



ARAB INTERNATIONAL  
WOMEN'S FORUM

المنتدى العربي الدولي للمرأة



CENTER for MEDITERRANEAN  
INTEGRATION | CENTRE pour  
l'INTÉGRATION en MÉDITERRANÉE  
مركز التكامل المتوسطي

The Joint Conference of the  
**Arab International Women's Forum &  
The Center for Mediterranean Integration**

# **Women, Water & Youth: Perspectives from the MENA Region**

**CONFERENCE REPORT & RECOMMENDATIONS**

26-27 September 2018  
Amman, Jordan

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## Table of Contents

|   |           |
|---|-----------|
| <b>1. Conference Co-Chair Messages</b>  | <b>4</b>  |
| 1.1 Message from the Arab International Women's Forum   |           |
| 1.2 Message from the Center for Mediterranean Integration   |           |
| <b>2. Conference Background, Concept &amp; Objectives</b>   | <b>8</b>  |
| <b>3. Conference Programme</b>  | <b>13</b> |
| <b>4. List of Speakers &amp; Report Contributors</b>  | <b>19</b> |
| <b>5. Report of Conference Discussions</b>  | <b>22</b> |
| 5.1 Opening Sessions  |           |
| 5.2 Panel Discussions   |           |
| <b>6. Recommendations emerging from the joint conference of<br/>the Arab International Women's Forum and the Center for<br/>Mediterranean Integration on <i>Women, Water &amp; Youth:<br/>Perspectives from the MENA Region</i></b> | <b>52</b> |

## 1. Conference Co-Chair Messages

### 1.1 Message from the Arab International Women's Forum



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

As Founder & Chairman and on behalf of the Board of the Arab International Women's Forum (AIWF), it was my great privilege and pleasure to co-chair the *Women, Water & Youth: Perspectives from the MENA Region* conference, which we were proud to host in Amman, Jordan in full partnership with the Center for Mediterranean Integration (CMI), and with the valued support of the Union of Arab Chambers, PepsiCo, PwC and CIHEAM-Bari.

The AIWF / CMI *Women, Water & Youth* initiative was unique in that it took an intersectional approach to three key development challenges in the MENA region – water scarcity and food security, women's economic participation, and youth unemployment. Our conference addressed these critical environmental and empowerment issues with a focus on identifying sustainable, long-term solutions through innovation, partnership, private sector development and social enterprise, and on creating new opportunities for economic growth and progress benefitting women and young people in the Arab world.

The conference examined water scarcity in the MENA region, which has been described as a "hotspot of unsustainable water use". Over 60% of the MENA population lives in high or very high water stressed areas (compared to 35% for the rest of the world). Roughly 70% of the region's economic activities are produced in areas of high or very high water stress, more than three times the global average of 22%. We examined the factors behind the low representation of female leadership in the water and agricultural sectors, as well as the low economic participation of women in the region overall, where women are bearing most of the burden of unpaid household and care work and are more inclined towards the informal economy than formal employment or entrepreneurship.

Enhanced leadership and entrepreneurship opportunities for women in these sectors would contribute, at least partially, a vital solution to the youth unemployment crisis in the region. Youth unemployment rates in the Arab States and North Africa regions have been the highest in the world for the past 25 years and continue to rise. Furthermore, existing development issues in the Arab world have in recent years been compounded by the urgent and unprecedented refugee crisis resulting from wars and conflicts within the region, creating further strain on land and water resources in many Arab States, as well as on the infrastructure and resources of receiving countries such as Jordan, the second largest refugee-hosting country in the world according to UNHCR.

Each of these challenges presents us with an opportunity to take personal ownership of the future of the Arab region; to lead the way forward in identifying, creating, and promoting viable, sustainable, long-term solutions; to inspire each other in our research, our philanthropy and our working lives; to collaborate and innovate across borders and across cultures; and importantly, to ensure that the voices of women and young people most affected by water challenges, food insecurity, armed conflict and displacement, and reduced economic opportunity, are brought into the conversation.

AIWF was proud to have this opportunity to work closely with the CMI, the Union of Arab Chambers, PepsiCo, PwC and CIHEAM-Bari to highlight the profound importance of protecting the Arab world's most precious resources – its land, its water and its people. *Women, Water & Youth: Perspectives from the MENA Region* provided a powerful platform to voice and examine critical issues of global and regional concern that deeply impact women's lives, their livelihoods and their security and prosperity. The conference was an excellent opportunity to collectively conceptualise innovative solutions to environmental and sustainability challenges, whilst simultaneously promoting women's economic participation and the importance of female leadership, and addressing our most serious concerns for youth empowerment, social mobility and job creation across the region.

Our Guest Speakers were prominent and accomplished thought leaders, change agents and key actors whose expertise spans the most critical sustainability issues in the MENA region and globally. Apart from our distinguished partners at the CMI and the World Bank, these included: The European Bank for Reconstruction and Development; the International Labour Organisation; the FAO; the United Nations Development Programme; ESCWA; CIHEAM Bari; and the Water Authority of Jordan (among others). We were also delighted to welcome a distinguished and exceptional calibre of delegates and participants to *Women, Water & Youth*, and to connect established global leaders in the water, agricultural and international development sectors with the region's young rising stars who are meeting the challenges of food, water and energy security in the MENA region through transformative technology and innovative projects, platforms and initiatives.

All six panels in the *Women, Water & Youth* programme delivered high-level, impact-driven recommendations, research and strategic solutions which AIWF is proud to document in this report and shall follow up on in future programmes and initiatives in collaboration with our Conference Partners and with all AIWF Global and Institutional Partners.

## 1.2 Message from the Center for Mediterranean Integration



**Blanca Moreno-Dodson**  
Manager, Center for  
Mediterranean Integration

As the Manager of the Center for Mediterranean Integration (CMI), it was our great pleasure to host the *Women, Water & Youth: Perspectives from the MENA Region* conference alongside the Arab International Women's Forum (AIWF).

For the CMI, women and especially young women are the cornerstones to building a better future for the Mediterranean region. Therefore, we have been centering our work on integrating them in all of our programs, including in reference to water. Since 2017, our water program took a great leap towards a more youth-inclusive and female empowering approach.

In the most water-scarce region in the world and one of the most vulnerable to climate change and extreme weather events, the CMI water program currently gathers, through its Mediterranean Youth for Water (MedYWat) network, around 100 young professionals from both rims of the Mediterranean and has been working on encouraging more female participation through targeted campaigns to promote the importance of women participation in fighting water scarcity and promoting effective water management in a context of climate change.

At the CMI, we truly believe that, if we are to change the unsettling reality of the Mediterranean region, we need to trust and invest in women, since early age, to unlock their true potential as well as further expand our outreach efforts to other segments of society in an inclusive manner.

We also believe that this is a goal that can only be achieved in collaboration with others and through partnerships, such as the one we enjoy with the AIWF. In fact, the CMI is a multi-partner platform where development agencies, Governments, local authorities and civil society from around the Mediterranean convene in order to exchange knowledge, discuss public policies, and identify the solutions needed to address key challenges facing the Mediterranean region. Members of the CMI include Egypt, France, Greece, Italy, Jordan, Lebanon, Morocco, Palestinian Authority, Tunisia, Provence-Alpes-Côte d'Azur Region, City of Marseille, the European Investment Bank and the World Bank Group, and the European External Action Service (EEAS) as an observer. By acting as a technical center that links knowledge to operations and reforms on the ground, the CMI complements the work of regional partners providing lending and research.

Our conference, *Women, Water & Youth: Perspectives from the MENA Region*, fell exactly within this approach. Our collaboration with AIWF presented the perfect opportunity to directly address the role of women in water governance in the region and to focus deeper on building youth capacity in the water sector.

Recognizing that water is at the heart of societies' resilience in the Mediterranean region, the CMI enjoys the technical and financial support of the World Bank and has a long-standing history of creating multiple collaborations with organization such as the French Development Agency, Plan Bleu, the UFM, and others working in the water sector. We attempt to capture dimensions related to preventing water shortages, encompassing measures designed to use water efficiently as well as defining water allocation rules and mechanisms across sectors such as agriculture, energy, industry, etc. These collaborations allow us to be the link that joins together water professionals, scholars and stakeholders to promote an exchange of experiences and expertise, demonstrating a desire to share the power of knowledge.

In concluding, I firmly believe that the Mediterranean holds more hope than it does obstacles. The region's wealth lies with its women and youth, eager to learn and exchange, to be empowered and play a more important role in society. I see it as our duty to help them change the face of the region. The Amman conference was only one example of what our joint efforts could achieve. At the CMI we remain committed to building beneficial partnerships to working towards empowering Mediterranean populations to unleash their potential for a transformation of the region.

## 2. Conference Background, Concept & Objectives

### ***Women, Water & Youth: Perspectives from the MENA Region***

A joint initiative of the Arab International Women's Forum & The Center for Mediterranean Integration

**The Arab International Women's Forum (AIWF) was proud to host a high-level conference in valued partnership between AIWF and the Centre for Mediterranean Integration. The conference took place in Amman, Jordan on 26 – 27 September 2018.**

Based in London, AIWF is a non-profit development organisation focused on women's development and youth empowerment. AIWF works closely with a global network of corporate and institutional partners to promote and prioritise the engagement of women and youth towards finding innovative and actionable solutions to the multi-faceted and complex environmental, economic security, and developmental challenges the MENA region faces.

AIWF's Annual Programmes have featured high-level international conferences held over the past 17 years in London, Berlin, Paris, Dubai, Doha, Damascus, Washington DC, Madrid, Brussels, Sharjah, Cairo, Amman, Beirut, Palestine, Kuwait and Morocco. These initiatives covered a broad range of women's and youth issues and strategies for job creation, inclusive sustainable development, the role of women as engines of economic growth, economic competitiveness, early stage entrepreneurship in the MENA region, women-led innovation in STEM, and important challenges related to women's peace and security and the impact of water scarcity and food insecurity on women and refugees in the MENA region.

*Women, Water & Youth* was a milestone in AIWF's 17-year advocacy for sustainable empowerment, economic opportunity, education, mobility and prosperity for women and young people in the Arab world. The conference objectives and programme were designed in collaboration with world leading subject matter specialists at the CMI and were significantly strengthened by the CMI's extensive and unparalleled expertise in the MENA region and beyond, in helping countries achieve transformative reforms, advancing refugee inclusion, promoting labour mobility, building economic and social cohesion, cross-border trade, investment, and scientific and cultural exchange to enhance Mediterranean integration.

AIWF was proud to partner with the Center for Mediterranean Integration on this much-needed and timely initiative on *Women, Water & Youth*, to bring into focus development challenges as well as opportunities for economic growth and progress benefiting women and youth in the MENA region and internationally. The conference was a positive demonstration of the commitment of AIWF and its AIWF Global Partners to giving women leaders, entrepreneurs, executives and educators a powerful platform to voice and examine critical issues of global and regional concern that deeply impact women's lives, their livelihoods and their security and prosperity.

AIWF and the CMI look forward to working with all partners and participants to action the outcomes and recommendations that emerged from this highly interactive, impact-driven conference that brought the public and private sectors, civil society organisations and NGOs, women change agents and young innovators together to examine new solutions for the food and water crises in the MENA region and better understand how these challenges impact the lives of women and young people.



## Conference Sessions

*Women, Water & Youth* took an intersectional approach to three critical development challenges for the Middle East and North Africa (MENA) region – water scarcity, women's economic participation, and youth unemployment. Sessions of the conference were directly aligned with the core priority policy areas of AIWF and the Center for Mediterranean Integration, and included:

### Day 1

- 1 Women and water governance in the MENA
- 2 Gender equity in sustainable agriculture and food production
- 3 Building youth capacity to address water scarcity challenges in the Arab water sector through entrepreneurship and social enterprise
- 4 Building capacity for women and youth in the Arab water sector through 'smart' technology and edtech innovation

### Day 2

- 5 Impact of water scarcity in the MENA refugee and internal displacement crisis
- 6 Reflections of women leaders and young innovators addressing water scarcity, sustainability, environmental and development challenges in the MENA region

## Conference Concept

The MENA is a “hotspot of unsustainable water use”, with more than half of current water withdrawals in some MENA countries well exceeding the water resources available by up to 75% on average<sup>1</sup>. Over 60% of the MENA population lives in high or very high water stressed areas (compared to 35% for the rest of the world)<sup>2</sup>. Roughly 70% of the region's economic activities are produced in areas of high or very high water stress, more than three times the global average of 22 percent, reflecting the high economic output of the highly water-stressed Gulf states<sup>3</sup>.

In Jordan alone, according to the country's Ministry of Water and Irrigation, “climate change and the refugee crisis have reduced water availability per person to 140 cubic meters, far below the globally recognized threshold of 500 cubic meters for severe water scarcity. These recent developments compound the impact of decades of rapid population growth, urbanization and agricultural intensification.”<sup>4</sup>

Furthermore, armed conflict in Syria, Libya, Iraq and Yemen and the resulting refugee and internal displacement crises, unprecedented since the Second World War, have created further strain on land and water resources in many Arab States, as well as on the infrastructure and resources of receiving countries such as Jordan, the second largest refugee-hosting country in the world when compared to the size of its population, according to the United Nations Higher Commission for Refugees (UNHCR). As economic, social and political pressures continue in Syria, Iraq, Egypt, Libya and Yemen, international focus has rested on

<sup>1</sup> Sadoff C and Jagerskog A, Game-changing water solutions for the Middle East and North Africa, 22 November 2017, The World Bank Water Blog; World Bank. 2017. *Beyond Scarcity: Water Security in the Middle East and North Africa*. MENA Development Series. World Bank, Washington, DC, p9

<sup>2</sup> World Bank. 2017. *Beyond Scarcity: Water Security in the Middle East and North Africa*. MENA Development Series. World Bank, Washington, DC, p10. License: Creative Commons Attribution CC BY 3.0 IGO

<sup>3</sup> World Bank. 2017. *Beyond Scarcity: Water Security in the Middle East and North Africa*. MENA Development Series. World Bank, Washington, DC, p10

<sup>4</sup> Sadoff C and Jagerskog A, Game-changing water solutions for the Middle East and North Africa, 22 November 2017, The World Bank Water Blog

security and conflict-related engagement, but it is clear that the realities of water scarcity and its alarming implications for economic growth, regional stability, health and quality of life for people in the MENA region are equally critical to its future prosperity and stability.

Nowhere in the world is the challenge of water scarcity more pertinent than it is in the “world’s most water-stressed” MENA region. In some MENA countries and economies, access to water is critically low. The World Bank finds in its *Water Scarcity* report: “In Yemen, Libya, and the West Bank and Gaza, less than 80% of the population has access to safe drinking water. In Djibouti, Yemen, Morocco, Libya, and Iraq, up to 50% of the population still lacks access to adequate sanitation. While some countries such as Morocco have made some progress, they remain several steps away from achieving universal access. Algeria is the only country in the Middle East and North Africa that has made no progress toward universal access.”<sup>5</sup>

Water security matters because scarcity threatens global prosperity and strains growth that could cost the global economy \$500 billion per year, a strain felt most keenly by countries already experiencing high levels of water insecurity and those with high dependence on agriculture (Sadoff et al, 2015)<sup>6</sup>. Water scarcity could potentially have serious long-term impact on regional growth and stability. According to the World Bank’s *Water Scarcity* report: “The region is expected to have the greatest economic losses from climate-related water scarcity as a share of GDP by 2050 (World Bank 2016). The many impacts of climate change on water scarcity have the potential to impair economic activities in the region, causing reductions in GDP of between 6% and 14% by 2050 (World Bank 2016).”<sup>7</sup>

Water scarcity mostly impacts food production, agriculture being the largest consumer of freshwater resources in the MENA and a “vital and volatile” economic sector which generates 15% of Morocco’s GDP, to give just one example – representing nearly a quarter of the country’s exports and creating jobs for nearly half its labour force<sup>8</sup>. Arab countries are the “largest net importers of cereal in the world and therefore highly vulnerable to variability and shocks in global commodity prices” (Brookings)<sup>9</sup> and as such, highly vulnerable to food insecurity – yet another critical challenge in the MENA region that disproportionately impacts women and youth.

