

INTERNATIONAL WEBINAR ON

EMPOWERMENT AND
CAPACITY DEVELOPMENT OF

WOMEN

IN WATER RESOURCES
MANAGEMENT

WEBINAR REPORT



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PREPARED BY

International Research Program for Irrigation
and Drainage- Iran Regional Node (IRPID-IRN)



REPORT ON

International Webinar on

Empowerment and Capacity

Development

of Women in Water Resources

Management

By ICID's IRPID-IRN in Collaboration with IRNCID and ICID's CDTE Working Group

August 2023

Empowering women in water resources management: Introduction and Rational

Women have played a crucial role in water management for centuries, but they are still underrepresented in decision-making roles. The International Commission on Irrigation and Drainage (ICID, <https://icid-ciid.org/home>) has launched a new initiative to empower women in water and agriculture management by developing their skills, increasing their knowledge base, and advocating for their essential role in both sectors. Empowering women in water resources management will provide the necessary basis for effective water management and achieving sustainable development goals. By promoting the role of women in water and agriculture management, women can create a more environmentally sustainable future for everyone.

The webinar (https://icid-ciid.org/icid_data_web/IRPID-IRN.pdf) was organized through a partnership involving the International Commission on Irrigation and Drainage's (ICID) Working Group on Capacity Development, Training, and Education (WG-CDTE), the Iran National Committee on Irrigation and Drainage (IRNCID), and the International Research Program for Irrigation and Drainage- Iran Regional Node (IRPID-IRN). The webinar aimed to highlight the advantages of women's participation in water management and promote their inclusion in decision-making roles. Empowering women in water resources management will provide the basis for effective

Executive Summary

On May 3, 2023, IRPID-IRN, in collaboration with ICID and IRNCID, along with CDTE-WG, organized a webinar addressing various aspects of women's empowerment and capacity development in water resources management. This report provides a concise summary of the main topics discussed during the event. The primary objective was to underline the pivotal role of gender equality¹ and women's involvement in achieving sustainable development goals, particularly in addressing water-related challenges. The presentations highlighted the barriers women face, the opportunities for empowerment, and suggested future strategies to promote women's active participation in the water sector. This executive summary provides a concise overview of the main insights and recommendations derived from the presentations.

The report begins by underlining the critical importance of gender equality in water resources management. Professor Ragab's ICID president presentation showcased how gender equality is intricately linked to achieving broader development objectives, including zero hunger and poverty reduction. Despite comprising 42% of agricultural workers in developing countries, women often lack sufficient support and participation in decision-making processes, hampering their full potential in contributing to sustainable water and food production.

The presentations emphasized the need to empower women through education and environmental knowledge. Ms. Hon. Karlene Maywald, Managing Director of Maywald Consultants Pty Ltd, stressed the significance of women's perspectives and negotiation skills in promoting more sustainable solutions. To achieve this, it is essential to address cultural barriers and create opportunities for women to participate in water decision-making processes at all levels, including enterprise and local government.

Dr. Anthi Brouma, Deputy Regional Coordinator, GWP-Mediterranean, initially presented the global work and related publicly-available material of the Global Water Partnership in support of gender equality, and then discussed the current status and

¹ A situation in which access to rights or opportunities is unaffected by gender.

challenges facing women in water diplomacy and transboundary water cooperation in the Middle East and North Africa (MENA) region. Supported through solid analytical work, an Initiative on Women Water Leadership in the MENA has been set up, aiming to strengthen women's capacity, increase the pool of female expertise, provide more opportunities, raise confidence, and have an impact on the perceptions of women leaders and decision makers in the water sector in the region.

Dr. Narges Zohrabi, the Associate Professor at the Islamic Azad University and the head of ICID's IRPID-IRN, emphasized the issue of water scarcity, which has become a sensitive and critical global crisis. She referred to the slogan of World Water Day in 2023, "Accelerating Change for Solving the Water Crisis," and stated that access to water is the fundamental right of all inhabitants of the Earth, including both women and men. She emphasized the need for coordinated efforts toward a sustainable future where clean water accessibility is attainable for everyone. Dr. Zohrabi further stressed that in this endeavor, the participation of women and their contribution, as a vital social asset, plays a crucial role in adapting to and mitigating the water crisis in their countries.

She emphasized the participation of women in water management, especially in regions such as the MENA, where the water crisis is much more severe and where gender inequality is also seen. Addressing these disparities requires region-specific interventions that consider cultural factors and societal norms. The report suggests studying successful case studies from regions with higher women's representation in water organizations to inform targeted strategies.

The report acknowledges the significant presence of women as technical experts and managers in water organizations in developed countries. To enhance this expertise on a global scale, it is vital to encourage women's leadership roles and break down gender barriers. By doing so, the water sector can benefit from diverse perspectives and innovative approaches to address complex challenges.

Empowering women in water resources management is not only a matter of social justice but also a strategic imperative for achieving sustainable development. By

embracing gender equality and gender mainstreaming¹, promoting education and leadership, and addressing cultural barriers, it will be possible to unlock the full potential of women's contributions to water security and sustainable development globally. This report calls for concerted efforts from policymakers, organizations, and communities to work collaboratively toward a more inclusive and resilient water management framework that benefits all.

¹ Gender mainstreaming means integrating a gender equality perspective at all stages and levels of policies, programmes and projects

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1. Introduction

Over the past three decades, there has been a growing acknowledgment of the critical role women play in water management. The United Nations Conference on Environment and Development in 1992 highlighted the significance of women's contributions to the provision, management, and protection of water resources. Despite this recognition, there remains a lack of comprehensive discourse and integrated approaches, resulting in insufficient attention to harnessing the capacity and potential of women in water management. Addressing gender-based obstacles to women's equal participation in water resource management schemes remains ambiguous, leading to a low level of involvement for women in this domain and inadequate support for optimizing their partnerships.

If the goal is to achieve sustainable development, all users and stakeholders should be involved in developing water management programs, including (and perhaps primarily) women. However, despite the high potential role of women, they have a minor role in water decisions. The lack of understanding of such differences by planners may contribute to the failure of general objectives. There is a global inclination towards increasing the presence of women in the water sector as there are numerous accomplished young women capable of participating in the water sector with appropriate training and support. Thus, the improvement in the future socio-political atmosphere of various countries and the developing awareness of legislative bodies concerning guaranteeing women's participation in the water sector are practical solutions for increasing the presence of women.

Attaining such a goal depends on highlighting major and minor advantages of women's participation in delineating national and international objectives. A global investigation into the relationship between the objectives of sustainable development and allocating funds for various activities and the empowerment of women and increasing their participation in water management is essential in the future.

Empowering women in water management establishes a solid foundation for effective water resource management and the attainment of sustainable development goals. By providing equal opportunities for women to participate in policy-making and decision-making processes, the inherent managerial abilities of women can be

leveraged to develop flexible water management systems, leading to higher efficiency and improved social well-being and health. This initiative aims to prioritize women's participation in various water management sectors and throughout the decision-making chain to unlock their potential capabilities in this vital domain. Expanding women's roles in water management will contribute to overall growth and development, creating career opportunities and skills training for women while bolstering the economy, alleviating poverty, and enhancing the resilience of water resources systems against the impacts of climate change.

In effect, empowering and capacitating women in the water management sector can positively influence research on climate change adaptation, water scarcity, public health, poverty alleviation, and overall societal development. This webinar seeks to develop practical solutions to enhance socio-political perspectives and increase the awareness of legislative bodies regarding policies that ensure women's active participation in water management, thus optimizing their presence and achieving the objective of sustainable water management. Through collaborative efforts and inclusive strategies, we can harness the potential of women in water management, paving the way for a more equitable, resilient, and prosperous future for all.

2. Topics

This webinar aimed to discuss improving women's participation in water management. In this regard, strengthening the participation of women through capacity building and empowering them in water management, both at the major and micro scales, was the primary goal of the webinar. The objectives of this webinar are categorized as follows:

- **Promote the role of women in water resources management**

Promoting the role of women in water resources management is not only a matter of social justice but also essential for achieving sustainable and efficient water management practices. Women possess unique insights and experiences that can significantly contribute to the preservation and equitable distribution of water resources. Recognizing and valuing their knowledge is crucial in designing effective water management strategies that cater to the diverse needs of communities.

- **Promote women's empowerment and education for reaching gender equality in water resources management**

To reach gender equality in water resources management, promoting women's empowerment and education is paramount. By providing women with access to educational opportunities and capacity-building programs, we can equip them with the skills and knowledge needed to actively engage in water-related activities. Empowered women are better positioned to make informed decisions, contribute innovative ideas, and become agents of change within their communities.

- **Increase women's participation in decision-making in water resources management**

Increasing women's participation in decision-making processes is a crucial step towards achieving gender equality in water resources management. When women are included in key discussions and decision-making forums, their perspectives can shape more comprehensive and inclusive policies. It also fosters a sense of ownership and responsibility, ensuring that water management strategies align with the needs and aspirations of all stakeholders.

By promoting the active role of women, empowering them through education, and increasing their participation in decision-making, we can unlock the full potential of women in water resources management. This transformative approach not only leads to more equitable and sustainable water management practices but also promotes social cohesion and economic development. Embracing gender equality in water resources management is not just the right thing to do; it is a strategic imperative for a prosperous and inclusive future. Together, let us build a water-resilient world that harnesses the collective wisdom and talents of all its members.

3. Objectives

Water management is a critical aspect of sustainable development, impacting various aspects of human life, economic activities, and environmental well-being. However, despite its vital importance, gender equity in water management has been a longstanding challenge in many regions around the world. Women, who often bear the primary responsibility for water-related tasks, have historically faced marginalization

and limited participation in water resource decisions and policies. Recognizing the importance of inclusivity and gender equality in water management, this section outlines a series of objectives aimed at promoting gender equity and empowering women in water-related activities.

The objectives set forth in this section encompass a wide range of areas, all aimed at bridging the gender gap in water management. The first objective is to improve gender equity in water management, breaking down the barriers that have hindered women's meaningful participation in this crucial field. By providing equal opportunities and access to resources, we can create a more inclusive and diverse water management sector, fostering innovation and sustainable practices.

The second objective is to enhance women's participation in water resource decisions and policies. Acknowledging women's unique perspectives and knowledge in water management, their active involvement in decision-making processes is essential to ensure that policies are holistic, effective, and responsive to the needs of all stakeholders.

Another vital aspect of gender equity in water management is the participation of women in water user associations. Empowering women to engage in these associations can lead to improved resource management and more equitable distribution of water resources, benefiting entire communities.

