



WOMEN IN SUSTAINABILITY,
ENVIRONMENT AND
RENEWABLE ENERGY

ENSURING AN INCLUSIVE GLOBAL
ENERGY TRANSITION THROUGH
ACCESS TO FINANCE AND CAPACITY-BUILDING



An initiative by

MASDAR 

About WiSER

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

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

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

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

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

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

Founding Partners



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Foreword

The Power of Inclusion in Climate Action

Inclusion lies at the heart of effective climate action, making it both equitable and impactful, especially as we navigate the critical energy transition. Successful climate initiatives not only address the challenges faced by those most affected by climate change but also recognize the transformative potential of diverse voices and perspectives in driving sustainable progress.

It is therefore essential to enhance the capabilities of marginalized and vulnerable groups, guaranteeing their access to vital resources and opportunities, if we want to achieve a just energy transition.

At Masdar, we are committed to addressing this issue through our Women in Sustainability, Environment, and Renewable Energy (WiSER) initiative – a global platform that champions women as leaders of sustainable change.

Women, often disproportionately affected by climate change, play a pivotal role in responding to its impacts. Recognizing that more needs to be done to strengthen women's participation in the global mission to tackle climate change, WiSER was formed to support women in climate action through a focus on education, engagement, and empowerment.

At the inaugural WiSER Breakfast Briefing Series at New York Climate Week 2023, co-hosted with the Atlantic Council, WiSER convened key stakeholders from government, business, academia, and civil society to explore strategies for achieving an inclusive global energy transition through improved access to finance and capacity building.

Participants stressed the importance of adopting a gender-responsive approach to policymaking to ensure new programs or policies aimed at accelerating the shift towards low-carbon



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energy take into account their potential impacts on all individuals, particularly women. Their discussions emphasized the importance of collaboration and localization for achieving an equitable and climate-safe future. This involves tapping into the insights and expertise of various stakeholders to tailor solutions to the specific needs of different communities.

Such an approach is a principle at the core of the UAE's strategy for COP28. COP28's focus on fast tracking a just and equitable energy transition will give world leaders and civil society an opportunity to unlock new perspectives that will empower communities, engage stakeholders, and inform policies vital to our collective commitment to a sustainable future.

Inclusion is not just a principle but a dynamic and evolving journey that must guide climate action at every step. This report aims to inspire and encourage individuals and organizations to prioritize diversity as a fundamental component of their climate initiatives.

Global Climate Change Is a Local Challenge



A just transition to a net zero future demands an inclusive approach in addressing inequalities from the perspectives of resource distribution, capacity-building, and awareness. The route to ensuring that all communities and individuals have a fair opportunity from sustainable initiatives is via creating pathways for everyone to participate. One of the key discussion points was that climate change has no borders.

While participants agreed that women are among the most vulnerable groups that are disproportionately affected by climate change, it is equally true that they are catalysts for change. The concept of a just and inclusive transition has become one of the defining features of how the Paris Agreement will be delivered. This means that individuals, communities, and institutions globally will need to come together and equip themselves with the right skills, knowledge, and resources to actively participate.

Globally, close to a third of all displaced people have been uprooted by weather events, with women and children the worst affected. Data shows that in 2021, 22.3 million people were

displaced by weather-related events, far higher than those similarly affected by conflict and violence, showing the **human cost of climate change**. These events include weather and climate hazards such as floods and storms, wildfires, landslides, extreme temperatures, and drought. **Weather shocks** lead to food insecurity which, in turn, leads to conflict.

This spotlights the importance of **human capital**. Participants underscored that countries which do better on **human development indices** have a better record of citizens adapting to climate action. In regions where incumbent interests might hold back the green revolution, disadvantaged groups, including women, youth, and workers in the green economy, can form coalitions for change. Examples were shared of initiatives that foster inclusion by taking various approaches. These include financial support, policy changes, collaboration, access to technologies, utilization of human capital, and calls to action in various sectors.

Capacity-building is most effective when it takes into account social issues and initiatives are



Capacity-building is most effective when it takes into account local issues and initiatives are tailored to support the most excluded populations



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tailored to support the most excluded populations. An **effective policy for innovation** is required to harness the immense potential of youth. UAE Independent Climate Change Accelerators ([UICCA](#))¹, for instance, work across three main areas, including **policy recommendations, unlocking finance, and innovation and technology**. Connecting the trillions of dollars of climate funding that countries have pledged to the innovators and markets is made possible via mentorship and support. At the same time, **regulatory sandboxes** ensure that innovation reaches markets as quickly and efficiently as possible.

