



WOMEN IN SUSTAINABILITY,
ENVIRONMENT AND
RENEWABLE ENERGY

Gender Inclusion and Climate Change in MENA:
**Advancing Gender-equality for a
Resilient Future**

An initiative by



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Foreword

Climate change is an undeniable global challenge and stands as the defining issue of our time. It transcends borders, affecting communities, ecosystems, and economies around the world. Yet, within this challenge lies an unprecedented opportunity – **a chance to reshape our societies and pave the way for a sustainable future.**

COP28, which delivered the historic UAE Consensus to chart a new course for the world, was the most inclusive Conference of the Parties to date. It marked a turning point guided by a simple principle: **everyone should have a seat at the table.** This inclusivity applies universally, recognizing the unique challenges and opportunities faced by regions, countries, and people.

Extraordinary women worldwide are leading efforts to advance sustainability. Their inspirational leadership underscores the critical importance of a gender-inclusive approach to the climate crisis. **Women are a driving force, contributing unique perspectives, skills, and talents** that are essential in crafting effective and equitable solutions.

In the Arab world, we are surrounded by many exceptional women whose resilience and dedication inspire us daily. As we navigate the complex intersection of gender and climate change, we must harness the full potential of women in our communities if our pursuit of a sustainable future is to be successful.

The UAE is at the forefront of gender equality and climate action with Masdar's WiSER initiative. Built on the belief that empowering women is key to achieving sustainable development, WiSER is making significant strides in fostering gender equality, especially in the context of climate change.



Dr. Lamya Fawwaz

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

As we build on this positive momentum, our joint efforts through the WiSER initiative will not only shape the future of Arab women but will also contribute to the empowerment of every woman and young girl around the world. Together, we can pave the way for a more sustainable world, where women are active contributors, decision-makers, and beneficiaries.

This white paper delves into the current challenges, opportunities, and recommended actions to empower women in the face of climate change in the MENA region. By highlighting opportunities and potential solutions, we aim to inspire collective action and a shared commitment to building a more sustainable and inclusive future for generations to come.

Introduction

This white paper explores the intersections of gender equality and climate change, shedding light on how these two global factors are intrinsically connected. The complexity of each of these factors, while influential globally, bears unique nuances and implications for the Middle East and North Africa (MENA) region that is imperative to climate action and solution.

Within the region itself, MENA has significant disparities in terms of economic development, social structures, and climate vulnerability, ranging from resource-rich Gulf nations to more resource-constrained countries. Despite these variations, addressing climate change and its impacts on women at a regional level is crucial for fostering collaboration across nation states, sharing best practices, and formulating policies that can be adapted and scaled across diverse context, promoting a united front for effective climate action and gender equality throughout the MENA region—the very pillars that resonate with the objectives set forth by COP28, aligning with the Sustainable Development Goals (SDGs), and echoing the commitments laid out in the Paris Agreement. In exploring the nexus of gender, climate, and regional dynamics, this paper contributes to a holistic understanding crucial for advancing the global agenda towards sustainable and inclusive development.



Structure of the paper

Organized around six core themes, this paper serves three primary objectives:

- Firstly, it delineates key challenges faced by women, offering a comprehensive understanding of the obstacles they confront.
- Secondly, it showcases opportunities and successes that provide a positive trajectory, drawing inspiration from best practices and real-life case studies.
- The culmination of this analysis results in the formulation of recommended actions, stemming from collaborative discussions among high-level stakeholders at the Arab Women Leaders' Summit hosted in collaboration with COP28 UAE Presidency.

These recommendations represent a pivotal step towards addressing identified challenges and capitalizing on opportunities, fostering a more gender-inclusive approach to climate action. Stakeholders, including policymakers, researchers, and advocates, can leverage this analysis for informed decision-making and policy formulation to advance sustainable and gender-inclusive climate solutions in the region.

Methodology

The paper includes results and highlights from comprehensive research conducted in the lead up to COP28, to bridge knowledge and action gaps.

Its advantage lies in its effort to compile and analyze data specific to the intersection of women and climate change, an area lacking structured information.

Primary research was undertaken through the following channels:

- **In-depth analysis:** a rigorous and comprehensive in-depth analysis was undertaken in October 2023 to comprehend the intricate nexus between women and climate change in the MENA region, involving the compilation, scrutiny, and synthesis of existing data, as well as the creation of comparative graphs to enhance clarity and insights.
- **Online survey:** for gaining insights from within the region, a MENA-wide survey was conducted, anchoring the research in local experiences realities and practicalities, providing essential context.
- **Deep dive interviews:** high-level stakeholder interviews have enriched the findings; validating insights and capturing current climate change trends.
- In addition, valuable discussions and events organized by the WiSER initiative at New York Climate Week and at MENA Climate Week have facilitated deeper insights that are also included in this paper.

WiSER would like to thank EY for its support in the development of this white paper.



Setting the Stage: Women and Climate Change in MENA



Climate Change in MENA

The Middle East and North Africa (MENA) region faces an escalating climate crisis, resulting in far-reaching socio-economic and environmental repercussions.

Hot and getting hotter

The MENA region is a climate change hot spot. Some parts of the region are already among the hottest locations globally and are getting hotter, leading to droughts and water scarcity. Projections vary but the scenarios suggest an increase of 2.6_ to 8.5 degrees by 2100. Between 1980 and 2022, temperatures across MENA increased 0.46°C per decade, well above the world average of 0.18°C.¹



Under no policy intervention, MENA region temp to rise by ~ 6°C by 2050; 50% hotter than the rest of the world.¹

Weather patterns are exacerbating water scarcity

Precipitation patterns have also changed significantly, aggravating existing water scarcity in some MENA countries, with droughts in Morocco in 2022 and Tunisia in 2023, while causing intense floods in 2022 in the United Arab Emirates (UAE), Iran, Saudi Arabia, Qatar, Oman and Yemen, impacting the ability of water treatment facilities to ensure clean drinking water.



MENA is home to 6.3% of the world's population, but it contains only 1.4% of the world's fresh water.²

At the same time, desertification is threatening population centers large and small, from across Dubai to Southeastern Morocco. Farmlands are rapidly being contaminated by salts, threatening the local and global food supply. Wildfires are gradually becoming an annual event, burning huge swaths of forests and grasslands, accelerating desertification. Moreover, soil degradation further exacerbates these challenges, intensifying the environmental pressures on agricultural systems and underscoring the urgent need for comprehensive solutions to ensure the sustainability of ecosystems.

Stress from climate disasters (food and water scarcity), displacements and other impacts are increasing ethnic frustrations and tensions, which has also increased violence and tragedies for the most vulnerable parts of the population.³

Climate Change Impact on Women

The impacts of climate change disproportionately affect women and girls, shaped by a complex interplay of social, economic, cultural, and environmental factors. For instance, women often bear the brunt in areas such as food production, energy, and agriculture, with societal norms prioritizing responsibilities like raising a family. As policymakers and advocates, the challenge is to explore ways to transform these dynamics. Subsequently, the focus will shift towards examining actionable steps and solutions to address and mitigate these disparities.

Disproportionate Effects

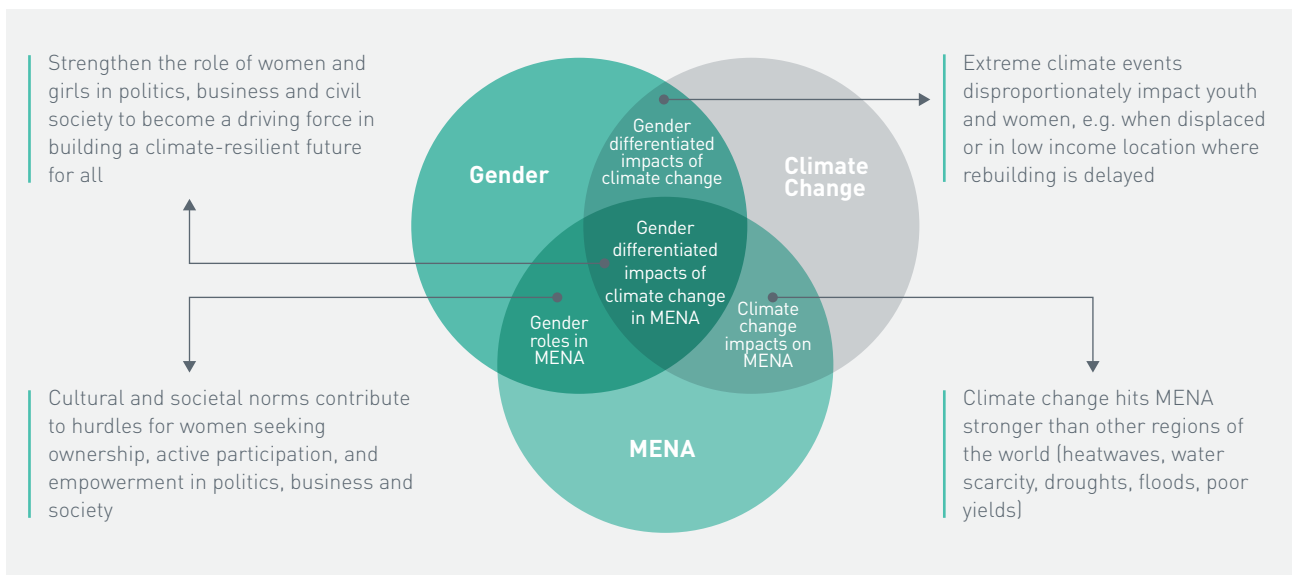
Climate change poses a threat to the safety, health, well-being, and security of people, communities, and nations worldwide. However, the effects of climate change are not uniform; they vary based on various factors such as geographical regions, generational differences, age, socioeconomic classes, income brackets, occupations, and genders. Vulnerability to the impacts of climate change often intersects with pre-existing vulnerabilities and inequalities, amplifying this impact and disproportionately affecting marginalized and disadvantaged communities.