Learning from past experiences is crucial for growth and development. The objective of involving women in water projects seeks to explore and analyze previous initiatives that have successfully incorporated women's participation. By identifying best practices and lessons learned, we can replicate successful models and avoid repeating past mistakes.

Empowerment is key to promoting gender equity in water management. The objective of empowering women to improve their water-related skills, knowledge, and livelihoods aims to provide women with the tools and resources they need to actively engage in water-related activities. By fostering capacity-building and training programs, women can take on more significant roles in the water sector.

Moreover, the relationship between water rights, gender, and poverty alleviation is crucial in understanding the challenges faced by female and male smallholders in public irrigation infrastructure development. By addressing gender disparities in water rights, we can work towards poverty reduction and inclusive development.

Eventually, the objective of determining practical steps to empower women in water management seeks to outline actionable measures and strategies that governments, organizations, and communities can implement to promote gender equity. Through targeted policies, education, and awareness campaigns, we can create an enabling environment for women to thrive in the water management domain.

Achieving gender equity in water management is not only a matter of social justice but also an imperative for sustainable development. By actively promoting the objectives outlined above, we can create a more equitable and resilient water management system that benefits society as a whole. Embracing gender diversity and women's empowerment in water management will undoubtedly lead us towards a more prosperous and inclusive future.

4. Target Audiences

1. **Women working in water management:** This includes engineers, hydrologists, policymakers, and other professionals working in the water sector who are interested in exploring how women's empowerment can improve water management outcomes.
2. **Development practitioners:** Professionals working in the development sector, including those focused on environment and natural resources management, may be interested in learning more about how empowering women can contribute to sustainable water management.
3. **Academics and researchers:** Scholars and researchers focused on water management, gender studies, environmental studies, and related fields may also be interested in attending an international webinar on women's empowerment in water management to deepen their understanding of the topic and stay informed about the latest research.

4. **Government officials:** Policymakers in the water sector at the local, national, and international levels may be interested in attending a webinar on women's empowerment in water management to gain insights into best practices and innovative approaches to improving water management outcomes through gender-inclusive policies and programs.

4.1. Other Audiences

1. Women working in the water management sector
2. Women interested in pursuing a career in water management
3. Women's advocacy groups focused on water management issues
4. Policy makers and government officials involved in water management
5. non-governmental organizations (NGOs) working on water management
6. Students studying environment, water management or related fields.

It is also possible that men may be interested in attending this webinar to learn about and support women's empowerment in this field.

5. Speakers and Moderator

5.1. Professor Dr. Ragab Ragab (Opening Message)

Dr. Ragab obtained his BSc. in Soil and Water Sciences (1970), MSc. in Irrigation (1974), and Ph.D, in Rural Engineering from the University of Leuven, Belgium (1982). Presently, he is serving as a Fellow Principal Hydrologist and Water Resources Management Specialist at UK Centre for Hydrology, Wallingford. As an editor at the Journal of Agricultural Science, he contributes to Cambridge University Press (2013-present). He is also serving as an Adjunct Professor at Soil and Water Sciences Dept., the University of Alexandria, Egypt since 2006. He has more than 40 years of experience in irrigation, drainage, catchments hydrology, remote sensing application in hydrology, integrated water management, climate change impact on water resources, soil-water-plant- atmosphere relations, rainfall harvesting, use of poor-quality water (saline/brackish, treated wastewater) for crop production, organic

farming and urban hydrology. Dr. Ragab is also associated with many professional organizations which include: British Society of Soil Science Society, Irrigators Europe - IE, and European Soil and Land Use Management. He has contributed over 130 peer-reviewed publications, excluding reports, and developed models like IHMS, SALTMED 2019, and HYDROMED and has also received global awards and recognitions for his commendable work in the irrigation and drainage sector, including Egypt State Recognition and Merit Award for Scientific Achievements, The Baron's 500: Leaders for the New Century, ICID Award of Excellence (2002, 2012, 2013, 2014) and Best Paper Award 2018. Dr. Ragab has actively contributed to the ICID activities as the Vice President of ICID from 2010-2013 and has also served as the Chairman of the British National Committee on Irrigation and Drainage (ICID-UK) (2007- 2011) and headed many ICID working groups.

5.2. Dr. Mohamed Wahba (Moderator)

Dr. Mohamed Wahba has many years of integrated and diverse experience starting from the field work and supervision of the implementation of projects for irrigation and drainage, research work and field studies, evaluation of the use of modern technologies in drainage networks and the use of drainage water for irrigation as well as savings in irrigation water, Development and management of water resources, including the preparation, design and implementation of policies and strategies, in addition to supervision and follow-up implementation of large projects. Planning and implementation of coastal protection projects and currently preparing the training strategy of the Ministry, designing and implementing various training programs in all fields related to water resources, irrigation and drainage, training needs assessment plans and capacity building for all different functions at the ministry level. Dr. Wahba, representative of the Egyptian government in several international and regional forums, including the International Commission on Irrigation and Drainage (ICID), where he was elected as Vice-President of ICID., a representative of the Ministry of Water Resources and Irrigation of the ESCWA Committee, coordinator of cooperation between the Ministry and similar ministries in China and Iraq, he was the former chairman of ENCID and now he is vice president honorary of ICID, Chairman of the African regional Working Group (AFRWG) & chairman of Capacity Development, Training and Education Working Group (CDTE-WG) of ICID and he is

a guest researcher in Institute of Geographical Sciences and Natural Resource Research, Chinese Academy of Sciences (CAS), Beijing-China..

5.3. Ms. Hon. Karlene Maywald (Keynote Speaker)

Karlene Maywald is a seasoned expert in water resource management, energy, and sustainable development, with over 25 years of experience in crisis management and natural resources policy reform. Over the years, she has held various high-level positions, including South Australian Government Minister for Water Security, Chair of the Australian National Water Commission, Chair of WaterAid Australia, Director of the South Australian Water Corporation and Managing Director of Maywald Consultants Pty Ltd, a reputable economic and environmental consulting firm. Karlene has been awarded Doctor of the University from Flinders University in recognition of her achievements in public policy across both public and private sectors, along with her extensive Ministerial appointments and government portfolio experience.

As an expert in her field, Karlene remains steadfast in her commitment to positively impacting water resource management, energy, and sustainable development. She is dedicated to continuous improvement and progress in her personal and professional pursuits.

Karlene is a skilled negotiator and communicator with strong media skills. She also possesses a recognized capacity to engender strong stakeholder support and is focused on building leadership and developing transformational strategies.

5.4. Dr. Narges Zohrabi (Keynote Speaker)

Narges Zohrabi has more than 21 years of academic and professional experience in water resources engineering and management. She has valuable practical scientific experience developing knowledge and capacity in the water industry in various academic, industrial, and technical independent institutions in Iran. In this regard, she has held multiple positions at the regional and national levels in Iran, including: Director General of Research and Technology of the Islamic Azad University (IAU) (Khouzestan Science and Research Branch); Head of Post-graduate and PhD Studies



in Water Resources Engineering Department - Ahvaz Branch, Islamic Azad University, Ahvaz, Iran; Advisor of the CEO of the Khuzestan Water & Power Authority (KWPA) in new water sciences and technologies; CEO and member of the Board of Directors of the Institute of the International Water and Agriculture Activities Program of Tavana-Ab-Peyman; Head of the Khuzestan Water & Power Higher Education and Research Complex (KWPHC); and the Head of the Khuzestan Branch, University of Applied Science and Technology for Water and Power Industry.

Narges is an Associate Professor in the Water Sciences and Engineering Department at the IAU, Ahvaz Branch, and provides specialized individual mentoring, coaching, and consulting to various stakeholders, especially water-related companies and industries at different national, regional, and international scales. She is an executive member of the IRNCID and a member of three ICID working groups, including the CDTE, WFE-N, and IDM working groups. In addition, she is the head of ICID's International Research Program for Irrigation & Drainage - Iran Regional Node (IRPID-IRN).

As a committed expert in her field, Narges is dedicated to developing capacity in various water industry sectors with a sustainable development perspective aimed at serving humanity at regional, national, and global levels.

5.5. Dr. Anthi Brouma (Keynote Speaker)

With more than 22 years of professional and academic experience, Anthi has worked on water governance, policy and financing, and natural resources management at national, regional, sub-regional and transboundary levels in the Mediterranean within UfM, EU, UN (UNEP/MAP, UNECE, ESCWA, UNDP), IFIs (EIB, EBRD, WB, AfDB), donors (Sida, SDC) and OECD frameworks. She has led/managed and serviced more than 13 regional projects, funded by multilateral (EU, UN, GEF, AfDB) and since 2019 she is leading the agenda on diversity (gender, youth) within GWP-Med. Anthi, a political scientist by education, specialized through her postgraduate and doctorate studies on global development issues and water policy. Prior to joining GWP-Med in 2006, Anthi worked for three years as a lecturer at SOAS, University of London, and two years as a freelancer water expert in Madrid, Spain.

6. The Flyer of the webinar



The flyer is a dark blue graphic with white and light blue text. At the top left, it says 'IRPID-IRN Presents In Association With IRNCID and ICID's CDTE-WG'. To the right is a circular inset image of a woman and a man in business attire looking at a whiteboard. The main title is 'INTERNATIONAL WEBINAR ON EMPOWERMENT AND CAPACITY DEVELOPMENT OF WOMEN IN WATER RESOURCES MANAGEMENT'. Below the title are three speaker profiles: Ms. Hon. Karlene Maywald (Managing Director, Maywald Consultants Pty Ltd, Adelaide, South Australia), Dr. Narges Zohrabi (Assistant Professor at IAU; Executive Member of the IRNCID; Head of IRPID-IRN), and Dr. Anthi Brouma (Deputy Regional Coordinator, Global Water Partnership - Mediterranean (GWP-Med)). A moderator profile for DR. MOHAMED A SHEHATA WAHBA (VPH-ICID, Chair of AFRWG & CDTE-WG) is also listed. The date and time are '3 May 2023, 11:30 am Tehran Time (IRST - UTC +03:30)'. A registration link 'bit.ly/41BWUp3' and a QR code are provided. At the bottom, logos for ICID.CIID, IRPID-IRN, IRNCID, and CDTE-WG are displayed, along with a 'TRAINING' logo.