However, economic losses arising from water scarcity and food insecurity are further compounded by two other critical development challenges that the MENA region faces. The first of these is the extraordinarily low rate of female participation in the Arab labour force overall, and the second is the high rate of youth unemployment in the Arab world.

As the ILO notes in its *World Employment and Social Outlook Trends 2017* report, despite significant improvements in educational attainment, women in North Africa are still twice as likely to be unemployed as their male counterparts, unemployment for women in the Arab States is still 13 percentage points higher than that for men, and female participation in the labour market remained the lowest globally at just 21.2% in 2016, against a world average of 49.5%. The male participation rate, however, was slightly above the world average (76.5% in 2016, against a global rate of 76.1%). As the ILO has found, such large gender disparities in labour market performance undoubtedly highlight the fact that although women have achieved high levels of education in many parts of the Arab world, this has not translated into enhanced inclusion in the world of work.

The World Bank estimates that legal and business barriers are still preventing women from joining the labour force in MENA, causing a loss of 27% in income for the region overall.

<sup>5</sup> World Bank. 2017. *Beyond Scarcity: Water Security in the Middle East and North Africa*. MENA Development Series. World Bank, Washington, DC, p76. License: Creative Commons Attribution CC BY 3.0 IGO

<sup>6</sup> World Bank. 2017. *Beyond Scarcity: Water Security in the Middle East and North Africa*. MENA Development Series. World Bank, Washington, DC, p16

<sup>7</sup> World Bank. 2017. *Beyond Scarcity: Water Security in the Middle East and North Africa*. MENA Development Series. World Bank, Washington, DC, p16

<sup>8</sup> Brookings, *Is Water Scarcity Dampening Growth Prospects in the Middle East and North Africa?* 24 June 2014 (Accessed at <https://www.brookings.edu/opinions/is-water-scarcity-dampening-growth-prospects-in-the-middle-east-and-north-africa/>); World Bank 2013 Project Appraisal Document on a Proposed Global Environment Facility Trust Fund Grant to the Amount of US \$ 6.44million to the Kingdom of Morocco For a Social and Integrated Agriculture Project

<sup>9</sup> Brookings, *Is Water Scarcity Dampening Growth Prospects in the Middle East and North Africa?* 24 June 2014; J Lampietti, N Magnan, S Michaels, A McCalla, M Saade, N Khouri 2009 *Improving Food Security in Arab Countries*. Report No. 5022. World Bank

Every MENA economy has at least one restriction on the type of work a woman can do, and Morocco is the only country where it's prohibited by law to discriminate against women when giving them access to credit. Morocco and Djibouti are the only countries that legally mandate equal remuneration for equal work and non-discrimination based on gender in hiring for jobs, and Algeria also legally mandates equal remuneration for equal work<sup>10</sup>.

Gender barriers to women's inclusion are also reflected in the low rates of female-led entrepreneurship in the MENA region, with the Global Entrepreneurship Monitor's (GEM) MENA 2017 Report identifying these barriers as women having higher levels of domestic responsibility, lower levels of education, a lack of female role models in business and public service, fewer business-orientated networks in Arab communities, a lack of capital and assets, and a culturally-induced lack of assertiveness and confidence in women's abilities to succeed in business, entrepreneurship and professional life.

At the same time, according to the Arab Youth Survey 2017, youth unemployment in the region stands at between 25% - 30% and the Arab world's youth population is among the fastest growing in the world, with the number of young workers aged 15-24 estimated to grow to 58 million by 2025. In some Gulf states, up to 70% of people are employed in the public sector, which clearly cannot sustainably provide jobs for the growing youth population into the future, making private sector job creation a key regional priority and startups and social enterprises key drivers of job growth in the region.

Promoting growth, jobs, and inclusiveness in the Arab World is critical to developing a future Arab working world and economy that - as **Christine Lagarde**, Managing Director of the IMF, said at the 2018 Arab Fiscal Forum - "includes all, works for all, and provides opportunities for all"<sup>11</sup>. Support and financing for youth-led, scalable startups and initiatives that create jobs for young people, especially those that rise up to critical development and sustainability challenges, can foster innovation and serve as a lifeline for unemployed young Arabs.

In most Arab countries there are clusters of Silicon Valley-inspired startup incubation initiatives that facilitate training and interaction between mentors and funders (including Flat6Labs in Egypt, Oasis 500 in Jordan, Bader, Berytech, and Seeqnce in Lebanon, Tenmou in Bahrain, and Astrolabs, Dubai 100 and SeedStartup in the UAE), but there is still much to be done to address challenges that inhibit startup growth in the region, which have been identified as the cost of establishing a business, cumbersome regulatory systems, inconsistent labour laws, the absence of bankruptcy laws and the difficulty of recruiting and retaining top talent<sup>12</sup>.

The consequences of failing to support opportunities for all, and failing to promote growth, jobs and inclusion for women and young people in the Arab world, are that ultimately, as Madame Lagard also said, that "stability is at stake ... Youth unemployment is the highest in the world - averaging 25% and exceeding 30% in nine countries. Moreover, over 27 million hopeful young people will join the workplace over the next five years, anxious to be included. But so far, their aspirations are unfulfilled, and their understandable frustration is compounded by perceived unfairness. This could easily lead to dissatisfaction, a rise in social tensions, and a collapse in social trust."

<sup>10</sup> The World Bank, *The State of Women's Rights in the Arab World*, 7 March 2016 (Accessed at <http://www.worldbank.org/en/news/feature/2016/03/07/the-state-of-womens-rights-in-the-arab-world>)

<sup>11</sup> Christine Lagarde, *Spending Reform for Sustainable and Inclusive Growth in Arab Countries*, as delivered in Dubai, February 2018 (Accessed at <http://www.imf.org/en/News/Articles/2018/02/09/sp021018-dubai-spending-reform-for-sustainable-and-inclusive-growth-in-arab-countries>)

<sup>12</sup> Suparna Dutt D'Cunha, *Plagued By a 30% Unemployment Rate, Arabian Youth Turn to Startups For a Lifeline*, Forbes, May 2017 (Accessed at <https://www.forbes.com/sites/suparnadutt/2017/05/11/can-startups-drive-new-job-growth-in-the-mena-region-where-youth-unemployment-rate-is-30/#4f95f7a34f43>)

## Conference Objectives: *Why Women, Water & Youth?*

The conference demonstrated the intrinsic link between the challenges of water scarcity, women's economic empowerment, and youth unemployment, providing fertile ground for participants and panelists to come up with new solutions to increasingly urgent problems through both technological innovation and a renewed effort to promote water governance measures – tariffs, subsidies and transparent regulations.

The conference brought women – who are most affected by water challenges, food insecurity, armed conflict and displacement, and reduced economic opportunity – into the conversation. It also brought vital youth voices to the table to explore ways in which women-led / targeted, and youth-led / targeted initiatives might solve environmental and sustainability challenges whilst simultaneously promoting women's economic participation and leadership and addressing the crisis of youth unemployment in the region.

The conference called for the engagement of international, regional and local actors, bringing together the Arab public and private sectors together with civil society to support innovative entrepreneurship, research and initiatives that directly address the need for technology and investment in education whilst promoting the urgency of water governance in the region.

Additionally, the conference examined strategies to support and empower women and young people to address environmental challenges in the region through public service, entrepreneurship and social enterprise, successfully connecting established women leaders in water and the international development sectors with rising stars who are breaking new ground to address the challenges of food, water and energy in the MENA region head on through the use of transformative technology and innovative projects and initiatives.

AIWF and the CMI welcomed subject matter experts and guests who brought our conference objectives to life, by sharing their research into critical issues around women, youth, water and food insecurity, bringing their own experiences and expertise into the discussions. Highly interactive, impact-driven discussions and panel debates that are a hallmark of AIWF conferences contributed actionable insights and results-oriented recommendations from thought leaders, change agents and key actors whose expertise spans the most critical issues facing the MENA region: water, food security, sustainability, women and youth.

These insights and recommendations are reported in this document for action and future follow up by AIWF, CMI, Conference Supporting Partners, and key institutional partners in the regional and international development communities.

### 3. Conference Programme

#### Day 1

0730 – 0900 Registration & Coffee Networking

0900 – 1000 **Opening Session** (Prompt start at 0900)

#### **AIWF Founder & Chairman's Keynote Address and An Introduction to 'Women, Water & Youth'**

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

#### **Guest of Honour Keynote**

**HE Hala Bseiso Lattouf** Former Minister of Social Development, Hashemite Kingdom of Jordan

#### **Guest of Honour Keynote**

**HE Eng Ali Subah** Secretary General, Ministry of Water and Irrigation, Hashemite Kingdom of Jordan

#### **Center for Mediterranean Integration Keynote**

**Dr Blanca Moreno-Dodson** Manager, Center for Mediterranean Integration, France

#### **Guest of Honour Keynote**

**Professor Fadia Kiwan** Director General, Arab Women Organization, Egypt

1000 – 1145

#### **PANEL 1**

#### **Women and water governance in the MENA**

Laws and regulations regarding water governance in MENA countries focus on the efficient use of water resources in order to protect water quality and conserve quantity, but do not make sufficient provision for the input or protection of women and citizens generally in decision-making on water governance, especially rural women or women working in the informal water economies. Women's involvement in managing water resources, with a focus on activism and awareness-raising through entrepreneurial ventures, could directly improve effectiveness and impact of water sustainability initiatives, informing community, corporate and government attitudes, behaviours and beliefs.

This session explores the importance of entrepreneurship and economic diversification to directly address the water scarcity crisis and strengthen the role of women in water governance in the MENA region. The session will examine multi-stakeholder frameworks and initiatives as well as private sector projects and entrepreneurial ventures in water resource governance, the creation of sustainable livelihoods in the water and agricultural sectors, and community-driven infrastructure development in informal water economies.

## Confirmed Speakers

**Panel Chair Esther Griffies Weld** Associate Banker, European Bank for Reconstruction and Development (EBRD), Jordan

**Susan Kilani** Assistant Secretary General for Laboratories & Quality Affairs, Water Authority of Jordan

**Lara Nassar** Regional SuSanA Coordinator (WANA Region), Bremen Overseas Research and Development Association, Jordan

**Israa Alassa** Deputy Coordinator of the Palestinian Water Authority Youth Committee, Palestine

1145 – 1215

Tea & Coffee Break

1215 – 1400

## PANEL 2

### Gender equity in sustainable agriculture and food production

CIHEAM's Strategic Agenda 2025 covers 15 thematic priorities, which include protecting the planet "by struggling against triple waste" (sharing knowledge and defending knowhow), managing natural resources and energy (water, soil, forests, energy, and biodiversity), and reducing agricultural losses and food waste. In addition, CIHEAM is committed to inclusive development "by investing in new generations and fragile territories" through young employment and life-long learning, gender equality and the participation of vulnerable groups.

Women in the MENA Region have historically always played an essential role in small-scale subsistence agriculture and pastoralism as well as food production, resource and household management as elsewhere in the world, but their involvement is far more limited in the modern agriculture and agribusiness and even when it takes place, their access to resources and services is highly restricted. According to the International Water Management Institute's January 2018 report on 'Gender-Equitable Pathways to Achieving Sustainable Agricultural Intensification': *"Increased gender equity in agriculture is both a practical and a social justice issue: practical because women are responsible for much of the production by smallholders; and social justice because in many cases they currently do not have rights over land and water resources, nor full access to markets, and often they do not even control the crops they produce. Strategies to promote gender equity must be tailored carefully to the social and economic context."*<sup>13</sup>

This session examines community-driven strategies to promote gender equity in the sustainable agriculture, water management and food production sectors to create more holistic, cost-effective and gender-neutral infrastructure in the water economies. The session will discuss the roles and responsibilities of men and women in small- and large-scale agriculture and food production in the MENA region, a sector in which

<sup>13</sup> International Water Management Institute, *Gender-Equitable Pathways to Achieving Sustainable Agricultural Intensification* (January 2018), p 3



women often lack legislative or regulatory protection of their land or water resource rights or access to markets. Panellists will explore how best to improve gender equal access to support networks, technology, credit, information, education and training, in order to engage more women in the sector, strengthen their voices in collective action and decision making at the highest levels, and create employment generation for sustainable sectoral growth.

### Confirmed Speakers

*Panel Chair* **Dr Roula Khadra** Senior Researcher / International Officer, Land & Water Resources Management, CIHEAM-Bari, Italy

**Wafaa Al Dika Hamze** Former Minister for Parliamentary Affairs, CIHEAM Board Member, National Commission for Lebanese Women, Agriculture and Rural Development Specialist, Lebanon

**Laurent Debroux** Program Coordinator for AG, ENV, NRM and Climate Change, The World Bank, Lebanon

**Wafaa Ramadneh** Programme Officer Global Forum on Food Security and Nutrition, FAO Jordan

**Juan Antonio Sagardoy** Former FAO Senior Officer of the Land and Water Development Division, International Consultant (WB, EC, IDB, USAID, CIHEAM-Bari), Spain

**Dr Souha Gamri** PhD Water Irrigation Systems, Member of the Mediterranean Youth for Water Network (MedYWat), Tunis

1400 – 1500

Buffet Lunch & Networking

1500 – 1630

### PANEL 3

#### Building youth capacity to address water scarcity challenges in the Arab water sector through entrepreneurship and social enterprise

This unique session engages young entrepreneurs at different stages of their ventures (successful, challenged and start-up / early stages of development) together with key stakeholders (government, private sector actors and civil society organisations) in frank and outcome-based dialogue on the current status of support provided to youth innovators addressing critical water scarcity challenges through entrepreneurship and social enterprise. It will showcase success and failure stories and explore key learnings from both, endeavouring to produce viable recommendations on how the dual challenges of youth unemployment and water scarcity in the Arab world might be addressed by equipping young people with the skills, training, investment and access to directly address environmental and sustainability challenges by starting new ventures and social enterprises or by initiating new sustainability projects or campaigns that not only facilitate development of infrastructure but also provide income and training opportunities for rural women.

## Confirmed Speakers

*Panel Chair* **Montgomery Simus** Co-Founder AquaShares Inc, Senior Fellow, Harvard Advanced Leadership Initiative 2015 – 2017, Board Member, Bayat Foundation (Afghanistan), United States

**Amal Talbi** Lead Water Resource Management Specialist, The World Bank, Lebanon

1630 – 1645 Networking Break

1645 – 1815 **PANEL 4**

### **Building capacity for women and youth in the Arab water sector through 'smart' technology and edtech innovation**

This session calls for increased co-operation and innovation between international, regional and local actors, Arab governments, the private sector, and civil society organisations, to first attract young people to the water and sustainability sectors and then dynamically build their capacities through sustained investment in training and education. The session examines how women and young people's capacity can be developed and matured with key skills, finance and access to support networks, but also looking beyond traditional education formats into social and cultural community-building using the power and influence of storytelling, harnessing new technologies, smart farming technologies, and digital innovation (including apps, MOOCs and other innovative online education technology platforms) to benefit women and youth in the rural and informal water economies. The session will also ask how technology and the development of smart farming infrastructure can build capacity and create much-needed jobs for young people and examine how technology can be used to empower women and girls in rural communities by facilitating access to education and vocational skills.