80%
of people displaced by climate change globally are women.⁴

Main Burden on Women and Girls

As the United Nations emphasized in its report on women and climate change in 2022⁵, women tend to bear the brunt of adverse effects from droughts, floods, hurricanes, extreme rainfall events, and sea level rise more than men. For instance, during intense rainfall events, women may face heightened vulnerabilities due to their traditional roles in caregiving and household responsibilities. Flooded areas can exacerbate challenges related to accessing clean water, managing sanitation, and ensuring the safety of family members, placing additional strains on women. Hurricanes also can disproportionately impact women due to social and economic factors. Women, particularly those in low-income communities, may face challenges in evacuating and rebuilding homes. Additionally, post-disaster recovery efforts can place an increased burden on women as they often take on caregiving responsibilities and play key roles in community resilience.⁶

Overlapping complexities

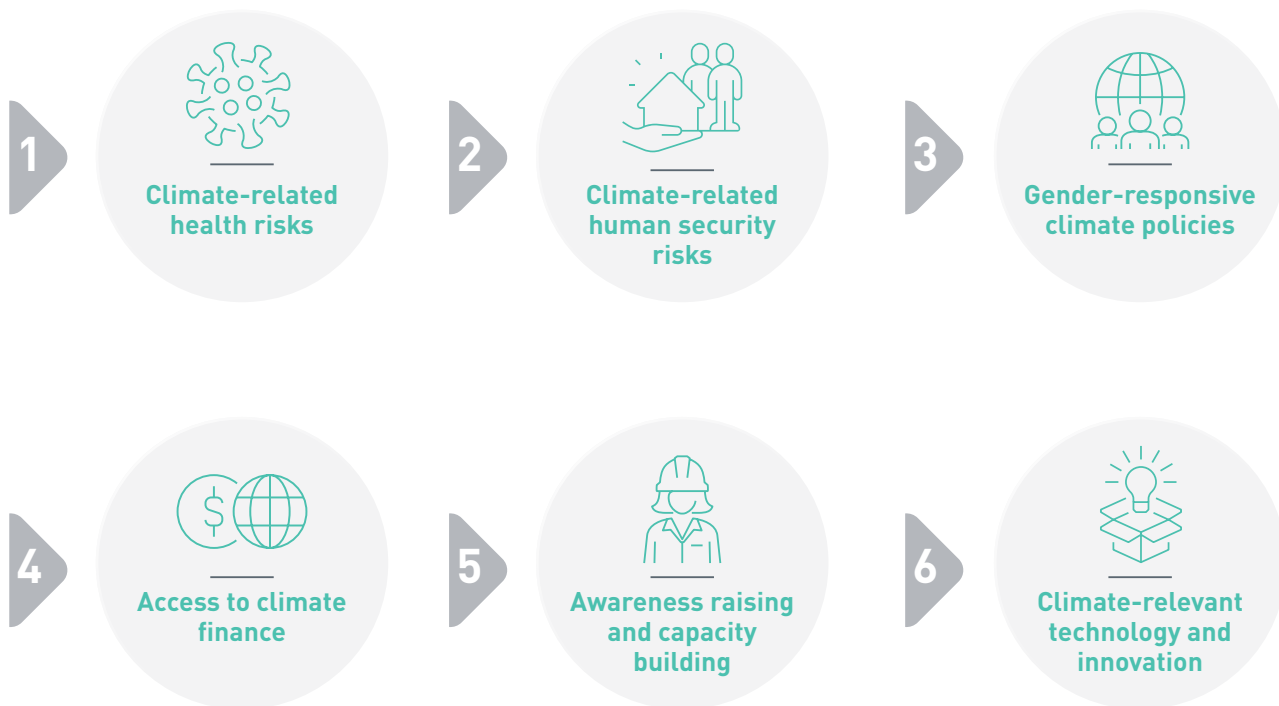


Special Challenges & Opportunities



In the upcoming section, the analysis is structured around key pillars essential to understanding the complex landscape of climate change impacts.

The examination systematically delves into the following six critical areas:



Throughout this exploration, the primary focus is on spotlighting the challenges within each domain and illuminating emerging opportunities for impactful solutions. It's essential to note that the examples and best practices provided do not cover all nuances but serve to illustrate and inspire, offering valuable insights into potential avenues for addressing the multifaceted challenges associated with climate change. This framework ensures readers gain a comprehensive understanding, guiding them through the nuanced complexities of climate-related issues and fostering a holistic perspective that considers both challenges and potential avenues for positive change.



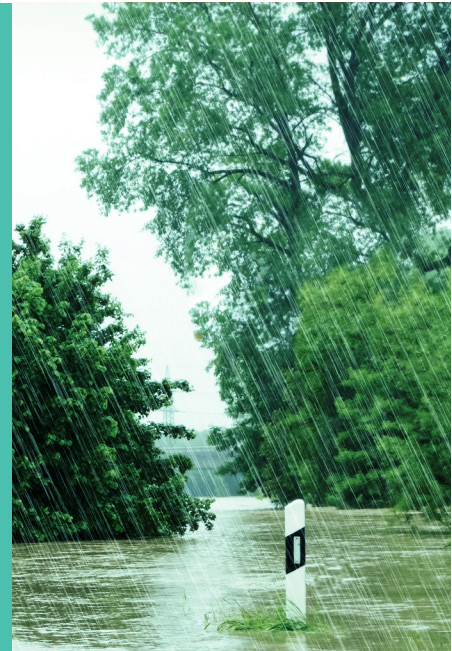
Climate-related Health Risks



Climate-related health risks for women refer to the specific threats and challenges to women's health that arise because of climate change. These risks encompass a broad spectrum of direct and indirect impacts on women's physical, mental, and reproductive well-being, influenced by changing climatic conditions.

CHALLENGES

Climate change poses a multifaceted threat to women, particularly in the MENA region. Changes in precipitation patterns and water scarcity heighten health risks for women, who manage household water resources, leading to increased vulnerability to waterborne diseases. Mental health challenges, exacerbated by climate-induced disasters, disproportionately affect women who bear the burden of caregiving. Additionally, disruptions in food production and increased vulnerability to natural disasters further amplify the gender-specific impacts of climate change, emphasizing the urgent need for gender-responsive climate policies in addressing these interconnected challenges.



Spread of Diseases

Changes in precipitation patterns and escalating droughts significantly impact water availability and quality, posing grave health risks for women, who frequently manage water resources within households. Due to constrained water access, women may resort to utilizing unsafe water sources, placing themselves and their families in jeopardy of contracting waterborne diseases like cholera, diarrhea, and typhoid.

Climate change also amplifies the spread of diseases like malaria and dengue. Rural women, engaging in outdoor activities, face heightened exposure. Limited healthcare access and preventive measures heighten their vulnerability, resulting in higher disease rates among women. Compounding this challenge is the stark reality that the MENA region is the most water-scarce area globally, encompassing 15 of the world's most water-scarce nations. To put it in perspective, one out of every five schools in the MENA region lacks access to essential Water, Sanitation, and Hygiene (WASH) services, which significantly heightens the risk of waterborne and hygiene-related diseases among students.⁷

Burden on Mental Health

Climate change-induced disasters and extreme weather events can also have profound psychological impacts. Women, who often bear the burden of caring for families and communities, experience heightened levels of stress, anxiety, and depression in the aftermath of such events. Loss of livelihoods and displacement amplifies these mental health challenges. Accordingly, data show that one in three women in the MENA region experience extreme levels of stress.⁸

Food Insecurity and Nutrition

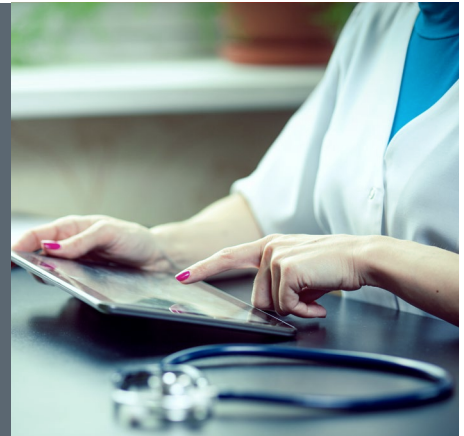
Moreover, climate change has profound implications for agricultural yields, leading to disruptions in food production and distribution. This is of particular concern for women, as they are responsible for water collection in 80% of households worldwide and often play pivotal roles in food provisioning and preparation within these households.⁹ The added pressure of food insecurity due to climate-related factors adversely affects their health and wellbeing. Pregnant and lactating women are at an elevated risk of malnutrition, which not only impacts their personal health but also has implications for the health of their children.

Increased Vulnerability to Natural Disasters

Ultimately, women, particularly in low-income communities, bear a heavier burden when it comes to the repercussions of climate-related disasters. Their roles as caregivers, in conjunction with prevailing gender norms, frequently place them on the front lines, where they encounter escalated risks of injury, displacement, and loss of livelihoods. Disturbingly, climate change disproportionately affects women and children, who are 14 times as likely as men to die during a disaster, underscoring the urgency of addressing this gender disparity.¹⁰ Furthermore, post-disaster, women face significant hurdles in accessing essential aid and recovery resources, further compounding their vulnerability.

OPPORTUNITIES

Amid the health challenges presented above, strides have been made globally, with success stories emerging from the MENA region. Successes include the development of climate-resilient health systems, employing strategies like resilient infrastructure and telemedicine, reducing the vulnerability of health services, and improving health outcomes.