IRPID-IRN Presents
In Association With
IRNCID and ICID's CDTE-WG

International webinar on

EMPOWERMENT AND CAPACITY DEVELOPMENT OF WOMEN IN WATER RESOURCES MANAGEMENT

 **Ms. Hon. Karlene Maywald**
Managing Director, Maywald Consultants
Pty Ltd, Adelaide, South Australia
Speaker

 **Dr. Narges Zohrabi**
Assistant Professor at IAU; Executive
Member of the IRNCID; Head of IRPID-IRN
Speaker

 **Dr. Anthi Brouma**
Deputy Regional Coordinator,
Global Water Partnership –
Mediterranean (GWP-Med)
Speaker

 **DR. MOHAMED A
SHEHATA WAHBA**
VPH-ICID,
Chair of AFRWG & CDTE-WG
Moderator

 3 May 2023
11:30 am Tehran Time (IRST - UTC +03:30)

More information and
REGISTRATION

bit.ly/41BWUp3



Figure 1. The IRPID-IRN Flyer of the Webinar

Further information, as well as the recorded video of the webinar, can be found on the ICID website at https://icid-ciid.org/inner_page/234.

THE PRESENTATIONS

OPENING MESSAGE



Prof. Dr. Ragab Ragab
PRESIDENT OF ICID

SPEAKERS



**Ms. Hon.
Karlene
Maywald**



**Dr. Anthi
Brouma**



**Dr. Narges
Zohrabi**



7. Report Based on Professor Dr. Ragab Presentation¹

7.1. Opening Message - President Prof. Dr. Ragab Ragab

President of ICID



Gender equality is crucial for achieving various Millennium Development Goals. Women play a significant role in agriculture and bear the burden of domestic tasks. However, they are underrepresented in decision-making processes and face limited rights to water access and resources.

7.1.1. Highlights from Prof. Dr. Ragab Speech

- Globally, around 42% of working women are engaged in agriculture, supporting their livelihoods.
- Women possess valuable ecological and social knowledge derived from their traditional gender roles.
- Women are largely excluded from environmental decision-making processes, hindering their participation in water policy development.
- Limited rights to water and river systems reduce women's access to irrigation and other water needs.
- Women face unequal access to resources, credit, training, and income sources, affecting their roles as active managers.

7.1.2. Ways to Improve Gender Equality in Agriculture

- Policymakers and development practitioners must ensure women's full participation and benefit in agricultural development.
- Building inclusive governance structures and empowering women in water governance are essential for addressing vulnerability and fostering resilience.
- Balancing control over water and irrigation requires changes in policies, laws, and water culture.

¹ The complete presentation file can be access through https://icid-ciid.org/icid_data_web/webinar_Empowerment_03052023.pdf

- Women's involvement in decision-making at all levels should be increased, recognizing their role in water management.

7.1.3. Women, Climate Change, and Water Scarcity

- Women are vulnerable to climate change and face difficulties in participating in governing bodies.
- Socially vulnerable women are least equipped to deal with climate change impacts due to their disadvantaged status.
- Education, leadership development, and adaptive capacity building can reduce women's vulnerability and enhance their roles in water management and food production.

7.1.4. Quantifying Gender Inequality

- Global Gender Gap Index and Woman Empowerment in Agriculture Index are used to measure women's empowerment in various domains.
- Comparing different regions within a country can highlight disparities and drive improvements.
- The main drivers of women's disempowerment are membership in agricultural self-help groups, land ownership, and control over income.

7.1.5. Summary of Presentation

Professor Ragab stated that gender equality is crucial for achieving Millennium Development Goals like Zero Hunger and Poverty. Globally, about 42% of working women are engaged in agriculture, with even higher percentages in South Asia and India. Women possess valuable ecological and social knowledge derived from their traditional gender roles. However, they need more support and participation in decision-making, especially in climate change adaptation and water policy development. Existing gender biases restrict women's rights to water and resources as well as affecting their abilities as managers. Policymakers and development practitioners must ensure women's full participation and benefit in agricultural development to promote gender equality, reduce poverty, and address vulnerability. Climate change exacerbates women's vulnerability due to water scarcity and flooding, but they face difficulties in participating in governance bodies. Education, involvement in decision-making, and community-based environmental education can empower

women in water management and food production. Various indices like the Global Gender Gap Index and Women Empowerment in Agriculture Index measure gender inequality and empowerment.

Dr. Ragab mentioned that a study conducted in India (Figure 1) identified the main drivers of women's disempowerment in agriculture and water management. The study found that the presence of membership in agricultural-related self-help groups, ownership of land, and control over income were significant factors contributing to women's disempowerment. These factors highlight the importance of access to resources and economic autonomy for women to enhance their empowerment in these sectors.

Quantification of Gender Inequality

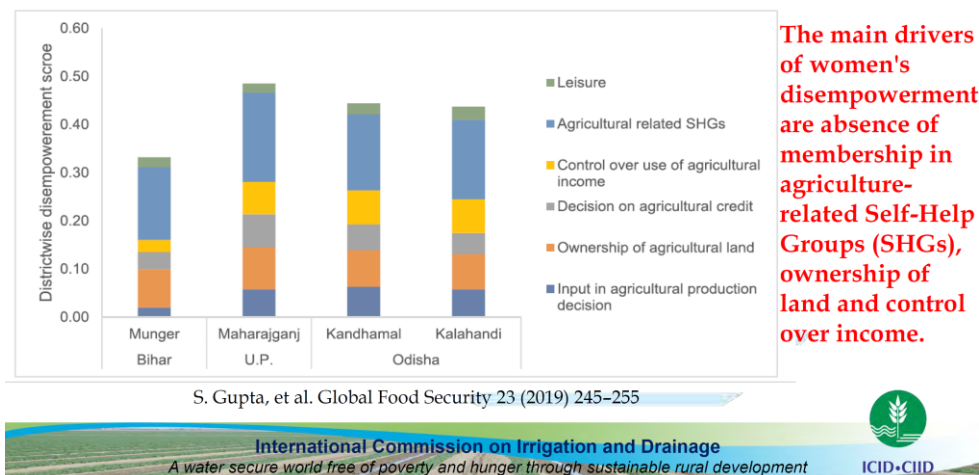


Figure 1. Screenshot from Dr. Ragab Presentation; Quantification of Gender Inequality

He mentioned that regional disparities in empowerment levels exist, influenced by factors like membership in agricultural self-help groups, land ownership, and control over income. Quantification and learning from prosperous regions can aid in improving women's empowerment. Professor Ragab also mentions forthcoming worldwide events like the ICID Congress meetings and workshops on water, climate change, agricultural water management, and drainage.

8. Report Based on Ms. Hon. Karlene Maywald Presentation¹

8.1. First Keynote Speaker- Ms. Hon Karlene Maywald

Managing Director, Maywald Consultants Pty Ltd, Adelaide, South Australia



Involving women in water decision making due to the complexity of the issues and the need for diverse perspectives is important. Women's participation brings unique negotiation skills and empathy, leading to more lasting and efficient results. To achieve this, cultural barriers must be addressed, men should support and partner with women, and inclusivity should be promoted at all levels of decision making.

8.1.1. Highlights from Ms. Hon. Karlene Maywald Speech

- Involving women in water decision-making is crucial due to the complexity of water issues and the need for negotiation.
- Women's specific participation at the community level requires addressing cultural barriers and creating an inclusive environment.
- Equal access to opportunities for women in enterprises and local government fosters equitable decision-making.
- Encouraging more women's engagement in political processes leads to diverse and sustainable solutions.
- Behavioral change, community engagement, and trust-building are essential for women's empowerment in the water sector.
- Men have a significant role in supporting and enabling women's participation in decision-making.
- Creating lasting results and better decisions requires cultural shifts and embracing women's empowerment in water decision-making.

¹ The complete recorded presentation can be accessed through:
https://www.youtube.com/watch?v=R_Mi4Ju65q8

8.1.2. Involving women in water decision making at the community level

- Cultural barriers must be addressed before women can be involved in decision-making at the community level.
- Conversations with local culture and leaders are crucial to create an environment where women leaders can be embraced.
- Women experts should be involved in creating an inclusive environment and developing women leaders within the community.
- Education and leadership development are necessary to enable women's participation in decision-making processes.
- Women's involvement at the community level is crucial to have more equal conversations about water-related decision-making.

8.1.3. Involving women in water decision making at the enterprise level

- Creating an environment of inclusivity is essential for women to have equal access to decision-making opportunities.
- Cultural norms need to shift to enable women's participation in self-help groups and decision-making roles.
- Equal participation of women and men in enterprises and government agencies leads to more informed and effective decisions.
- Encouraging women's involvement in engineering departments and leadership positions within agencies is important.
- Embracing women's empowerment at the enterprise level contributes to cultural change in communities.

8.1.4. Important role that men play in enabling women's empowerment

- Men have a significant role to play in enabling women's empowerment in water decision-making.
- Men should support and nurture up-and-coming women leaders in the field.
- Men need to step aside and create opportunities for women to have their voices heard.
- Men should actively embrace cultural change and shift norms to allow women to move into decision-making positions.

- Men partnering with women and working together can create an environment that empowers and enables women's participation in water decision-making.

8.1.5. Summary of Presentation

In her presentation, Ms. Hon. Karlene Maywald highlights the significance of women's involvement in water decision-making. She emphasizes that excluding women from these discussions is senseless, as water-related issues are complex and require the participation of multiple stakeholders and disciplines. Ms. Maywald points out that women possess valuable negotiation skills and offer a different perspective, which leads to more lasting and efficient decision-making. Engaging women in water management is essential for achieving sustainable solutions and addressing the diverse needs of communities.

She stresses the importance of addressing cultural barriers at the community level. Before implementing water reforms, it is crucial to understand local culture and work with community leaders to create an inclusive environment for women's participation. By doing so, women leaders can emerge and contribute to decision-making processes. At the enterprise level, equal access to job opportunities and decision-making positions is necessary. Ms. Maywald emphasizes the need to create an enabling environment for women's participation, not only in water infrastructure enterprises but also in local governments and community groups. Involving women in decision-making roles leads to diverse perspectives and more effective solutions.

Furthermore, she discusses the importance of women's participation in higher-level leadership and political processes. When men and women collaborate, conversations shift, and decisions become more empathetic and behaviorally oriented. Women's empowerment in leadership roles builds trust within communities and enables the development of education and leadership programs.

Ms. Maywald underlines that cultural change and lasting solutions require upfront engagement with communities. By embracing women's voices and expertise, trust is built, roles and functions are clearly defined, and sustainable solutions are more likely to be achieved. Men play a crucial role in supporting women's empowerment by creating opportunities and stepping aside when necessary.

