the region's most salient development challenges, including food security, water scarcity, and poverty.

The UAE is already well on track to becoming one of the world's leading green economies, as well as a center for the export and re-export of green products and technologies. Morocco is creating a whole new generation of green entrepreneurs, getting young people in rural areas into agri-smart entrepreneurship and green social enterprises, with a target of creating 350,000 new farmers by 2030. In Tunisia, more than 200 micro "green" projects have given local communities a boost, benefiting some 17,000 people, and helping to combat desertification by diversifying livelihoods through conservation efforts and land and water management. And in July 2020, Jordan launched a multi-million ambitious green growth plan as part of a broader national drive towards a green economy and sustainable development.

For the MENA region, where nearly 5 million jobs are at risk because of COVID-19 and where 300 million new jobs need to be created over the next 30 years, the transition to a green economy carries exciting potential to create millions of much-needed opportunities for Arab women and young people. Since 2011, according to the Strategy & / PwC Women in Work 2021 Report, "OECD countries have consistently made gains towards women's economic empowerment - but considerable progress is still needed to achieve gender parity in the workplace", especially as COVID-19 threatens to reverse the OECD's progress on women's empowerment and economic inclusion<sup>29</sup>. As the World Bank notes, "the response to the current pandemic will at the same time also be the response to the climate crisis".<sup>30</sup>

Although the green economy is still a relatively small-scale job creator at present, there is enormous potential for growth if skills and gender gaps in STEM disciplines are addressed now, linking industry, education, technology and innovation to ensure STEM graduates are fully equipped with the skills low-carbon sectors need now and in the future. In a region where, according to UNESCO, 34-57% of STEM graduates in Arab countries are women (a figure much higher than that seen in universities across the US or Europe), opportunities for female professionals in a green MENA economy are currently unrealized, and the potential for women entrepreneurs unlimited.

Empowering women to contribute to the green economy represents a major opportunity to boost competitiveness, private sector growth and job creation which would power the region into a new era of prosperity and potential. There is a new energy that we are seeing towards empowering women and young people, with economic inclusion, education and entrepreneurship, the key priorities in many states' strategies and 'Visions' towards meeting the SDGs by 2030.

In terms of finance for climate-related green projects and initiatives, the speakers agreed that the environment for green entrepreneurs has evolved significantly in a relatively short period of time. They recalled talking to financial institutions 5-10 years ago about climate finance and adaptation measures but the conversations would hit a wall because climate finance was too untested and too new at the time. Banks considered climate finance irrelevant, and could not see the business rationale, making it difficult to convince them that climate projects made investment sense. This has completely changed because most institutions now see the impact of climate change in their portfolios, with many of them invested in industries and sectors that are heavily impacted by climate change. Hence, investors are now looking for new ways to finance innovative green projects and to engage in business advisory services, to help innovators measure and assess risks and to help their existing portfolio of customers adopt practices which adapt to climate change, making those investments more resilient. This is a significant change playing out in the markets now.

29 Strategy & / PwC, Women in Work 2021: The impact of COVID-19 on women in work, March 2021, p 2-3

30 Martin Heger & Lia Sieghart, Going green after COVID-19 will help MENA economies recover better, The World Bank Blog (July 2020), Accessed at <https://blogs.worldbank.org/arabvoices/going-green-after-COVID-19-will-help-mena-economies-recover-better>

Blended finance<sup>31</sup>, the speakers agreed, is an excellent vehicle for achieving impact at scale, achieving balanced impact/risk/return for both private and public investors. As Iveta Tancheva-Nikolova shared, Finance in Motion is an impact investment manager with many years of experience in structuring and scaling such blended finance impact funds, of which SANAD is one of the successful examples focused on the MENA region, especially when the financial sector of each country is used as a channel for the funding. If climate projects were to be implemented directly in the SME space, they would largely be inefficient and impossible to scale, but working through the financial sector – with local banks and local financing companies – makes it possible to achieve an outreach that can be leveraged for impact and measured against metrics such as sustainability, adaptation, and diversity and inclusion. Bringing it all together, as Barbara Rambousek of the EBRD stated, is how we can ‘really show that women are catalysts of change’. Women entrepreneurs are more likely to invest in green technologies, so if impact is the goal, investing in women is not just a good thing to do for inclusion targets but also because you can achieve other objectives and make a contribution towards tackling the climate crisis.