Building Water Infrastructure

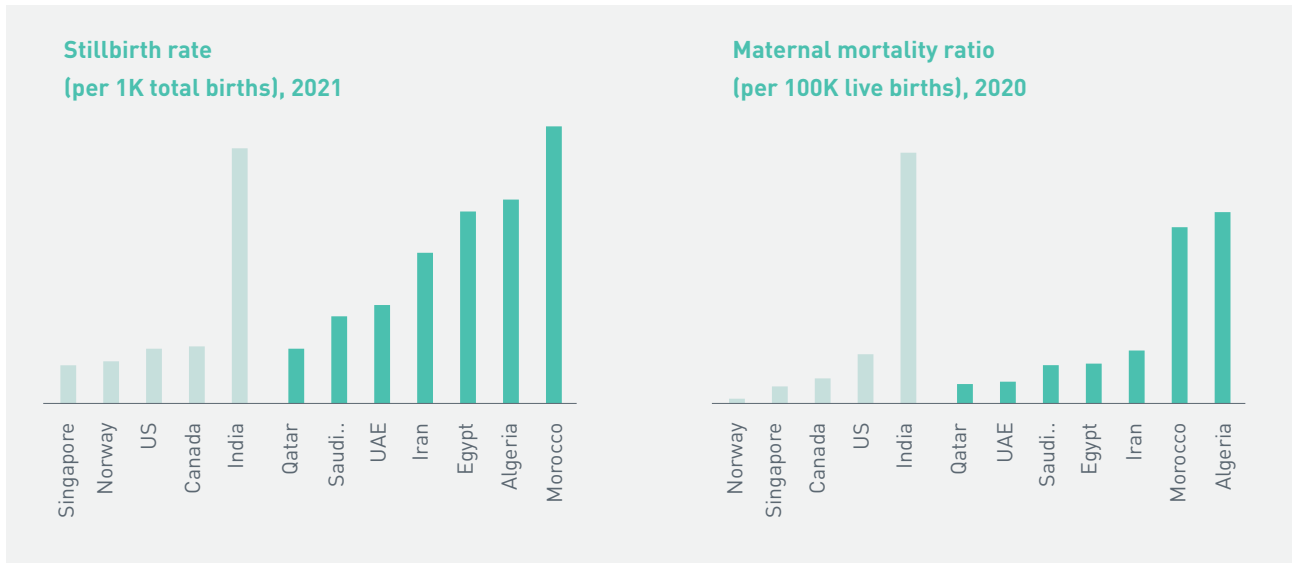
In the MENA region several countries have taken remarkable steps to improve water security and sanitation. This, in turn, has positively impacted women's health, as they are typically the ones responsible for water collection and sanitation duties. As an example, Morocco's National Initiative for Human Development (NIHD) has been instrumental in investing in building water infrastructure. This initiative has notably reduced the burden on women who traditionally walk long distances to collect water. As a result, women's health has improved, and their vulnerability to climate-related health issues has decreased. Furthermore, INDH has empowered women by involving them in decision-making processes related to water infrastructure development, strengthening their roles as active contributors to the resilience of their communities.

Maternal Health

The MENA region has also made significant strides in improving maternal health, particularly concerning reproductive health services and maternal care. These improvements are pivotal, given that climate change can exacerbate health risks during pregnancy and childbirth. As an example, Tunisia has witnessed substantial improvements in maternal health, resulting from initiatives aimed at enhancing maternal care. Comprehensive reproductive health services have been expanded to ensure that women receive the necessary care during pregnancy, even during extreme weather events. As a result, maternal mortality rates have seen a remarkable decline.

Another example is Qatar, which has the lowest maternal mortality rates and stillbirths in MENA. Qatar offers universal access to healthcare to all its citizens and has developed world-class infrastructure including dedicated hospitals for the treatment of women and children.

Stillbirth rate and maternal mortality ration in MENA



Source: EY Knowledge Analysis of data from World Bank and country policies

To Sum Up

The successes in protecting women against climate-related health risks underscore the potential for positive change in the face of global environmental challenges. The MENA region demonstrates its commitment to safeguarding women's health by focusing on water security, maternal health, and women's empowerment.

However, the journey is ongoing, and the need for continued efforts and investment in climate adaptation and gender-sensitive policies remains. These endeavors are essential to ensure that the positive trends persist, offering women the protection they deserve amid the ongoing and intensifying challenges posed by climate change.



Climate-related Human Security Risks



Climate-related human security risks for women encompass the threats and challenges to the safety, well-being, and dignity of women arising from the impacts of climate change on broader societal and environmental conditions. This concept extends beyond traditional notions of national security to include the protection of individuals and communities from various climate-induced vulnerabilities.

CHALLENGES

Climate-induced displacement, mainly triggered by weather-related hazards and conflicts in 2022, disproportionately impacts women and girls, elevating their risk of violence. Urgent improvements in support services, especially for vulnerable populations like women with mental health issues, are essential amid the complex nexus of climate-induced disasters and conflicts.



Water Hazards, Conflicts and Displacement

In 2022, a staggering [98%](#) of disaster-induced displacements were triggered by weather-related hazards, encompassing floods, storms, and drought.¹¹ This concerning trend, exacerbated by conflicts and disasters, has significantly heightened global food insecurity, which was already a pressing issue due to the slow and uneven recovery from the Covid-19 pandemic.

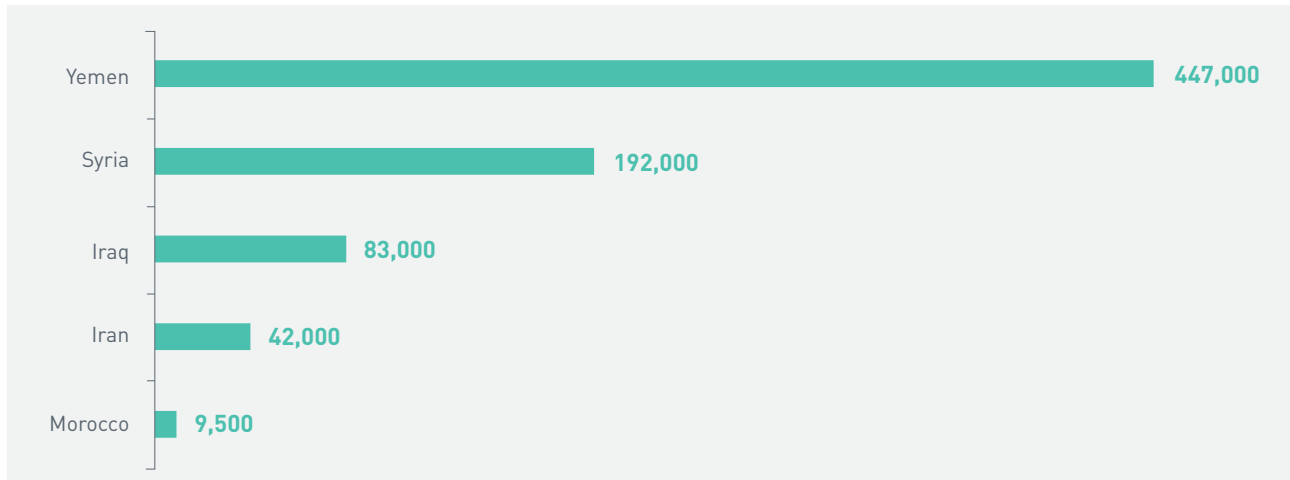
The overlap of disasters and conflicts in the same regions during 2022 further prolonged the dire situation for internally displaced persons (IDPs), forcing some to endure displacement for a second or even a third time. Remarkably, three-quarters of the world's internally displaced population reside in just ten countries, underscoring the acute concentration of this issue. Critically, four of these nations—Syria, Yemen, Somalia, and Sudan—are located within the MENA region, underscoring the urgency of addressing displacement challenges in this vulnerable region.

Moreover, it is essential to acknowledge that vulnerable populations, particularly women with traumata and mental health issues, face even more significant challenges during displacement.

Alarmingly, a distressing [70%](#) of NGO-run shelters do not accommodate women with mental health issues, highlighting the urgent need for improved services and support for these particularly marginalized individuals amidst the complex nexus of climate-induced disasters and conflicts.¹²



5 Countries with most Internally Displaced Persons in MENA (2022)



Source: GRID 2023 report

OPPORTUNITIES

In the midst of climate-related human security challenges, there has been a notable shift toward understanding and addressing the unique human security risks faced by women.

Initiatives in the MENA region reflect a growing commitment to addressing the specific vulnerabilities and needs of women in the context of climate-related displacement. As examples show humanitarian organizations have made significant strides in providing essential support to those displaced by climate-related disasters.



Yemen's Women-Led Community Centers

In Yemen, a nation grappling with both conflict and climate-induced drought, humanitarian organizations have taken a proactive approach. They have established women-led community centers within internally displaced persons (IDP) camps. These centers equip women with training and resources to become leaders in disaster response, contributing to the development of community resilience. Data from the International Organization for Migration (IOM) underscores the pivotal role played by women in ensuring their families' well-being amidst these complex challenges.¹³

Jordan's Women-Centered Spaces

Jordan, facing its own water scarcity challenges compounded by the arrival of Syrian refugees due to climate change, has embarked on innovative initiatives. With support from international organizations, they have set up women-centered spaces within refugee camps. These spaces offer more than just shelter and healthcare; they also provide educational and vocational opportunities. This multifaceted approach empowers women to rebuild their lives and contribute to their communities. As of 2021, these women-centered spaces had positively impacted over 30,000 Syrian refugee women in Jordan.¹⁴

Increase in Data-Driven Insights

Recognizing the importance of understanding the gendered dimensions of climate-related displacement, the International Organization for Migration (IOM) has played a pivotal role in collecting and analyzing data related to such displacement in the MENA region. Its findings emphasize the significance of implementing gender-sensitive policies and interventions.

To Sum Up

Despite these significant successes, challenges persist. Gender disparities in resource access, decision-making, and education continue to undermine the resilience of women facing climate-induced displacement. Sustaining and expanding efforts to support displaced women, including the provision of mental health and psychosocial support services, remains crucial. As the MENA region confronts the complex intersection of climate change, conflict, and displacement, prioritizing women's empowerment is not only a matter of equity but also a key strategy for building resilient communities in the face of climate-related challenges.



Gender-responsive Climate Policies



Gender-responsive climate policies refer to strategies and initiatives that consider and address the distinct needs, vulnerabilities, and capacities of different genders in the context of climate change. These policies recognize that climate change impacts women and men differently due to existing social, economic, and cultural inequalities.

CHALLENGES

Women's involvement in climate-related political decisions in the MENA region faces persistent gaps and barriers, hindering their active participation and influence in shaping climate policies. The region historically shows limited women's participation in politics, ranking second lowest globally in female political representation. The absence of gender-disaggregated data in Nationally Determined Contributions (NDCs) is a notable gap, with only a few NDCs in the MENA region recognizing equal women's participation in climate decision-making. Additionally, insufficient participation of women in National Focal Points contributes to the region's low standing in terms of female representation.