In conclusion, Ms. Maywald emphasizes the significance of including women in water decision-making processes to achieve more sustainable and effective outcomes. By embracing women's skills, perspectives, and leadership, the water sector can better address the diverse needs of communities and foster positive change.

*Another important item that Ms. Hon. Karlene Maywald mentions in her presentation is the need for **behavioral change** as a precursor to finding sustainable solutions in the water sector. She emphasizes that at the start of the process, before considering engineering solutions, it is crucial to engage women in conversations about behavioral change. Women's perspectives and empathy with communities can lead to different and more efficient decisions. By actively involving women in defining the problems and solutions, instead of imposing solutions without their input, more effective outcomes can be achieved. This highlights the importance of considering the community's needs and engaging women in decision-making processes from the outset.*

9. Report Based on Dr. Anthi Brouma Presentation¹

9.1. Second Keynote Speaker- Dr. Anthi Brouma

Deputy Regional Coordinator, Global Water Partnership – Mediterranean (GWP-Med)



Dr. Brouma shared that gender mainstreaming goes beyond the integration of women only or their representation in different bodies. She emphasized the need for fully integrating both male and female perspectives and actively striving for gender equality. She mentioned that she would share two things during her presentation: information about the Global Water Partnership's work and tools related to gender equality and the key findings from an initiative on strengthening female leadership in the water sector in the MENA region, specifically related to water diplomacy.

9.1.1. Highlights from Dr. Anthi Brouma Speech

- Gender mainstreaming goes well beyond women's representation and aims for full integration of gender perspectives.
- A comparative study on women in water diplomacy in the MENA region revealed persistent barriers and challenges in the involvement of women in decision-making positions.
- Women in the region face discriminatory practices, conservative socio-cultural contexts, and lack of opportunities for advancement. They continue to occupy a secondary social role, which makes their contribution to national economic growth weak, including the fluctuating water industry that can benefit significantly from a well-balanced and diverse management and leadership.
- Despite the reforms undertaken and the progress achieved towards the promotion of women's rights in the MENA region, the socio-cultural variant remains influential and significantly affects the balance of power between men

¹ The complete presentation file can be accessed through: https://icid-ciid.org/icid_data_web/webinar_Empowerment_03052023_anthibrouma.pdf

and women in the decision-making sphere. The unequal distribution of domestic and family tasks within the societies of the MENA region hinder the empowerment of women and influence their access to power.

- Comprehensive skills needed for women in water diplomacy include diplomatic and international skills, legal knowledge, and communication skills.
- The GWP-Mediterranean Initiative to empower women water leadership aims to expand its scope to more countries in the region, intensify its capacity building and mentorship component and facilitate a pool of knowledgeable and empowered female professionals.

9.1.2. What makes a good water diplomat?

- Core skills and general background, with specific academic skills in the fields of international law (including water), negotiations, political science, diplomacy and international relations so as to better lead in water diplomacy positions
- Communication skills and personal development, with strong communication skills being one of the priorities of a good diplomat as it helps better understand the counterpart(s) and to build trust and respect;
- Women's specific skills, which concern those specific characteristics that women typically bring to the negotiation table and are valuable elements for consensus building. For example, women have the natural ability to build trust, to combine analytical and constructive thinking, have better listening and negotiation skills, and show a greater understanding of sensitive issues.
- At the same time, additional skills that would benefit female water diplomats, include the ability to go outside one's comfort zone, to identify innovative ways to support changes in cultural settings and to open up to digitization and advanced technological tools. A female water diplomat who is informed and puts forward an argument based on technical knowledge, will make all the stereotypes that men have about women disappear.

9.1.3. Action for change: the GWP-Mediterranean initiative on empowering female leadership in the water sector in the MENA region

- The initiative focuses on empowering female leadership in the water sector in the MENA (Middle East and North Africa) region.
- Aims to address the underrepresentation of women in high-level positions in water diplomacy and transboundary water cooperation settings.
- Involves collaboration between the Global Water Partnership (GWP), the Geneva Water Hub, and the Union for the Mediterranean.
- Engaged 93 women from five countries (Egypt, Jordan, Lebanon, Morocco, and Palestine) through surveys and input gathering.
- Evolved into an initiative that includes a network of female water professionals across the MENA region.
- Aims to strengthen and develop the different areas of skills for a good water diplomat and for acquiring water leadership positions.
- Seeks to increase the pool of female expertise, provide more opportunities, raise confidence, and challenge negative perceptions of female decision-makers.
- Ongoing work with plans to expand to more countries in the region to gather additional input and address challenges faced by women in accessing decision-making positions in water diplomacy.

9.1.4. Importance of capacity building and mentoring programs

- Capacity building and mentoring programs are essential for empowering women in water diplomacy.
- These programs help women develop the skills, knowledge, and confidence required for leadership roles.
- Mentoring programs provide guidance, support, and opportunities for networking and professional growth.
- These programs contribute to breaking gender barriers and increasing women's representation in decision-making positions.
- These programs promote a more inclusive and diverse water sector, fostering better collaboration and decision-making processes.

- By investing in capacity building and mentoring, societies and organizations can tap into the potential of women in the water sector and benefit from their unique perspectives and contributions.

9.1.5. Summary of Presentation

Dr. Brouma started her presentation by providing an overview of the Global Water Partnership (GWP). She explained that the GWP is a global multi-stakeholder action network with a vision for a water-secure world. It has 13 regional partnerships covering various parts of the globe and works together with more than 3,000 partners/organisations in 179 countries. Dr. Brouma noted that the GWP was established in 1996 and has an intergovernmental status hosted by the government of Sweden since 2000. Then she discussed the GWP strategy for 2020-2025. She highlighted that the GWP is currently implementing its five-year strategy through a cross-cutting approach. The strategy focuses on three anchored areas: sustainable development goals, climate resilience through water, and transboundary water cooperation (Figure 3).



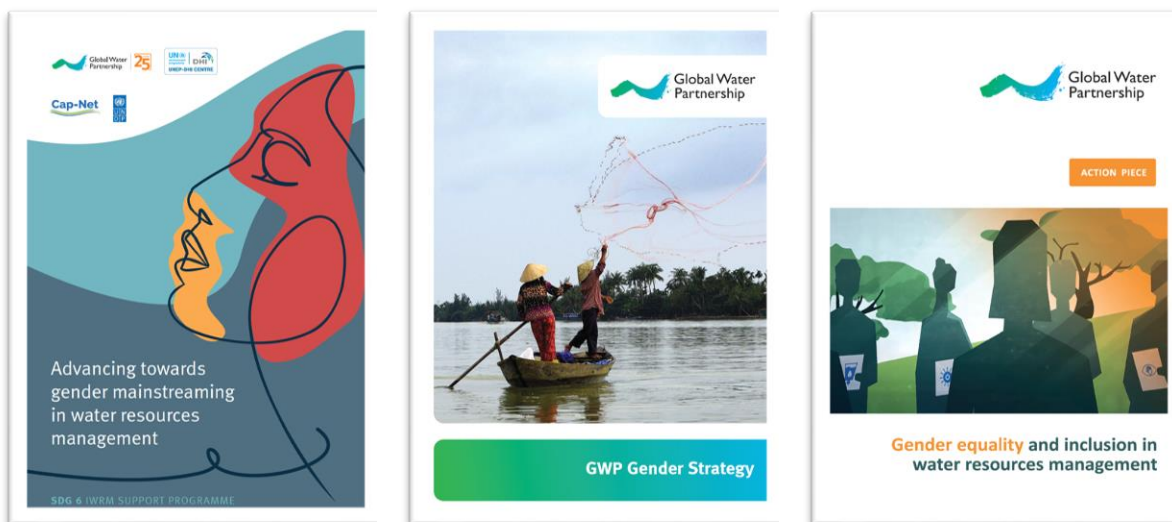
Figure 3. The Screenshot from Dr. Brouma presentation regarding GWP strategy 2020-2025

Within this strategy, Dr. Brouma emphasized that gender equality is one of the three encore cross-cutting areas. She highlighted the importance of integrating gender

perspectives and moving beyond the mere integration of women. Dr. Brouma emphasized that gender mainstreaming entails fully integrating both men and women perspectives, striving for gender equality, and employing a transformative approach. The GWP's gender strategy plays a crucial role in achieving gender equality in water resources management. It outlines the organization's approach and commitment to promoting gender equality, providing a concise explanation of their efforts and goals in this area.

Dr. Brouma pointed out that the GWP has developed various resources and publications related to gender equality and inclusion in water resources management (Figure 4). She mentioned an action piece on gender equality and inclusion in water resources management that identifies tangible action areas and provides recommendations.

Furthermore, Dr. Brouma highlighted the resources available through the GWP, such as the IWRM Action Hub and the Cap-Net Network¹ (Figure 5). These platforms and material provide opportunities for knowledge exchange, interaction, and capacity development in sustainable water management. She encouraged the audience to explore and utilize these resources.



¹ <https://cap-net.org/category/publications/gender/>



Figure 4. The GWP resources and publications related to gender equality and inclusion in water resources management

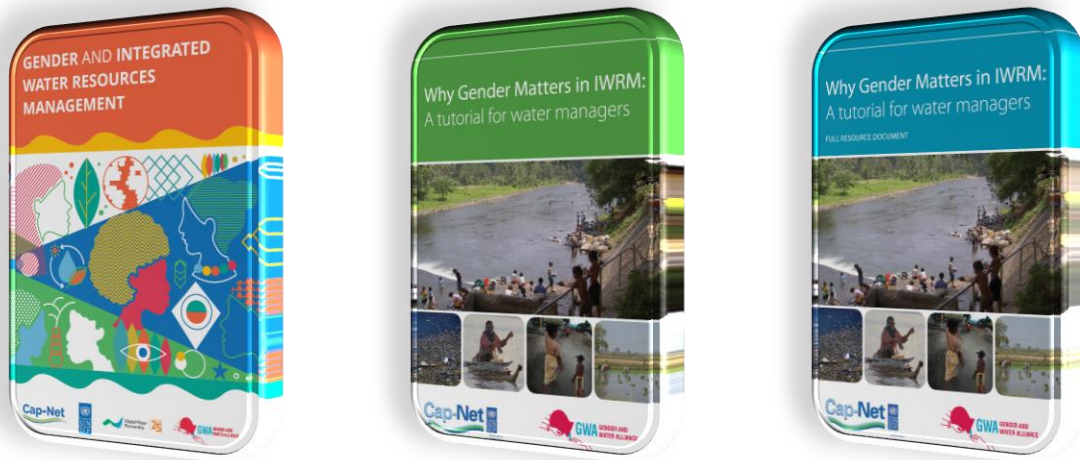


Figure 5. Cap-Net Publication on Gender

Furthermore, Dr. Brouma shared insights from an initiative aimed at strengthening female leadership in water diplomacy in the Middle East and North Africa (MENA) region. The Initiative was set off through a comparative study entitled “Empowerment Women in Water Diplomacy in the Middle East and North Africa: A Comparative Study

of Egypt, Jordan, Lebanon, Morocco, and Palestine¹” (Figure 6) that was conducted among 93 women from five countries including: Egypt, Jordan, Lebanon, Morocco, and Palestine. The study identified persistent barriers to women's advancement in water diplomacy, including discriminatory practices and socio-cultural contexts. The study also emphasized the importance of developing skills and knowledge in water diplomacy. It highlighted the need for women to possess diplomatic, legal, and communication skills to effectively navigate negotiations and decision-making processes.