## Confirmed Speakers

*Panel Chair* **Reem Nejdawi** Executive Director, ESCWA Technology Centre, Lebanon

**Dr Rana Dajani** Rita Hauser Fellow, Radcliffe Institute for Advanced Study, Harvard University; Associate Professor Molecular Cell Biology, Biology Department, Hashemite University; Founder of We Love Reading, Jordan

**Dr Aida Al Awar** PhD Environmental Sciences ('Funding intervention projects in the water and sanitation aid sector: Success by Design'), Imperial College London, United Kingdom

**Dr Lahbib Latrach** Founder & CEO of Green WATECH, young water entrepreneur and winner of the CMI 2018 Water Heroes Contest, Member of the Mediterranean Youth for Water Network (MedYWat), Morocco



1815 – 2000 **Speakers & Partners Evening Networking Reception** and 'Women & Water' show led by women storytellers from the Maghreb region (winners of the CMI Water Heroes Contest)

## Day 2

0820 - 0920 Registration, Coffee & Networking

0920 – 1000 **Opening Session (Day 2)**

### Founder Chairman's Welcome & Summary of Day 1

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

### Guest of Honour Opening Keynote

**Dr Fares Braizat** Chairman, NAMA Strategic Intelligence Solutions, Jordan

### Guest of Honour Opening Keynote

**Tessa Terpstra** MENA Regional Envoy for Water and Energy Security, Ministry of Foreign Affairs of the Netherlands, Jordan

1000 – 1130

### PANEL 5

#### Impact of water scarcity in the MENA refugee and internal displacement crisis

Armed conflict in Syria, Libya, Iraq and Yemen and the resulting refugee and internal displacement crises have created unprecedented strain on land and water resources in many Arab States, as well as on the infrastructure and resources of receiving countries such as Jordan, the second largest refugee-hosting country in the world when compared to the size of its population, according to UNHCR. This session brings together leaders in public service and global advocacy to discuss the impact that the refugee crisis in the MENA region has had on water scarcity, food insecurity and future environmental stability in the region, and to provide insight into how these challenges can be overcome or mitigated through multi-level engagement and dialogue.

### Confirmed Speakers

*Panel Chair* **Patrick Daru** Senior Skills and Employability Specialist & Coordinator for Amman Decent Work Country Programme, International Labour Organization, Jordan

**Dr Samuel Rizk** Manager, Sub-Regional Response Facility (Syria Crisis), United Nations Development Programme, Jordan

**Kholoud Al Ajarma** Programs Manager Lajee'oon Center, Member of the Mediterranean Youth for Water Network (MedYWat), Palestine

1130 – 1300

## PANEL 6

### Reflections on water scarcity, sustainability, environmental and development challenges in the MENA region

This unique session will invite women leaders and young innovators to share reflections of leadership and common motivating factors as well as differentiating challenges in launching initiatives, projects and campaigns that directly address water scarcity, sustainability, food security, environmental and social development challenges in the MENA region. This session recognises leadership and innovation in addressing critical sustainability challenges and highlights the essential role that women and young people play in the development of sustainable approaches to natural resource management, stressing the need for women and young people to participate in environmental and sustainability decision-making at all levels.

#### Confirmed Speakers

*Panel Chair* **Asma Bachikh** Former President, World Youth Parliament for Water, Morocco

**Malak Issa** Acting Head of Design Review Section / Technical Affairs Directorate, Palestinian Water Authority, Palestine

**Dr Hussam Hussein** Postdoctoral Researcher at the University of Kassel (Germany), Vice-Coordinator of the Mediterranean Youth Water Network, Jordan

**Maha Al Salehi** Water professional (EMWIS, MedYWat Member) and Youth Activist, Yemen

1300 – 1310

Closing Remarks delivered by **Rania Rizk**, AIWF Co-Chairman and Senior Vice President & General Counsel AMEA, PepsiCo

1310 – 1400

Post-Conference Networking and Refreshments

## 4. List of Speakers & Report Contributors

AIWF and CMI were especially proud to bring world class specialists in the areas of sustainability, water resource management, refugee support and education, and women and youth empowerment together with representatives of leading international organisations, NGOs, academia, research institutes and the private sector. The Conference Co-Chairs welcomed guest speakers representing The European Bank for Reconstruction and Development; the International Labour Organisation; the Food and Agriculture Organization of the United Nations; the United Nations Development Programme; Economic and Social Commission for Western Asia; the Mediterranean Agronomic Institute of Bari; the Water Authority of Jordan; the Palestinian Water Authority; and the Mediterranean Youth for Water Network, among many others, as well as over 200 high-level participants drawn from Jordan, Lebanon, the MENA region, the United States and Europe. Speakers who contributed to the compilation of this report include:

### CONFERENCE CO-CHAIRS

**Haifa Fahoum Al Kaylani**

Founder and Chairman, Arab International Women's Forum, United Kingdom

**Dr Blanca Moreno-Dodson**

Manager, Center for Mediterranean Integration, France

### OPENING SESSION & GUEST OF HONOUR KEYNOTE SPEAKERS

*(In order of appearance)*

**Haifa Fahoum Al Kaylani**

Founder and Chairman, Arab International Women's Forum, United Kingdom

**HE Hala Bseiso Lattouf**

Former Minister of Social Development, Hashemite Kingdom of Jordan

**HE Eng Ali Subah**

Secretary General, Ministry of Water and Irrigation,  
Hashemite Kingdom of Jordan

**Dr Blanca Moreno-Dodson**

Manager, Center for Mediterranean Integration, France

**Professor Dr Fadia Kiwan**

Director General, Arab Women Organization, Egypt

**Dr Fares Braizat**

Chairman, NAMA Strategic Intelligence Solutions, Jordan

**Tessa Terpstra**

MENA Regional Envoy for Water and Energy Security,  
Ministry of Foreign Affairs of the Netherlands, Jordan

## GUEST SPEAKERS

*(In order of session)*

### **Esther Griffies Weld**

Associate Banker, European Bank for Reconstruction and Development (EBRD), Jordan

### **Susan Kilani**

Assistant Secretary General for Laboratories & Quality Affairs, Water Authority of Jordan

### **Lara Nassar**

Regional SuSanA Coordinator (WANA Region), Bremen Overseas Research and Development Association, Jordan

### **Israa Alassa**

Deputy Coordinator of the Palestinian Water Authority Youth Committee, Palestine

### **Dr Roula Khadra**

Senior Researcher / International Officer, Land & Water Resources Management, CIHEAM-Bari, Italy

### **Wafaa Al Dika Hamze**

Former Minister for Parliamentary Affairs, CIHEAM Board Member, National Commission for Lebanese Women, Agriculture and Rural Development Specialist, Lebanon

### **Laurent Debroux**

Program Coordinator for AG, ENV, NRM and Climate Change, The World Bank, Lebanon

### **Wafaa Ramadneh**

Programme Officer Global Forum on Food Security and Nutrition, Food and Agriculture Organization of the United Nations, Jordan

### **Juan Antonio Sagardoy**

Former FAO Senior Officer of the Land and Water Development Division, International Consultant (WB, EC, IDB, USAID, CIHEAM-Bari), Spain

### **Dr Souha Gamri**

PhD Water Irrigation Systems, Member of the Mediterranean Youth for Water Network (MedYWat), Tunis

### **Montgomery Simus**

Co-Founder AquaShares Inc, Senior Fellow, Harvard Advanced Leadership Initiative 2015 – 2017, Board Member, Bayat Foundation (Afghanistan), United States

### **Dr Amal Talbi**

Lead Water Resource Management Specialist, The World Bank, Lebanon

### **Reem Nejdawi**

Executive Director, ESCWA Technology Centre, Lebanon

**Dr Rana Dajani**

Rita Hauser Fellow, Radcliffe Institute for Advanced Study, Harvard University; Associate Professor Molecular Cell Biology, Biology Department, Hashemite University; Founder of We Love Reading, Jordan

**Dr Aida Al Awar**

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**Dr Lahbib Latrach**

Founder & CEO of Green WATECH, young water entrepreneur and winner of the CMI 2018 Water Heroes Contest, Member of the Mediterranean Youth for Water Network (MedYWat), Morocco

**Patrick Daru**

Senior Skills and Employability Specialist & Coordinator for Amman Decent Work Country Programme, International Labour Organization, Jordan

**Dr Samuel Rizk**

Manager, Sub-Regional Response Facility (Syria Crisis), United Nations Development Programme, Jordan

**Kholoud Al Ajarma**

Programs Manager Lajee'oon Center, Member of the Mediterranean Youth for Water Network (MedYWat), Palestine

**Asma Bachikh**

Former President, World Youth Parliament for Water, Morocco

**Dr Janette Uhlmann**

Senior Operations Officer, Center for Mediterranean Integration, France

**Malak Issa**

Acting Head of Design Review Section / Technical Affairs Directorate, Palestinian Water Authority, Palestine

**Dr Hussam Hussein**

Postdoctoral Researcher at the University of Kassel (Germany), Vice-Coordinator of the Mediterranean Youth Water Network, Jordan

**Maha Al Salehi**

Water professional (EMWIS, MedYWat Member) and Youth Activist, Yemen

## 5. Report of Conference Discussions

### 5.1 Opening Sessions

#### Haifa Fahoum Al Kaylani

Founder and Chairman, Arab International Women's Forum, United Kingdom

- AIWF Founder & Chairman Haifa Al Kaylani opened the conference with a powerful call to action for women and young people to be part of the progress for sustainable agriculture, rural development and food and water security in the region. The conference, she said, comes at a pivotal time with focus and attention on water scarcity and food challenges compounded by the ongoing refugee crisis and the lack of economic participation of women. Nowhere in the world is the challenge of water scarcity more acute than in the Middle East - in Jordan alone, climate change and the refugee crisis have reduced water consumption availability per person to below recognized international quota. Across the board, MENA countries are eroding their water supply.
- Information and research are urgently required on women in the MENA region overall as the region lacks workable, usable data that can power further research and innovation, especially in STEM and in relation to women's economic, entrepreneurial and academic engagement in STEM sectors.
- The three challenges addressed by *Women, Water & Youth* are interlinked:
  1. Water scarcity and food insecurity disproportionately impact women and young people.
  2. The low participation of women in the workforce persists despite improvements in educational attainment and gender barriers to women's inclusion are reflected in the low number of women entrepreneurs in a region noted for its thriving startup culture.
  3. Youth unemployment in the region still stands at 25-30%. AIWF's position has long been that enhanced support to youth will create much-needed jobs and failing to support opportunities for Arab women and young people will ultimately reflect negatively on future stability in the region. Youth are our today and our tomorrow and if we want a better future we must engage with youth from today to ensure that they inherit a tomorrow they can work with and be proud of.
- There is a need to identify the precise needs of women in the agricultural value chain. An excellent example of a project that aims to do this is NOWARA (a CIHEAM-Bari initiative). NOWARA is the National Observatory for Women in Agriculture and Rural Areas, and one of its main objectives is the promotion of territorial development through the valorization of women entrepreneurship and the creation of innovative dynamics related to the work and employment of Lebanese women in the agricultural, agri-food and rural sectors. NOWARA also aims to support rural women by spreading knowledge and good practices.
- Further support is urgently needed for water user associations such as in Egypt and Tunisia where water distribution and irrigation practices are developed, applied and continually improved which liberate women working in rural sector.

- On the issue of water scarcity, FAO has supported 100 small scale projects in Jordan, 56% of them run by women. To develop further these projects and improve opportunities for women in the water sector, the following is required: (a) Access to market; (b) Training; (c) Capacity building; (d) Equality in access to opportunities. Investment in these projects can yield the greatest impact as activities run by women supported by FAO have been more sustainable than others.
- The mission of the World Bank is to reduce poverty but this cannot be done without addressing critical development challenges as they relate to agriculture, and women are key in the agricultural sectors following a universal trend of feminisation in the sector (in countries such as India, Uzbekistan and Afghanistan). The World Bank, in all the projects it supports, emphasises the need to incorporate and benefit from new technology, supporting cooperatives and initiatives that prioritise sustainability and long-term viability.
- Women's health on the land must also be addressed (in context of the health of female farmers). This is part of a wider need to address the subject of women's health in the MENA region overall and the urgent need to bring more young women into medical practice – for this reason, AIWF will be organising a major conference at the American University of Beirut in April 2019 on *Women & Health: Empowering women-led innovation and medical education towards the fulfilment of the Sustainable Development Goals*, in partnership with the University of Massachusetts Medical School and AUB. *Women & Health* builds on the success of the Amman conference on *Women, Water & Youth* and also AIWF's conference in London in December 2017 on *Women-Led Innovation in STEM* and will bring into focus key and complex challenges as well as opportunities for innovation and development on critical subjects of women's health and opportunities for women to innovate, discover and lead in medicine and the healthcare sciences.
- Public awareness is an issue in water scarcity as it is unclear whether the MENA populations are acutely aware of the scarcity challenges and the cost of 'free' water. Do we all fully appreciate the economic value of water? There is a serious need for structured recycling programmes and initiatives in the region not only to educate the public about the value of water and the impact of scarcity on a prosperous, peaceful Arab future, but also to practically manage water and implement viable policies for water management on both national and regional levels.
- Intergenerational dialogue is key to success in addressing water scarcity challenges and correcting sustainability awareness gaps in every generation, imparting knowledge from one generation to the next (and vice versa) and engaging generations in working together to solve water, food, economic development and security issues.
- Top of the Arab development agenda must be the issues of water and sanitation which are critically important especially when we address the ongoing and worsening refugee crisis that is a direct result of years of civil unrest, war and humanitarian crises.
- Each of these challenges presents us with a choice, to lead the way to create sustainable long-term solutions. We must collaborate and innovate across borders and cultures. We are all part of the solution.

## HE Hala Bseiso Lattouf

Former Minister of Social Development. Hashemite Kingdom of Jordan

- As a global community, we face many serious challenges such as extremism and hunger, as well as political crises, climate change and water scarcity. In addition, water shortage in Arab countries will be a major cause of regional instability. The Arab water deficit is expected to reach unprecedented levels, as well as the effects of climate change and global warming that affect precipitation rates.
- Despite the progress in all areas and the technological revolution in the world, the world's international realities on water require more efforts and cooperation to achieve justice and ensure the optimal distribution of water in accordance with the human rights approach, which stresses the right to clean water in order to secure a decent life for all humans.
- More than 6 billion people have access to a mobile phone, while only 4.5 billion have access to adequate health facilities, with a high percentage of affected women. 780 million people do not have access to clean water on a daily basis. Water consumption for agriculture is expected to reach 19% of the total water consumption in 2050.
- Jordan is the second largest host country for refugees in terms of population. Today it hosts about 1.3 million Syrians, which constitutes about 21% of the population. This has forced Jordan to transfer its efforts and capabilities from dealing with the direct and initial impact of the crisis to the extended period of hosting this huge number of Syrian refugees, who place enormous pressure on all vital sectors in the Kingdom and benefit from the infrastructure, education, health, energy, water and transportation.
- Jordan has worked to approve plans to respond to the Syrian crisis, the most recent of which is the Jordanian response plan for the Syrian crisis for the years 2017-2019 at a total cost of about \$ 7.6 billion, or about \$ 2.5 billion per year and for a period of three years. In Jordan, the equivalent of a quarter of the national budget is spent on the costs related to refugees. More than 80% of Syrian refugees live outside camps, mostly women and children.
- Demand for water in the northern governorates has increased by 40%. The figures indicate that the annual per capita water share has fallen to 100 square meters, increasing the complexity of the water problem for its direct relevance to important matters such as sanitation, hygiene and health.
- Water security in Jordan is directly related to the participation of women and youth in agricultural activity and the basic roles that can be played by both of them in different seasons and agricultural areas. When considering the issue of enhancing agricultural productivity and activating the role of youth and women in the agricultural sector, all barriers and obstacles, including the issue of water scarcity, must be considered, especially as the lack of clean water and access to health facilities affects women more so than men, and poses a serious challenge to the efforts made to eliminate gender discrimination.
- UN sources report that nearly 80% of wastewater is not treated or reused. In order to optimize the use of water from these sources, it is necessary to introduce the concepts of modern technology for alternative energy and raise awareness about local and regional strategies that contribute to water supply, through the application of water harvesting techniques, the reuse of grey water, and the separation of treated water sources from natural and flood waters, achieving the sixth sustainable development objective of "ensuring the availability, management and sustainability of water and sanitation services for all by 2030. This will provide more than 1.8 billion people who use contaminated water for drinking with access to usable water.