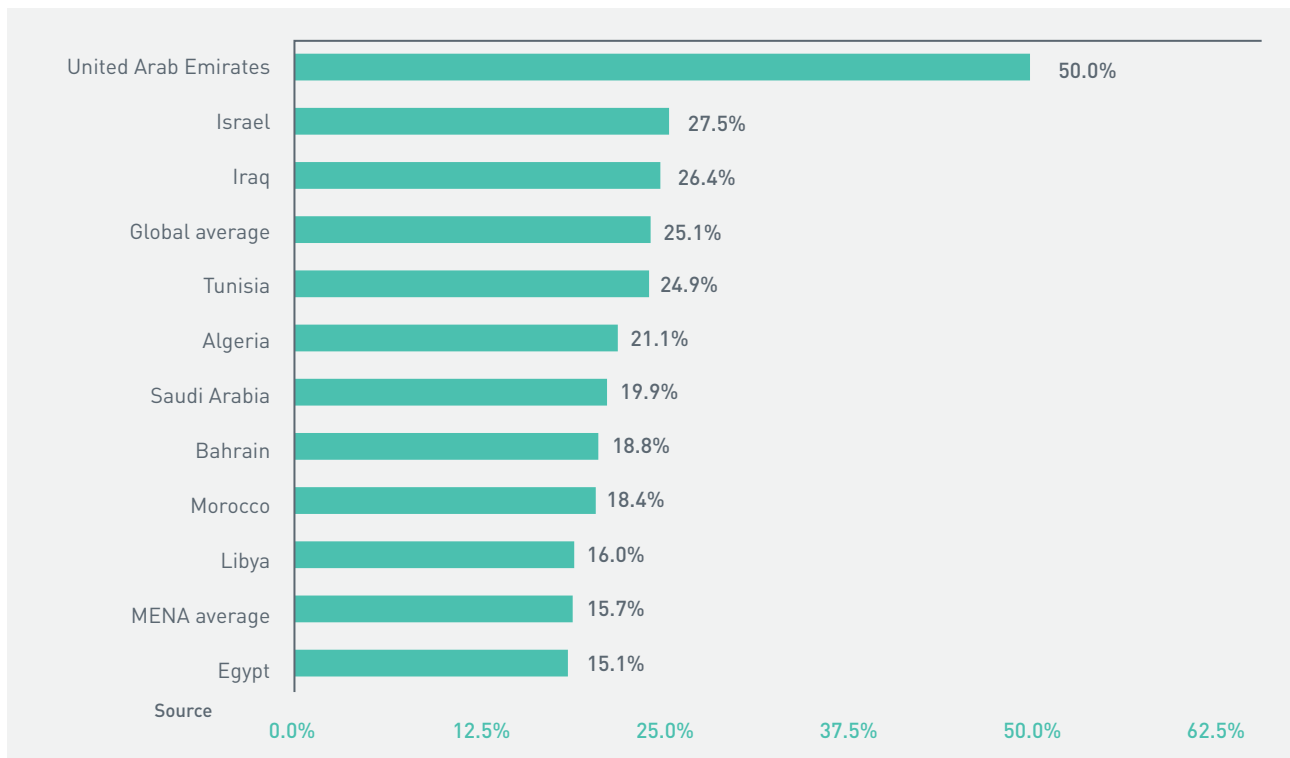


Low Political Participation

Women's representation in climate-related political decisions in the MENA region is a critical issue. Despite recent progress, persistent gaps and barriers limit their active involvement and influence in shaping climate policies. Historically, the region has seen limited participation of women in politics, including climate-related decision-making. As mentioned above, MENA ranks second lowest globally in female political participation, with only [17.5%](#) of parliamentary seats held by women.¹⁵ The UAE is the sole country with enforced quotas ensuring parliamentary gender equality.¹⁶



Share of parliament or consultative body seats held by women in the Middle East and North Africa region in 2020, by country

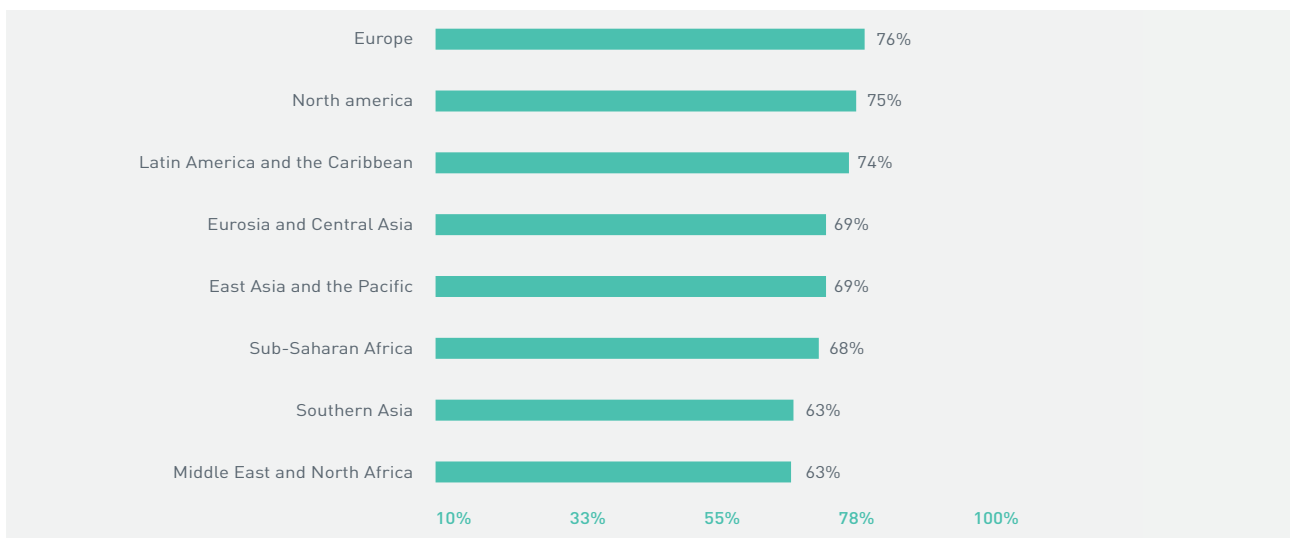


Source: Statista, accessed on 15 Oct 2023

Lack of Representation

Another key indicator of women's representation is their presence in climate committees, governmental bodies, and international negotiations. However, the numbers remain disproportionate. When compared to other regions, MENA lags furthest behind in achieving gender parity, scoring at [63%](#) (see graph below). Notably, the UAE, and Bahrain showcase the highest levels of gender parity, while Morocco, Oman, and Algeria rank the lowest. Among the most populous nations, including Egypt, Algeria, and Morocco, there have been declines in parity scores since the last assessment. Conversely, five countries, notably Bahrain, Kuwait, and Qatar, have improved their gender parity by [0.5%](#) or more. It's important to highlight that there is a significant disparity in women's representation in environmental leadership, with only [10%](#) women environmental ministers in the MENA region as opposed to the 39% of women environmental ministers in OECD countries, emphasizing the need for further gender-inclusive policies and practices.

Gender Gap Index Score



Source: WEF, accessed on 15 Oct 2023

Low Number of gender-related NDCs

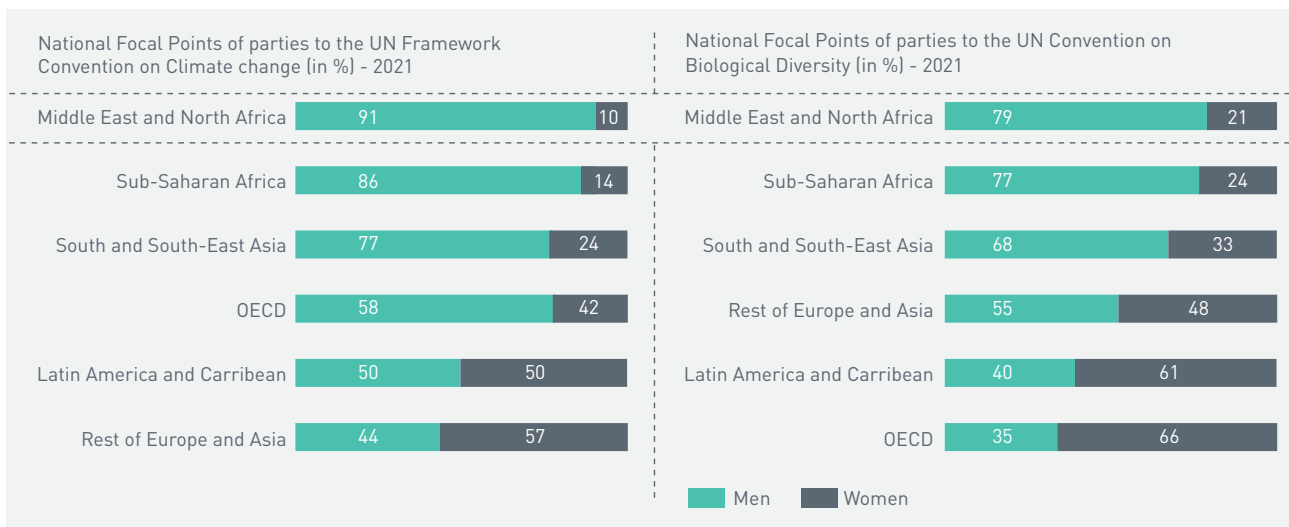
Furthermore, Nationally Determined Contributions (NDCs) – a key component of the Paris Agreement – are also recognized as a valid indicator for the degree of women’s involvement in climate policies. NDCs are specific commitments made by individual countries to reduce their greenhouse gas emissions and adapt to the impacts of climate change. As analysis shows, one common and crucial gap in NDCs was a lack of gender-disaggregated data, which limited understanding of how climate change impacts women and men differently.

In the MENA region only 3 NDCs recognized the equal participation of women in climate decision-making as of 2022 – globally the number was 33 NDCs.¹⁷

National Focal Points

National Focal Points are director-level ministry staff who actively contribute to negotiations. Ultimately, inadequate participation of women in National Focal Points places the MENA region at the bottom in terms of female representation (see below).