Looking at the composition of Chief Sustainability Officers, women are relatively well represented in this particular role, an indicator that decision makers in leading corporations and financial institutions are focused on the dual mission of profit-making *and* achieving diversity in order to contribute positive progress in society and in the workforce, satisfying both the ‘E’ and the ‘S’ in ESG. When there is female representation in such a role, it is possible to reach a tipping point on diversity because the organization’s leadership becomes more attuned to the intersection between gender and sustainability. However, the reality is that women are often not in the position to make decisions about the allocation of capital. This needs to change.

One promising area of change is the ability of just transition partnerships to peg capital flow to gender inclusion at systemic country level. This involves taking a holistic look at a country’s decarbonization plan and requiring that the private sector, as stewards of funding from the World Bank and other multilateral development banks, or MDBs, ensure women have representation in the partnership agenda. If women are not on the agenda and part of the core leadership team, then the capital does not flow. Jobs of the future, the speakers agreed, must include women *and* men. Women have proven that they are resilient, adaptable, can do more with less, and are also disproportionately affected by climate effects. On that basis, the argument for giving capital to someone who is themselves affected by climate is strengthened, because women are more likely to do something about it. This argument is a simple reframing of the dominant narrative, and it can help capital to flow in the direction of the right businesses – *green* businesses.

Focusing on access to finance for women entrepreneurs in the green economy, the speakers agreed that the key barriers mirror those for women entrepreneurs operating in any other sector. Strategies that should be considered to support green entrepreneurship in the region include extending finance by sector, and working closely with the financial intermediaries in the region including banks, Monetary Financial Institutions (MFIs), micro-finance institutions, leasing companies, and philanthropic organizations willing to fund micro and small businesses in the region.

Although there has been some progress, and we should all be encouraged by the many examples of successful initiatives led by female leaders and entrepreneurs, what we are also seeing is an entrenched financing gap when it comes to women in business – green or otherwise. One speaker pointed out that women own only 12% of the SMEs in the region, and more than half of those businesses have no access to formal financing but are financed through savings, friends or family. This means they have no formal engagement with the financial system and often, have limited financial literacy. This holds women back from scaling their businesses, creating wealth for themselves and jobs and prosperity for their employees, who also largely tend to be women.

There are still significant barriers, the speakers agreed, to directly funding a female-owned business. There is a biased assumption that if you lend to women, there is a higher risk to your credit, or if you lend to female fund managers, you have reduced your investable universe because they’re only focused on a narrow segment. When talking about venture investments, you want a broad church of investments because venture is a high-risk game. By definition, many of those investments will fail, a few will be ‘middling’, and a few others may succeed. So investors want a broad portfolio and to then start narrowing the universe down so there is positive impact on returns.

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31 As defined by the OECD: “Blended finance is the strategic use of development finance for the mobilization of additional finance towards sustainable development in developing countries. It attracts commercial capital towards projects that contribute to sustainable development, while providing financial returns to investors. This innovative approach helps enlarge the total amount of resources available to developing countries, complementing their own investments and ODA inflows to fill their SDG financing gap, and support the implementation of the Paris Agreement.” See <https://www.oecd.org/dac/financing-sustainable-development/blended-finance-principles/>

The great success story of micro-finance is in its philosophy. In previous times, a bank would not lend a tiny sum of money to a person with no credit history, because the theory was, if you have no credit history, that means you are risky credit. Micro-finance turned that on its head. It is a well-proven pathway to empowerment, as loans made to women typically have lower default rates. They also benefit from the ripple effect, the speakers agreed. This is something that does not get enough airtime – when you lend to women, there are numerous positive benefits and impacts for other women in their families, their communities and their whole economies. Lending to women is a six times multiplier.

We need to reframe the narrative to focus on adaptation, to emphasize the urgent need for finance and capital flow to adapt to the realities of climate change over mitigation, which is solely focused on reducing carbon emissions to stave off further climate crises. If we invest in adaptation, there is a 12 times multiplier in disasters averted or GDP losses avoided. By addressing this problem now and creating resiliency, this intersection of gender and climate becomes a mega-multiplier and a story that can be framed in the language of investors in terms of return on investment (ROI). In the MENA region, if we were to invest more money in women SMEs, or women fund managers, it would represent a \$2.7 trillion GDP boost. The speakers agreed it is important to get this into the heads of the investment community.