- Women have an important role in water governance alongside men. Equal gender representation in the development and drafting of water policy of countries is essential. Currently, women work to provide water to meet the needs of their households, while men make decisions about water resource management and development at the local and regional levels. Therefore, projects, programs and policies aimed at addressing gender inequalities must empower women to contribute to the development of policy around water resource management and human development to ensure that both men and women – especially poor women and young people – can access and benefit from water resources, around the world.
- Water delivery in conflict areas should be considered a top humanitarian aid priority especially in IDP camps where women and children constitute the largest proportion of refugees.
- We need to integrate women and youth into water and food security programs and to involve them in water decision-making, solutions, knowledge sharing, innovation, and training women, youth, boys and girls to deal with water-related issues and challenges and how to manage them, starting from home. Women have an important and vital role in conserving the environment and water resources in particular and reducing their depletion. They are primarily responsible for rationalizing the consumption of water at home and have the primary role in guiding household members to the proper ways to benefit from water and not waste it.
- Young people play a vital role in water conservation. They are the ones who will lead the future. The world we live in today is theirs. They will discuss their future and it is up to them to make key decisions about the world they wish to live in, and to undertake research and studies that address environmental problems, as well as to develop and offer solutions and recommendations to ensure a better environmental future for all.
- Young people must be better supported to launch initiatives that serve the environment, and use social media, brochures and the Internet to increase awareness and deliver environmental messages to all segments of society. They have a responsibility to apply science on the ground and to preserve the environment and water, build their capacity to meet the challenges of water scarcity through entrepreneurship, social projects, smart technology, technological innovation, and exchange experiences among women leaders and young innovators who face the challenges of water scarcity, sustainability and environmental and development challenges in the region.
- To achieve the objectives of sustainable development, we must continue to develop strategic plans based on improving land productivity with the sustainable development of human, land and water resources, and improving the economic conditions of the population through the development of humanitarian programs and the coordination of existing desertification control activities within a vision of human parity, to support both the host communities and refugees, based on the approach of international partnership, the promotion of the role of women and the activation of the role of private sector and governments.
- We need to protect natural and environmental resources by integrating knowledge into interdisciplinary and interrelated issues (water, energy, the human environment) and adopting a scientific framework for improving ecosystems, as resource protection and management are the only guarantors of adequate water, food and dignity for future generations.

## HE Eng Ali Subah

Secretary General, Minister of Water and Irrigation, Hashemite Kingdom of Jordan

- Natural water resources are scarce, with 40% of water in Jordan shared with other countries. Despite joint agreements it is not easy for Jordan to have access to the water for its needs. Wahda Dam was built however in the past four years Jordan has not had enough of the basic water levels it has needed and the Yarmouk River's flow is not enough. 140 sq m should be what is the quota for each individual however Jordan is at well below that quota.
- Jordan's water sources are at risk as the country does not have additional sources within its national borders, which is why the Jordanian government has sought solutions outside its borders by sharing regional water resources and through joint desalination projects.
- HE Eng Ali Subah emphasised that women have long played an integrql role in the Jordanian Ministry of Water, with women comprising more than 50% of engineers and geologists and a woman serving as a past Director General. Women play a key role in managing Jordanian water resources in comparison to many other countries; for example, at a bilateral meeting with German counterparts, the Ministry of Water in Jordan had the gender balance completely in favour of women in Jordan, whereas the German delegation was made up mainly of men.
- Education has played a key role in bringing women into the workforce. Jordan needs to have at least 50% of women in the workforce spanning all sectors and at all levels – in fact, the Ministry of Water in Jordan recently launched a women plumbers' initiative to encourage more women to enter into careers that have been previously dominated by men.
- The Ministry of Water in Jordan is especially keen to have women play a big role as well as more generally. The Ministry even went to schools to launch awareness campaigns around water management and the sustainability contributions of their own schools. Jordanian youth need to play a key role, and anyone below the age of 60 is considered a young person by His Majesty the King. This is why USAID and German donors are interested in nurturing experienced and competent young graduates, and the Ministry of Water supports by training new cohorts of young graduates – both young men and women, with new programmes starting every six months.

## Dr Blanca Moreno-Dodson

Manager, Center for Mediterranean Integration, France

- The Center for Mediterranean Integration (CMI) is a multi-partner platform where development agencies, Governments, local authorities and civil society from around the Mediterranean convene in order to exchange knowledge, discuss public policies, and identify the solutions needed to address key challenges facing the Mediterranean region, thus furthering the "Mediterranean public good" debate. By acting as a center for technical excellence that links knowledge to operations and reforms on the ground, the CMI complements the work of the Union for the Mediterranean, Mediterranean research institutes, and other regional partners.
- The CMI places youth and gender at the center of its work by adopting youth and gender as cross-cutting themes. CMI themes systematically integrate youth and gender components, as part of the "Empowering the Population" dimension, and also in connection with the refugees and water agendas. In this context, the CMI Water Program aims to prevent water scarcity and to support adaptation to and mitigation of climate change effects in the Mediterranean by providing capacity-building and green entrepreneurship opportunities (targeting youth) revolving around water, as a way to leverage untapped potential in the region with positive socioeconomic and environmental outcomes.

- For context on water in the MENA (key figures and challenges based on 2017 World Bank Beyond Scarcity report), over 60% of the region's population lives in areas with high or very high surface water stress, compared with a global average of about 35%. Over 70% of the region's GDP is generated in areas with high to very high surface water stress, compared with a global average of some 22%.
- Increasing consumption, paired with undervalued water, inadequate Governance arrangements, and weak enforcement is leading to the depletion of water resources — especially groundwater—at an unprecedented rate. Of all the challenges the Middle East and North Africa region faces, it is least prepared for water crises.
- Water governance issues—in particular, the failure to create incentives that signal extreme water scarcity and promote water conservation— are the common denominator of water management in the Middle East and North Africa. Excessive consumption and resource depletion are the predictable consequences of undervalued water, weak governance arrangements, and inadequate enforcement.
- Countries that fail to achieve water security forgo potential growth, increase vulnerabilities to hydrological shocks, and may potentially compound social and political fragility. The MENA region has the greatest expected economic losses from climate-related water scarcity, estimated at 6–14% of GDP by 2050 (World Bank 2016).
- Opportunities and solutions based on 2017 World Bank Beyond Scarcity report include:
  - Technological and governance innovations – in the region and globally – are accelerating to meet an urgent need for action. Some of the most notable water management innovations in the world are being implemented in the Middle East and North Africa.
  - Public-private partnerships have also been implemented in the region to tackle the operational constraints of water utilities. The Middle East and North Africa has been the most active place in the world (along with China) regarding public-private partnerships in water management.
  - Engaging and educating civil society on water issues and water conservation is also crucial. Changing water management practices to ensure better service delivery and sustainability of water use requires changing the attitudes of individuals and government officials, as much as putting in place institutional incentives and arrangements.
  - Achieving water security means acting together, from the household level to the regional level. From a household water perspective, this means engaging women, who often have the main responsibility for using and conserving water. Women's rights, representation, and resource need to be acknowledged and addressed, both for social inclusion and for sustainable development.
- Why are women concerned with water? According to the 2017 World Bank *The Rising Tide* report on water and gender, over the past 20 years there has been a rising tide of social, economic and technological trends have lifted many boats but still too many have been left behind especially women and youth.

- Issues of equity and inclusion are currently center stage on the world's policy agenda. Ensuring that nobody is left behind has been a cornerstone of recent global agreements and commitments and closing gender gaps is among the most effective ways to make this ambition a reality.
- Women are most often the users, providers, and managers of water in rural households and are the guardians of household hygiene. If a water system breaks down, women, not men, are most likely to be the ones most affected, for they may have to travel further for water or use other means to meet the household's water and sanitation needs. Women have a strong incentive to acquire and maintain improved, conveniently located water facilities, since they often spend more time collecting water. Hence, women and girls tend to benefit most when water quality and quantity improves. Water is an arena where gender relations play out in ways that often mirror inequalities between the sexes. For instance, women's lower access to land is mirrored in their lower access to water-related natural resource assets.
- Youth and water in the MENA region: More than 28% of the population of the Middle East is aged between 15 and 29. Representing over 108 million young people, this is the largest number of young people to transition to adulthood in the region's history. Young people 15 to 24 constitute approximately 20% of the populations in Egypt, Iraq, Lebanon, Libya, Morocco, Oman, Sudan, Syria, Tunisia, Yemen, Jordan, Algeria, and Saudi Arabia (World Bank data).
- In the Arab countries' populations, young people are the fastest growing segment, some 60% of the population is under 25 years old, making this one of the most youthful regions in the world, with a median age of 22 years compared to a global average of 28.
- Stakeholder participation is at the core of effective water and sanitation management. Therefore, investing in an enabling environment for youth as key stakeholders in the water sector is a prerequisite to successful engagement and will ensure the achievement of SDG 6.
- In addition, young people have the potential to be effective agents of change. But unless the need is acknowledged to provide an enabling environment for youth to thrive in, this remains an empty catchphrase. The transition of youth from a target group to full partner lacks traction in many fields of the development domain, including water.
- The Center for Mediterranean Integration believes that it is essential to encourage youth engagement in water in the region to face the multiple consequences of water scarcity and unsustainable water management. In this spirit, CMI has facilitated and supported the launching of a youth network focusing on water in the Mediterranean region. The Mediterranean Youth for Water network was launched at the Center for Mediterranean Integration in March 2017, at the World Water Day Youth innovating with wastewater for a sustainable Mediterranean" regional youth workshop in Marseille. The MedYWat network gathers over 100 young water researchers, entrepreneurs and activists from the around the region to foment a common, regional approach to the region's most pressing water challenges while giving more voice to Mediterranean youth on the regional water agenda.
- In conclusion, an all-inclusive society engagement is essential for the achievement of water security (SDG 6) in the MENA region and this will only be feasible if we work in a holistic, participatory approach under the umbrella of the 2030 sustainable development goals while linking it to achieving SDG 5 (Gender) and SDG 17 (Partnerships).

## Professor Dr Fadia Kiwan

Director General, Arab Women Organization, Egypt

- Economic losses because of water scarcity and food insecurity are a main preoccupation of governments and decision makers in the Arab world. In 16 of 22 Arab states the access of individuals to water is less than 1000m<sup>2</sup> per year which is at the 'water poverty line'. In 12 states, it is lower than 500m<sup>2</sup> per year, according to the *Guidelines for the preparation of water strategies including climate change*, UNESCO, 2015.
- Women are directly concerned about this scarcity since most women in rural areas spend long walking hours to bring water and they usually have to bear it on their shoulders. In fact, women all over the world spend around 16 million hours per day to collect water, and 90% of collected water and wood is done by women's efforts alone (World Bank, 2010).
- On another hand, the international community expresses its concern about the low rate of Arab women employment: 21% compared to 48.6% as average in the world. The high rate of Arab youth unemployment is a real concern as well: 30.6% in 2016, compared to the world average of 13.1%.
- Climate change, armed-conflict and post-armed conflict vulnerability are deeply impacting the Arab population, among which women and girls are a majority. Many Arab states have been confronted with very critical situations because of armed conflicts and wars. Unfortunately, civil unrest and wars have not come to an end in many states, and people who live in exclusion and vulnerability are increasing day by day.
- In the early 2000s, many Arab states doubled their efforts to achieve the full enrolment of boys and girls in schools. Some States had to fill a gap between the enrolment of girls and boys. By the beginning of the second decade, many states did achieve equal access and a full enrolment. However, some of these states shifted to wars and armed conflicts since that time and the enrolment of both boys and girls declined dramatically and the priorities of their population became subsistence and the access to the basic needs.
- We should not ignore the issue of scarcity of water and the food insecurity because of the wider challenge of climate change. Neither should we ignore the anger of new generations who cannot find a job or ask ourselves why Arab women have such low representation in the labour market. But we have to add the vulnerability of people due to wars and armed conflict to our discussions and try to find a new non-conventional agenda to address all these problems in tandem.
- A comprehensive strategic vision among governments and international and regional decision makers are the only way to ensure effectiveness of any intervention, any action or any program. No one can act on his or her own, no one can work alone. This would be a waste of time and of resources.
- Women and girls are half of any population and they are a majority in any poor or deprived or excluded or displaced or traumatized population. Women are by essence, agents of social change, knowing their role in the family and in the local communities. They are a majority of workers in the rural areas and they are silent workers, mostly not counted in the national statistics.
- In view of these reflections, working with women and girls is a very good way to be effective on a multidimensional level and to ensure effectiveness of our actions. By implementing actions among women and girls, we will be investing in the future of any nation, providing education to women and girls, empowering them, training them to

develop their professional and vocational skills, supporting their higher education and the choice of scientific fields of specialisation are all ways to transform the whole society and to strengthen its capacities and develop its potential.

- The Arab Women Organization, being a specialised Arab intergovernmental institution working in close cooperation with the Arab League, is in the process of elaborating new programs addressing the main fields where cooperation may accelerate the progress of Arab societies as part of an agenda dedicated to women and girls in rural areas:
  - Developing the contribution of women in the rural economies.
  - Erasing alphabetical illiteracy, improving legal illiteracy among women, ensuring full school enrolment of girls in rural areas.
  - Raising awareness on climate change, on good management of natural resources, on Disaster Risk and Disaster risk management and reduction.
  - Initiating the use of technology in their lives and in their work, developing their vocational and professional skills.
- Two other programs to be launched by the AWO:
  - Supporting women and girls in vulnerable situations, mainly among displaced populations and in slums. Seven states are on the list of the coming activities in this program: Libya, Yemen, Palestine, Iraq, Jordan and Lebanon (focusing on displaced and refugees from Syria), and Sudan. AWO's aim is to provide support and focus on education and development of skills to facilitate women integration in the economy. The content of any activity is extended to awareness on climate change, management of natural resources, women health and care, technology and consolidation of the legal culture of people.
  - A youth program where a network of young men and women will be supported to organize activities in fields of their own concern: job opportunities, socio-economic requests and availability in different countries, social expectations, dialogue, conflict management and resolution, eradication of extremism and violence.
- Arab young people have become very sensitive to words and conferences and they expect concrete actions on the ground. Providing them with concrete support, education and empowerment is a small contribution to the efforts of justice restoration, peace building and sustainability in the Arab region.

### Dr Fares Braizat

Chairman, NAMA Strategic Intelligence Solutions, Jordan

- Significant changes in perceptions about women in politics and who makes better political leaders, and same changes with regard to business executives and gender. Overall an undercurrent more positive than many people would think in relation to women and their role in business and political life.
- However, who is entitled to a job when jobs are scarce across the board?