A collaborative approach, such as **policy hubs**, bringing together the public and private sectors, along with civil society, can help accelerate decarbonization. Participants also discussed the meeting point of **technology and culture**, in considering the possibility of halal certification for products that tackle methane emissions, which are [80 times](#)² more powerful than carbon dioxide as a greenhouse gas. The government plays an important role in capacity-building, especially when it comes to deploying new technologies.

In the US, the Department of Commerce has the Commercial Law Development [Program](#)³ as a focus on legal and regulatory reforms. The recently [enrolled](#)⁴ Climate Corporate Data Accountability Act, once signed, is set to be the first comprehensive greenhouse gas emissions disclosure requirement for large companies, applicable to the entire supply chain of a business in the United States.

Many regions, including the Middle East and North Africa, need to consider climate change from the perspective of **adaptation as well as mitigation**. Climate shocks in the region are more frequent and costlier in terms of GDP loss, specifically in agriculture. Energy transition from the point of view of natural resource dependence and industrial production needs to be addressed in the context of many countries' reliance on these. The meeting heard that there is a huge opportunity to experiment and innovate with regard to **solar power** in the region. At the same time, fuel subsidies are high in many parts

Updating 5 farming technologies at Africa's smallholder farmers could cut the continent's emissions by **10%**

This will be especially relevant because a high number of smallholder farmers in developing countries are women

of the region. Countries that successfully convert these subsidies to green fuel, while compensating the poor, will see the highest gains from the transition.

A call to action has been launched by [Power for All](#)⁹ a global campaign to end energy poverty by accelerating the adoption of decentralized renewable energy, which called for transitioning the US\$ 8 trillion food system out of fossil fuels and into renewable energy. Research shows that updating five key farming technologies for Africa's smallholder farmers could cut the continent's emissions by 10 percent and see economic gains of US\$ 24.5 billion. This is especially relevant because an uncommon number of women are farmers in developing countries, participants said.



Inclusion of Marginalized and Vulnerable Groups



Participants at the roundtable stressed the importance of hope as a starting point for any progress. The first step to this is to have a **vision for the future**. The next step is to have a plan, and the importance of having a **transition plan** that can be delivered. The final piece is to do with **knowing the role** each of us plays in driving that change. Everyone has to be on board from the design stage.

Inclusion is also one of the key concepts to be discussed at COP28, the United Nations Climate Change Conference to be held in the United Arab Emirates in November and December 2023. COP28 is specifically positioned as the “COP of inclusion.” According to COP28 President-Designate [Dr. Sultan Al Jaber](#)⁶, “The COP28 Presidency believes inclusivity is a critical enabler to achieving transformative progress across the climate agenda. Only by rising above our differences and working together can we raise our shared ambition and deliver progress to keep 1.5C within reach.”

The emphasis is on the need to include **human capital** as part of strategic plans. Participants heard that a majority of Nationally Determined Contributions (NDCs) did not mention human capital. Specifically, there needs to be a shift in planning to include gender because gender-responsive policymaking can pave the way to inclusive transition.

A 2021 [study](#)⁷ by the International Union for Conservation of Nature (IUCN) shows that 78 percent of NDCs (69 of the 89 NDCs reviewed) include at least one mention of gender, up from 40 percent (or 65 out of 162 Intended NDCs reviewed in 2016). Latin America and the Caribbean and Sub-Saharan Africa are regional leaders, close to 100 percent of NDCs including gender considerations. However, even among those who mention it, less than a quarter have listed any actions related to gender. The human side of contributions needs to be included in the relevant climate policy.

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Organizations such as the European Bank for Reconstruction and Development (EBRD) work with policymakers to integrate gender into relevant climate policy, whether it is the national energy policy or the national infrastructure policy, along with bolstering skillsets and **education policies** to get women into subjects related to science, technology, engineering, and mathematics (STEM). The **policy ecosystem** emerged as a big piece of the jigsaw.

Climate action is also influenced by geopolitical realities. Participants discussed challenges to do with the potential of events such as Russia's invasion of Ukraine derailing the energy transition, or accelerating the diversification of energy sources.

Participants stressed the importance of inclusive action, which involves looking at **energy solutions globally**. However, it is imperative that any potential solutions that address reductions in carbon emissions do so in a way that maintains and promotes **energy security** progressively.