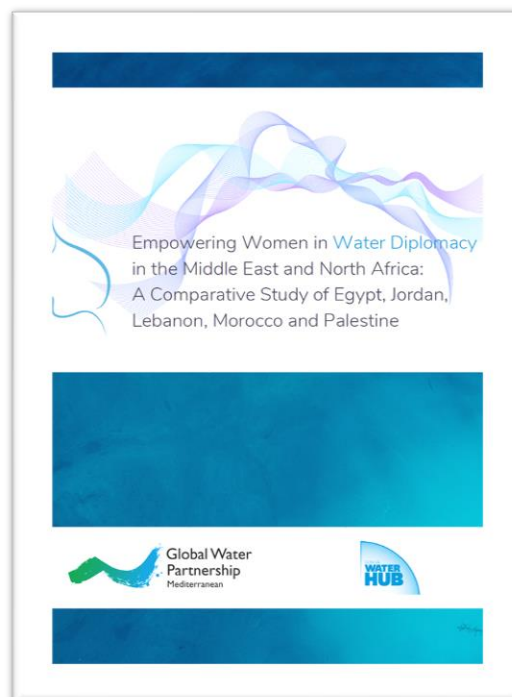


Figure 6. Empowering Women in Water Diplomacy in the Middle East and North Africa: A Comparative Study of Egypt, Jordan, Lebanon, Morocco, and Palestine

According to the results of this comparative study on empowering women in water diplomacy in the MENA Region, Dr. Brouma discussed the main factors contributing to the male-female ratio in the workplace (Figure 7). She mentioned that the factors were chosen based on traditional gender mainstreaming research, but two additional factors were included based on the working assumption that certain elements within

¹ <https://www.gwp.org/globalassets/global/gwp-med-files/list-of-programmes/women-in-water-diplomacy/wwd-comparative-study.pdf>

the control of women water professionals could be worked on to increase the pool of female expertise in water diplomacy. Dr. Brouma presented the findings from the comparative study, showcasing variations in percentages across the five countries assessed. The factors identified shed light on the challenges and barriers that women face in accessing high-level decision-making positions in water diplomacy and transboundary water cooperation. These factors were:

1. **Male-dominant society:** A male-dominant society was identified as a major factor in at least three of the countries examined. This factor reflects the overarching societal influence that perpetuates gender inequality;
2. **Male-female quota imbalance:** The lack of equal representation and opportunities for women compared to their male counterparts was identified as a key factor contributing to the workplace male-female ratio;
3. **Lack of supportive frameworks:** The absence of appropriate legal, legislative, and policy frameworks was identified as another significant factor inhibiting women's promotion to senior positions. Dr. Brouma emphasized the importance of addressing this issue to foster an environment where women can thrive and have equal opportunities for leadership positions. By advocating for and implementing supportive legal frameworks, organizations and societies can work towards dismantling barriers and creating a more inclusive and gender-equal work environment;
4. **Negative perceptions:** The slide indicated that negative perceptions of women in leadership roles, both from men and women themselves, contribute to the workplace male-female ratio. Dr. Brouma stressed the importance of challenging and changing these perceptions; and
5. **Lack of female expertise:** The perception that women lack the necessary expertise and skills for decision-making positions in water diplomacy was highlighted as a barrier. Dr. Brouma emphasized the need to address this perception and provide opportunities for women to enhance their skills in diplomacy and related fields.

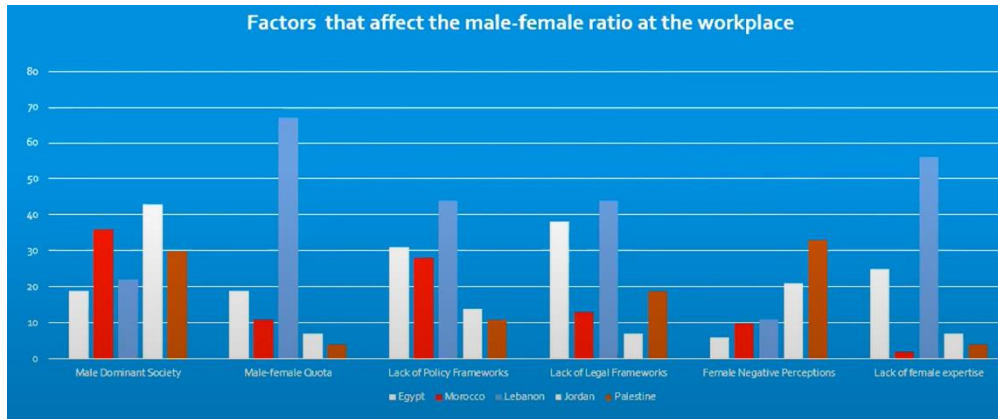


Figure 7. A screenshot from Dr. Brouma’s presentation. Main Factors contributing to the workplace male-female ratio according to the results of the GWP-Med’s study entitled “Empowerment Women in Water Diplomacy in the Middle East and North Africa: A Comparative Study of Egypt, Jordan, Lebanon, Morocco, and Palestine”

After discussing the factors contributing to the workplace male-female ratio, Dr. Brouma moved on to explain the factors that influence the acceptance of decision-making positions among women (Figure 8). She mentioned that the factors presented on the slide were typically cited in the literature and expressed by working women in the region. These factors represented the considerations and challenges faced by women when aspiring to decision-making positions and included: confidence and/or fear, lack of comprehensive skills, lack of supports from peers, lack of opportunity, and the motherhood tasks. Among them, Dr. Brouma highlighted the following:

- **Lack of opportunities compared to male colleagues:** there was a consensus among the responses from the five countries, indicating that women often have fewer opportunities for promotion and advancement compared to their male counterparts;
- **Lack of support from peers:** women face a lack of support from their peers in actively overcoming the challenges associated with the absence of opportunities. This lack of support further hinders their progress in decision-making positions; and
- **Absence of comprehensive skills:** there is a need for women to develop their diplomatic and international skills and acquire better knowledge of related legal instruments. These skills are crucial for effective leadership in water diplomacy.

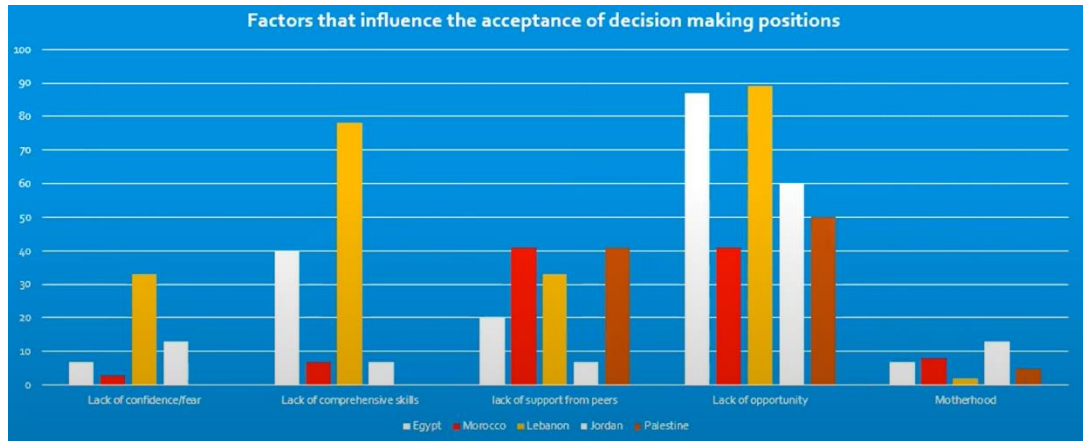


Figure 8. A screenshot from Dr. Brouma’s presentation. Factors that influence the acceptance of a decision-making position. Main Factors contributing to the workplace male-female ratio according to the results of the GWP’s study entitled “Empowerment Women in Water Diplomacy in the Middle East and North Africa: A Comparative Study of Egypt, Jordan, Lebanon, Morocco, and Palestine”

Based on the Comparative Study, Dr. Anthi Brouma mentioned the types of skills needed to attain positions in water diplomacy (Figure 9). She emphasized the importance of acquiring a range of skills related to political guidance, diplomacy, and international relations, technical expertise, and better knowledge of related instruments. These skills are crucial for effectively navigating the complexities of water diplomacy and engaging in negotiations.

Dr. Brouma highlighted the significance of having a solid foundation in political guidance, which involves understanding the political landscape, decision-making processes, and policy frameworks related to water resources management. This knowledge enables diplomats to navigate political dynamics and contribute effectively to decision-making processes. Additionally, she emphasized the importance of diplomatic skills, which encompass the ability to engage in effective communication, negotiation, and relationship-building with stakeholders involved in water diplomacy. These skills are essential for fostering collaboration, resolving conflicts, and achieving mutually beneficial outcomes. She also highlighted the need for strong international skills, which involve understanding the global context of water-related issues, international frameworks, and legal instruments. This knowledge allows diplomats to engage in discussions at an international level, represent their countries or organizations effectively, and contribute to global water governance. Dr. Brouma

emphasized that a combination of political guidance, diplomacy, and international skills is necessary for individuals aspiring to water diplomacy positions. These skills enable effective engagement in negotiations, collaboration, and decision-making processes within the field of water resources management.