## Tessa Terpstra

MENA Regional Envoy for Water and Energy Security, Ministry of Foreign Affairs of the Netherlands, Jordan

- The world needs to prepare for a future of scarcity. The seriousness of climate change and its effects on our daily lives is mentioned time and again. For arid regions such as West Asia and North Africa, the effects will be even greater; this region will be hit twice as hard as elsewhere in the world. By the end of the century, in the MENA region, rainfall is expected to be 20% less. And the hottest days now will be the coolest by the end of the century. Due to these changes, people will move away in search of better places to live, meaning that the displacement and refugee witnessed today will be the new normal.
- A radical shift in water use is needed, as is technology and the right mindset. In most countries, agriculture is the largest water consumer with up to 85% of water consumption. This is where we need to start reducing our water footprint. In the MENA region 60 to 80 liters of water is used to grow a kilo of tomatoes, whereas in the Netherlands only 4 litres are used. This has to do with a whole set of measures: better irrigation techniques, precise crop selection, using greenhouses, and using very few pesticides and fertilizers.
- In Jordan the Dutch government works with EcoConsult on hydroponics, a technology using a minimal amount of soil and water. To help farmers produce more efficiently, the government is rolling out a large education and vocational training program in Jordan over the coming years, focusing on sustainable agriculture and water use, looking at alternative ways to traditional farming through innovation & technology.
- Another solution to focus on in view of climate change is the world's largest untapped water source: waste water. It is the only natural resource that increases as cities and populations grow. According to the World Bank, only 18% of the waste water is recycled in the MENA region, against 70% in high income countries outside the region. Imagine the huge gains from increasing waste water use in agriculture. Jordan stands out as a great example, reuse 60-80% of the water in the Jordan Valley. Jordan can lead by example.
- What is needed is the right mindset to use water wisely, as something that is scarce and precious. This is where women come in. Women are the main water managers in the family. They can set an example and teach their children to use water wisely. Change should come from women as leaders and the youth to make it happen. This is why the Netherlands, like many others, is focusing on education: €115million over the next five years for education worldwide.
- More needs to be done than education and introducing new technologies: we need to create jobs, green jobs building a sustainable future. We need to have entrepreneurs starting green businesses. And these entrepreneurs need access to finance. To name just a few examples:
  - Dutch social entrepreneurs of GreenfieldsCities are working with the governor and university in Mafraq to build a campus for 1500 young Jordanians and refugees, women and men, to learn and work on green solutions.
  - UNICEF has signed an MoU with the University of Science and Innovation in Irbid to develop a curriculum for water and sanitation. The Dutch Development Bank FMO has set up the Nasira Fund of €75million to lend to female, young and migrant entrepreneurs in the Arab region and Africa, to set up their own green business; and
  - With Sweden and Germany, the Dutch government is developing a fund for young entrepreneurs working on innovations for water, energy and food, called the Water-Energy-Food Challenge.

## 5.2 Panel Discussions

### Panel 1: Women and water governance in the MENA

*Panel Chair* **Esther Griffies Weld** Associate Banker, European Bank for Reconstruction and Development (EBRD), Jordan

**Susan Kilani** Assistant Secretary General for Laboratories & Quality Affairs, Water Authority of Jordan

**Lara Nassar** Regional SuSanA Coordinator (WANA Region), Bremen Overseas Research and Development Association, Jordan

**Israa Alassa** Deputy Coordinator of the Palestinian Water Authority Youth Committee, Palestine

- Panel shared professional and personal experiences of women and water governance in the MENA region and examples of how to overcome challenges.
- **Susan Kilani**, Assistant Secretary General for Laboratories & Quality Affairs, Water Authority of Jordan, has worked in the sector for thirty years and shared insight on the current situation in the context of the SDGs. The world today faces urgent environmental threats, which include water scarcity, climate change impacts and the loss of biodiversity. Poor governance and conflict today are further exacerbating the situation.
- The 2030 Agenda for Sustainable Development aims to respond to these challenges by adopting sustainable development as the overlaying principle for global cooperation on social inclusion, economic development and environmental sustainability. This comes with the commitment to reduce inequalities within and among countries, showcasing the clear demand for sustainable consumption and production patterns and ultimately “aspire for peace, fair governance and justice”.
- Key elements that underpin the SDGs:
  - Sustainable Development Goal 6 and its relation to Goal 8
    - Millions of water related employment positions ensure that water is made available every day for domestic use, ensure the treatment of waste water, and hence sustain food security through irrigation for agriculture.
    - Aiming to achieve water security includes creating meaningful jobs related to water and wastewater development and service provision.
    - Moving to achieve proper water governance is directly linked to sustainable economic growth.
  - Goal 6 and its relation to Goal 11
    - Sustainable cities are all about creating a society that can be a hub for ideas, innovation, science and productivity.



- However, the Syrian refugee crisis is exerting pressure on water supplies, sewage, the living environment, and public health. These challenges can be partly overcome by improving water governance and achieving SDG6 targets that help improve resource use and help reduce poverty.
- Jordan's National Water Strategy 2016-2025 includes:
  - Key interventions to improve water governance
  - Clarify responsibilities and accountabilities among water institutions
  - Improve financial sustainability mechanism
  - Improve regulatory framework through moving to independent regulatory entity with clear mandates
  - Increase women participation in governing water entities through ensuring women presentation in their Boards
  - Improve community participation in decision making process
  - Improve transparency through mandating information dissemination and accessibility
- **Esther Griffies Weld**, Associate Banker, European Bank for Reconstruction and Development, Jordan, emphasised the importance of building a community of knowledge sharing and cooperation among donors and financiers, in collaboration with national governance structures. Highlighting the importance of stakeholder contributions in enhancing the environments in which they are financing projects; enabling women to not only participate but to have equal influence on the governance of water resources and services is vital in protecting this essential resource.
- **Lara Nassar**, Sustainable Sanitation Alliance (SuSanA) coordinator at BORDA-WesCA argued that an enabling environment (family support and education) to give women space to lead and deliver youth with opportunities to engage is key to empowering women in water governance – luck has nothing to do with it, women's success has everything to do with the enabling environment and improved gender diversity in the sector.
- Gender inclusive water strategies in the region still present a gap between policy and practice. That is largely caused by the different social and cultural perceptions that these strategies were built on. Strategies are typically built on research and science originated from Latin America, Africa and Asia, but in the MENA regions culture and social norms are different. Therefore, these strategies will not necessarily work and will present implementation gaps.
- Having more women involved in the water sector and specially in managerial positions isn't impossible, and the MENA as a region could lead in this, but the major question according to Ms Nassar is: "Are women 'ready' to take the extra mile? Are we willing to push cultural and social norms?"
- **Israa Alassa**, Deputy Coordinator of the Palestinian Water Authority Youth Committee, Palestine, spoke about the role of Palestinian women in the water sector and the challenges facing Palestinian women. The situation in Palestine has created new ways of thinking about the role of women in all sectors, including the environmental sector. Palestinian women have needed to make decisions concerning the family and to earn a living in several areas, including agriculture, irrigation and livestock feeding.

- Palestinian women continue to face various challenges related to the workplace as working females and the community as female. These challenges are often associated with the social, cultural, economic and stereotypical aspects that neglect women's needs, priorities and opportunities in various sectors, including the water and environment sectors.
- Women have a high responsibility for water, which is mainly translated into water conservation, systematic maintenance of equipment types to prevent water loss, and many innovative ideas as women rely more heavily on modern irrigation techniques than men. With regard to measures to strengthen women's decision-making capacities in water projects, more emphasis is placed on training and awareness programs as Palestinian women do not mind participating or attending any water project activity.
- Panellists agreed that research and data in the Arabic language is very much needed but currently very much lacking, representing a major gap that could be filled through cross-border collaboration and international research exchange and partnership programmes. One of the most significant challenges in the field of the environment is the language issue and difficulties with terminology.

## Panel 2: Gender equity in sustainable agriculture and food production

*Panel Chair* **Dr Roula Khadra** Senior Researcher / International Officer, Land & Water Resources Management, CIHEAM-Bari, Italy

**Wafaa Al Dika Hamze** Former Minister for Parliamentary Affairs, CIHEAM Board Member, National Commission for Lebanese Women, Agriculture and Rural Development Specialist, Lebanon

**Laurent Debroux** Program Coordinator for AG, ENV, NRM and Climate Change, The World Bank, Lebanon

**Wafaa Ramadneh** Programme Officer Global Forum on Food Security and Nutrition, FAO Jordan

**Juan Antonio Sagardoy** Former FAO Senior Officer of the Land and Water Development Division, International Consultant (WB, EC, IDB, USAID, CIHEAM-Bari), Spain

**Dr Souha Gamri** PhD Water Irrigation Systems, Member of the Mediterranean Youth for Water Network (MedYWat), Tunis

- **Dr Roula Khadra**, (Senior Researcher / International Officer, Land & Water Resources Management, CIHEAM-Bari) briefed on the work of the International Center for advanced Mediterranean Agronomic Studies (CIHEAM) which has committed itself to "Combating Triple Waste (Knowledge and Know-how, Natural Resources and Energy and Food). Social and economic empowerment, education and capacity building, enhancement of women's and youth role in poverty reduction and crises prevention, are key items of the CIHEAM 2025 strategic agenda and Action Plan for the Mediterranean.

- Small-scale and family farming represents the vast majority of agricultural production. Small-holders, women and youth in rural areas are amongst the most vulnerable for hunger and poverty. Addressing these issues is fundamental for achieving the SDGs. Achieving gender equality and women's empowerment is integral to each of the seventeen SDGs.
- There is compelling evidence of the fundamental role of women within the agricultural sector, as much as there is awareness of their strong contribution in ensuring food security and nutrition at household and community levels. Despite their acknowledged contributions, policies and programmes have failed to target them properly.
- The modernization of the irrigation schemes is one of the most important programs targeting the MENA region. It entails the adoption of more valuable crops and opens a window to food processing and use of technologies. Mainstreaming gender and youth in these programs is fundamental to exploiting the opportunities provided for a key economic window to national development.
- In the context of emerging needs to increased food production to overcome the depletion of natural resources and the hazardous effects of climate change, more sustained efforts are needed to invest in the abilities of women and girls and to creating an enabling environment for them to equally participate and benefit from the changes in rural settings and livelihoods.
- Gender sensitive agricultural policies can play a strong role in closing the gender gap in rural societies, thus strengthening women's access to productive resources, rural services, infrastructure, advisory services and social protection. Focusing on "women only empowerment" is a risky strategy and will not lead to transformative empowerment. Holistic multi-dimensional empowerment is needed to link between the public sphere of women's life and her private sphere. It directly influences the household's division of labour and on the gendered social roles and power dynamics of both women and men.
- **Wafaa Al Dika Hamze**, Former Minister for Parliamentary Affairs, CIHEAM Board Member, National Commission for Lebanese Women, Agriculture and Rural Development Specialist, Lebanon, shared insight into the female face of farming in Lebanon and the need for further engagement of women in Lebanese political life to push forward legislative reform that makes female and youth empowerment possible.
- 2018 marked the 62nd session of the UN Commission on the Status of women, where the world commitment to achieve gender equality and the empowerment of rural women and girls was reaffirmed and the international and regional instruments and frameworks on human rights and women's rights including CEDAW, Beijing Platform for action and ICPD and SDGs were reiterated. In its agreed conclusions, the Commission also recognized the central role and contributions of rural women to enhancing sustainable agriculture and rural development. It also confirmed that gender inequalities in rural communities and agriculture sectors still prevail with multiple and intersecting forms of discrimination and marginalization against rural women and girls.
- Recognizing continued efforts and advancements at many levels many questions are put forward today after decades of continuous commitment and activism. Are we using the right approaches to empowering women? Were we able to combat patriarchal systems

and social norms? Have we succeeded in bringing women's issue particularly marginalized women in rural and remote areas as a priority on national agendas? Have we been able to trigger women's awareness to their own rights? What about the existing gender gaps in wages, the discriminatory family laws and practices including inheritance laws, access to and control over land and resources, early marriages and its impact on educating young girls, and above all violence against women and girls in all its forms.

- For the last seven years violent extremism and terrorism have been the biggest threats to women's advancement and to achieving gender equality. The situation is further aggravated with the pre-existing social norms that limit women's agency. Not to underestimate the protracted crisis causing the highest influx of migrants and refugees in the region and its impact on many countries including Lebanon hosting the largest number of refugees per capita that reached more than 1.5 million.
- As such making a change is a complicated task, and women's advancements and gender equality becomes even more complicated but not impossible. A main characteristic of women empowerment is their presence in decision making positions and to what extent they affect policies. Arab women nowadays comprise 17.5 % of parliament seats but creating the enabling environment to achieve gender equality and eliminate discrimination is still at very slow pace. More than 10 Arab countries have enacted laws against gender-based violence including Lebanon but the levels of domestic violence crimes and sexual harassment is accelerating in both the public and private spheres, in both rural and urban areas (reaching 70% in some countries).
- Closing the gender gap in education in many Arab countries was unfortunately not reflected in females increase in the work force - Lebanon ranks the highest in the Arab region in university enrolment rates for both boys and girls but women contribution to the economy doesn't exceed 27%. Although Lebanon is one of the first countries in the Arab region to accord women rights in politics since 1953, to date women continue to be excluded from the Parliament (4.6%), the cabinet (3.3%) as well as from local governance (5.4%). Building on increased societal awareness and investing in women's self-empowerment has become crucial - the sharp increase in female candidates in the last Lebanese parliamentary elections of May 2018 is a vivid example of women's eagerness to engage in politics (111 females).
- However, what is much more crucial than the normative frameworks is building on women's existence in productive sectors, in agriculture, trade and economy, in finance through elimination of technical, structural and social barriers. Despite the acknowledged contributions of women in the agriculture and food sectors, policies and programmes have failed to target them properly. In the context of emerging needs to increase food production to overcome the depletion of natural resources and the hazardous effects of climate change, sustained efforts are needed to invest in the abilities of women and girls and to create an enabling environment for them to equally participate and benefit from the changes in rural settings and livelihoods.
- 43% of women make up the agricultural labour force. Women farm workers are paid 43% less than men. Only 9% of farms are headed and operated by women, and only 9% of total agricultural lands are cultivated by women. Cooperatives in artisanal products, agriculture and food processing are a flourishing sector in Lebanon. Women cooperatives account

for 9% of the total cooperatives (1350 registered coops) ie. 96 women coops with a total of 1202 female members with a focus on crop and livestock-based produce, bee-keeping, fisheries and crafts and other artisanal products. Rural women mostly organize themselves in agri-processing, marketing and rural artisanal produce organizations although there are notable marketing constraints and leadership challenges.

- Gender sensitive agricultural policies can play a strong role in closing the gender gap in rural societies, thus strengthening women's access to productive resources, rural services, infrastructure, advisory services and social protection. A holistic Multi-dimensional empowerment is needed to ensure linkages between the public sphere of women's life and her private sphere. It directly impacts the household's division of labor and on the gendered social roles and power dynamics of both women and men.
- *Enhancing gender mainstreaming for sustainable rural development and food security* (a regional project in 6 Arab Countries) aims to:
  - Address the role of women in specific value chains in agriculture and food production.
  - Foster multidimensional empowerment merging awareness of women's rights and political empowerment together with social and economic empowerment.
  - Enhance the Ministry of Agriculture's technical capacities and awareness on GEWE in sustainable agriculture/rural development.
- NOWARA (a specialized governmental program established in 2008) is adopting a multidimensional approach to women's empowerment in rural areas through:
  - **Social and cultural:** Promoting women's agency, addressing the structural root causes of discrimination and conducting campaigns engaging students and school teachers.
  - **Economic:** Creating spaces and places where women's voices can be heard and importantly, securing the involvement, endorsement and contribution of men.
  - **Institutional:** Generating knowledge and credible research.
- **Laurent Debroux**, Program Coordinator for AG, ENV, NRM and Climate Change, The World Bank, Lebanon, reiterated that the goal of gender equality by 2030 is priority for all of us. When countries value girls and women as much as boys and men, when they give greater opportunities to participate in their economy, manage income, the benefits extend way beyond to societies and economies at large.
- Gender is a corporate priority for the World Bank across all sectors to help mainstream gender throughout all its business. The World Bank work in the MENA region is informed by a specific Regional Gender Strategy which aims to enhance economic and social inclusion for peace and stability in MENA. Gender also guides World Bank support for agriculture - in all Client countries through using both men's and women's capacity and talent by giving equal opportunities for both groups to participate will ultimately strengthen projects performance.
- Information technology and innovation is good in itself but so is good economic policy for creating stable families and stable societies, especially important in MENA. In 2015, the

World Bank adopted a gender strategy identifying specific targets for gender in projects, and tracks female labor force participation, unemployment and financial inclusion. The strategy built on 3 pillars:

- Renewing the social contract; removing constraints for more and better jobs (women make 30% less than men for equal work – women must have equal access to jobs. Removing barriers to women's access to land ownership, bank accounts, and access to credit
  - Resilience to Internally Displaced People/Refugee shocks; closing gaps in human health (across the World Bank portfolio, it is investing \$3 billion dollars globally). Preventing gender-based violence (for example, the Democratic Republic of Congo recently asked World Bank for support in this)
  - Recovery and reconstruction; enhancing women's voice and engaging men and boys. Women participating in decision making.
- Regional action plans for the MENA region focusing on women's economic empowerment - in the MENA region, only 18% of GDP comes from women compared to 37% worldwide. In the future, the MENA region will need to create 300 million jobs. Women, young people and the refugee communities need to be included as the primary contributors to and beneficiaries of successful job creation strategies and initiatives.
  - **Wafaa Ramadneh**, Programme Officer Global Forum on Food Security and Nutrition - Jordan, Food and Agriculture Organization of the United Nations (FAO - specialized agency of the United Nations that leads international efforts to defeat hunger with emphasis on quality of food and not just access to it), outlined the FAO's strategic objectives:
    - **SO1:** Help eliminate hunger, food insecurity and malnutrition
    - **SO2:** Make agriculture, forestry and fisheries more productive and sustainable
    - **SO3:** Reduce rural poverty
    - **SO4:** Enable inclusive and efficient agricultural and food systems
    - **SO5:** Increase the resilience of livelihoods to threats and crises
  - Capacity building is key and more investment in women in agriculture is urgently needed if they are to have proper access to resources and play their rightful roles in food security.
  - FAO has provided families with soilless hydroponics gardens and the training to teach them how to use the gardens for several reasons. Apart from the fact that the gardens are extremely efficient in their use of space, they are also suitable for areas that are scarce in their water resources, because they save more water than potted plant gardens. It is because of their resource efficiency that hydroponics are utilized in the confrontation of the effects of global warming.
  - Wafaa Ramadneh briefed on the FAO project to improve and diversify food consumption for the most vulnerable Syrian and Jordanian households living in Al Mafraq and Irbid through increased availability of nutrient-rich food and enhanced knowledge and adaptation of optimal nutrition practices through:



- Formulate and implement throughout the project technical training on: i) land preparation and planting; ii) irrigation; iii) fertilization; iv) pest management; v) establishing hydroponic systems and vi) hydroponic cultivation and monitoring.
  - Formulate a training calendar.
  - Develop a manual for the construction of hydroponic equipment.
  - Contribute to the formulation of pre- and post-training assessments for all trainings and support the analysis of the data collected.
- Today, agriculture and food systems face an unprecedented array of challenges. The global population is growing amidst persistent and emerging economic, environmental and social concerns. These include price volatility, market insecurity, conflicts, protracted crises, mass migrations and more, all of which are exacerbated by rapid urbanization, shifts in dietary patterns and livelihood systems, natural resource depletion and climate change. Faced with these challenges, it is more important than ever that the agriculture sector perform to its full capacity, while also becoming more efficient, inclusive and sustainable. FAO recognizes that in order to achieve this, the persisting inequalities that effect the underperformance of agriculture in many countries must be addressed.
  - According to **Juan Antonio Sagardoy**, Former FAO Senior Officer of the Land and Water Development Division, International Consultant (WB, EC, IDB, USAID, CIHEAM-Bari), Spain, the identification of gender gaps in irrigated agriculture to develop gender inclusive plans is fundamental. Juan Antonio Sagardoy co-authored "Passport to Mainstreaming Gender in Water Programs", designed to assist field staff and professionals in addressing gender issues during planning, implementation and management of agricultural water management projects and programmes and make informed choices to ensure sustainable and equitable interventions. The guide contains a large number of questions organized in six sections, namely: 1) Access to land and water; 2) Farming context; 3) Multiple use of water; 4) Management of irrigation systems; 5) Water distribution, irrigation practices and maintenance; 6) Environmental issues.
  - Reference was made to the GEWAMED (Mainstreaming Gender Dimensions into Water Resources Development and Management in the Mediterranean Region) Project financed by the EC and executed by the CIHEAM-Bari during the period of 2006 to 2011. The project played an important role in developing and collecting gender disaggregated information, that at the time was very scant, creating awareness of the gender problems and mobilizing gender concerned organizations to undertake gender equality programs. During the implementation of the GEWAMED project field surveys were undertaken to identify the most critical issues that affect women and men engaged in irrigated agriculture. Towards the end of the project the need was felt to develop guidelines to undertake quick gender field surveys and as result the publication: "Passport to mainstreaming gender in water programmes" was jointly prepared by FAO, Gender and water Alliance (GWA) and the GEWAMED Project.
  - Juan Antonio Sagardoy emphasized that any program or project that aims to improve the living conditions of women and men in the irrigated agriculture needs to be based in a clear identification of the problems that affect men and women as productive farmers but also within the household. Access to land and water remains a key issue since women owners of the land are between 2- 7 % for most countries of the MENA region. But even when they are owners, their access to practice irrigated agriculture is often limited by

social norms. Some successful initiatives in allocating land to women are taking place, for instance in the New Lands of Egypt, but much more need to be done. The fact that many men are now migrating to towns offers a new generation of women farm managers that unfortunately see their producing capacity limited due to lack of training and access to productive resources. Production and living standards of these women could be improved much if these constraints would be removed.

- Women's access to governing bodies of Water Users Associations (WUAs) is very limited due to their restricted representation as water users but alternative solutions (fix quotas, two water users for each piece of land, women water users' committees, etc.) are being tried out in several countries with interesting results. The important issue is that the access to irrigation water by women farmers is guaranteed and enforced strictly.
- Juan Antonio Sagardoy emphasised the importance of carrying out Gender Needs Assessments (GNA) to ensure that new opportunities do not add more work to women without any compensation. For this purpose, it is important to know first if women under their present tasks (farming context) have any free time for anything else. When this is the case, additional work must be fully compensated and equal pay practiced. The multipurpose nature of water is highly evident in the rural context and therefore projects must also be multipurpose to attend these multiple water needs, which are particularly important for women, moving away from projects strictly addressing a single use.
- Irrigation modernization programmes are among the largest ones in the Mediterranean Region and offer new opportunities for increasing production, saving water and reducing the amount of work that men and women dedicate to this activity. On farm irrigation modernization may also lead to more intensive and productive crops. Women may, as result, have greater opportunities to be engaged in more productive activities and particularly in value added chains provided that the required training and access to productive means is provided. Without them, it is very difficult to upgrade agriculture production and transformation of products.
- **Dr Souha Gamri**, PhD Water Irrigation Systems, Member of the Mediterranean Youth for Water Network (MedYWat), Tunis, sees field vision and the need to analyse the success and shortcomings of technology implementation in the field as key to achieving gender equity in sustainable agriculture. Dr Gamri has worked on water management, specifically waste water use, and finds that men make the decisions and manage the irrigation systems whereas women are involved in manual work in the field, so there is a looming gender gap in the agricultural sector.
- The 'feminisation of agriculture' also means that women are doing the lion's share of work as many men have migrated away. Nevertheless, women are still primarily the producers and not the owners of agricultural land. Technology is key as it can mainstream best practices and efficiencies as well as empower women through the attainment of new skills that power and manage these new technologies.
- Another aspect that needs to be addressed is the pitiful remuneration offered to female social scientists and researchers working in the field (typically around 3 Jordanian dinars a day) with 3-year constraints tied to loans and grants by lending organisations.
- In summary, the panel agreed that institutions are a critical dimension of sustainability and that knowledge about the gender situation in the different Mediterranean countries



is still very scarce. General figures are available, but specific information in the field and ethically sourced and usable data is still very much missing. This data is urgently needed to inform and improve inclusive gender projects and to generate workable data that can be used to address gender issues related to agriculture. Special attention is needed to ensure that any agriculture development project, and in particular those concerned with irrigated agriculture, have adequate gender components that have resulted from the identification of the gender needs at the field level.

### **Panel 3: Building youth capacity to address water scarcity challenges in the Arab water sector through entrepreneurship and social enterprise**

*Panel Chair* **Montgomery Simus** Co-Founder AquaShares Inc, Senior Fellow, Harvard Advanced Leadership Initiative 2015 – 2017, Board Member, Bayat Foundation (Afghanistan), United States

**Dr Amal Talbi-Jordan** Lead Water Resource Management Specialist, The World Bank, Lebanon

**Kholoud Al Ajarma** Programs Manager Lajee'oun Center and Member of the Mediterranean Youth for Water Network (MedYWat), Palestine

- Monty Simus**, chairing Panel 3, shared insight on a new 'share economy' platform to buy and sell water savings that he has piloted in Sonoma, California and in Marrakesh, Morocco. Just as Uber or Airbnb relieve scarcity of transport and lodging from the current inventory of cars and homes, AquaShares leverages web/mobile markets to 'crowd-source' water from within the urban system. Rather than compete or disrupt regulated or public entities, trading aligns the interests of supply-side providers and demand-side users through voluntary incentives, making the utility stronger.
- AquaShares integrates centuries-old lessons from traditional self-organizing water systems – Persian qanat, Balinese subak, Spanish huertas, Arabian aflaj, Southwest acequias – which harness self-interest to maximize equitable and efficient outcomes. A similar adaptive, bottom-up approach customizes allocation formulas to each local water system, empowering metered accounts (including the utility itself) to 'earn, own and trade the water you save.'
- Formerly resistant stakeholders now demand and use advanced meters, find and fix leaks, reduce needless waste, and invest in tools like efficient toilets, taps, and rainwater harvesting that lower their water footprint. Recent AquaShares transactions record how some residents and businesses have slashed usage 1,000 liters per meter per day, selling their savings at a current market value of \$0.91.
- That outcomes-driven price is, interestingly, less than a) the energy costs to pump the same amount, and b) less than the input cost of the utility's rebate programs. Also, since 11-35% non-revenue water losses (NRW) often make a supplier one of its own biggest water "consumers" AquaShares introduce new and stronger economic incentives for the utility to address NRW at scale with small investments.

- The voluntary online platform meets private needs in ways that restore public trust. Rather than escalate the 'us versus them' dichotomy that makes districts unilaterally ration, restrict, and raise rates on others (leading to a volatile death spiral of lost revenues), AquaShares' incentives encourage gradual transparent negotiations where parties plan from a secure baseline, then innovate in a competitive race to conserve.
- **Dr Amal Talbi-Jordan**, Lead Water Resource Management Specialist, The World Bank, Lebanon, briefed the conference participants on World Bank initiatives to cultivate the MENA region's youth to drive innovation and social enterprise:
  - **World Bank Youth Innovation Fund:**
    - Grant awards to young staff
    - Channel ideas and innovation
    - Design and implement development projects
  - **Nile River Basin Initiative Internship Program:**
    - Engaged youth to work on complex, multi-sectoral problems of the eastern Nile
    - Flood monitoring and forecasting applications to web-based information systems
    - 11 batches and 21 universities
  - **World Bank Youth Innovation Fund:**
    - Encourage and support peer-to-peer interaction
    - Exposure to real-life examples from the social entrepreneurial world
    - Collaborative thinking and networks
    - Internships and apprenticeship opportunities
    - Supports social enterprises in contributing to development goal
- **Kholoud Al Ajarma**, Programs Manager Lajee'oun Center and Member of the Mediterranean Youth for Water Network (MedYWat), Palestine, shared the need for youth to engage in water saving campaigns and initiatives, and to participate directly in the organisation of these initiatives. The availability of fellowships and scholarships for young people aspiring to careers in science and water conservation could be made more readily available through public-private partnerships. In addition, breaking stereotypes surrounding youth. True that youth are tomorrow's leaders, yet this future starts NOW and they should be considered as key actors in the present. There is a need to have a youth voice in every aspect related to water governance and management. Youth all around the region (including members of the MedyWat network) are developing solutions to water issues. Therefore, we should create platforms for youth and children education, activism in the water field and enable more democratic systems in which the abilities of young people thrive.

## **Panel 4: Building capacity for women and youth in the Arab water sector through 'smart' technology and edtech innovation**

*Panel Chair* **Reem Najdawi** Executive Director, ESCWA Technology Centre, Lebanon

**Dr Rana Dajani** Rita Hauser Fellow, Radcliffe Institute for Advanced Study, Harvard University; Associate Professor Molecular Cell Biology, Biology Department, Hashemite University; Founder of We Love Reading, Jordan

**Dr Aida Al Awar** PhD Environmental Sciences ('Funding intervention projects in the water and sanitation aid sector: Success by Design'), Imperial College London, United Kingdom

**Dr Lahbib Latrach** Founder & CEO of Green WATECH, young water entrepreneur and winner of the CMI 2018 Water Heroes Contest, Member of the Mediterranean Youth for Water Network (MedYWat), Morocco

- **Reem Najdawi**, Executive Director, ESCWA Technology Centre, Lebanon, chairing Panel 4, opened the session with the key point that we can no longer address the continuous challenges facing the Arab region without innovative science and technology – especially green technology – for advancing sustainable development, productivity and economic development.
- The 2030 Agenda for Sustainable Development (SDGs) adopted in September 2015 highlights the important role of science and technology in addressing current critical world challenges.
- ESCWA is working to influence change that can improve the lives of millions of people. It is one of 5 UN Regional Commissions with HQ in Beirut and promotes integration of sustainable development in the region as an intergovernmental and impartial platform, facilitating regional dialogue and international cooperation. ESCWA has three key roles:
  - As the voice of the region
  - As think tank
  - As advisor to member countries
- ESCWA Technology Centre established in 2010 and hosted by the Government of Jordan at the Royal Scientific Society (RSS) and supported by RSS and the Higher Council for Science and Technology. ESCWA has implemented a number of regional green technology-related projects, namely:
  - the project on "Building Capacities in Developing Appropriate Green Technologies for Improving the Livelihood of Rural Communities in the ESCWA Region";
  - the "Regional Initiative for the Assessment of the Impact of Climate Change on Water Resources and Socio-economic Vulnerability in the Arab Region (RICCAR)";

- the Project on “Strengthening national capacities on developing green production sectors, which led to the creation of Green Help Desks in 6 ESCWA Member Countries”;
- the project on “Establishing National Technology Development and Transfer Systems in select ESCWA member states” (Egypt, Tunisia, Lebanon, Morocco and Oman), which aims to enhance national innovation system capacity through reviewing current legislation related to science, technology and innovation, as well as through the establishment of National Technology Transfer Offices (NTTO).
- The 30th Ministerial Session of UNESCWA, convened in late June 2018 under the theme of “technology for sustainable development in the Arab region,” highlighted the need to seize upon the “Fourth Industrial Revolution” and leverage productive gains toward meeting the SDGs in an equitable and participatory way.
- Recent data available for ten Arab countries reveal that women represent between 34% and 56.8% of tertiary graduates in science, engineering and agriculture which is a relatively high ratio (UNESCO Science Report: Towards 2030). However, while the number of female graduates from science, technology and engineering fields exceeds that of men in certain countries of the Gulf such as KSA, UAE and Oman as well as in Tunisia, Jordan and Palestine, less than one third of the total labour force is composed of women in these countries (UNESCO Institute of Statistics).
- The difference in women’s high levels of academic attainments in the scientific specializations and actual participation in the labour force can be attributed to social perceptions which associate the suitability of certain employments to either women or men and addressing the societal and cultural barriers would foster major social and economic benefits for Arab States.
- In the Arab region, the gender gap in water governance is linked to the division of gender roles which allocate many water-related responsibilities to women and young girls but vests the control and decision making to men.
- A considerable portion of women in the Arab region are employed in the agriculture sector, (Egypt: 40 percent; Iraq: 44 percent; Mauritania: 84 % Sudan: 46 % and Yemen: 57 % of women employed in the agriculture sector) (ILOSTAT database). This high share of female employment in agriculture is in stark contrast with their limited ownership of land, access and control over water resources as well as other means of agricultural production.
- Women and young girls are most often in charge of collecting water from distant water wells and managing the increasingly scarce water resources at the household level; hence, the scarcity in water resources in the Arab region which is further compounded by the impact of climate change and is disproportionately affecting women. Displacement due to armed conflicts and the associated water insecurity disproportionately affect women and children.
- Nevertheless, women are underrepresented in governing boards of water authorities and water regulating bodies and other community-based water organizations. Participation in professional networks can support the engagement and visibility of women in the water sector. The technical and capacity building activities offered by the Arab Integrated Water

Resources Management Network (AWARENET) housed at ESCWA provides one such opportunity.