National Focal Points of Parties to the UN Framework Convention on Climate Change



Source: EY Knowledge Analysis

OPPORTUNITIES

Despite major challenges and an enormous need to catch up, progress has been made in some MENA countries. Gender-responsive policies and strategies have emerged as a vital approach to also address the disparities in climate change impacts.

National Gender-Responsive Climate Strategies

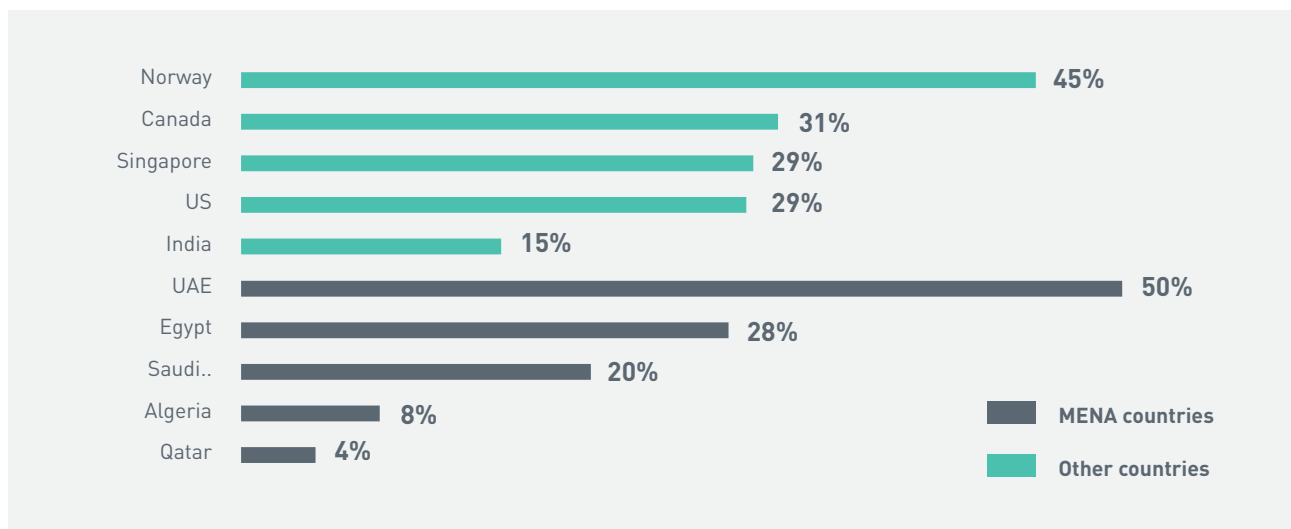
The formulation of gender-responsive climate strategies and gender-responsive budgeting at a national level is the crucial starting point for progress in inclusive climate policies. These strategies are designed to address the gender-specific impacts of climate change and empower women in climate adaptation and mitigation efforts.

UAE a Champion in Women's Representation

A major success in promoting gender equality by actively increasing women's representation in parliamentary and ministerial positions has been shown in the UAE. This achievement can be attributed to visionary leadership, strong institutional frameworks, legal reforms, a national vision emphasizing gender equality, capacity-building programs, and international engagement. The UAE's commitment to women's participation in decision-making positions highlights its dedication to building an inclusive and equitable society.

As the graph below shows, the UAE is the regional champion, not only when it comes to women's share in parliament, it also has the highest proportion of women in ministerial level positions. The country passed a law in 2019 to ensure women constitute 50% of the Federal National Council and has the highest proportion of women in ministerial position in MENA with 27% share.¹⁸

Proportion of seats held by women in national parliaments (%), 2022



Source: EY Knowledge Analysis

Climate Education

Another area of progress is in climate education and awareness programs that incorporate gender perspectives, enhancing knowledge about climate change and its impacts. In some countries like Morocco, climate education has been integrated into school curricula with a focus on gender. Data from the Ministry of National Education shows that this initiative has led to increased awareness among students about the gender dimensions of climate change. Young girls and boys are actively engaging in discussions about climate-related gender disparities, paving the way for informed and equitable climate policies in the future.

To Sum Up

In summary, the specific successes in the MENA region demonstrate a promising trajectory in addressing gender disparities in climate responses. These achievements underscore the importance of continued collaboration, research, and investment to create a more resilient and equitable future for all, where women's voices and experiences are central to shaping climate action.

Access to Climate Finance



Access to climate finance refers to the ability of individuals, communities, organizations, and countries to secure funding or financial resources specifically dedicated to activities and projects aimed at addressing climate change. Climate finance plays a crucial role in supporting efforts to mitigate and adapt to the impacts of climate change. This funding is essential for implementing projects and initiatives that aim to reduce greenhouse gas emissions, enhance resilience to climate change, and promote sustainable development.

CHALLENGES

In the MENA region, female founders in clean energy and climate technology encounter significant hurdles, with a notable lack of investment in female-only ventures. The gender disparity in the venture capital industry, primarily male-dominated, exacerbates challenges and may contribute to biased funding decisions. Despite some advancements, female founders struggle to secure investments, and structural barriers persist in climate finance and investment projects, limiting women's access to crucial funds for driving climate-resilient development.



Gender Disparities in Entrepreneurship

In MENA, female founders navigating the realms of clean energy and climate technology encounter a myriad of challenges. A mere 2% of total start-up investments in 2022 were directed towards female-only start-ups, presenting a formidable obstacle for those seeking climate finance. The gender gap is exacerbated by the pronounced gender disparity within the venture capital industry, where a 92% of investors are male. This stark imbalance potentially perpetuates gender bias in funding decisions, significantly impeding access to crucial financial and productive resources.¹⁹

Despite strides, the hurdles persist, with only 38.1% of female founders securing investments at the seed stage, followed by pre-seed and angel funding—a reflection of the enduring gender gap in climate finance. This challenge is compounded by the perception held by 57.8% of female founders who believe that MENA-based investors are less likely to invest in women-led start-ups compared to

their global counterparts. Moreover, a staggering 65.9% of female founders rank raising investment as a major obstacle in entrepreneurship, surpassed only by the lack of investor interest. This stark reality underscores the urgent need for targeted initiatives to dismantle systemic barriers, fostering financial empowerment for women in the clean energy and climate technology sectors.²⁰

Minority Representation in Business Ownership

Women-led businesses remain a minority in the MENA region, constituting less than 5% of the entrepreneurial landscape. This statistic sharply contrasts with the global average of up to 26%.²¹ Research pinpoints typical barriers faced by female founders in the clean energy and climate technology sectors, including limited access to funding, insufficient support in developing business strategies, and a scarcity of networks and mentors dedicated to aiding female entrepreneurs.

Challenges in Developing Business Strategies

Many women-led start-ups encounter challenges in crafting comprehensive business strategies. The absence of sufficient business development support often leaves female entrepreneurs struggling to create viable business plans and attract the necessary funding.

Structural Barriers

Despite women's pivotal role in driving a successful transition toward climate-resilient development, climate finance and investment projects frequently overlook gender considerations in design, development, and implementation. This oversight creates a structural barrier, impeding women's access to climate investment funds that could help address the unique challenges faced by women-led environmental entrepreneurs.²²

90%

of overall funding to clean-tech and agro-technology companies in the MENA region in 2022 went to just two companies.²²

2%

of total start-up investments were allocated to female-only start-ups in 2022.²³

OPPORTUNITIES

Data shows that, despite major hurdles, female founders have started to emerge as a powerful force in some MENA economies, challenging stereotypes, delivering innovative solutions, and paving the way for future generations.

Overcoming Funding Challenges

In recent years, the MENA region has witnessed a surge in female entrepreneurship, with women shattering traditional barriers and venturing into various sectors. Despite the challenges, progress is evident, and access to funding for female founders is slowly evolving, promoting economic growth and empowerment across the region.

5%

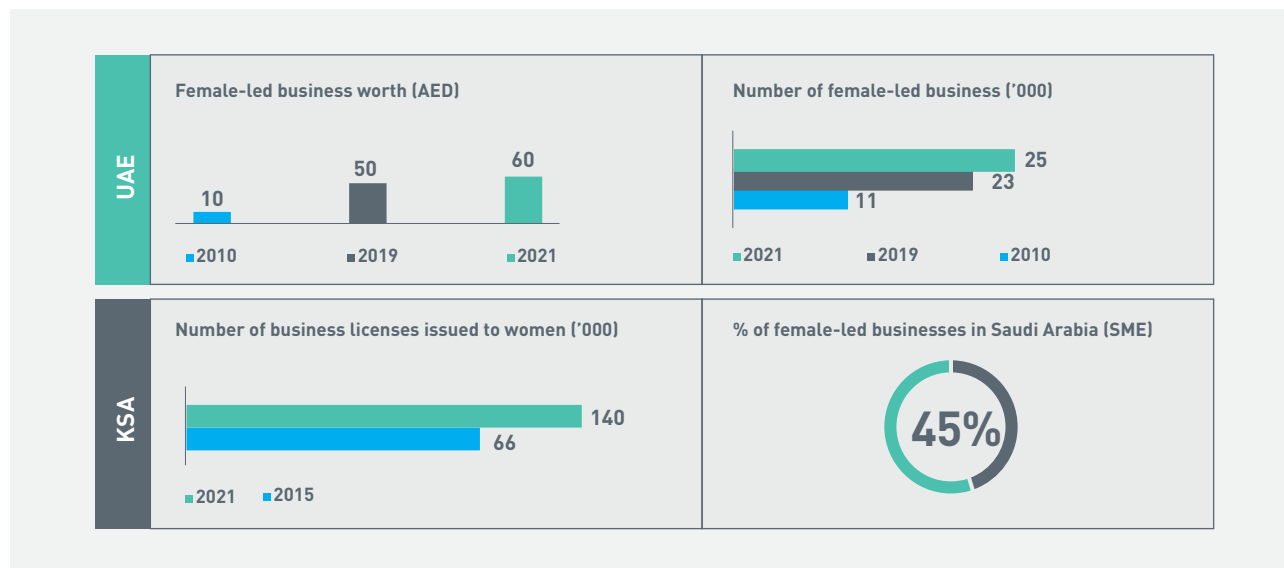
of the businesses are women-led in the MENA region compared to **26%** worldwide.²⁴

42%

of women own a bank account in the MENA region versus **65%** global average.²⁵

Leading the Way: Saudi Arabia

In Saudi Arabia, a 2021 study by the Ministry of Communications and Information Technology unveiled a remarkable [112%](#) increase in commercial registrations for female founders, with over [140,000](#) licenses issued. This represents a substantial leap from 2015 when only [65,912](#) licenses were granted to female-owned businesses. Of particular note is the growing participation of women in Saudi Arabia's tech sector, which reached an impressive [28%](#), well above the European average of [17.5%](#). These statistics signify a growing trend of female founders challenging traditional male-dominated industries, setting a new standard.²⁶



Source: EY Knowledge Analysis

UAE's Remarkable Progress

As the graph above shows the UAE stands out as another regional leader in fostering female entrepreneurship. A report titled "Women-Owned Businesses in the United Arab Emirates: A Golden Opportunity", published by NAMA Women Advancement in collaboration with UN Women, highlights the surge in female entrepreneurs. In 2021, 25,000 Emirati women entrepreneurs owned a remarkable 50,000 trade licenses.²⁷ Even during the challenges of the COVID-19 pandemic, the UAE witnessed a 68% growth in female-led startups.²⁸ This growth underscores not only the resilience of women entrepreneurs but also their ability to adapt and seize opportunities even in the face of adversity.