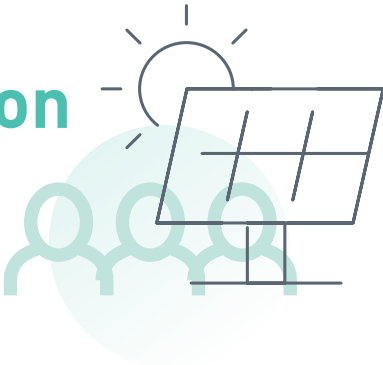
Multiple participants spoke about the need to include diversity and capacity-building at the start of any initiative. A **gender-centered approach**, they said, is central to energy

A vision for the future needs to find structure in a transition plan that can be delivered. The final piece is to do with knowing the role each of us plays in driving that change. Everyone has to be on board from the design stage.

Considering women as drivers and catalysts pays off in terms of the resilience and outcomes of each program

transition. At the same time, considering women as drivers and catalysts is not limited to being a "nice notion". Evidence shows that this approach pays off in terms of the resilience and outcomes of each program.

Technology Assists Inclusion in Capacity-building



Capacity-building is at the heart of climate action. Emphasizing the importance of inclusion right from the design stage, participants spoke of “deliberate action”. A program called SEforALL Women in [STEM](#)⁸ traineeship includes end-to-end training for women. Aspects of the program include young women working on transition plans of countries such as Ghana and Kenya. This enables creating a **diverse talent pool**, with inclusion built into it from the start. This systemic approach can be made possible with deliberate action by the government so that diverse populations are included in the policymaking and design phases.

The meeting also dwelled on the fact that transition brings many new jobs and skillsets with it and emphasized the responsibility of stakeholders to ensure that **vulnerable populations**, including women, are prepared enough to take advantage of these. Women are in

a unique position here because they have been shown to be **flexible and adaptable**. Participants also spoke about women being **enablers and facilitators of collaboration**. However, structurally speaking, access to opportunities is only possible with **training and capacity-building**. Participants discussed the importance of delineating the roles that women can play during the transition and in the future. Examples included workforce development, identifying the needs in each community, and targeting women and

Financial flows and capacity-building in hydropower and geothermal power can help bridge the energy access gap





disadvantaged communities so that they benefit from these initiatives.

Private sector participants shared examples of initiatives that focus on **upskilling employees**. This is crucial from an **employee value proposition** standpoint because it empowers talent to focus on sustainability. As we go forward into climate action, this aspect will differentiate organizations. Organizations also find different ways to include giving back. For instance, energy companies run programs where employees are encouraged to give back to their communities through fundraising, donating, and volunteering. Examples of such programs show that communities are empowered when large companies work with local charities in supporting their efforts.

Being technology-agnostic can help apply affordable and reliable solutions for the world's energy future

The role of awards in empowerment and mentorship was part of the discussion. The [Zayed Sustainability Prize](#)⁹ for instance, is an annual global award established in 2008 that recognizes sustainable development solutions. The recipients include organizations and high schools led by women. Such initiatives act as bridges between the market and the innovator in that they help **scale solutions**, and encourage **local women micro entrepreneurs** to become business leaders and support their communities by addressing challenges in the areas of health, food, energy, water.

