



Women's World Banking

Finance, Climate, and Gender

Empowering women agents of change

November 2024



Gender equality is the most urgent climate action of all

Climate change is an increasing human crisis hitting climate-vulnerable regions and especially women, their families, and the communities they live in. Despite their vital role in supporting families and communities, 753 million women in the most climate-vulnerable regions lack even basic financial services needed to withstand the challenges. Worse still, an even greater number of women – 880 million – don't have any way of receiving emergency relief payments in case of a climate crisis because they lack access to the personal technology, digital financial capability, or connectivity to access simple digital payment services.

As the world stands today, financial systems continue to fail these women and disregard their specific needs, leaving them vulnerable and ill-prepared to protect their livelihoods.

However, women are not passive victims of climate change. Often, they are at the forefront of preparing for and responding to climate crises, addressing early recovery needs of their families, and strengthening community building. Many women are stewards of natural resources, leaders in sustainable agriculture, and pivotal actors in the informal economy – naturally poised to become the architects of climate solutions, creating adaptive and resilient communities, through financial empowerment.

Ensuring these women have the access and capabilities to use financial tools has been a focus of Women's World Banking for over 45 years. Dedicated to the nearly 1 billion women excluded from the formal financial system, we recognize that financial access is not a hoped-for outcome,

but rather a prerequisite to building women's (and girls') prosperity and resilience. Strengthening their financial resilience means they have a safe place to save, receive insurance payouts for climate-related events and credit to support business investments, and have secure digital payment mechanisms to receive government assistance and access funds from family and friends. Yet, the financial playing field is unfair even among women. Income, education level, the rural/urban divide, employment, and infrastructure connectivity combined with climate risk can create a gap as large as 76 percentage points in financial services access among women.

To tackle these disparities and build climate resilience, new approaches are needed that combine existing financial services with non-financial solutions—such as early warning systems, community training, and (digital) financial literacy programs. It is also essential to bundle services, as we have seen immense success with various partners, such as savings and credit with [Bank of Baroda](#), credit and insurance with [Pula](#), and multiple forms of insurance with [DRIVE](#). New partnerships across the climate and financial ecosystem and innovative public-private collaboration are needed to better address – at scale – the complex challenges and risks the new climate realities are posing. However, these new approaches will take time to develop and implement, and so it is reassuring to know that there are many existing solutions to learn from as seen throughout this publication.

Women's World Banking is calling policymakers, financial service providers, civil society organizations and YOU, to prioritize the financial needs of women in the collective pursuit of climate solutions. Financing directed at the women who are most likely to bear the brunt of climate impacts is currently a meager 0.01% of all climate financing. With change anticipated to push as many as 158 million more women and girls into poverty by 2050 there is no time to wait. We cannot address the climate crisis without women's financial inclusion, nor can we achieve gender equality without confronting the climate emergency.

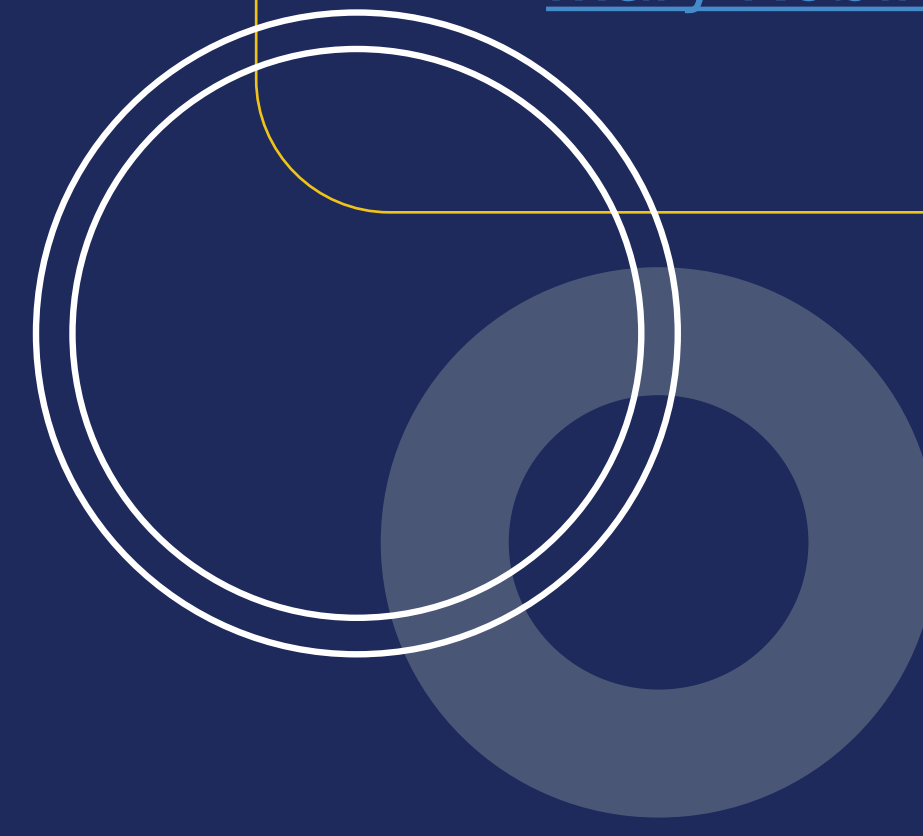
Women's World Banking, as the recognized expert on financial inclusion and gender-focused investing, is best positioned to lead and drive this collective goal. To ensure all women are equipped with the financial tools to withstand and recover from climate events – empowering them as agents of change in a climate-challenged world. I invite you to join me and the Women's World Banking team on this journey. Contact us at communications@womensworldbanking.org.