Empowering Through Climate Finance

Moreover, MENA's significant potential in renewable energy projects has led to increased female participation, providing women with greater access to climate finance. Microfinance programs supporting climate-resilient agriculture have proven successful, offering financial resources to women to adapt to changing climate conditions. For instance, in Morocco, the "Microfinance for Climate-Resilient Agriculture" program provides accessible financing for climate-adaptive agricultural practices,

empowering women farmers. Data indicates that this initiative has not only improved the livelihoods of women farmers but also enhanced their resilience to climate change impacts.

Financial Support for Climate Initiatives

Several development banks have also introduced targeted financial instruments for women, offering resources and opportunities to lead climate-related initiatives. The World Bank's Women Entrepreneurs Finance Initiative (We-Fi) is instrumental in providing financial support to women-led businesses in developing countries. Data from the World Bank demonstrates that We-Fi has mobilized over USD 2.6 billion in financial resources, supporting women entrepreneurs engaged in climate-resilient sectors.

To Sum Up

The MENA region is witnessing a transformation in female entrepreneurship, with growth in the number of female founders across various sectors. While progress has been made, funding challenges and gender bias still impact female entrepreneurs in the region. Nevertheless, the resilience and innovation of these women, combined with supportive initiatives and policy changes, promise a more inclusive and economically vibrant future in the MENA region.

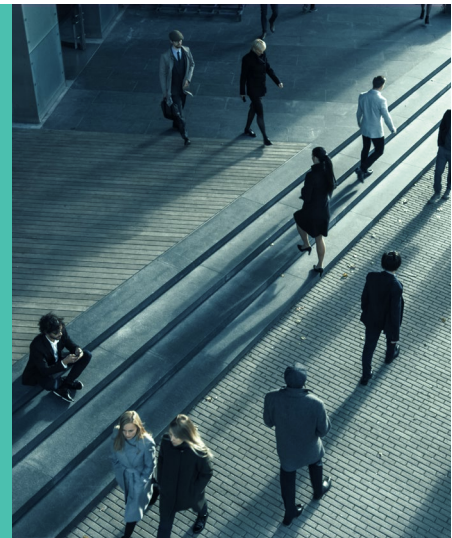
Awareness Raising and Capacity Building



In the realm of climate change, capacity building and awareness raising for women involve targeted efforts to strengthen their knowledge, skills, and confidence in actively contributing to climate action and sustainability. The aim is to empower women to play pivotal roles in addressing the challenges posed by climate change. These efforts for women in the context of climate change have direct connections to their participation in the labor market and their share of leadership roles.

CHALLENGES

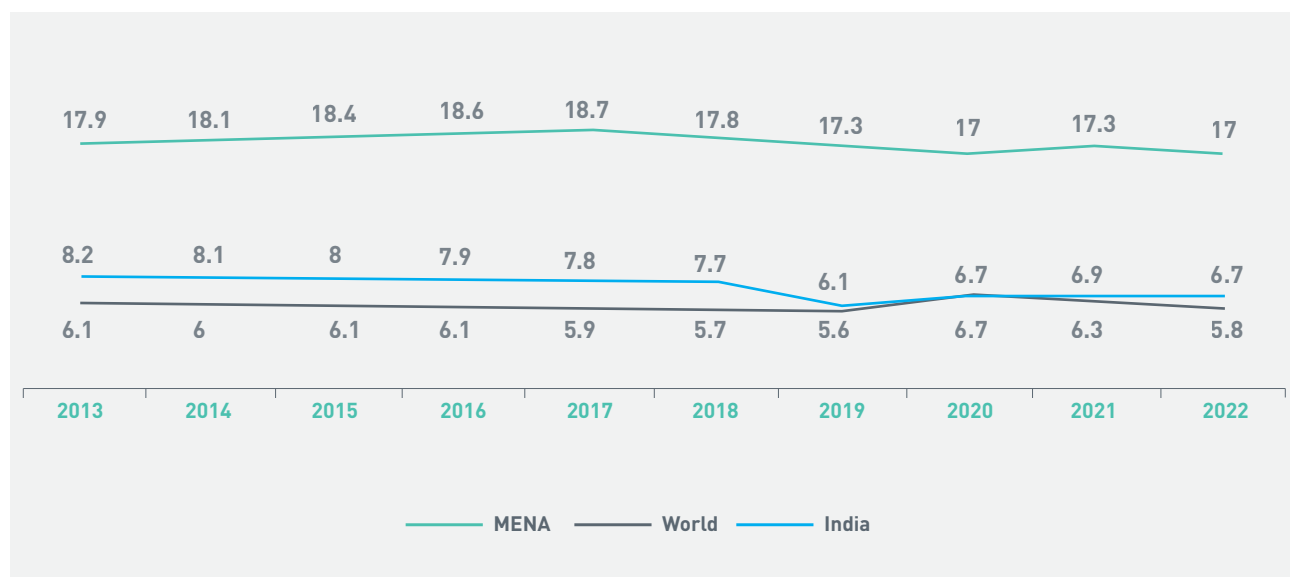
In the MENA region, women face persistent challenges with a higher unemployment rate than the global average, limiting their access to training and on-the-job experience crucial for capacity building. This challenge is underscored by the low Country Policy and Institutional Assessment (CPIA) rating of the MENA region, emphasizing the need for increased capacity building initiatives to address gender disparities in education, health, the economy, and legal protection.



High Female Unemployment Rate

Over the past decade, the MENA region has consistently grappled with a higher unemployment rate among females compared to the global average (see graph below). This disparity not only affects women's economic independence but also poses significant challenges to their capacity building and overall development.

Unemployment, female (% of female labor force) (modelled ILO) estimate)



Source: EY Knowledge Analysis

One of the key challenges women face is the limited access to training and on-the-job experience due to high unemployment rates. Capacity building, which encompasses both personal and professional growth, is dependent on the opportunity to learn, develop skills, and gain practical experience. However, with women being excluded from the workforce, these critical opportunities often remain

out of reach. The consequences of this exclusion from the labor market are far-reaching: When women are unable to participate in the workforce, valuable talents and perspectives go untapped, hindering the overall progress of society and various industries. Gender diversity fosters innovation and better decision-making, making it an asset that should not be under-utilized.



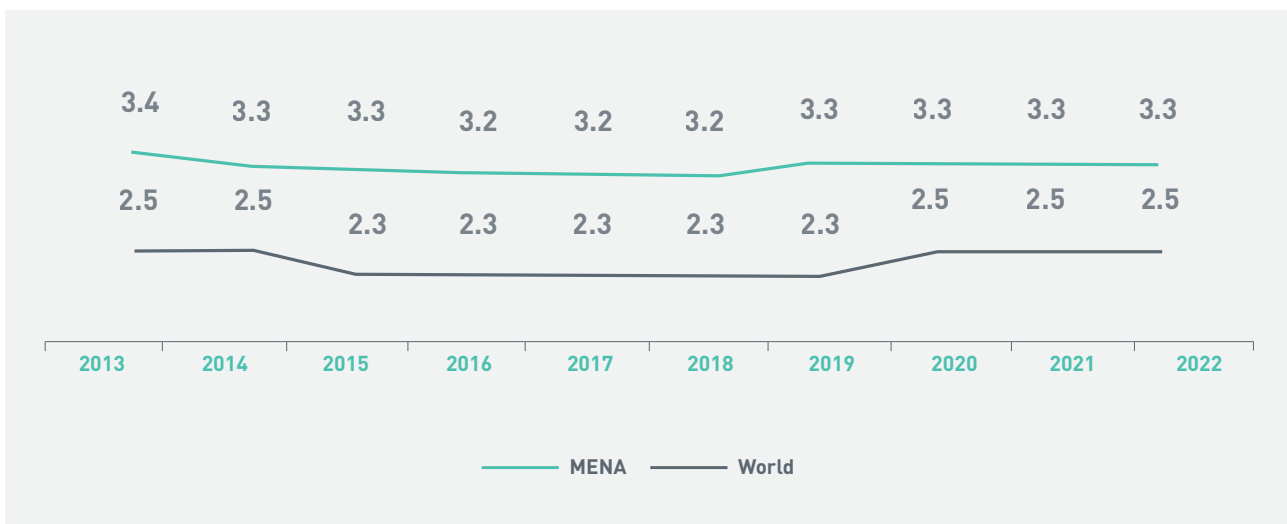
Female Under-representation in Leadership Roles

Furthermore, the MENA region exhibits a concerning under-representation of women in leadership roles. In 2022, women held only 6% of leadership positions in the region, a stark contrast to the global average of 33.65%.²⁹ This significant gender gap in leadership roles suggests that women’s capacity building is hindered at the highest levels of organizations and governments.