Although micro-finance is an excellent gateway for women's entrepreneurship, the loans are very small amounts spread out over many people, and at some stage it becomes important to look ahead and help women to scale their businesses to make a greater impact. Without scalability, the MENA economy will struggle to fully unlock the value created by female-led SMEs. In response, Standard Chartered is dedicating loan capital to women-owned medium enterprises through a program called SC WIN (Women's International Network), which leverages the power of the bank's unique global footprint to help women-led businesses grow, at home and abroad. Standard Chartered is marrying that with its community-focused work, which is called Future Makers, working with women on their capacity and their skills. Beyond being a positive benefit for women and for society, this is a commercial operation where the multiplier effect is real. As Marisa Drew commented, 'If we bank these women, entrepreneurs who are running these (hopefully soon to be) big businesses, what happens is that they grow their wealth ... and then we move them out of the community side of the banking industry and into mainstream finance'. Drew explained further that once capital starts to flow into the world of the entrepreneur, the system gets going and 'we can start to create something really big ... and that to me is quite exciting'.

## 6.4 Solutions & Recommendations

### **Convene all stakeholders to ease the transition towards a more gender equal and green future**

In the pursuit of a sustainable future, intertwining the green economy with gender finance becomes imperative. By channelling resources into SMEs via micro-finance, we can catalyze their evolution from micro-enterprises to more substantial, medium-sized entities, especially those helmed by women. A tailored approach, as opposed to generic solutions, resonates more effectively with unique regional challenges. International stakeholders should emphasize the importance of an inclusive dialogue, converging in target countries, partnering with regulators, central banks, and dedicating financial resources to women's inclusion in the green economy. Engaging with these actors ensures a holistic approach, aligning global aspirations with local realities, steering clear from overly broad mandates influenced by external factors. The goal? A collaborative ecosystem, reinforcing inclusivity and cultivating environments conducive for women-led enterprises.

### **Raise awareness and profiles of successful female green entrepreneurs and the investors who have backed them**

'Shout from the rooftops' about women's green startup success stories as this helps to raise the profile and visibility of successful female entrepreneurs and leaders in the green economy who have delivered inspirational innovations and made a strong difference in their country. Find ways to bring entrepreneurs and female investors who are investing in women-led businesses more closely together. Many women entrepreneurs do not have a support network, and networking with other women who are in the same position and share the same challenges is highly valuable. Making investors more visible also reinforces the message that there is finance out there; women just have to be knowledgeable and strategic to secure it.

### **Finance climate solutions that are community-focused but scalable**

Take stock of promising solutions and work with all stakeholders to replicate those solutions at scale within a country, taking into account the unique cultural and economic context of the country itself – often, big solutions don't work and are too far removed from the region. Base solutions-building around climate finance on direct engagement with the women who are themselves suffering the effects of climate change, as they are the women coming up with the most innovative, creative platforms and tools and technologies. This is where lasting and sustainable differences can be made. Climate finance requires regional action but, first and foremost, it requires community action.

### **Legislative reform is required to repeal discriminatory laws that prevent women from inheriting or owning assets to improve access to finance**

Stakeholders should work closely with policymakers to correct discriminatory laws that prevent women from owning or inheriting assets. If access to, or owning assets, is the issue, laws must change to ensure that women can own and inherit assets equally, which could be put up as collateral, foster further innovation and in turn be reinvested into the economy. Access to finance depends largely on financial institutions that are typically asset or cash flow-based lenders, and if women are being prevented in some parts of the region from owning assets or inheriting them, that makes it infinitely more difficult for that money to flow.

### **Measure climate finance / gender metrics**

Place social and diversity KPIs in MENA green bond framework and sustainable capital market structures, so that every bond raised has social KPIs attached to it. These KPIs could be closely aligned with the national gender equality targets or targets related to women on boards, and could foster a more robust, gender friendly ecosystem. Structure cohesive blended finance vehicles to fund women businesses as standalone investments and *not* as a subset of other funds. Incentivize women-led businesses by providing technical interest, better interest rates and other value add-ons.