We look forward to working with you.



Mary Ellen Iskenderian

Author, Advocate, and
President and CEO
Women's World Banking



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“The impacts of the climate crisis hit the most marginalised communities hardest. For many women and girls, a lack of access to education, healthcare and resources increases the risks they face, with those working in informal sectors suffering the most. The climate emergency is a gender injustice.”

Mary Robinson, The Elders¹³

Why is women's financial inclusion so important amid climate realities?

Beyond its environmental impact, climate change affects women's health, women's economic stability, and our collective social fabric.

- Climate change may push 158 million more women and girls into poverty by 2050.³
- Economic challenges related to the 2022 drought in the Horn of Africa resulted in a 4x increase in child marriage in Ethiopia and increased rape and intimate partner violence by 20%.³
- Climate vulnerability and financial vulnerability go together.⁴ 840 million women in climate-vulnerable countries would find it difficult or impossible to cover the cost of an emergency.⁵
- Climate change threatens to unravel development progress for women. Financial inclusion can stop this dangerous trajectory.^{6 7}
- Climate change creates disproportionate health challenges for women such as pregnancy complications, pre-term labor, early menopause, and neuropsychiatric disorders in their children.⁸

These impacts are only predicted to increase.

As key decision-makers, entrepreneurs, farmers, leaders, mothers, and caregivers, women are cornerstones of stability in their households and communities, but climate change threatens their agency. The financial sector has failed to adequately prepare women for this crisis.

753 million

women in climate-vulnerable countries do not have an active bank account or e-wallet⁹