Low CPIA rating

The general findings above are underlined by the international “Country Policy and Institutional Assessment” (CPIA) rating. The CPIA gender equality rating gauges a nation’s implementation of institutions and initiatives aimed at upholding laws and policies that foster equal opportunities for both genders in education, health, the economy, and legal protection. This rating scale spans from 1 (indicating a low level) to 6 (indicating a high level). Internationally, the CPIA rating is seen as a valuable indicator to highlight the need for increased capacity building among women. As the figures below show, MENA region performs around 2.5 – below the worldwide average.³⁰

CPIA gender equality rating (1=low to 6=high) Middle East & North Africa, World



Source: EY Knowledge Analysis

OPPORTUNITIES

Despite huge challenges, some MENA countries have made progress in increasing the participation of women in the workforce in recent years, breaking through traditional barriers and reshaping gender dynamics.

The rising number of women in the workforce is reflected in both data and several examples, demonstrating a positive shift towards greater gender equality and economic empowerment.

Saudi Arabia and UAE as Examples for Positive Trends

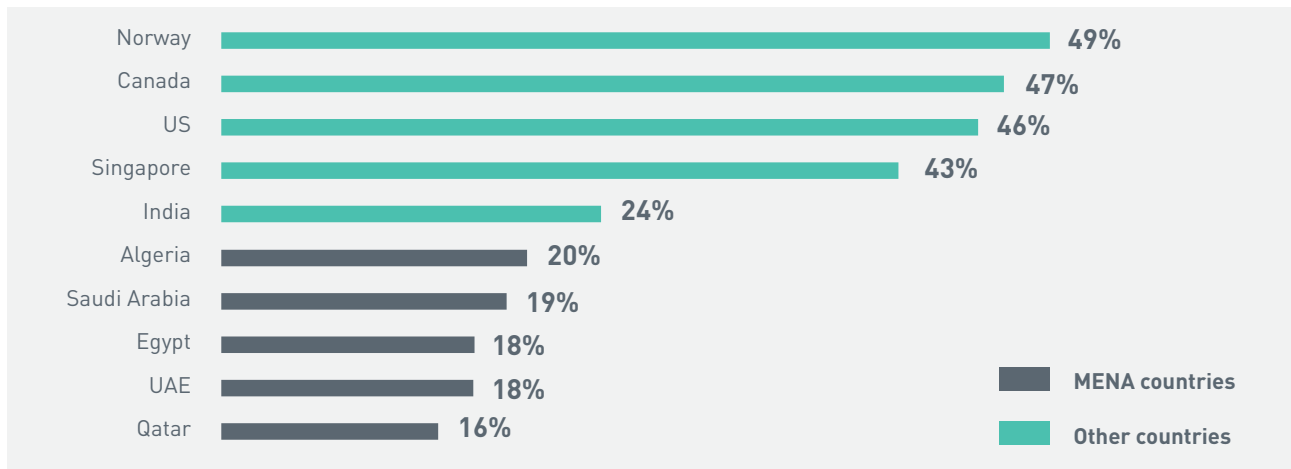
One of the notable success stories comes from Saudi Arabia, where the Vision 2030 reform agenda has driven significant changes. In 2018, the country saw a landmark decision to allow women to drive, which not only enhanced women's mobility but also opened new employment opportunities. As a result, the labor force participation rate for women in Saudi Arabia has been steadily increasing. In 2020, it reached [26.7%](#), up from [23.5%](#) in 2018.³¹ This demonstrates that policy changes can have a transformative impact. Numbers indicate that this trend was additionally supported by other policies, such as the "Saudization" policy which aims to increase the employment of nationals – and apparently, has also indirectly helped boost female employment.

Furthermore, the UAE has been proactive in empowering women in the workplace. The UAE's commitment to gender equality is exemplified by the appointment of women to key positions, including ministers and diplomats. In 2020, the country introduced the Equal Pay for Equal Work Decree, which mandates equal pay for men and women performing the same job.



The graph below shows female participation in the workforce in selected countries in 2023. To promote female workforce participation, countries have launched various initiatives. For example, Saudi Arabia started three programs (Wusool, Tamheer, Qurrah) as part of its 2030 vision which includes initiatives such as 80% cost cover for transportation for working women, on-the-job training and child support for female employees.

Women participation in workforce (%)

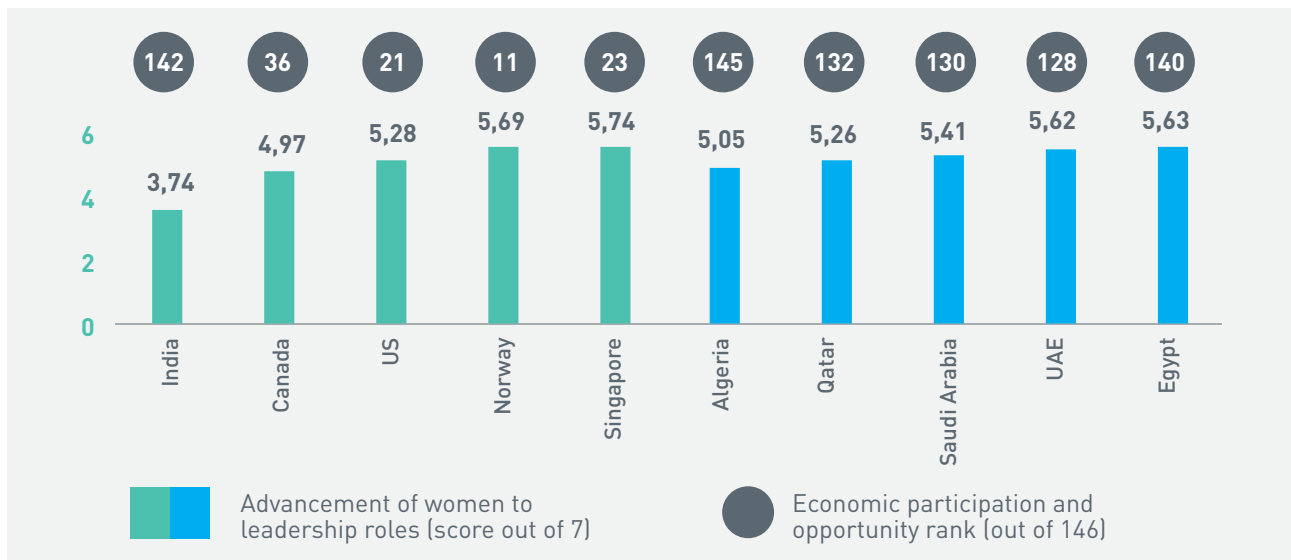


Source: EY Knowledge Analysis

Women in Leadership Positions

Also, with regards to female participation in business leadership, upward trends can be shown for some MENA countries. For example, UAE and Egypt have the highest score in advancement of women in business leadership roles as per WEF’s Global Gender Gap Report 2023. They also rank above other countries in the region. These trends were supported by several policies, such as the requirement from Egypt’s Financial Regulatory Authority that regulated companies ensure [25%](#) female representation on boards.³²

Women participation in business leadership



Source: EY Knowledge Analysis

To Sum Up

The MENA region has witnessed achievements in increasing the number of women in the workforce. Initiatives and policies in countries like Saudi Arabia and the UAE have played a crucial role in empowering women and reshaping the gender landscape. The data reflects this progress, showing a steady increase in women’s labor force participation. To continue this positive trajectory, it is imperative to address remaining challenges and foster an environment where women are encouraged to pursue careers, contribute to the economy, and shape a more inclusive and prosperous future for the MENA region.

Climate-relevant Technology and Innovation



Climate-relevant technology and innovation refer to advancements and solutions that directly contribute to addressing climate change challenges. In the context of innovation performance, it involves the development and adoption of cutting-edge solutions to improve environmental sustainability. Digital tools and literacy play a vital role by enabling the effective implementation and management of these technologies, fostering innovation performance in the quest for climate resilience and mitigation.

CHALLENGES

The Global Innovation Index evaluates a country's innovation performance based on factors like research and development, infrastructure, and human capital. In 2018, MENA countries ranked lower than most regions, but recent improvements indicate a positive shift, though significant room for progress remains, particularly in unlocking the potential of women in technology and innovation. Despite a higher presence of female STEM graduates in the MENA region compared to the global average, a substantial gender gap persists in accessing professional and technical roles.



Difference Between Countries in Innovation Performance

The Global Innovation Index (GII) is a ranking and assessment of a country's innovation capabilities and performance, considering various factors such as research and development, infrastructure, business sophistication, and human capital. In the overall GII Index 2018, MENA countries lagged behind all other regions except Africa, with many Arab countries displaying a downwards trend in the previous years. Today, most of the countries have turned the downwards trend around, improving the MENA region's performance. However, there is still enormous room for improvement and for closing the gap among MENA countries. There is a need to develop and unleash all kinds of unused capacities – especially the potential for women in the technology and innovation sector.