### **Improve board leadership to diversify decision-making on finance**

Ensure that women sitting on boards in financial institutions and regulatory authorities have critical mass in terms of representation and an equal voice, and are not present as 'token' female board members. Ensure that female appointments to boards are merit-based so that women accelerated to board leadership are fully competent and do not present a bottleneck for more competent female leaders.

### **More female-led acceleration and incubation programs could achieve critical mass in climate-focused women's entrepreneurship**

Acceleration and Incubation programs are becoming very popular in the region, but they are not necessarily owned by women or focused on women entrepreneurs. Such programs are extremely important because they give women the confidence to make that first leap into entrepreneurship and further develop their business before beginning a more serious search for investment. The power of representation, combined with a targeted, supportive approach, can make female-led acceleration and incubation programs pivotal in achieving critical mass in climate-focused women's entrepreneurship. As more women join and succeed in these programs, a ripple effect is likely, inspiring even more women to venture into the realm of climate entrepreneurship.



# 7. The Future We Want: Empowering the Next Generation of Young Female Innovators and Leaders

**“It has been a pleasure having our young Arab and international women leaders with us to inspire us all, because you are the voice of the future. You bring us hope, pride and joy and we feel better about the world listening to you.”** - Haifa Al Kaylani, President & Founder, Arab International Women’s Forum

## 7.1 Introduction

At ‘On the Road to COP28’, AIWF and WiSER were proud to spotlight the inspirational AIWF Young Arab Women Leaders alumni and WiSER Pioneers 2023 in a special session finale, *The Future We Want*.

The Young Arab Women Leaders conference initiative was launched by AIWF in London in 2011 in partnership with PwC Middle East as a platform for leading Arab and international women advocating sustainable solutions to critical global challenges through diversity and inclusion, gender empowerment, education, leadership and innovation. Each program brings established and emerging women leaders together for an intensive day of deeply engaging and open discussions, through which women leaders formed new business and research links, mentored and encouraged each other’s projects and progress, and benefited from highly targeted and valuable networking and experience exchange.

Launched in 2018, the WiSER Pioneers Program is a year-long program offering young women aged 25 to 35 access to bespoke educational workshops and global networking opportunities with industry experts, creating leaders with an entrepreneurial mindset who are prepared to shape a more sustainable world. The WiSER Pioneers Program gives young women a platform to voice their opinions, while equipping them with valuable leadership, networking and communication skills to enrich their professional development. Formally beginning each year at Abu Dhabi Sustainability Week – one of the world’s largest sustainability gatherings – the program explores topics on gender equality and the crucial role women play in achieving the Sustainable Development Goals, specifically SDG 5.

Chaired by **Emma Cox**, Global Climate Leader at PwC in the UK, this final session of the day welcomed the following inspirational young leaders as speakers: **Heba Al Emara**, Managing Director Middle East, Vistra, UK/ UAE; **Christelle Comair**, Policy Advisor on youth and women’s empowerment, University of Paris-Saclay; 2021-2022 Research Fellow at the Women And Public Policy Program (WAPPP), Harvard Kennedy School; **Dr Mona Hamade**, Partnerships Development Manager at Meta, UK; **Shalom Iboh**, Field Engineering Operator Notore Plc & WiSER Pioneer 2023, Nigeria; **Hajer Ben Charrada**, Manager Corporate Strategy TAQA & WiSER Pioneer 2023, UAE; and **Monica Gao**, Solicitor (England & Wales) in Sustainability & WiSER Pioneer 2023, UAE.

In this session, these inspirational young women from the Young Arab Women Leaders and WiSER Pioneers programs reflected on their empowerment journeys and shared their key learnings and best advice for other young women leaders in sustainability, climate action and STEM, focused on the following questions: How did the empowerment journey start for you, where are you in that journey, and what are your key learnings that you would pass on to aspiring young women leaders? Looking ahead, how do we achieve the future we want? What are the three key things that need to happen to produce an empowering, enabling, equitable environment for the next generation of young women innovators and future leaders?