1.41 billion

women in climate-vulnerable countries do not have formal savings¹⁰

880 million

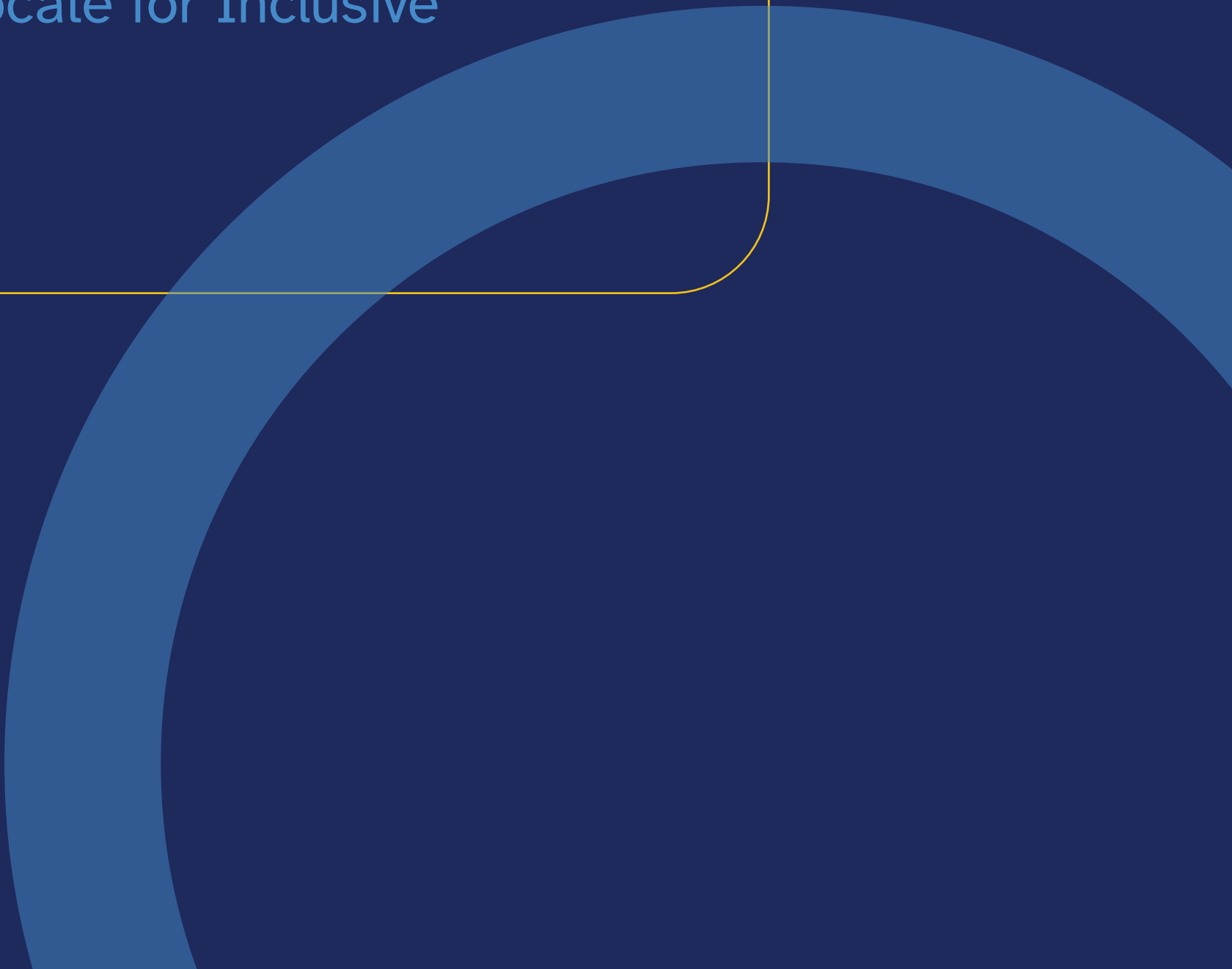
women in climate vulnerable countries do not have a way to easily receive relief payments after a climate emergency¹¹

only 116 million

people in the world have climate-related microinsurance, and there is a 20 percentage point gender gap in climate-related microinsurance¹²

For Women, the climate crisis is a financial inclusion problem.

Not focusing financial resources on this challenge increases women's economic instability, health complications, and social problems.



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“Inclusive finance has a unique and critical role to play in ensuring that climate finance makes its way into the hands of the most vulnerable and empowers them to act.”

HM Queen Máxima of the Netherlands, Secretary-General’s Special Advocate for Inclusive Finance for Development; and Ajay Banga, World Bank Group¹

Women are not passive victims of climate change.

Women are active contributors to and architects of climate solutions and a sustainable world.



Resilience

They ensure climate resilience for their families amid acute climate shocks and are more likely to heed early warnings of impending disasters. Women pursue goals like developing an emergency fund, signing up for insurance policies that cover their property, or opening a mobile wallet through which they can receive assistance if their community is destroyed. They make emergency plans for their families using financial tools.



Adaptation

They adapt their businesses and households to chronic climate realities. They use finance to secure cooling technology for their business locations, build savings to cover health costs related to increasing temperatures, and take credit bundled with insurance to secure drought-resistant crop inputs.



Mitigation

They drive local and household strategies to mitigate climate impacts through community action and consumer choices like solar power or clean cooking technology. They need credit to be able to make such investments.

Women build **resilience** to climate shocks, **adapt** to climate realities, and **mitigate** climate impacts, but they need financial tools to do so.