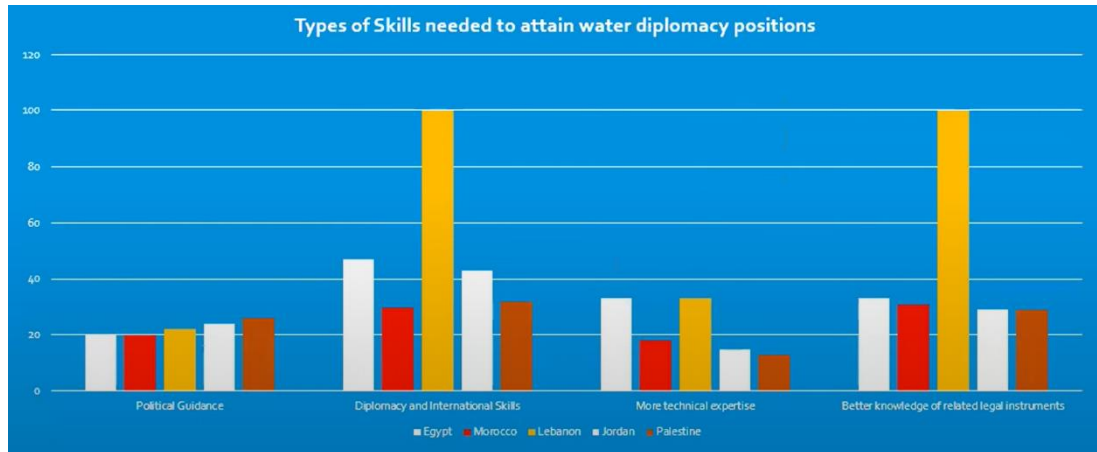


Figure 9. Types of skills needed to attain water diplomacy position

In conclusion (Figure 10), Dr. Brouma expressed the ongoing commitment of GWP-Mediterranean to expand the Initiative, gather input from more countries in the MENA region, and develop a knowledgeable and empowered pool of female professionals in water diplomacy. The ultimate goal is to increase the representation and participation of women in high-level decision-making and leadership positions in the water sector and contribute to gender equality in water resources management.

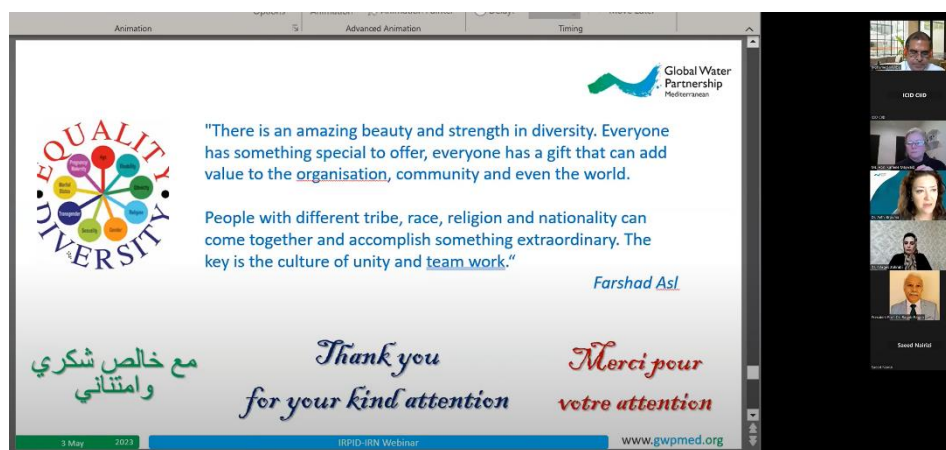


Figure 10. Dr Brouma's Presentation during the international webinar on empowerment and capacity development of women in water resources management

10. Report Based on Dr. Narges Zohrabi Presentation¹

10.1. Keynote Speaker- Dr. Narges Zohrabi

Associate Professor at IAU; Executive member of the IRNCID; Head of IRPID-IRN



Dr. Narges Zohrabi deliberates upon the severe problem of the water scarcity crisis and emphasizes the necessity of women's involvement in water management to safeguard access to water. She accentuates women's pivotal role in water management, both within the local and community spheres. Furthermore, she emphasizes the importance of empowering women to participate in water management and decision-making.

10.1.1. Highlights from Dr. Narges Zohrabi Presentation

- Water scarcity is a global crisis, and addressing it requires collective efforts and solutions.
- Women play a crucial role in dealing with water scarcity due to their valuable knowledge and responsibilities in water collection and management.
- Women's participation in decision-making is essential for sustainable development and efficient water resource management.
- Current global statistics show disparities in women's participation across sectors, including water management.
- Successful countries have policies promoting women's participation, including training, empowerment, and supportive initiatives.
- International organizations are involved in projects focused on women's capacity development in the water sector.
- Stakeholders are urged to prioritize capacity development and empowerment of women to address the global water crisis, particularly in the MENA region.

¹ The complete presentation file can be access through https://icid-ciid.org/icid_data_web/webinar_Empowerment_03052023_Zohrabi.pdf

10.1.2. Women's Participation in Water Resource Management

- Women have valuable knowledge of water resources and their key role in water and sanitation management at the local and community levels.
- Recognizing and supporting women's contributions to the water sector is crucial.
- Women's participation in decision-making processes is of high importance for sustainable development
- There is a need to empower women and ensure their participation in water resource management for efficient utilization of resources.
- Disparities in women's participation across regions and sectors are influenced by factors such as economic structure, educational opportunities, laws, and cultural traditions.

10.1.3. Water Scarcity and the Global Water Crisis – role of women

- The pressing issue of water scarcity is a sensitive and vital problem worldwide.
- The universal right to access water is for all individuals, regardless of gender or location.
- There is a need to examine capacities and work together to overcome the global water crisis.
- Nowadays there is an urgency for sustainable solutions and collective efforts by men and women to address water scarcity
- Recognizing and utilizing all available capacities to effectively address the water crisis is important.

10.1.4. Water Scarcity and the Global Water Capacity Development and Empowerment for Women in the Water Sector

- Although there are some ongoing projects focused on women's capacity development in the water sector, particularly in Central Asia and Africa, there is a need for greater attention and support from national and international institutions to strengthen women's capacity in the water industry, especially in the Middle East.
- Recognizing the conditions necessary for enhancing women's capacity and the utilization of women's capacity in the water sector is of high importance.

10.1.5. Summary of Presentation

Dr. Narges Zohrabi enraptured the attendees with her captivating discourse titled "Water is the Elixir of Life and Woman is the Giver of Life", illuminating the acute predicament of water scarcity. She accentuated the indispensable contribution of women in grappling with this worldwide predicament, emphasizing the imperative for expeditious measures. The slogan for World Water Day 2023, "Accelerating Change for Solving the Water Crisis," further highlighted the need to examine capacities for overcoming the crisis. The presentation discussed the critical aspect of sustainable development, specifically focusing on water resource management and the essentiality of women's participation in this field. It emphasized the social, economic, and environmental factors that make women's involvement crucial. Women, being responsible for meeting their families' needs, play a central role in ensuring access to vital resources such as drinking water, sanitation, and irrigation. They also contribute significantly to environmental conservation and natural resource sustainability. Moreover, their participation in decision-making and water resource management improves efficiency and promotes sustainability, ultimately ensuring access to safe and clean water for all. Recognizing the significance of women's participation in securing access to water resources, empowering them becomes essential for a sustainable future. Women's participation in water resource management was highlighted as crucial due to their responsibility for water collection and their valuable knowledge of water resources. Their involvement in decision-making at local and community levels ensured sustainable development. Dr. Zohrabi shared a statement from UNESCO recognizing the significant role women play in water and sanitation management (Figure 11).



Women not only bear the primary responsibility for collecting water in many parts of the world, but they also possess valuable knowledge in the field of water resources and play a key role in water and sanitation management at the local and community levels.

Figure 11. A statement from UNESCO recognizing the significant role women play in water and sanitation management (Source: Taking stock of progress towards gender equality in the water domain, 2021, UNESCO World Water Assessment Programme, ISBN: 978-92-3-100453-7)

Dr. Zohrabi highlighted the significance of women's participation in water resource management, considering social, economic, and environmental factors. Within societies, women have historically shouldered the responsibility of water collection and management, underscoring the importance of ensuring access to clean water. Their involvement in environmental conservation and natural resource sustainability contributes to overall efficiency and sustainability.

Dr. Zohrabi examined women's participation from both individual and societal perspectives, as depicted in Figure 12. On an individual level, she acknowledged the long-standing burden women have carried in water collection and management. She emphasized their valuable knowledge in water resources and their pivotal role in local and community-level water and sanitation management. In this section, she emphasizes the individual participation of women, which can usually occur in all societies and does not necessarily mean the high participation of women in that society, but rather depends on the inherent ability of each individual.

From a societal standpoint, Dr. Zohrabi drew attention to disparities in women's participation across regions and sectors. While individual women's participation can be found in all societies, it does not necessarily imply a high overall involvement rate. The existence of platforms and environments that support women's capacity-building

and development within societies emerged as a crucial factor in promoting their participation.

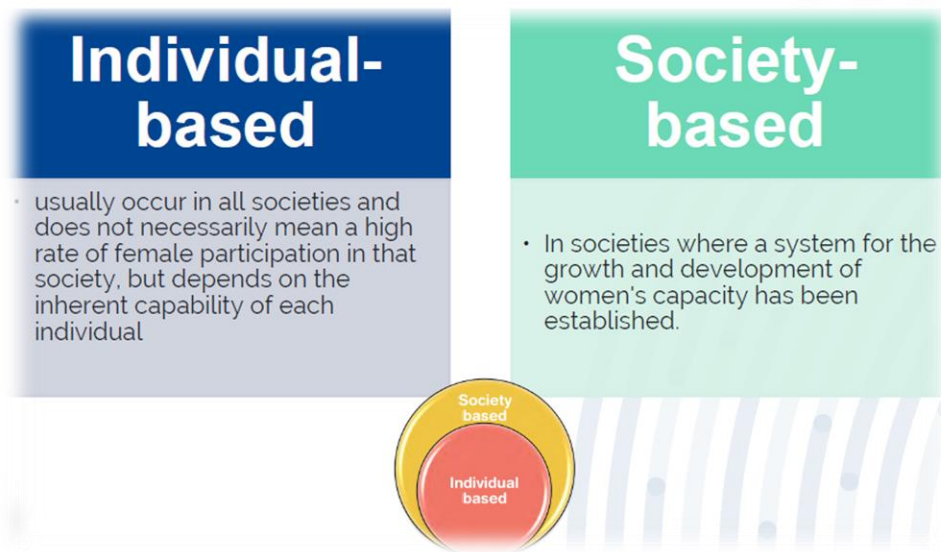


Figure 12. Examined women's participation from both individual and societal perspectives

Dr. Zohrabi discussed the World Bank's 2022 report, which examined women's participation rates and the gender gap percentage based on the income of countries in different regions (Figure 13). The report revealed notable patterns across income categories. In low-income countries, women had higher participation rates and lower gender gap percentages compared to other income categories. As countries transitioned to average income levels, women's participation rates declined, resulting in an increase in the gender gap. However, in developed countries, women's participation was relatively high, accompanied by a lower gender gap percentage.