Digital Tools and Literacy

Successful entrepreneurship, innovation and the development of new technologies require digital WMENA women entrepreneurs felt they needed to improve their digital literacy, while [28%](#) reported poor or missing internet coverage in their region. There was also a very large gap between the [65%](#) of female entrepreneurs who were willing to be trained on information and communications technology (ICT) and the [25%](#) who actually received training.³³

Mismatch Between Female STEM Graduates and Their Share in the Workforce

While the share of women in the workforce in the MENA region is generally low as shown before, the share of female graduates leaves room for hope since their presence in the technology and innovation sector is higher than the global average. Nevertheless, women suffer a wide gender gap in access to professional and technical jobs.³³

53%

of STEM graduates in Arab countries are women compared to 35% in OECD ³⁴



Share of women in renewables in select MENA countries compared to the global average

7-9% | MENA

32% | Global Average ³⁴

OPPORTUNITIES

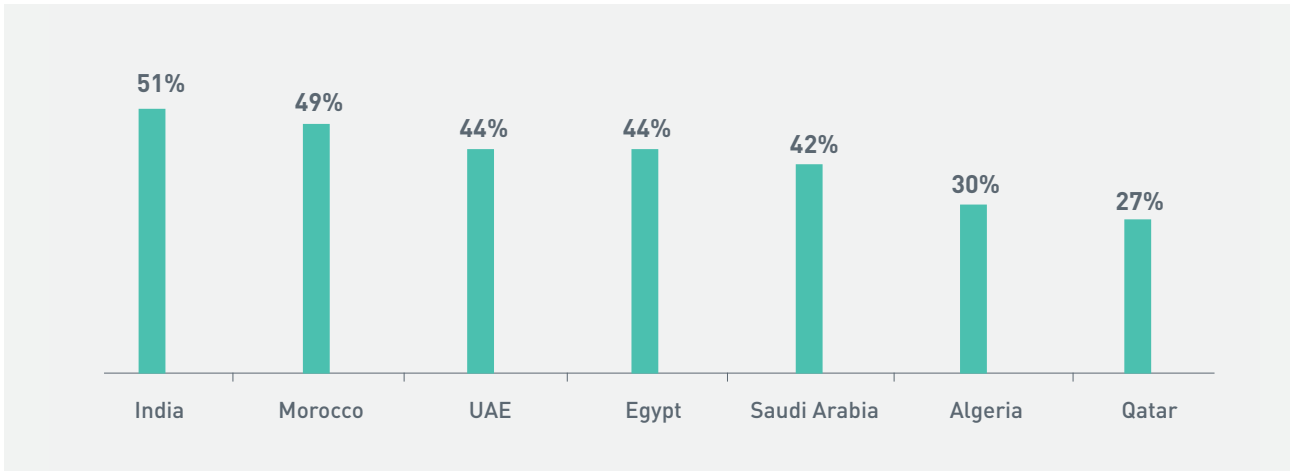
In MENA, where renewable energy is a crucial focus for addressing climate change, women are taking the lead in developing and managing renewable energy startups.



Across the region, climate-tech innovation hubs are emerging that encourage women's participation in technology and innovation for climate solutions. In Qatar, the "Climate-Tech Innovation Hub for Women" provides women with access to cutting-edge technology and mentorship to develop climate-related innovations. Also, other countries are implementing supportive policy frameworks that prioritize women's participation in climate-related technology and innovation. For example, Saudi Arabia's Vision 2030 program (see above) has incorporated gender equality as a core principle, including in the field of climate technology. Data from the Saudi Ministry of Energy shows a notable increase in women's involvement in climate-related technology initiatives, demonstrating the success of these policy efforts.

Another remarkable example is Iran. Although lagging in other aspects of women empowerment, it is leading with more than [50%](#) women graduates in STEM programs. The country launched a science, technology and innovation policy in 2010 to focus on emerging technologies and promote research. Other countries like Morocco, UAE, Egypt and Saudi Arabia show also a high number of female STEM graduates.³⁵

Share of female graduates in STEM*



To Sum Up

The trend of women’s leadership in renewable energy and climate-tech innovation in the MENA region signifies a promising shift towards a more climate-resilient future. It diversifies the pool of talent and ideas dedicated to addressing climate challenges, enhancing the region’s capacity to develop innovative solutions.



Recommended Actions



In the pursuit of sustainable development and effective climate action, it is imperative to prioritize the inclusion and empowerment of women. Looking ahead, key recommendations to advance women in climate action involve strategic and interconnected measures across different sectors, regions and industries. For the areas highlighted in this paper, stakeholders of the Arab Women Leaders' Summit developed a broad set of recommended actions.



Climate-related Health & Human Security Risks

Strengthen general health systems to provide a safety net in case of diseases.

Improvement of health systems in the MENA region to better handle the impacts of climate change is essential, since women are proportionally more affected than men by climate change. This includes upgrading infrastructure, training of health care workers in climate-related health issues and developing early warning systems for climate-sensitive diseases.

Promote and foster projects like water and sanitation.

Ensure adequate access to clean water and sanitation facilities, particularly in areas affected by drought or floods. This will prevent the spread of waterborne diseases and improve overall health and wellbeing of women.

Make use of gender-based violence (GBV) lenses in the context of climate-induced migration.

Apply a gender-based violence lens in the context of climate-induced migration to specifically recognize and address the unique health and security risks

women in the MENA region face because of climate change. This understanding facilitates the design of targeted strategies such as provision of mental health and psychosocial support services to displaced women, ensuring their well-being, resilience, and safety, while also promoting their overall human security amidst the adversities of climate change.

Foster initiatives to educate women on climate change adaptation measures and disaster response to increase community resilience.

Educational initiatives on climate change adaptation and disaster response empower women in the MENA region, equipping them with essential knowledge and skills to safeguard their health and security in a changing climate. As women often play a crucial role in community resilience, such education not only strengthens their personal adaptability, but also enhances the broader community's capacity to effectively respond to and recover from climate-induced challenges and disasters.

Gender-responsive Climate Policies

Involve women in local climate initiatives.

Engage women in local climate initiatives to provide specific insights and experiences which help for more realistic, effective and gender-responsive climate policies. This creates a feedback loop and fosters female recognition as well as consideration on all levels of policy making.

Integrate gender equality principles into national climate change policy frameworks and action plans.

Ensure that the gender-related aspects of climate change are not overlooked, and that strategies and plans are comprehensive, inclusive, and effective in addressing both women's unique vulnerabilities to and capacities for mitigating and adapting to climate change.

Implement quotas for female participation and representation in governments and municipals, particularly in the field of climate change.

This allows for a greater diversity of experiences and perspectives in decision-making processes related to climate change, ensuring that the unique needs and contributions of women are integral in designing and implementing resilient, sustainable, and equitable climate policies. Enhancing the share of female National Focal Points can be one of the first measures to take.



Access to Climate Finance

Implement improved data collection to enhance knowledge about possible levers to assess gender issues in climate finance.

Improved data collection highlights gender disparities in climate finance, helping bridge the gap for women's access in the MENA region. As one roundtable participant aptly said, "unlock the data and you unlock the capital" – meaning comprehensive data drives policy adjustments and investments to empower women in combating climate change.

Promote education of young girls and women to raise financial literacy.

Foster financial literacy education among young girls and women to significantly improve their understanding of climate finance, equipping them with the necessary skills to access and manage such resources effectively. More knowledgeable women make informed financial decisions, compete for available climate funding, and navigate the complexities of financial systems, thereby enhancing their roles in climate change mitigation and adaptation efforts in the MENA region.

Build initiatives to connect female entrepreneurs with female investors to build up networks and offer mentorship opportunities.

Establish initiatives that connect female entrepreneurs with female investors to create an empowering environment for women in the MENA region, facilitating their access to climate finance. These networks and mentorship opportunities provide necessary guidance, increase investment in women-led climate solutions, and foster a supportive ecosystem that recognizes and values women's contributions to climate action.

Introduce targeted financial instruments for women, offering resources and opportunities to lead climate-related initiatives.

The introduction of financial instruments targeted at women allows for more specific resource allocation and opportunity creation for women leading climate-related initiatives. For instance, public and private organizations can increase blended finance mechanisms, and the creation of an Advisory Board

composed of women could allow for a proportion of COP28 funds to be directly channeled towards women-led climate projects, ensuring a gender-inclusive approach to climate finance.

Awareness Raising and Capacity Building

Implement targeted education and training programs on all levels.

The implementation of targeted education and training programs, including formal and informal education through online and distance learning methods, significantly enhances the awareness and capacity of individuals across the MENA region to understand and tackle climate-related challenges. Moreover, designing tailored capacity-building programs that respect cultural sensitivities and address the region's specific needs not only ensures better inclusivity and accessibility, but it also increases the effectiveness of the initiatives in empowering communities to contribute actively towards climate solutions.

Address barriers women face or could face at their workplace.

Tackling workplace issues such as childcare responsibilities, obstacles to entry and retention, and reintegration after maternity leave, increases the female labor participation rate in the MENA region. Enhance women's participation in the workforce to nurture a diversified work environment where different perspectives flourish, fostering increased awareness and capacity-building for climate-related challenges and solutions.

Ensure that the principle of equal pay is mandated in labor laws.

Implement robust equal pay regulations to ensure fair compensation and opportunity in the MENA region. This will contribute to more women entering and remaining in the workforce. It also grants women more access to education and training opportunities through higher incomes, which contributes to capacity building.

Advocate for women's leadership and decision-making capability.

Support women-led climate organizations and ensure women's active participation in climate-related decision-making processes enables a more diverse and holistic approach to these challenges, paving the way for innovative solutions and driving comprehensive climate action.



Climate-relevant Technology and Innovation

Strengthen female participation in STEM fields.

Boost female participation in STEM fields to drive climate-relevant technology and innovation in the MENA region as it enhances diversity of ideas and perspectives in developing sustainable solutions. This can be achieved by offering micro degrees, initiatives such as scholarships and grants for women in STEM education or campaigns such as “stop genderwashing” to promote women in the field.

Increase access and knowledge transfer and drive the integration of KPIs via Knowledge Hubs in different regions.

Provide broader access to and transfer knowledge via regional Knowledge Hubs to significantly enhance climate-relevant technology and innovation, particularly for women in the MENA region. With a public-private partnership (PPP) structure, these hubs provide mentoring and funding for initiatives and projects. They offer courses and certifications, virtual internships, and are open to all applicants, but with a strict quota or KPI for women, to ensure a dedicated space for women’s growth and contribution in the climate action sector.

Hold problem-solving and idea crowdsourcing events to tackle regional specific climate issues.

Organize local problem-solving and idea crowdsourcing events to stimulate climate-relevant technological and innovative solutions specific to the MENA region. These events provide a platform for individuals to express their creativity and propose solutions for localized climate challenges. Promotion of these events are tailored and aimed at women to ensure their participation in climate-relevant technologies and innovations.

Identify growing and promising sectors such as renewable energy and incorporate practices for a higher participation of women.

Recognize growing sectors such as renewable energy to provide a unique opportunity to significantly enhance women’s roles in climate-relevant technology and innovation in the MENA region. Active promotion of women’s participation creates new pathways for them to lead, influence, and innovate in the field of climate action and offers new opportunities for more gender equality.

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wiser@masdar.ae |  wiser.masdar
masdar.ae |  wiser.masdar
 WiSER Network