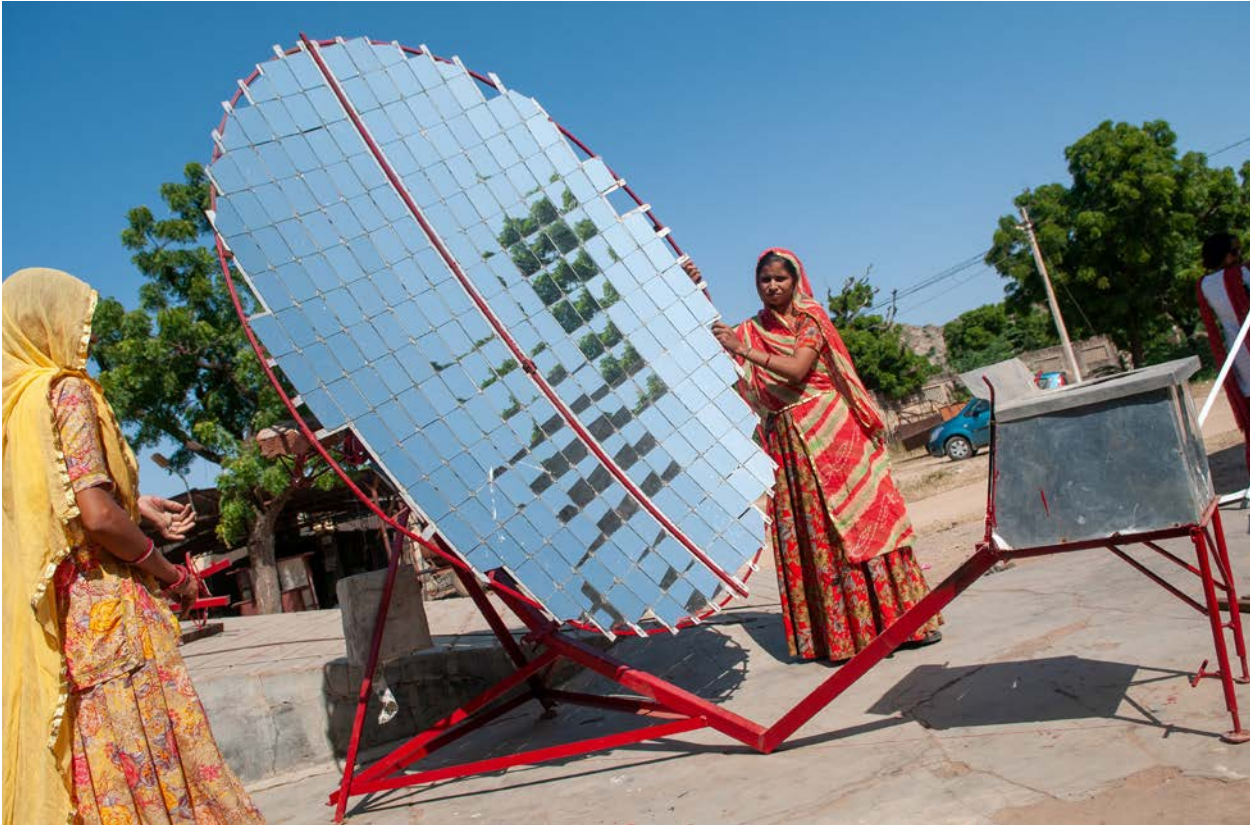
It is essential to be **technology-agnostic** in order to pursue all of the solutions that can provide the affordability and reliability for the world's energy future, participants said. Adapting to different technologies may be a challenge for communities, and preparing them psychologically for the transition is important. One example is of Azura Marine in Indonesia, a [woman-led techno-social company](#)¹⁰, where the founder has helped entire fishing villages switch to electric boats, which are not just greener compared to the diesel-powered ones but also provide cost benefits. Participants emphasized the importance of **education and community awareness**.

Thought leaders have said that some technologies that are considered outdated in some parts of the world may, in fact, be very useful. However, financial flow and capacity-building in **hydropower and geothermal power** can help bridge the energy access gap depending on different natural resources that local communities have. In an example from India, women in rural areas have been [trained](#)¹¹ to assemble and repair solar lanterns and install and maintain solar panels and batteries that offer power after dark. Called 'barefoot engineers', the team of workers has managed to connect villages far away from the national grid to solar electricity, which has been powering their mobile phones and lights since 2009. In 2022, a [cohort](#)¹² of 1,000 women received technical training on working as solar panel and solar pump technicians to replace diesel pumps being used in salt farming. In an example from Nigeria, where solar grids are not accessible to certain populations, entrepreneurs make a difference by using solar lamps to spread awareness while providing a solution.

When it comes to capacity-building, it is important to ensure that women from all sectors and segments, including policymakers, inventors, and those in the financial sector, are supported in ensuring an inclusive agenda.

The meeting heard about the importance of collaboration and localization to ensure that different parts of the world get the technologies they need. Companies such as 3M work closely with governments, nonprofits, and other energy companies in each of their local markets.

It is important to not only make funding available but also set out clear objectives and metrics to measure success



Financial Solutions Can Support Inclusion



Clearly defined goals help focus the conversation on issues of relevance to everyone. Sustainable Development Goal (SDG) 7, for instance, relates to ensuring “access to affordable, reliable, sustainable, and modern energy for all.” The Clean Cooking Alliance tracks the progress on energy access, energy efficiency, renewable energy, clean cooking, and international cooperation in this field. The latest report estimates that international financial flows or **public aid in support of clean and renewable energies to developing countries** peaked at US\$ 26.36 billion in 2017 and have plummeted since then, with the last reported figures being US\$ 10.77 billion in 2021. Clean cooking is only available to 17.7 percent of the population in Sub-Saharan Africa, compared to 71.7 percent globally.

Lack of energy access is an issue that comes up even as the world deliberates transition. Data shows that more than three-quarters of a billion people lacked energy access in 2022. Universal

energy access is part of the adaptation, participants heard. The discussion also touched upon the importance of access to information, power, and agriculture in a different way. This needs large commitments of public financing. It is not enough to assume that the effect will filter down to fragile and conflict-affected states. The need for deliberate action is great in such cases.