Dr. Zohrabi highlighted a concerning disparity in certain regions, such as South Africa, the Middle East, and North Africa, where men's participation in the water sector exceeded that of women by threefold. This disparity indicated an underutilization of women's capacity in these regions. This issue is influenced by various factors, including economic structure, educational opportunities, laws, and cultural traditions.

She mentioned this issue is influenced by various factors, including economic structure, limited educational opportunities, prevailing laws, and cultural traditions. The slide emphasized the significance of addressing these factors to promote greater

gender equality and mainstreaming and harness the untapped potential of women in the water sector.

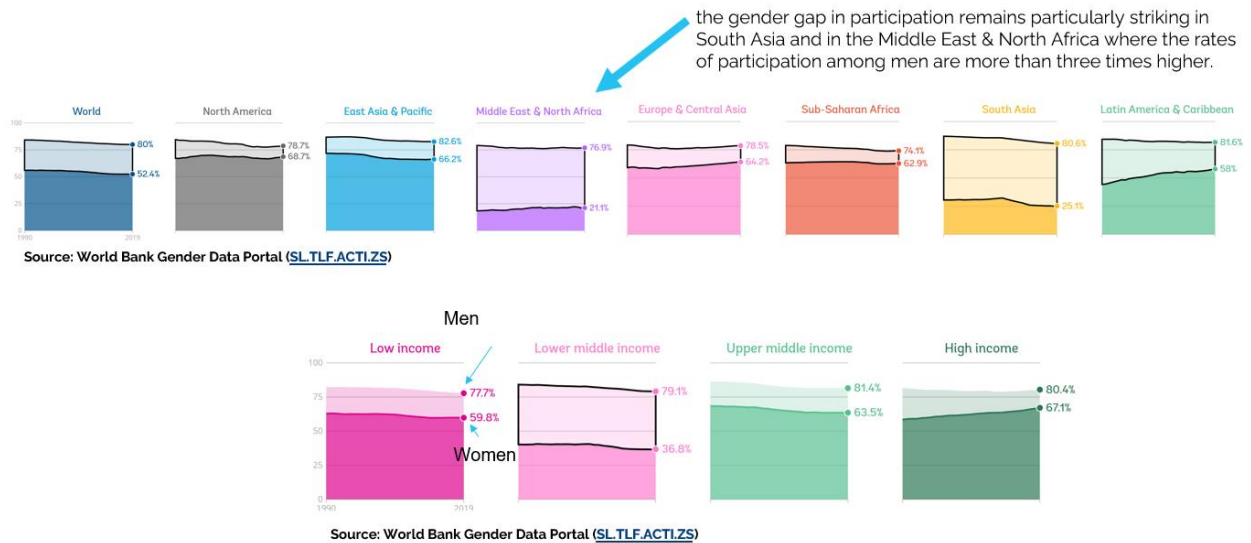


Figure 13. Screenshot from Dr. Zohrabi Presentation, Female Labor Force Participation

Further, Dr. Zohrabi discussed the relationship between women's participation and water stress in certain regions, specifically the Middle East and North Africa. She referred to a figure that depicted the regions experiencing high levels of water stress and severe water crises (Figure 14). She highlighted that in some countries within the Middle East and North Africa region, women who primarily take on homemaking roles are directly impacted by water scarcity and lack of access to water. These women spend significant hours each day collecting water for their families. Moreover, she pointed out that in some countries in these regions women have fewer opportunities to enter managerial decision-making positions in the water sector. In others, women, already facing higher vulnerability to poverty than men, will be least able to absorb the oncoming economic shocks. Dr. Zohrabi emphasized the intersection between women's capacity utilization and the severity of water stress in these regions. It implied that women's contributions to water resource management are essential in addressing water crises but are currently underutilized, particularly in regions facing acute water challenges.

Water stress levels based on freshwater withdrawal as a share of total renewable freshwater resources, 2019 (percentage)

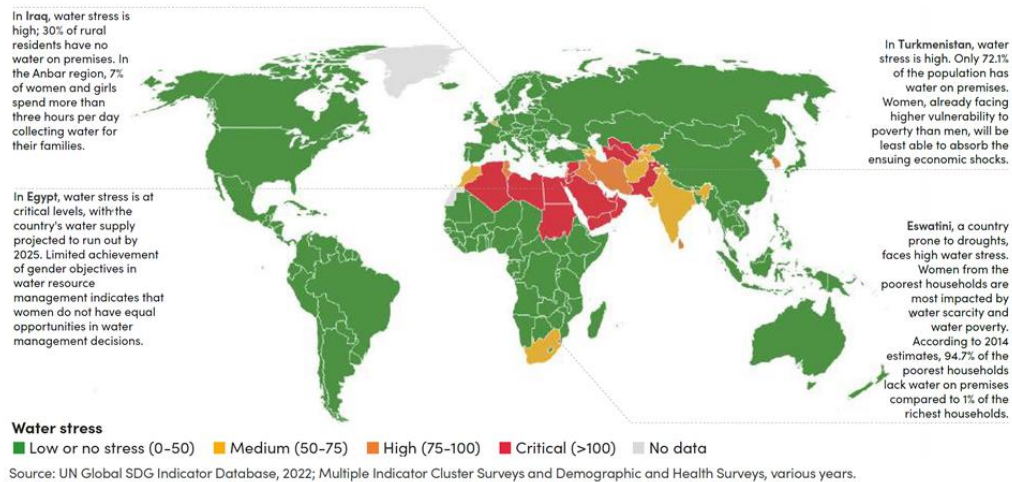
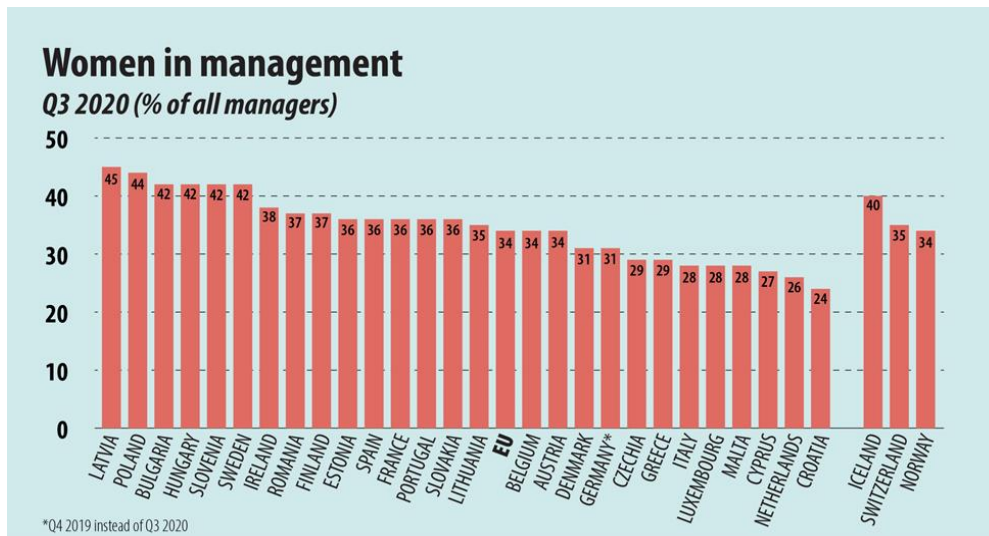


Figure 14. Screenshot from Dr. Zohrabi presentation. Water stress levels based on freshwater withdrawals as a share of total renewable freshwater resources (percentage), 2019.

Afterward, Dr. Zohrabi discussed the active presence of women as water managers, technical experts, and high-ranking officers in organizations related to the water sector in developed countries (Figure 15 and 16). She cited the Joint Research Centre of the European Commission, which stated that women make up 24 percent of water managers in Europe. However, she also noted that this figure falls short of the European Union's goal of having 40 percent of women in decision-making positions by 2020. She highlighted the progress made in developed countries regarding women's participation in water management. Despite this progress, Dr. Zohrabi indicated that there is still room for improvement in achieving gender parity in decision-making positions within the water sector.

The main emphasis of Dr. Zohrabi in this section was on acknowledging the presence of women in water management roles in developed countries and under-developing countries, while recognizing the need for further advancements to achieve gender mainstreaming and increase women's participation in decision-making positions within the water sector.



#InternationalWomensDay

ec.europa.eu/eurostat 

Figure 15. Screenshot from Dr. Zohrabi presentation. Active presence of women as water managers, technical experts, and high-ranking officers in organizations related to the water sector in developed countries

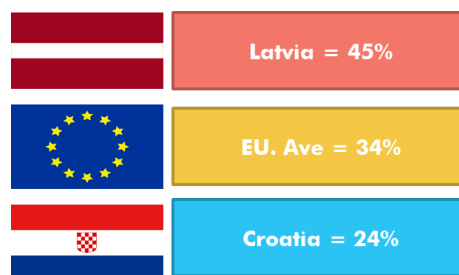


Figure 16. Screenshot from Dr. Zohrabi presentation. The status of the best country in the European Union, the average of the European Union, and the worst country in the European Union in terms of women's participation.

Further, Dr. Zohrabi discussed various factors contributing to the success of countries with high levels of women's participation, particularly in management positions within the water sector. She highlighted several key factors:

- Professional competence and individual capabilities: Dr. Zohrabi emphasized that in successful countries, professional competence and individual capabilities are the primary criteria for superiority. Gender issues are less visible in the work environment, promoting gender equality.
- Government policies and programs: Successful countries have implemented policies and programs aimed at promoting women's participation in water

resource management. These include initiatives such as encouraging women to participate in training programs, empowering them to obtain managerial positions, supporting the establishment of women-led companies in water resource management, and implementing other supportive policies.

- Education and qualifications: Dr. Zohrabi noted that a high level of education and qualifications enable women to compete for managerial jobs in water resources and succeed in this area. Access to quality education plays a crucial role in empowering women and enabling them to take on leadership roles in the water sector.

While these factors contribute to the success of countries with higher levels of women's participation in water resource management, Dr. Zohrabi also mentioned that developing countries face additional challenges. Raising awareness among women, removing legal barriers, implementing gender mainstreaming strategies, increasing attention to women's ideas, and fostering collaborative interactions are fundamental factors for developing countries to focus on (Figure 17).