- **Dr Rana Dajani**, Rita Hauser Fellow, Radcliffe Institute for Advanced Study, Harvard University; Associate Professor Molecular Cell Biology, Biology Department, Hashemite University; Founder of We Love Reading, Jordan, structured her intervention around four key factors:
  - **The youth bulge as an opportunity:** Highly educated but unemployed / underemployed youth population in the MENA – how do we harness that energy? By building their capacity and equipping them with skills and tools to allow them to keep learning all throughout their lives. Since unemployment is high for lack of traditional jobs, young people have to come up with innovative ways to create their own jobs.
  - **Building capacity and lifelong learning:** Being in the field and understanding needs on the ground is vital. Individual interaction is still important as technology is not available everywhere and internet access is not universally available.
  - **Social and cultural community building:** We need to help them understand that the learning and education they have acquired should be used beyond the classroom to serve the community to solve the challenges around them.
  - **Storytelling and role models:** In order for our youth to be inspired we need to show case role models from their community. The best way of sharing and learning is through story telling. Therefore, we need to write our stories to share from one generation to the next. Everyone is unique and has a unique perspective to share with the world.
- **Dr Aida Al Awar**, PhD Environmental Sciences ('Funding intervention projects in the water and sanitation aid sector: Success by Design'), Imperial College London, United Kingdom, focused her contribution on the place of youth in the water sector, and specifically women. The Arab region is one of few regions in the world where the percentage of female students in STEM is equal or even higher than their male counterparts. Yet this does not translate to the workforce. There are many reasons why women do not go into employment (in STEM or other disciplines), but lack of opportunity should not be one. The water sector and the STEM sectors at large need to make more room for women, and particularly young women. Dr Aida noted that this had been a recurring theme at the conference, reinforcing the fact that half of the MENA region's intellectual resources (women, or even more if including unemployed youth) are being lost or wasted. Dr Aida concluded that the need for more opportunities for women and youth is still extremely prevalent, and youth engagement is vital.
- **Dr Lahbib Latrach**, Founder & CEO of Green WATECH, young water entrepreneur and winner of the CMI 2018 Water Heroes Contest, Member of the Mediterranean Youth for Water Network (MedYWat), Morocco, shared insight on rural sanitation and best practices from the MENA region.
- There are 2.64 billion people around the world who do not have access to adequate and safe sanitation. More than 800 children die each day due to preventable water and sanitation-related diarrhoea diseases. In Morocco, 15 million people (or 32,000 villages) suffer from the pollution caused by direct rejection of wastewater impacting population health, contamination of potable water, and pollution of the environment.

- Best sanitation practices in the MENA region employ a participatory approach, retain government engagement and endorsement, are socially acceptable and technically appropriate, and aim to:
  - Create jobs
  - Protect the environment and natural resources
  - Reuse treated wastewater
  - Develop capacity building and mobilisation
  - Focus on women
  - Engage youth population
  - Deliver educational impact

## Panel 5: Impact of water scarcity in the MENA refugee and internal displacement crisis

*Panel Chair* **Patrick Daru** Senior Skills and Employability Specialist & Coordinator for Amman Decent Work Country Programme, International Labour Organization, Jordan

**Dr Samuel Rizk** Manager, Sub-Regional Response Facility (Syria Crisis), United Nations Development Programme

**Kholoud Al Ajarma** Programs Manager Lajee Center, Member of the Mediterranean Youth for Water Network (MedYWat), Palestine

- **Patrick Daru**, Senior Skills and Employability Specialist & Coordinator for Amman Decent Work Country Programme, International Labour Organization, Jordan, chairing the panel, observed that as so many conference participants were involved in hydroponics projects, a technical meeting should be organised in this area as a follow up to the conference to build on expertise and leadership from the MENA region.
- Innovation should be co-ordinated in clusters and not on an individual / farm by farm basis (availability of research in the Arabic language and sectoral cluster data pertinent to the region is key). Specialised research should be conducted into women's role in innovation and in displacement crises where women typically take the lead in facilitating positive change and progress as part of reconstructive strategy.
- According to the ILO, 10,000 refugees and Jordanians have been certified for the construction sector for skilled and semi-skilled work. A lot of work is intensive and tackling labour shortages, especially in infrastructure works, through programmes for roads and agriculture. 13% of infrastructure work has benefited women.
- **Dr Samuel Rizk**, Manager of the Sub-Regional Response Facility for the Syria Crisis at the United Nations Development Programme (UNDP), shared the approach of the UNDP Sub-Regional Response Facility (SRF) as well as the efforts by the partners to the Regional

Refugee and Resilience Plan (3RP), co-led by UNCHR and UNDP, in addressing water issues in the context of the Syria crisis, which resulted in more than 5.6 million refugees and more than 6 million IDPs.

- He illustrated the commitment of the 3RP's WASH Sector partners and the successful examples to tackle the challenges related to access to water both at the level of refugee camps and host communities. Dr. Rizk also highlighted some of the difficulties encountered by the 3RP partners, such as the chronic plan's underfunding – especially in some sectors like livelihoods – which has implied falling short in reaching people in need and build resilience.
- He concluded by affirming that the way forward to address water scarcity and enhance access to water, whether in protracted crisis context or not, is to build more resilience capacities at individual, community, and institutional level, therefore laying the ground for sustainable water resources management and service delivery that respond to the needs of the most vulnerable in the community and genuinely leaves no one behind.
- **Kholoud Al Ajarma**, Programs Manager Lajee'oun Center, Member of the Mediterranean Youth for Water Network (MedYWat), Palestine, described inspirational projects featuring hydroponics on garden rooftops led by youth in refugee camps. It is imperative to reframe focus on refugee development programmes as not being based on neediness but seeing refugees as talented, educated and motivated individuals who can bring a wealth of experience and skills to sustainability projects and initiatives as well as to entrepreneurship.
- Coming from a refugee back ground, Ms Al Ajarma spoke during this panel about her experience growing up and working in Aida Refugee Camp, Bethlehem, Palestine. Among refugee communities, women often take the lead to insure access to water for their families and the hardships of Palestinians are compounded by the limited access to water that people in refugee camps have to endure. Water scarcity, food insecurity and future environmental stability in the region are challenges that can be overcome or mitigated through multi-level engagement and dialogue and women and youth can take a leading role in insuring a better future in the water field.



## Panel 6: Reflections on water scarcity, sustainability, environmental and development challenges in the MENA region

*Panel Chair* **Asma Bachikh** Former President, Water Youth World Parliament, Morocco

**Dr Janette Uhlmann** Senior Operations Officer, Center for Mediterranean Integration, France

**Malak Issa** Acting Head of Design Review Section / Technical Affairs Directorate, Palestinian Water Authority, Palestine

**Dr Hussam Hussein** Postdoctoral Researcher at the University of Kassel (Germany), Vice-Coordinator of the Mediterranean Youth Water Network, Jordan

**Maha Al Salehi** Water professional (EMWIS, MedYWat Member) and Youth Activist, Yemen

- Dr Janette Uhlmann**, Senior Operations Officer, Center for Mediterranean Integration, France, summarized initiative outcomes and shared that the conference had gathered such significant interest in the interlinkages of the Water-Women-Youth agenda in MENA. The conference had discussed the water sector from a particular Women and Youth perspective and promoted attention to the Water demand side dimension. The Jordanian government had expressed wide support to the agenda and to both youth and gender mainstreaming in the Water sector. It identified needs to deepen the exchanges and to expand the promotion of gender- and youth sensitive work supported by evidence-based research and data.
- Conclusions emphasized the need for continued efforts to increase Women and Youth engagement involving various levels through: strengthen inter-generational linkages for learning and professional support; support expanding interregional linkages learning across countries; better understand and address behavioral attitudes which (still) limit an increased engagement of women in the water sector; target also the local level in the field (in complement to the policy level work), ensure a space for Water youth to engage and support their contributions to the policy agenda.
- Dr Uhlmann called for stronger ties between CMI, AIWF and regional partners on the themes of Women, Water and Youth: partnership between AIWF and CMI was strengthened including possible future collaboration on gender and sustainable development questions in MENA. The MedYWat network facilitated by CMI had contributed significant technical contributions and received recognition for enriching the conference with youth-based technical perspectives.
- CMI announced the upcoming CMI World Water Day (WWD) focused on "Water & Migration" in March 2019. Every year, World Water Day draws the world's attention to key global water issues. World Water Day 2019 will focus on Water and Migration. Youth has an important role to play in working towards regional water security and increased water awareness. Young people are involved in innovative water-related projects and research around the Mediterranean and are key to securing a more sustainable water

future in the region. Youth also has an essential role to play in creating a more inclusive Mediterranean for migrants and refugees. CMI invited all conference partners and participants to contribute.

- Proposed recommendations from CMI included:
  - Greater support for regional partners in strengthening youth agenda across sectors with a focus on CMI's expertise in youth engagement in water
  - Reinforcing the CMI's facilitated MedYWat network in Jordan in order to follow up on some of the conference key outcomes
  - Sharing the outcomes of the conference with World Water Day participants and using some of its conclusions as a stepping stone for building the World Water Day workshop program
- **Malak Issa**, Acting Head of Design Review Section / Technical Affairs Directorate, Palestinian Water Authority (PWA), Palestine and PWA Youth Committee Representative, outlined main challenges in Palestine with focus on gender and innovation. Palestinian youth and women are real innovators with lots of potential ideas and capacities. Ideas already exist for implementation.
- Water scarcity is defined as the lack of sufficient available water resources to meet the demands of water usage within a region. Water scarcity is driven by two converging phenomena: growing freshwater use and depletion of usable freshwater resources. Water scarcity can be a result of two mechanisms, and Malak Issa reports that Palestine is impacted from both:
  - physical (absolute), which is a result of inadequate natural water resources to supply a region's demand
  - economic which is a result of poor management of the sufficient available water resources.
- Water scarcity driven factors are:
  - Demand: when demand is higher than the availability
  - Population Growth: pressure on the amount of water leading to per capita water shortages
  - Climate: extreme events (flash floods and droughts) which result in economic and social losses
  - Pollution: as water quality can degrade to the point that it is unusable.
- Political situation is considered a key element for water scarcity in Palestine (the 1993 Oslo Peace Agreement allocated 80% of the water pumped from the mountain aquifer to Israel and only 20% to the Palestinians). More than 97% of the Gaza aquifer is not suitable for drinking purposes.
- Water security defined as the ability to access sufficient quantities of clean water to maintain adequate standards of food and goods production, proper sanitation, and sustainable health care.

- Less than 5% of agricultural holders in many countries in Northern Africa and Western Asia are women. Only 16% of national water resources plans mention women as key stakeholders or primary participants in climate adaption. According to FAO 47% of the irrigation labor is carried out by women. Women comprise an average of 43% of the agricultural labor force in developing countries. In rural India and Africa, more than 30% of women's daily energy intake is spent just on fetching water.
- Malak Issa outlined the specific challenges in Palestine:
  - Ongoing occupation and inequitable allocation and control of water resources
  - High rate of population growth, 3-3.5%
  - Overexploitation and Pollution
  - Climate change and Drought
  - NO reliable shared management of Transboundary Water Resources
  - Educational public awareness
- In agriculture, Malak Issa reports that Palestinian women play large roles in almost all activities including farming, planting, irrigation, livestock feeding and medication. Women's contributions in the water sector regarding domestic and productive uses of water are still not efficiently documented and their innovative ideas and practices in water / environmental institutions are not encouraged.
- Best practices, strategies and solutions of the PWA include:
  - Awareness projects related to water sector implemented by the PWA in partnership with other parties, targeting students at school (the next generation)
  - Providing scholarships for MA and PhD offered by the PWA which creates opportunities for young people to continue their higher studies and specialize in the water and agricultural sectors
  - Youth committee in water sector established under Water Security Development Program – WSDP. PWA youth committee is composed of a multidisciplinary group of up to 15 young professional experts.
- **Maha Al Salehi**, Water professional (EMWIS, MedYWat Member) and Youth Activist, Yemen, participated via video link due to restrictions on travel for Yemeni citizens. Freedom of movement for Arab citizens both within the region and internationally continues to present a serious restriction on women advocates and academics alike, because of the legal requirement for a guardian to approve or accompany her on the travel. Reference was made to the UNDP *Arab Human Development Report 2016: Youth and the Prospects for Human Development in a Changing Reality*<sup>14</sup> on reducing barriers to mobility in the region – specifically, through relaxing visa restrictions and to implement a region-wide policy of mutual recognition of diplomas and other qualifications which is crucial for greater job mobility.

<sup>14</sup>UNDP Arab Human Development Report 2016: Youth and the Prospects for Human Development in a Changing Reality, p 164 (<http://www.arab-hdr.org/reports/2016/english/AHDR2016En.pdf>)

- Maha Al Salehi shared her key recommendations, which include:
  - Improving the quality of education and offering high school students some guidance on their university degree choices according to the needs of their local societies and countries
  - Including women and youth in the water sector and development process and encourage them to engage in this sector in the professional levels through making quotas and educational levels through offering scholarships or training programs
  - Improving the overall integrated water resources management across the Arab States by taking concrete steps, such as improving the water information systems and exchanging the know-how practices across the countries
  - Combating corruption as it hinders the development in general and the improvement of water resources management in particular
  - Addressing the challenges faced by Internally Displaced People (IDPs) together with refugees, and providing their basic needs (in Yemen alone, there are more than 2 million IDPs<sup>15</sup>). The focus on refugees and immigrants often neglects internally displaced persons who are forcibly displaced within their countries.
- Maha Al Salehi also made the important point that the UNSCR 2250 on Youth, Peace and Security and UNSCR 1325 on Women, Peace and Security must be integrated into strategies and solutions to development challenges for the region, including in the water sector, as peacebuilding is an urgent need for many Arab States today and women and youth have critical roles to play in peace and security.
- **Dr Hussam Hussein**, Postdoctoral Researcher at the University of Kassel (Germany), Vice-Coordinator of the Mediterranean Youth Water Network, Jordan is currently working on a PhD chapter focusing on food sovereignty in Jordan, which is one of the most water scarce countries in the world. In Jordan as well as in the rest of the Middle East, engineering, technical, "apolitical", and supply side solutions have been promoted by governments. Nevertheless, demand side solutions also need to be considered. Interdisciplinary solutions are needed which will promote inclusion of the social sciences - as it has often been neglected in water studies in the region - and it can contribute to the analysis of the problem and to the framing of the solutions of this complex problem.
- In this context, Dr Hussam believes that youth play a huge role and must be involved and part of the solution. The Mediterranean Youth for Water Network (MedYWat), of which he is the Vice-Coordinator, works towards a Mediterranean Region where youth is a recognized, active stakeholder at all levels in water resources management. MedYWat's mission is to engage young Mediterranean water professionals to create and share knowledge, build capacity and amplify their voice on the regional and global water agenda. Its objectives are:
  - To connect and engage Mediterranean youth from different disciplines working on water;
  - To become a knowledge-based platform which creates and exchanges best practices and opportunities for Mediterranean youth;
  - To create cross-linkages between MedYWat and key decision makers in the Region.

<sup>15</sup> UNHCR Reliefweb, Yemen UNHCR Update, March 2018 (<https://reliefweb.int/report/yemen/yemen-unhcr-update-march-2018>)

## 6. Recommendations emerging from the joint conference of the Arab International Women's Forum and the Center for Mediterranean Integration on *Women, Water & Youth: Perspectives from the MENA Region*

Amman, Jordan | 26-27 September 2018

**Acknowledging that** as a global community, we face many serious challenges such as extremism and hunger, as well as political crises, climate change and water scarcity. In addition, water shortage in Arab countries will be a major cause of regional instability. The Arab water deficit is expected to reach unprecedented levels, as well as the effects of climate change and global warming that affect precipitation rates. Nowhere in the world is the challenge of water scarcity more acute than in the Middle East and women and young people to be part of the progress for sustainable agriculture, rural development and food and water security in the region.