## 7.2 Reflections

**“I hope that in hearing these young women’s stories, we’ll hear some of how they’re bringing their own skills to bear in the challenges that we face in the world.”** – Emma Cox, Global Climate Leader, PwC UK

In the MENA region, a significant market gap persists in providing young women with skills, employability training, and connectivity – something that AIWF and WiSER have both addressed through their respective Young Arab Women Leaders and WiSER Pioneer programs. Having attended the AIWF Young Arab Women Leaders conference in London, one of the speakers shared her journey of transforming her PhD findings into tangible programs to bridge the gap and establish a UK-based NGO to support entrepreneurs not only from the GCC, but also across the UK and Europe. Her mission? To grasp the financial and skill-based necessities of these entrepreneurs, fortifying them both culturally and emotionally.

Getting her initiative off the ground wasn’t without challenges, and one particular hurdle she identified resonated with many on the panel: imposter syndrome. This psychological barricade often hinders young women, leaving them feeling a constant need to validate their credibility. Whether it’s stepping into a meeting room, contributing to a panel discussion, or unveiling new research, the shadow of doubt frequently looms large. At any time when they have been faced with rejection, the speakers agreed they have learned to pivot these experiences into opportunities for creativity. Embracing failure, a concept not often discussed in many cultural contexts, becomes a stepping stone to success. This approach requires introspection, routinely checking one’s perceptions and beliefs with trusted advisors and peers from diverse backgrounds.

This experience was echoed by another speaker who, during a UK law firm training contract interview soon after graduation, was advised by a senior partner to fully grasp the corporate realm, hone her networking skills, and leverage that network to ‘really understand how the corporate world works’. A sentiment that many echoed was that young women ought to be the architects of their own journeys. Essential to this is the creation of a supportive community where women can unite, share, and learn from shared experiences and mutual challenges.

**“I am basically a collection of all of my experiences, and this has allowed me to bring in various different factors to what I can give to jobs. And I think this is something that needs to be more realized and accepted across the workforce.”** Dr Mona Hamade, Partnerships Development Manager, Meta

The speakers agreed that the landscape of career trajectories for young people is shifting. Gone are the days where one’s profession was a straight path, neatly fitting into societal boxes. From academia to tech, from policy-making to entrepreneurship, the journey can zigzag. The conventional nine-to-five is steadily becoming obsolete in many sectors. The new era embraces diverse roles, including self-employment and the “side hustle”, allowing young leaders to diversify their portfolios, redefine their identities, and pursue diverse passions. Particularly for serial female entrepreneurs, the challenge is no longer about which domain they operate in, but rather how many different domains they can juggle.

Central to the discussion was the unparalleled power of community. The speakers recalled their personal experiences at AIWF gatherings and WiSER events, and reflected on authentic stories they’d heard – stories of perseverance, challenges of asserting oneself in corporate settings, and the art of articulating novel ideas. They agreed on the importance of community and the invaluable lessons derived from mutual experiences which epitomize the strength drawn from unity, from learning, and most importantly, from supporting one another. The speakers agreed that sisterhood provides a safe space for women to discuss challenges faced in both their private life and career. Historically, women have been perceived as competitors rather than allies, but as we move forward, the narrative is changing. The emphasis is on women supporting each other rather than competing. This sense of community, of nurturing and investing in relationships, becomes a cornerstone for progress. Many women today consider their female friends to be their most valuable assets, offering support, understanding, and camaraderie.

In the global context, initiatives like the COP conferences are recognizing the importance of women’s voices in critical areas like climate change and sustainability. During the session, it was proposed that AIWF and WiSER

should convene young women leaders who attended COP26, COP27, and COP28 in 2024 to carry forward the COP spirit and put dialogues into action. The inclusion of young women leaders in global climate dialogue and solutions-building underscores the importance of both representation and influence, as there's a distinct difference between merely being present and genuinely influencing negotiations. At COP28, women aren't just stakeholders; they're at the forefront of game-changing sustainability projects and they are an influential voice in the formation of policy and solutions-oriented innovations.

**"I wanted to be a global voice, and that's exactly what was given to me when I joined the WiSER programme with international leaders, people in industry, people in academia and people in policy. The WiSER programme brought me out there, and gave me the confidence to reach out to women in other communities, to learn from them and to share our experiences of projects and innovations."** Shalom Iboh, Field Engineering Operator, Notore Plc & WiSER Pioneer 2023, Nigeria

To truly champion women's economic inclusion and their progression in the MENA region and beyond, it's vital to recognize the challenges and act on them. From providing representation in technology and policy spaces, supporting grassroots initiatives, fostering sisterhood and camaraderie, embracing failures, ensuring global platforms amplify women's voices, to providing mentorship and advocacy – the path forward is multifaceted but clear. And as we champion these causes, the onus is also on us to uplift others, hold those accountable who falter, and foster a spirit of partnership and advocacy.