- Women in the fishing business in Indonesia are working to adapt their businesses so that fish don't spoil in extreme heat
- Governments like India and the Philippines are setting up digital payment rails so that women can receive relief after climate disasters
- Financial institutions like Bike Bazaar are creating affordable finance for e-vehicle adoption to increase mobility and decrease emissions

3 out of 4 women with inadequate financial services live in a climate-vulnerable geography

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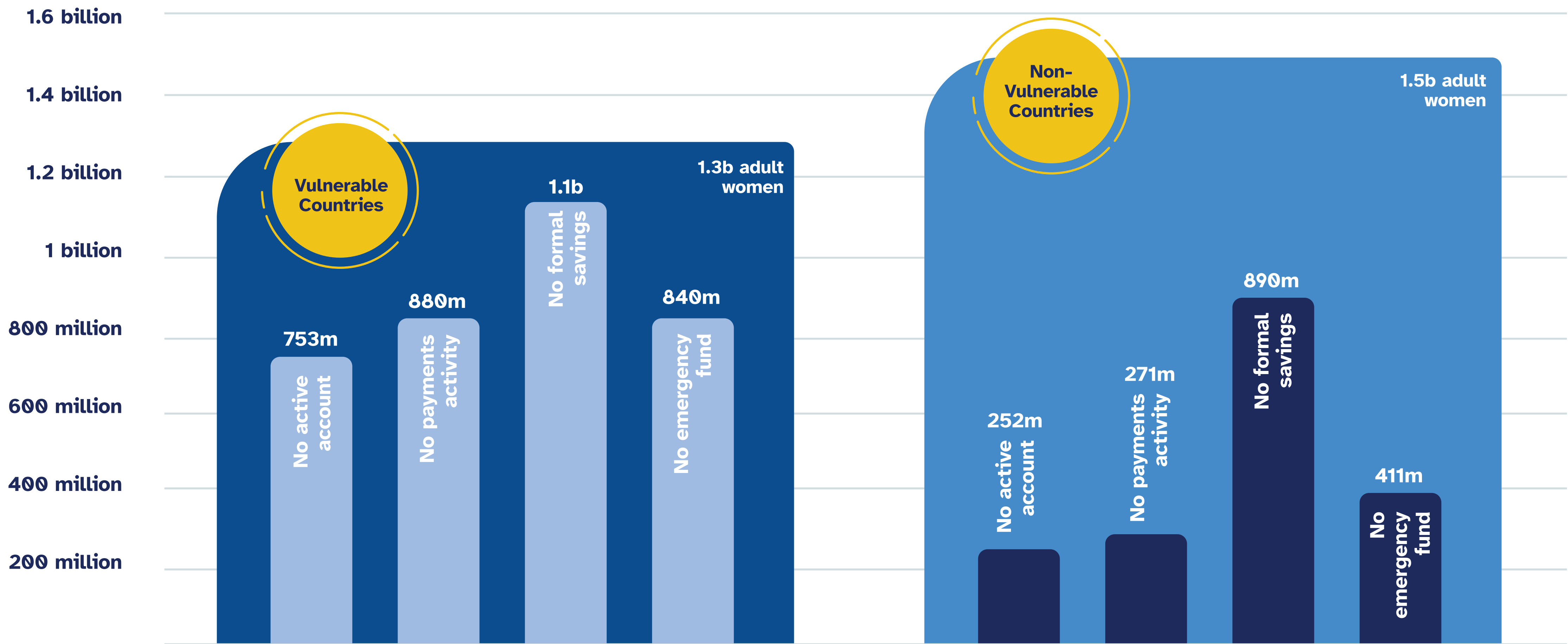
Women are ... both some of the most vulnerable people, but also, they're the decision makers often for their families. I think it's really important to lift up women's voices, and I think it's very important to have women at the table.”

Vicki Arroyo, Georgetown Climate Center¹⁴

ND-Gain Index (2024). Countries are marked as "vulnerable" if they have a climate vulnerability score of .41 or higher.

Countries with high climate vulnerability are found in nearly every region.

Financial exclusion is higher in climate-vulnerable geographies¹⁵



Addressing climate change through finance takes collaborative action

Over 45 years, Women's World Banking has developed women-centered, evidence-based, and impactful solutions for financial inclusion. We have deep expertise gained through hundreds of thousands of hours understanding the needs of women around the world. The magnitude of these needs requires action from all of us—policymakers, investors, financial services providers, and donors. As Women's World Banking leans into addressing the climate problem, we look forward to joining with a range of partners to build solutions for today's challenges, contributing to a better tomorrow.