**Acknowledging that** water is a human rights issue, and despite the progress in all areas and the technological revolution that has impacted water management for the better, the world's international realities on water require more concerted efforts and cooperation to ensure the optimal distribution of water in accordance with the human rights approach, which stresses the right to clean water in order to secure a decent life for all humans.

**Acknowledging that** increasing consumption, paired with undervalued water, inadequate Governance arrangements, and weak enforcement is leading to the depletion of water resources —especially groundwater—at an unprecedented rate. Of all the challenges the Middle East and North Africa region faces, it is least prepared for water crises. Water governance issues, especially the failure to create incentives that signal extreme water scarcity and promote water conservation, are the common denominator of water management in the Middle East and North Africa. Countries that fail to achieve water security forgo potential growth, increase vulnerabilities to hydrological shocks, and may potentially compound social and political fragility. The MENA region has the greatest expected economic losses from climate-related water scarcity, estimated at 6-14% of GDP by 2050 (World Bank 2016).

**Acknowledging that** water security in the MENA region is directly related to the participation of women and youth in agricultural activity and the roles that can be played by both in different agricultural areas. When considering the issue of enhancing agricultural productivity and activating the role of youth and women in the agricultural sector, all barriers and obstacles, including the issue of water scarcity, must be considered, especially as the lack of clean water and access to health facilities affects women more so than men, and poses a serious challenge to the efforts made to eliminate gender discrimination.

**Acknowledging that** to achieve the objectives of sustainable development, we must continue to develop strategic plans based on improving land productivity with the sustainable development of human, land and water resources, and improving the economic conditions of the population through the development of humanitarian programs and the coordination of existing desertification control activities within a vision of human parity, to support both the host communities and refugees, based on the approach of international partnership, the promotion of the role of women and the activation of the role of private sector and governments.

**Acknowledging that** the three challenges addressed by *Women, Water & Youth* are interlinked:

- 1 Water scarcity and food insecurity disproportionately impacts women and young people.
- 2 The low participation of women in the workforce persists despite improvements in educational attainment and gender barriers to women's inclusion are reflected in the low number of women entrepreneurs in the MENA region despite its thriving startup culture.
- 3 Youth unemployment in the region still stands at 25-30%. AIWF's position has long been that enhanced support to youth will create much-needed jobs and failing to support opportunities for Arab women and young people will ultimately reflect negatively on future stability in the region.

**Acknowledging that** the 2030 Agenda for Sustainable Development (SDGs) adopted in September 2015 highlights the important role of science and technology in addressing current critical world challenges, and that multi-level engagement is essential for the achievement of water security (SDG 6) in the MENA region. This will only be feasible if we work in a holistic, participatory approach under the umbrella of the 2030 sustainable development goals while linking it to achieving SDG 5 (Gender) and SDG 17 (Partnerships).

**Taking forward the above acknowledgments, these are the recommendations to emerge from the observations and valued contributions of all distinguished Guest Speakers who participated at the AIWF / CMI Women, Water & Youth conference in Amman in September 2018.**

## Water governance

1. Regional collaboration on water governance could produce a successful roll out of a comprehensive MENA Water Strategy that would improve water governance across the region, benchmarking from the Jordan Water Strategy 2016-2025, which calls for:
  - a. Key interventions to improve water governance
  - b. Clarification of responsibilities and accountabilities among water institutions
  - c. Improvement of financial sustainability mechanism
  - d. Improvement of regulatory framework through moving to independent regulatory entity with clear mandates
  - e. Increasing women participation in governing water entities through ensuring women presentation in their Boards
  - f. Improving community participation in decision making process
  - g. Improving transparency through mandating information dissemination and accessibility
2. Best sanitation practices in the MENA region must employ a participatory approach, retain government engagement and endorsement, be socially acceptable and technically appropriate, and aim to:
  - a. Create jobs
  - b. Protect the environment and natural resources
  - c. Reuse treated wastewater
  - d. Develop capacity building and mobilisation
  - e. Focus on women and gender equity
  - f. Engage the youth population
  - g. Deliver educational impact
3. Combating corruption that hinders MENA development in general and the improvement of water resources management in particular.



4. Recognising the importance of building a community of knowledge sharing and cooperation among donors and financiers in partnership with national governance structures, where these stakeholders can influence the environment in which they are financing projects. Enabling women to not only participate but to have equal influence on the governance of water resources and services is vital in protecting this essential resource.

## Technological innovation

5. Enhancing awareness (radical shift in water use and mindsets on water use) urgently needed together with understanding at regional and national levels that we can no longer address the continuous challenges facing the Arab region without innovative science and technology – especially green technology – for advancing sustainable development, productivity and economic development.
6. Promoting the use of hydroponics, a technology using a minimal amount of soil and water - alternative ways to traditional farming through innovation and technology. As so many conference participants were involved in hydroponics projects, a technical meeting should be organised in this area as a follow up to the conference to build on expertise and leadership from the MENA region.
7. Utilising technology to address the 80% of wastewater that is not treated or reused. Wastewater is the world's largest untapped water source, the only natural resource that increases as cities and populations grow.
8. Introducing concepts of modern technology for alternative energy and raising awareness about local and regional strategies that contribute to water supply, through the application of water harvesting techniques, the reuse of grey water, and the separation of treated water sources from natural and flood waters, achieving the sixth sustainable development objective of "ensuring the availability, management and sustainability of water and sanitation services for all by 2030.
9. Technological and governance innovations – in the region and globally – are accelerating to meet an urgent need for action. Some of the most notable water management innovations in the world are being implemented in the Middle East and North Africa. Irrigation modernization programmes are among the largest ones in the Mediterranean Region and offer new opportunities for increasing production, saving water and reducing the amount of work that men and women dedicate to this activity. On farm irrigation modernization may also lead to more intensive and productive crops.

## Gender parity in sustainable agriculture

10. Women have an important role in water governance alongside men. Equal gender representation in the development and drafting of water policy of countries is essential. Currently, women work to provide water to meet the needs of their households, while men make decisions about water resource management and development at the local and regional levels. Therefore, projects, programs and policies aimed at addressing gender inequalities must empower women to contribute to the development of policy around water resource management and human development to ensure that both men and women – especially poor women and young people – can access and benefit from water resources, around the world.
11. Gender sensitive agricultural policies can play a strong role in closing the gender gap in rural societies, thus strengthening women's access to productive resources, rural services, infrastructure, advisory services and social protection. Focusing on "women only



empowerment" is a risky strategy and will not lead to transformative empowerment. Holistic multi-dimensional empowerment is needed to link between the public sphere of women's life and her private sphere. It directly influences the household's division of labour and on the gendered social roles and power dynamics of both women and men. Capacity building is key and more investment in women in agriculture is urgently needed if they are to have proper access to resources and play their rightful roles in food security.

12. The 'feminisation of agriculture' means that women are doing the lion's share of work as many men have migrated away. A new generation of women farm managers unfortunately see their producing capacity limited due to lack of training and access to productive resources. Production and living standards of these women could be improved much if these constraints would be removed.
13. Women's access to governing bodies of Water Users Associations (WUAs) is very limited due to their restricted representation as water users but alternative solutions (fix quotas, two water users for each piece of land, women water users' committees, etc) are being tried out in several countries with interesting results. Access to irrigation water by women farmers must be guaranteed and enforced strictly.
14. Women are underrepresented in governing boards of water authorities and water regulating bodies and other community-based water organizations. Participation in professional networks can support the engagement and visibility of women in the water sector. The technical and capacity building activities offered by the Arab Integrated Water Resources Management Network (AWARENET) housed at ESCWA provides one such opportunity.
15. Special attention is needed to ensure that any agriculture development project, and in particular those concerned with irrigated agriculture, have adequate gender components that have resulted from the identification of the gender needs at the field level. Emphasising the importance of carrying out Gender Needs Assessments (GNAs) to ensure that new opportunities do not add more work to women without any compensation. For this purpose, it is important to know first if women under their present tasks (farming context) have any free time for anything else. When this is the case, additional work must be fully compensated and equal pay practiced. The multipurpose nature of water is highly evident in the rural context and therefore projects must also be multipurpose to attend these multiple water needs, which are particularly important for women, moving away from projects strictly addressing a single use.
16. Women's health on the land must also be addressed (in context of the health of female farmers). This is part of a wider need to address the subject of women's health in the MENA region overall and the urgent need to bring more young women into medical practice.

## Research and information

17. Gender inclusive water strategies in the region still present a gap between policy and practice, caused by the different social and cultural perceptions that these strategies were built on. Strategies are typically built on research and science originated from Latin America, Africa and Asia, but in the MENA region culture and social norms are different. Therefore, these strategies will not necessarily work and will present implementation gaps.
18. Research and data in the Arabic language is very much needed but currently very much lacking, representing a major gap that could be filled through cross-border collaboration and international research exchange and partnership programmes. One of the most significant challenges in the field of the environment is the language issue and difficulties with terminology.

19. Information and research are urgently required on women in the MENA region overall as the region lacks workable, usable data that can power further research and innovation, especially in STEM and in relation to women's economic, entrepreneurial and academic engagement in STEM sectors.
20. We need to protect natural and environmental resources by integrating knowledge into interdisciplinary and interrelated issues (water, energy, the human environment) and adopting a scientific framework for improving ecosystems, as resource protection and management are the only guarantors of adequate water, food and dignity for future generations
21. Innovation research should be co-ordinated and classified in clusters and not on an individual / farm by farm basis (availability of research in the Arabic language and sectoral cluster data pertinent to the region is key). Specialised research should be conducted into women's role in innovation and in displacement crises where women typically take the lead in facilitating positive change and progress as part of reconstructive strategy.
22. Knowledge about the gender situation in the different Mediterranean countries is still very scarce. General figures are available, but specific information in the field and ethically sourced and usable data is still very much missing. This data is urgently needed to inform and improve inclusive gender projects and to generate workable data that can be used to address gender issues related to agriculture.
23. Intergenerational dialogue is key to success in addressing water scarcity challenges and correcting sustainability awareness gaps in every generation, imparting knowledge from one generation to the next (and vice versa) and engaging generations in working together to solve water, food, economic development and security issues.

## **Public and private sector partnerships, support and investment for women-led sustainability projects, initiatives and social enterprises.**

24. More needs to be done than education and introducing new technologies: we need to create jobs, green jobs building a sustainable future. We need to have entrepreneurs starting green businesses. And these entrepreneurs need access to finance which can be raised, co-ordinated and distributed by public-private investors and funding schemes.
25. Public-private partnerships have been implemented in the region to tackle the operational constraints of water utilities. The Middle East and North Africa has been the most active place in the world (along with China) regarding public-private partnerships in water management.
26. There is a need to identify the precise needs of women in the agricultural value chain. To support women-led projects, initiatives and social enterprises and improve opportunities for women in the water sector overall, the following is required: (a) Access to market; (b) Training; (c) Capacity building; (d) Equality in access to opportunities. Investment in these projects can yield the greatest impact as activities run by women supported by FAO have been more sustainable than others.

## Public awareness and STEM education

27. Women's low participation in the scientific specializations and actual participation in the labour force can be attributed to social perceptions which associate the suitability of certain employments to either women or men and addressing the societal and cultural barriers would foster major social and economic benefits for Arab States. Eliminating cultural barriers for Arab women in STEM and sustainability sectors is an important first step to improving gender diversity in water governance as well as addressing the critical challenge of women's low economic participation and the ongoing challenge of youth unemployment.
28. The availability of fellowships and scholarships for young people aspiring to careers in science and water conservation could be made more readily available both with public sector support and through public-private partnerships.
29. Engaging and educating civil society on water issues and water conservation is also crucial. Changing water management practices to ensure better service delivery and sustainability of water use requires changing the attitudes of individuals and government officials, as much as putting in place institutional incentives and arrangements.
30. Public awareness is an issue in water scarcity as it is unclear whether the MENA populations are acutely aware of the scarcity challenges and the cost of 'free' water. We need to integrate women and youth into water and food security programs and to involve them in water decision-making, solutions, knowledge sharing, innovation, and training women, youth, boys and girls to deal with water-related issues and challenges and how to manage them, starting with practices and awareness of water use and conservation measures in the home.
31. There is a serious need for structured recycling programmes and initiatives in the region not only to educate the public about the value of water and the impact of scarcity on a prosperous, peaceful Arab future, but also to practically manage water and implement viable policies for water management on both national and regional levels.

## Youth and family engagement in the water sector and conservation efforts

32. Women have an important and vital role in conserving the environment and water resources in particular and reducing their depletion. They are primarily responsible for rationalizing the consumption of water at home and have the primary role in guiding household members to the proper ways to benefit from water and not waste it. Achieving water security means acting together, from the household level to the regional level. From a household water perspective, this means engaging women, who often have the main responsibility for using and conserving water. What is needed is the right mindset to use water wisely, as something that is scarce and precious. This is where women come in. Women are the main water managers in the family. They can set an example and teach their children to use water wisely.
33. We need to break down unfair and outdated stereotypes surrounding youth and engage youth voices in every aspect related to water governance and management. Youth all around the region (including members of the MedyWat network) are developing solutions to water issues. Therefore, platforms need to be created for youth and primary level education, activism in the water field and enabling more democratic systems in which the abilities of young people thrive.

34. Young people must be better supported to launch initiatives that serve the environment, and use social media and digital technology, especially education technology, to increase awareness and deliver environmental messages to all segments of society.
35. Stakeholder participation is at the core of effective water and sanitation management. Therefore, investing in an enabling environment for youth as key stakeholders in the water sector is a prerequisite to successful engagement and will ensure the achievement of SDG 6. Engaging young people in the sector will involve:
  - a. Awareness projects related to water sector implemented in partnership with other parties, targeting students at school (primary and secondary level as well as through to tertiary level)
  - b. Providing scholarships for MAs and PhDs which creates opportunities for young people to continue their higher studies and specialize in the water and agricultural sectors
  - c. Establishing youth committees in the water sector
  - d. Improving the quality of education and offering high school students some guidance on their university degree choices according to the needs of their local societies and countries
  - e. Including women and youth in the water sector and development process and encourage them to engage in this sector in the professional levels through the use of quotas and teacher training programs

## Refugees and internally displaced persons (IDPs)

36. The issues of water and sanitation which are critically important especially when we address the ongoing and worsening refugee crisis that is a direct result of years of civil unrest, war and humanitarian crises. Water delivery in conflict areas should be considered a top humanitarian aid priority especially in IDP camps where women and children constitute the largest proportion of refugees.
37. We must reframe the focus on refugee development programmes as not being based on neediness but seeing refugees as talented, educated and motivated individuals who can bring a wealth of experience and skills to sustainability projects and initiatives as well as to entrepreneurship.
38. Addressing the challenges faced by Internally Displaced People (IDPs) together with refugees and providing for their basic needs (in Yemen alone, there are more than 2 million IDPs). The focus on refugees often neglects internally displaced persons forcibly displaced within their countries.
39. UNSCR 2250 on Youth, Peace and Security and UNSCR 1325 on Women, Peace and Security must be integrated into strategies and solutions to development challenges for the region, including in the water sector, as peacebuilding is an urgent need for many Arab States today and women and youth have critical roles to play in peace and security.

## Mobility and Labour

40. Freedom of movement for Arab citizens both within the region and internationally continues to present a serious restriction on women advocates and academics alike, either because of the legal requirement for a guardian to approve or accompany her on the travel. Taking forward the recommendation of the *UNDP Arab Human Development Report 2016: Youth and the Prospects for Human Development in a Changing Reality* on reducing barriers to mobility in the region – specifically, through relaxing visa restrictions and implementing a region-wide policy of mutual recognition of diplomas and other qualifications which is crucial for greater job mobility.



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