Examples of approaches used by various participants include supporting women entrepreneurs by investing in small and medium enterprises (SMEs) across a range of sectors. When these entrepreneurs are **empowered with information** on the types and **applications of green technologies to their business**, they are often seen to be more open to adopting new technologies and **driving the transition**. As investors, being supportive to women is not a tradeoff but a sound investment strategy. At the same time, participants stressed the need to have more women in leadership positions to be able to drive change.





Examples of initiatives include educating investors to build a gender component across a range of green investments. EBRD and its partners have worked on an online guide to identify gender and climate investment opportunities with tools, analysis, and case studies for investors to promote gender equality and women's empowerment in climate financing. Participants spoke of the need for capacity-building among investors as well, enabling them to build inclusive components into green investments across a range of sectors.

[Social impact investing](#)¹³ also came up as a viable solution in places that other financial flows, such as public-private partnerships or aid, have not reached. Mission-driven finance investment involves a pool of lenders, including large banks and private companies, implementing social impact investing at low interest rates to organizations committed to **servicing, engaging, and employing the communities** where they are active. In an example, Grameen Capital India's non-banking financial company (NBFC) received [institutional funding](#)¹⁴ for projects related to financial inclusion, agriculture, affordable health, and affordable education, with the aim of attracting debt capital to the base of the pyramid. The company targets impact-focused enterprises through debt and equity funding solutions, credit enhancement, and strategic advisory services. The goal is to double the funding of their impact investment programs.

Capacity-building among investors would enable them to build inclusive components into green investments. Social impact investing too is a viable solution in places where other financial flows, such as public-private partnerships or aid, have not reached

Participants brought up the importance of partnerships at different levels of regulation to ensure that best practice is encouraged. In some cases, legislation may not have caught up with innovative projects on the ground, which would prevent big lending from entering. In these situations, **supportive partnerships at micro level** can make a difference in expanding access to services.

The **role of private financing** in streamlining its processes was also discussed. It is important to not only make funding available, but also set out clear objectives and metrics for measuring success, in order to set up dedicated investment vehicles and specific investment strategies.

Key Outcomes

Vulnerable populations such as women are disproportionately affected by climate change as they grapple with systemic inequalities. The climate crisis affects everyone globally but in unique local ways, which necessitates locally relevant climate action. Collaborating to build community resilience and capacity among those most affected is a crucial part of climate action. Participants discussed the role of policy and of training investors in making sure gender is on the agenda.

1 Women are among the most affected, least responsible

Women and girls are among the most disproportionately impacted by climate shocks. The effect of climate change is far-reaching, affecting livelihoods, education, health, and safety.

2 Climate change has no borders

Climate change affects countries, regions, and populations in unique ways but needs cohesive global action by addressing inequalities with an inclusive approach towards resource distribution, capacity-building, and awareness.

3 Creating change together has more impact

No single group can accomplish sustainability goals in isolation. For all stakeholders to have a fair opportunity to benefit from initiatives, it is essential to create opportunities for everyone to participate.

4 There is no progress without hope

Sharing of success stories is one of the vital stepping stones toward creating a viable ecosystem for climate action.

5 A plan to fulfil the hope is essential

A vision for the future needs to be substantiated with a well-defined outcome. This includes a plan for transition.

6 Defined roles help streamline solutions

When stakeholders have a clear, shared understanding of roles and contributions, solutions emerge more efficiently.

7 The policy ecosystem is a big piece of the jigsaw

Policymakers are increasingly nimble and agile, keeping pace with innovation via regulatory sandboxes. Policy hubs help bring together the public and private sectors, along with civil society, to empower innovation.

8 Climate change affects regions differently

The MENA region, for instance, is affected by more frequent climate shocks in terms of GDP loss, specifically in agriculture. Energy transition needs to be addressed from the point of view of natural resource dependence and industrial production.

9 Micro initiatives address unique issues

Climate action at ground level is varied – from updating farming tech in Africa to benefit smallholder women farmers, to training rural women in solar tech in India, or introducing electric fishing boats in Indonesia.

10 Include human capital in NDCs

Many NDCs do not mention human capital or gender. Gender-responsive policy and action can pave the way to inclusive transition. This includes national policies related to energy, infrastructure, and education.

11 Opportunities are inherent in climate action

Transition brings with it many new jobs and skillsets and the responsibility of stakeholders to ensure that vulnerable populations including women are prepared enough to take advantage of these.

12 Solutions need to cater to all levels of regulatory readiness

While investors need to be educated on including gender, social impact investing is also a viable solution in places where other financial flows such as public-private partnerships or aid have not reached.

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