Policymakers

- Enforce sustainable finance regulations.
- Incentivize financial service providers to adopt gender-transformative financial products.
- Address climate challenges and supporting women's resilience.
- Include sex-disaggregated targets and data collection related to climate strategies.
- Invest in women consumers' financial literacy, particularly related to insurance.

Donors

- Support climate finance initiatives, to empower low-income women to build resilience
- Foster both gender equality and environmental sustainability
- Consider subsidies for products not yet sustainable such as insurance premiums.

Partnerships taking action

All Stakeholders

- Ensure women are at the table and at the center of solutions.
- Involve civil society to increase awareness, training, and advocacy

Investors

- Invest in climate finance initiatives to empower low-income women to build resilience.
- Foster both gender equality and environmental sustainability.

Financial Services Providers

- Employ women-centered design to develop financial products and services to build resilience against climate shocks
- Increase proportion of staff who are women, particularly in decision-making and customer-facing roles

Orange most vulnerable quartile
Light Blue least vulnerable quartile
Yellow remaining quartiles

Intersectional challenges

Women bear the economic brunt of climate challenges, but they are not a homogenous group. Climate realities are compounded by intersectional issues:

- Income
- Age
- Ethnicity
- Dependent care responsibilities
- The rural/urban divide
- Education level
- Health

The combination of these factors means that climate change does not just affect women in one uniform way; it creates a web of compounded realities where various aspects of their identities and circumstances intersect, intensifying their overall vulnerability.

These intersectional challenges require inclusive solutions that build on strong partnerships. These intersectional challenges require recognition of diversity among women. Bringing women to the table, with a strong emphasis on ensuring a range of women's experiences are represented, is important. Financial institutions must ensure solutions work for all.

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	No active account (%)	No payment use (%)	No emergency fund (%)			
	Climate-vulnerable geography	Non-climate-vulnerable geography	Climate-vulnerable geography	Non-climate-vulnerable geography	Climate-vulnerable geography	Non-climate-vulnerable geography
Women who are <u>lower-income</u> , have <u>limited education</u> , are <u>unemployed</u> , <u>without internet access</u>	75%	52%	84%	59%	77%	67%
Women who are <u>higher-income</u> , have <u>at least secondary education</u> , are <u>employed</u> , <u>with internet access</u>	19%	7%	26%	8%	27%	15%

Source: Authors' analysis of Demirgüç-Kunt et al. (2022).¹⁶

Financial access is not equal, even among women.

Income, education level, the rural/urban divide, employment, and infrastructure connectivity combined with climate risk can create a gap as large as 76 percentage points in financial services access among women.