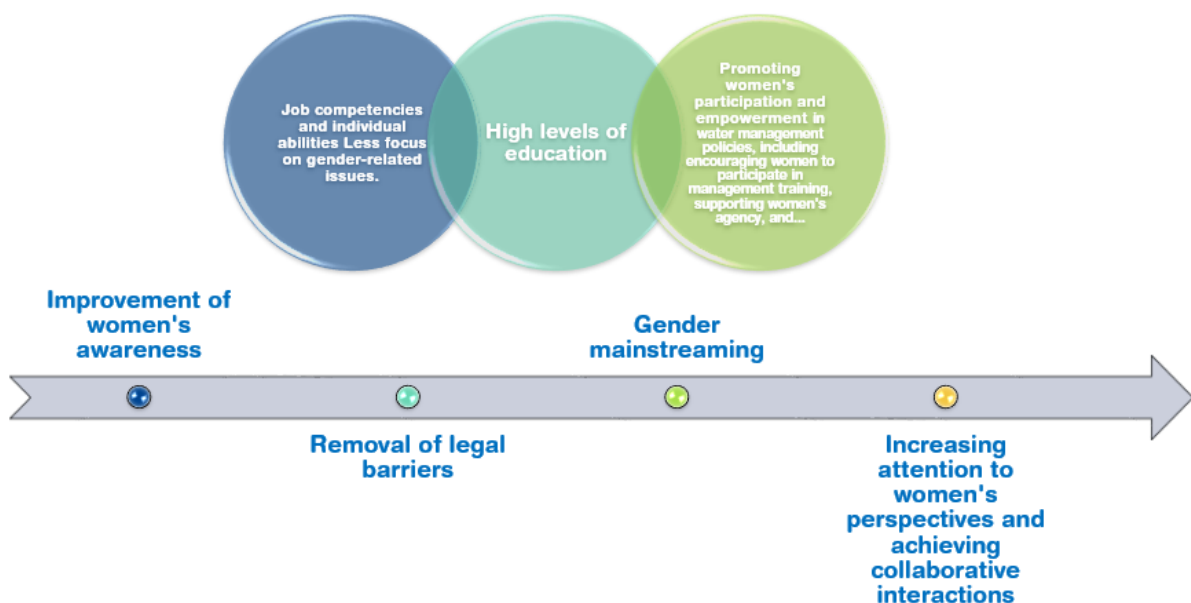


Figure 17. Screenshot from Dr. Zohrabi presentation. Reasons that lead to the success of women's presence

Dr. Zohrabi discussed several ongoing projects focused on women's capacity development in the water sector, particularly in Central Asia and Africa. She mentioned specific initiatives conducted by international organizations, including:

- The innovation project for gender equality in water management, carried out by the International Water Management Institute (IWMI).
- The Women in Water Management project in Central Asia and Afghanistan, conducted by SIWI since 2021.
- The Women's Water Diplomacy Network in the Nile, a project initiated by SIWI in 2017.

She highlighted these projects as examples of international efforts aimed at developing women's capacity in the water sector. It indicated that most of these studies have been conducted in Central Asia and Africa, emphasizing the focus on these regions for capacity development initiatives. Dr. Zohrabi drew attention to the need for greater focus and attention from national and international institutions in strengthening and developing women's capacity in the water sector. She emphasized the importance of considering the conditions necessary for enhancing women's capacity and highlighted the urgency for increased support and resources to empower women in the water industry. She called for increased recognition of the importance of women's capacity development and stressed the need for concerted efforts to address existing gaps and challenges. She emphasized The effective utilization of women's capacity in the water sector requires attention and prioritization from relevant institutions and stakeholders.

She emphasized that the effective use of women's capacity in the water sector requires the support of men's society, as well as the attention and support of relevant institutions and stakeholders.

Dr. Zohrabi mentioned that according to global statistics, the less representation of women in the water industry was highlighted, with less than 17 percent of women currently active in the field (Figure 18). Dr. Zohrabi emphasized the need for greater attention from national and international institutions and organizations to strengthen and develop women's capacity in the water sector.



Figure 18. Highlighted slide from Dr. Zohrabi presentation (Source: World Bank. 2019. Women in Water Utilities: Breaking Barriers. © World Bank, Washington, DC. <http://hdl.handle.net/10986/32319> License: CC BY 3.0 IGO)

Dr. Zohrabi focused on the effective addressing of the water crisis by utilizing all available capacities. She pointed out that communities that have witnessed improvements in water management have benefited from capacity development and empowerment initiatives. She requested all stakeholders and actors in the water sector, especially the member countries of IRPID-IRN (facing severe water crises in the MENA region), to seriously consider and implement capacity development, capacity building, and the strengthening of women in all dimensions. The importance of utilizing women's capacity to help solve the water crisis globally was emphasized.

She called for increased recognition and focus from national and international institutions in strengthening and developing women's capacity in the water sector. The importance of considering the necessary conditions for enhancing women's capacity was stressed, and greater support and resources were urged to empower women in the water industry. The the need for concerted efforts to address existing gaps and challenges, as well as the utilization of women's capacity in the water sector was emphasized.

11. Conclusions

Presentations on women's empowerment in water resources management are not only important and effective in adapting to and responding to the global water crisis, but also have highlighted the critical importance of gender equality and women's role in achieving sustainable development goals. The key points identified a number of challenges and opportunities for empowering women in the global water sector. Here are comprehensive conclusions based on the insights provided:

The presentations on women's empowerment and capacity development in water resources management are not only important and effective in adaptation and flexibility in the global water crisis but also have highlighted the critical importance of gender equality and women's involvement in achieving sustainable development goals. The key points identified a number of challenges and opportunities for empowering women in the water sector globally.

One of the critical pathways to unleashing women's potential in the water sector is by ensuring equal access to education and resources. By providing women with the necessary skills and environmental education, they can make informed decisions and actively participate in water management and food production. Furthermore, engaging women in decision-making processes is essential as their perspectives and negotiation skills lead to more sustainable and holistic solutions.

Cultural barriers and societal norms were identified as significant challenges to women's involvement in water management. To overcome these obstacles, collaborative efforts with communities are vital. This entails promoting a cultural shift that embraces gender equality and mainstreaming and supports women in leadership roles. By supporting women's participation at all levels of water management, we can create a more inclusive and equitable water management framework.

The International Commission on Irrigation and Drainage (ICID) is an organization dedicated to promoting sustainable agriculture water management. Its Vision 2030 (https://icid-ciid.org/inner_page/2) and its mission is to achieve a water-secure world that is free of poverty and hunger through sustainable rural development. ICID works towards this vision by facilitating prudent agriculture water management and promoting interdisciplinary approaches that are economically viable, socially

acceptable, and environmentally sustainable. The organization aims to address the challenges of water resources management, irrigation, drainage, and flood management, with a focus on promoting the equitable and efficient use of water resources.

Given that a significant portion of farmers worldwide and local communities are women, ICID can contribute to creating a more inclusive and sustainable water management sector that empowers women and promotes the equitable and efficient use of water resources. ICID's efforts in empowering and developing the capacity of women in water management will contribute to achieving sustainable development goals and ensuring a water-secure world that is free of poverty and hunger through sustainable rural development.

Further, the role of organizations like the Global Water Partnership (GWP) and GWP-Mediterranean is crucial in advancing gender equality in water resource management. GWP's commitment to empowering women through its gender equality strategy, relevant resources and the different dedicated activity lines, including a global Community of Practice on Gender and Water Resources Management, is commendable. Building upon this foundation, future efforts are focusing on further developing opportunities that strengthen women's leadership in water diplomacy and water decision-making. This could involve targeted training programs, including mentorship opportunities, additional analytical work to raise awareness and inform a regional dialogue, as well as networking opportunities to connect women in the water sector in the MENA region and worldwide.

It is evident from the presentations (https://icid-ciid.org/inner_page/234) that women's participation in water management varies across different regions and income levels. In regions like MENA, there is a pronounced gender gap in participation, highlighting the need for targeted interventions that are tailored to the specific needs of the region. By learning from successful case studies and best practices from other regions with higher women's representation in water organizations, valuable insights can be gained to inform targeted interventions.

As the world faces mounting challenges related to water scarcity, climate change, and environmental degradation, it is crucial to tap into the wealth of knowledge and

expertise that women possess. Women have demonstrated their capabilities as technical experts and managers in water organizations across the globe. By promoting women's leadership and breaking down barriers, we can foster innovation and inclusive decision-making in the water sector globally.

In conclusion, the presentations underscored the importance and added value by investing on women's empowerment and capacity development in water resources management. By promoting gender equality and mainstreaming, facilitating education and knowledge-sharing, and breaking down cultural barriers, the societies can unlock the full potential of women's contributions to water security and sustainable development. As the societies move forward, it is essential for policymakers, organizations, and communities to collaborate and implement targeted strategies to create a more inclusive, equitable, and resilient water management framework that benefits all. Empowering women in the water sector is not only a matter of social justice but also a smart and strategic approach to achieving a more sustainable and prosperous future for all.

In this regard, IRPID-IRN, on behalf of ICID, invites its member countries to define projects for capacity development and empowerment of women in water resources management in their countries. IRPID-IRN also expresses its interest in cooperating with international organizations such as GWP, WB, FAO, UNESCO, and other ICID collaborating institutions active in the water and agricultural field. So far, they have implemented many projects to empower women in different parts of the world. IRPID-IRN encouraging these international organizations and institutions to implement a project in this field in the member countries of IRPID-IRN, of which the MENA region is the one that is facing acute water crisis. Therefore, these institutions and international organizations are encouraged to actively cooperate in implementing the goals of sustainable development, social justice, and greater awareness of women and decision-makers for more sustainable water and food security in the member countries of this node.

12. Recommendations and Future Outlook

Based on the presentations' insights, the report offers several recommendations to promote women's empowerment in water resources management:

1. Implement targeted education and capacity-building programs to equip women with the skills and knowledge necessary for effective water management.
2. Promote gender-inclusive decision-making processes in the water sector at all levels, fostering collaboration and diversity in finding sustainable solutions.
3. Foster cultural change through community engagement, advocating for gender equality and breaking down traditional barriers that limit women's participation.
4. Establish mentorship and networking programs to support women's career advancement in the water sector and facilitate knowledge-sharing.
5. Encourage collaboration between organizations and governments to develop region-specific strategies for promoting women's participation in water management.

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