Lastly, a unanimous consensus emerged around climate change — not as a looming threat but as a wellspring of inspiration. The climate arena is teeming with remarkable women, ushering in innovative solutions with their expertise, humanity, and distinctive personas, and the MENA region stands at the cusp of a revolution. The call is clear: more scientists, engineers, entrepreneurs, and data technologists are needed in the MENA region, more young women leaders who can harness the might of data and AI to combat global challenges on a grand scale.

## 7.3 Solutions & Recommendations

### **Acknowledge and address imposter syndrome; embrace adversity and reframe failures as lessons**

Frequently engage with other women and other young people, sharing experiences and seeking out mentorship opportunities. Leverage every opportunity to witness women leaders in action, mentor other young women, and mentor an established female leader ('reverse mentoring'). Practice authenticity, humility, and empathy in your dealings with your peers. Adopt anxiety management techniques to retrain the voice in your head. You deserve that seat at the table. You have a voice which the world needs to hear. Use it, always, for the good of people *and* the planet. Encourage the mindset within your teams and especially within yourself that adversity often fosters creativity. Advocate for viewing failures as stepping stones to success. Encourage open dialogues about challenges and practical solutions.

### **Seek out community and support civil society**

Actively engage with platforms like the AIWF Young Arab Women Leaders or the WiSER program, or any of the many programs available and flourishing throughout the MENA region and internationally, that aim to give women a global voice and the opportunity to connect with international leaders in academia, industry, and policy. Encourage other young women to join you, to reach out, learn from, and share experiences with women and young people from different communities and backgrounds. Connectivity and community are essential to your wellbeing and your professional development. Offer support to, and partner with, civil society organizations focusing on women's issues and empowerment. Support and encourage the establishment of women-led organizations aimed at community service and championing women's empowerment in one's specific sector. Highlight the success stories of women-led initiatives to inspire others.

### **Steer organizational and institutional change in your working world in whatever way you can**

Cultivate a culture of sisterhood, offering a safe space for women to share and reflect on their challenges. Challenge the misconception that women are inherently competitive with each other. Emphasize the importance of vulnerability, mutual support, and investing in authentic female friendships and mentorships. Recognize the importance of partnership, advocacy, and finance in propelling women forward in their journeys. Amplify women's achievements, your own and those of your peers. Acknowledge the importance of cultural literacy and



respect diverse voices in your working life and in your decision-making. Support women entrepreneurs with your consumer decisions and ensure equal representation of women when building teams, planning projects, launching new initiatives or hosting a work-related event. Advocate for increased representation of MENA women in your working environment, at your company, in your startup, and within your leadership development programs. Actively recognize champions for gender equality in your teams and organizations. Encourage senior women and supportive men to act as advocates, championing the advancement of women in their careers. Instill a culture of elevating others as one progresses in their career. Prioritize accountability and integrity, your own and others', calling out unsupportive behaviors and fostering an environment of mutual respect. Speak up when you see inequality, even if your voice shakes.



# 8. Contributing Speakers

*In order of session*

## OPENING SESSION

**Haifa Fahoum Al Kaylani**, President & Founder, Arab International Women's Forum, UK; Commissioner, ILO Global Commission on the Future of Work; Fellow, Harvard Advanced Leadership Initiative 2017

**Dr Lamy Fawwaz**, Executive Director of Brand & Strategic Initiatives, Masdar; Program Director of WiSER

**The Right Honourable Lord Swire KCMG PC**, Deputy Chairman of the Commonwealth Enterprise and Investment Council; Member of the House of Lords; Former Minister of State at the Foreign, Commonwealth and Development Office (FCDO); Former Chairman of the Conservative Middle East Council, UK

**Dame Judith Mayhew Jonas DBE**, Chair, Commonwealth War Graves Foundation, UK

**Hayaatun Sillem CBE**, CEO, Royal Academy of Engineering, UK

## SESSION I

*Session Chair* **Haifa Al Kaylani**, President & Founder, Arab International Women's Forum, UK