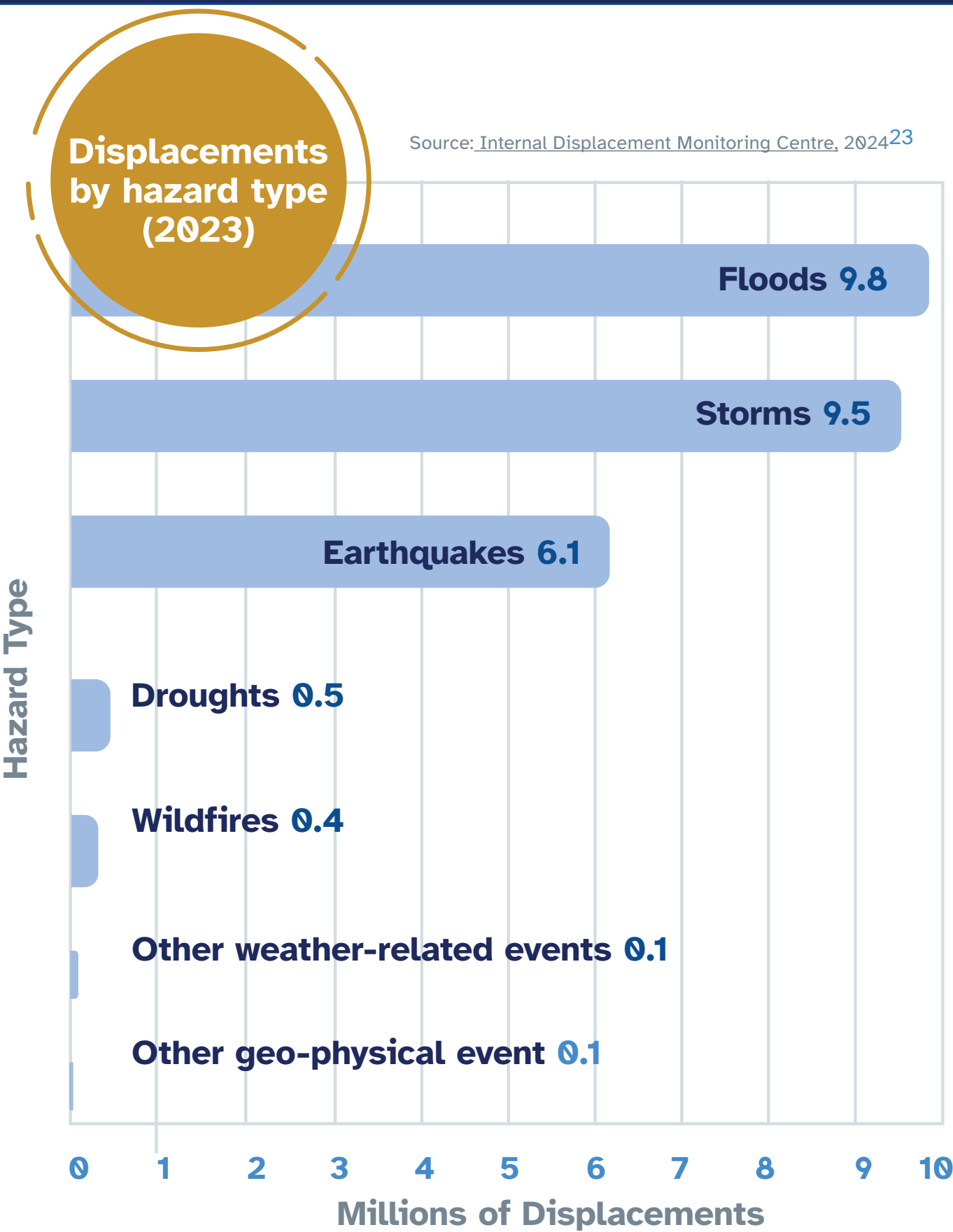
Resilience

Insurance, savings, and payment instruments contribute to financial resilience for women's households, their businesses, and their communities in the face of acute climate crises.

By 2050, climate change effects are expected to cause the internal displacement of 216 million people. Women's resilience—their ability to recover from shocks—is dependent on their access to financial resources.¹⁷

Financial institutions can foster resilience by ensuring women have:

Payments	Immediately after a natural disaster, governments and support organizations alike <u>struggle to reach</u> the people they need to support. Having access to payments offers a financial lifeline, and yet 880 million women in climate-vulnerable countries <u>do not have</u> access to digital payments. ^{18 19}
Insurance	Insurance safeguards women's property against risk, and where financially viable insurance products can mean the difference between financial recovery and financial ruin for families living near the poverty line. One study of insurance access <u>finds</u> women are more likely to take up insurance than men because they are more aware of household risks. ²⁰ Research also <u>shows</u> that each 1% increase in insurance uptake results in a .5% increase in GDP. ²¹
Savings	Women need a safe place to store their funds, as a severe weather event can destroy cash-based savings. One study of the cost of cash <u>finds</u> that people lose 22% more funds each year when they store value in cash compared to keeping it in a formal savings instrument. ²²



Product Spotlight

Annapurna Finance accounts for climate vulnerabilities

Annapurna Finance in India employs a hazard mapping approach to predict and prepare for cyclone and severe weather impacts on individual customers, allowing the company to offer flexible loan terms and first responder help to clients predicted to be affected. This proactive risk assessment helps prevent potential portfolio impacts while ensuring climate resilience for its customers. With this approach, the institution can also plan and execute relief efforts using their existing infrastructure.

No one financial service instrument can build resilience.

Instead, financial services work together to allow women to prepare for and respond to climate disaster for the sake of their families and communities.

Resilience



Financial services support climate resilience

Financial services institutions are already supporting women’s climate resilience. They play a role in building the rails for government support, allowing families to build up an emergency fund, and directly providing support to meet women’s needs when disaster strikes.

Government of the Philippines

The Government of the Philippines strongly believes payments are the key to climate resilience.²⁴ Over the past 60 years, temperatures have increased faster in Asia and the Pacific than the global average. It is home to six of the ten countries most vulnerable to climate risk. The Philippines sees digital payments—both relief payments and social network support—as being critical to rapid-response strategies to the most affected households.