**Julian Lampietti**, Manager for Global Engagement in the Agriculture and Food Global Practice, The World Bank, USA

**Dr Majd Alnaber**, Director of Science for Society Centre, Royal Scientific Society, Jordan

**Dr Dalal Al Ghawas**, Founder and Agrifood Consultant at SWAPAC, Singapore

**Sarah Roberts**, CEO, Practical Action, UK

## SESSION II

*Session Chair* **Dr Loubna Bouarfa**, Machine learning scientist and founder CEO of OKRA.AI; Advisory Board Member, Oxford Internet Institute, UK

**Fatima Hadj**, Chief Climate Investment Strategist, HSBC Asset Management, UK

**Margarete McGrath**, Global Advisory and Strategy Partner Lead, Dell Technologies, UK

**Jamila Saidi**, Global Head of Digital Commerce | Head of Retail & Luxury (Trade & Investment), Department for Business & Trade, UK

**Elena Sinel**, Founder, Teens in AI, UK

## SESSION III

*Session Chair* **Olulana Nwosu**, Director of Policy & Markets, World Energy Council, UK

**Iman Ustadi**, Head of Negotiations - UAE Special Envoy for Climate Change & WiSER Pioneer 2023, UAE

**Phoebe Stone**, Partner - Head of Sustainable Investing, LGT Wealth Management, UK

**Eleanor Webster**, Head of Secretariat, Mission Innovation, UK

## SESSION IV

*Session Chair* **Chidi King**, Branch Chief, Gender, Equality, Diversity and Inclusion Branch (GEDI), in the ILO Conditions of Work and Equality Department, ILO

**Professor Yusra Mouzugh**, President, Royal University for Women, Bahrain

**Noora AlMarzooqi**, Board Member, Vice President-Group Strategic Investments at ADNOC

**Karoona Ramah Sleightholme**, Head of Digital & IT Delivery, Vodafone, UK

## SESSION V

*Session Chair* **Barbara Rambousek**, Director, Gender & Economic Inclusion, European Bank for Reconstruction and Development, UK

**Joumana Asso**, Founder & Managing Director, Clima Capital Partners, USA

**Iveta Tancheva-Nikolova**, Director – Investment Management, SANAD Fund for MSME, Germany

**Marisa Drew**, Chief Sustainability Officer, Standard Chartered

## SESSION VI

*Session Chair* **Emma Cox**, Global Climate Leader, PwC, UK

**Heba Al Emara**, Managing Director Middle East, Vistra, UK/UAE

**Christelle Comair**, Policy Advisor on youth and women's empowerment, University of Paris-Saclay; 2021-2022 Research Fellow at the Women and Public Policy Program (WAPPP), Harvard Kennedy School

**Dr Mona Hamade**, Partnerships Development Manager at Meta, UK

**Shalom Iboh**, Field Engineering Operator Notore Plc & WiSER Pioneer 2023, Nigeria

**Hajer Ben Charrada**, Manager Corporate Strategy TAQA & WiSER Pioneer 2023, UAE

**Monica Gao**, Solicitor (England & Wales) in Sustainability & WiSER Pioneer 2023, UAE





AIWF was founded in London in 2001 by Haifa Al Kaylani as a non-profit development organisation with the clear mandate of supporting and enhancing the role of women and young people in the social and economic development of their countries and across the Middle East region. In just over two decades, AIWF has become an internationally renowned advocacy platform for inclusive growth, empowerment and sustainability for women's and youth leadership, empowerment and innovation in the MENA region and internationally.

Headquartered in London, in all our Arab and global programmes we are exceptionally proud to bring partners in all spheres together to build bridges and facilitate business links, cross-border collaboration and experience exchange to build the capacity of Arab women at every level and in every sector whilst addressing critical development challenges for women and young people in the region beyond. AIWF, as an NGO Member of the UN Global Compact, works with governmental and non-governmental partners such as the League of Arab States, the European Commission and European Parliament, UN organisations and agencies, the World Bank, the MENA-OECD Investment Programme, and the UK Foreign and Commonwealth Office, to produce flagship reports, policy recommendations and strategies that inform priorities in the region, business strategies and the development of diversity in the MENA workplace, and cultural shifts in the region to advance and support inclusive and equitable growth for women and youth in the MENA and global economy.