Women’s World Banking and Bank of Baroda

In India, Women’s World Banking has been working with Bank of Baroda to increase women’s savings frequency. Unfortunately, there were devastating rains in one state in 2023, creating flash floods and widespread damage to the homes and businesses of women and their families. While many people were financially devastated, the women who had saved in a financial institution had their own emergency funds and emergency credit to fall back on.



Rockefeller Foundation

Aiming to reach one billion people with resilience solutions by 2030, Rockefeller Foundation deploys capital to people most impacted by climate change. The Climate Resilience Fund focuses on innovative strategies to enhance the adaptive capacity of vulnerable communities, ensuring they can withstand and recover from climate-related shocks. To do this, the foundation invests in sustainable infrastructure, early warning systems, and climate-smart agriculture.²⁶

World Bank’s Global Index Insurance Facility

Women are responsible for growing about 70% of the food in Sub-Saharan Africa, and there are 2.5 billion small farmers globally.²⁷ The World Bank’s Global Index Insurance Facility connects insurance companies to customers, using parametric insurance that automatically pays out to communities when the weather is particularly disruptive to growing seasons, preventing uninsured losses from destroying an entire season’s crop.²⁸

Global Shield

At the household level, the G7’s Global Shield effort layers social protection systems with insurance, risk-sharing networks, and credit guarantees, with insurance payouts tagged to particular events. The effort is active in 14 countries and has been tremendously successful at building climate resilience in the face of triggering events, both for governments and for individuals.



Climate Adaptation

Women's health, property, and businesses are at risk given chronic climate realities—they use credit, savings, and additional financial support to adapt to rising temperatures and changing environmental patterns.

Climate change creates everyday impacts for nearly everyone in the world. For example, the **United Nations recently recognized that 70% of the global workforce—2.4 billion people—are now at risk of extreme heat.** “Extreme heat is having an extreme impact on people and planet. The world must rise to the challenge of rising temperatures,” says Antonio Gutierrez, Secretary General of the United Nations. Women need resources to be able to adapt their homes, families, and businesses to climate realities.

Climate adaptation is a smart financial bet. The World Resources Institute finds that every dollar invested in adaptation yields between \$2 and \$10 in net economic benefits, and the World Economic Forum estimates the adaptation market could be worth \$2 trillion per year by 2026.^{29 30}

Women in climate-impacted countries have a range of adaptation needs:

- Women-owned businesses need to adapt retail operations to be able to stay open during the hottest times of the day so their profits do not suffer.
- Women working in animal husbandry must create shelters for livestock in order to decrease the likelihood of loss.
- Women farming in drought-prone areas need access to irrigation systems that are reliable even when rain is limited.
- Women require cooling solutions to avoid harmful health effects of extreme heat such as pre-term birth, poor maternal health, early menopause, and other challenges. They also need insurance to cover the cost of climate-related health complications.³¹
- Women relying on complex global supply chains will need local resources if rising sea levels change the ability of ports to manage global goods.

While climate adaptation designed with a gender lens tends to be more effective, only .01% of all worldwide funding supports projects that address both climate change and women's rights^{32 33}

Her Story

Esther, a fisherwoman in Ambon Bay, Indonesia

Esther, a 45-year-old fisherwoman from Ambon Bay, Indonesia, faces significant financial challenges exacerbated by climate change. Rising temperatures and unpredictable weather patterns disrupt her fishing activities and market sales, reducing her income. In Indonesia, temperatures are expected to continue to rise. Without proper storage facilities, she must sell her fish quickly to avoid spoilage, often at a loss. Esther's daily profit of IDR 100,000 (less than US \$10) is carefully allocated to household expenses, savings, and repaying microloans essential for her family's essentials. The entire community of women fishers shares these struggles, with many forced into debt to cover basic needs. To adapt, they urgently need resources like capital to make a major infrastructure investment in their business, better storage facilities, and support in securing reliable supplies. Additionally, access to tailored financial services such as flexible microloans, insurance products to protect against climate-related losses, and digital payment platforms could help Esther and her community manage their finances more effectively and build resilience against future challenges.



Adaptation

Financial services support climate adaptation

A range of financial services support climate adaptation. Loans, savings, payment rails, and even subsidies are all important pieces of the adaptation picture.