AIWF has collaborated extensively with the City of London Corporation, the Greater Paris Investment Authority, the Dubai International Financial Centre, the EastWest Institute, the Women's Leadership Board at Harvard, the International Bar Association, UN agencies, NGOs, academic, economic and trade institutions. AIWF also partners with International Chambers of Commerce, UK, US and Arab business councils, entrepreneurs, SME networks, incubation centres, multinationals active in the MENA region and global corporations to promote initiatives and build the relationships that will help create private sector jobs that are desperately needed in the region.

AIWF proactively links partners in academia with partners in industry and the private sector to address the well-known skills mismatch in the region and integrate entrepreneurship and sustainability education into mainstream curricula. Since inception, AIWF is proud to have partnered with some of the world's leading universities and regional institutes of learning to support opportunities for Arab women in higher education, with a focus on STEM, business and entrepreneurship, including Zayed University; the American University of Sharjah; INSEAD Abu Dhabi; the American University in Cairo; the American University in Beirut; Birzeit University West Bank Palestine; the School of Oriental and African Studies at London University; Instituto de Empresa Business School Madrid; Imperial College; the Royal Academy of Engineering; the University of Massachusetts Medical School; Princeton University; and Harvard University. All AIWF academic partners promote the empowerment of women as an economic imperative and are advocates for entrepreneurship training and sustainability education to become a core part of the business and management syllabus in the region. AIWF is also very proud to offer internships to talented female students, routinely assists universities with research projects and always invites students to attend conferences and participate in its initiatives.

**For further information on AIWF's global advocacy, Board and membership, please visit [aiwfonline.com](http://aiwfonline.com).**



An initiative by



Women in Sustainability, Environment and Renewable Energy (WiSER) is a global platform that champions women as leaders of sustainable change.

Since 2015, WiSER has focused on the core pillars of education, engagement, and empowerment, and is borne of the UAE leadership's longstanding and continuing commitment to the role of women; a commitment traced directly back to the vision of the late founding father Sheikh Zayed bin Sultan Al Nahyan. Aligned with the UAE's Net Zero goals, WiSER is rooted in a recognition that more needs to be done to support women in the global mission to tackle climate change.

Education forms the basis of WiSER's training and mentorship programs, enabling women to gain leadership skills through the lens of sustainability. Engagement lies at the heart of our field trips and high-level forums, where women can increase their sustainability knowledge and build connections. Empowerment drives our events, where global influential leaders gather to find solutions to gender and sustainability issues.

Established by the UAE's two leading sustainability champions - Masdar and the Zayed Sustainability Prize - WiSER embodies the country's vision for building a more sustainable future for all.

As a global clean energy powerhouse, Masdar is active in over 40 countries advancing renewable energy and green hydrogen technologies. Established in 2006, Masdar's work shows the country's long-term commitment to advancing sustainability. Masdar's projects are expected to displace more than 30 million tonnes of carbon dioxide per year - the equivalent of taking 6.5 million cars off the road.

The Zayed Sustainability Prize is the UAE's pioneering global award in sustainability and a tribute to the legacy of the late founding father of the UAE, Sheikh Zayed bin Sultan Al Nahyan. The Prize aims to drive sustainable development and humanitarian action by recognizing and rewarding organizations and high schools that are delivering innovative sustainable solutions across the categories of Health, Food, Energy, Water, Climate Action and Global High Schools. For over 15 years, through its 106 winners, the Prize has positively impacted the lives of over 378 million people in 151 countries.

AWF x WIER HIGH-LEVEL CONFERENCE

# On the Road to COP28: Women-Led Innovation in Climate Sustainability & STEM

Fostering UK-GCC-MENA Partnerships for Growth

Initiative of the Arab International Women's Forum and Women  
in Sustainability, Environment and Renewable Energy (AWIFWISERE)

2023 | 08:30 - 17:30

Imperial College Academy of Engineering | London, UK





  

AIWF & WISER HIGH-LEVEL CONFERENCE

**On the Road to  
Women-Led  
Sustainability**

Fostering UK-GCC-Middle East  
Partnerships for  
Sustainability, Innovation  
and Economic Growth

Initiative of the Arab  
World Academy of Sciences



## Initiative Partners



WOMEN IN SUSTAINABILITY,  
ENVIRONMENT AND  
RENEWABLE ENERGY



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