World Food Programme R4 Resilience Initiative

World Food Programme's R4 Rural Resilience Initiative uses risk reduction and adaptation strategies to support 550,000 vulnerable households across Africa, Asia, and Latin America and the Caribbean.³⁴ These interventions include agricultural capacity-building, livelihood diversification, and investment in business improvements. Their work improves food security and increases participating households' eligibility for insurance—particularly those working in agriculture.

The Government of India's National Plan on Climate Change

The Government of India's National Plan on Climate Change (NAPCC) includes a set of actions that increase Indian households' ability to adapt to changing environmental realities. Some examples are financing rain water harvesting structures, improving seed quality for farmers, and increasing energy efficiency to reduce stress on the electricity infrastructure.

Pula

Pula couples insurance with adaptation finance. Emerging climate risks create new challenges for insurers and lenders. Pula's agriculture insurance and agriculture input subsidies protect loan books and farmers. In Kenya, subsidized insurance through Pula led to a 30% reduction in farmers' income volatility due to weather-related risks. In Ghana, Pula's subsidized insurance increased farmers' use of improved seeds and fertilizers by 40%. Pula provides these products to over two million small-scale farmers. Their insurance acts as a bank guarantee, reducing collateral and interest rate requirements, which is especially beneficial for women and youth who lack collateral and credit history. In fact, insurance is shown to boost agricultural productivity by 16% annually.³⁵





Climate Mitigation

Women use credit and savings to access lower-emitting energy solutions, with positive environmental impacts and improved household conditions.

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“A virtuous cycle of green inclusive finance ... can be achieved by issuing risk-proportional climate regulations; lowering the cost of green due diligence through systemic solutions addressing information barriers; and expanding the reach of green finance to vulnerable sectors. These measures collectively increase the availability and affordability of green finance. Increased investment in climate resilience and mitigation in turn can reduce the risk the financial sector is facing, leading to improved risk-adjusted returns.”

The [World Bank Group](#)⁴¹

Women are in all places where energy decisions are being made:

200 million hours annually are spent by women collecting water globally.³⁶

13 hours per day are spent by women on tasks related to dependent care, business activities, and household management—more than average daylight allows.³⁷

5 hours per day are spent by women collecting fuel for cooking.³⁸

1/3 of all businesses are owned by women across the globe.³⁹

75% of discretionary spending is controlled by women globally.⁴⁰

Women actively make decisions about their day-to-day household technology, transportation options, and business inputs. Financial services enable women’s access to clean energy and green technology, including:



Household energy and utilities

Water access solutions help women prioritize education for girls and reduces their own time burden. Solar power extends evening hours for entrepreneurial activity and homework. Clean cooking solutions keep household air free from harmful pollutants.



Mobility solutions

Electric vehicles allow for more entrepreneurial activity away from home and make school dropoffs easier. E-bikes or motorcycles in particular are healthier to use than traditional vehicles.



Business solutions

Efficient water pumps deliver irrigation more reliably for agricultural activities. Solar for business locations extends the working day and decreases reliance on non-renewable energy.

Women are leaders in their households and communities.

Ensuring they have the financial resources to make clean energy choices will contribute to climate change mitigation.



Mitigation

Financial services support climate change mitigation

Women cannot be left behind in the clean energy and green tech movement. Financial services enable their use of these technologies. In turn, women's consumer power will make clear which technologies are working, meet their needs and which need to be improved.

The Central Bank of Jordan

The Central Bank of Jordan's Green Finance Strategy 2023-2028 establishes a green credit guarantee scheme and creates a green credit reporting system. These will reduce information asymmetries and increase efficiency of lending to women and men seeking credit for green technology.⁴²

Solar Sister

Solar Sister empowers women with green technology and enables women entrepreneurs to set up businesses to sell green technology. Their "Business in a Box" model has created over 10,000 new women-owned businesses whose primary product is solar-powered technology.⁴³

The Shell Foundation

The Shell Foundation has reduced 67.53 million tons of CO2 or equivalent gasses through its investment in consumer and business adoption of clean technology like e-bikes, clean agricultural inputs, and solar-powered household appliances.⁴⁴

The Self-Employed Women's Association of India

The Self-Employed Women's Association of India (SEWA) launched a program to replace existing water pumps with solar pumps used for salt production.⁴⁵ As part of this program, they trained 1,000 women salt pan workers to be solar technicians. The new pump emits half of the fossil fuels of the previous one, decreasing environmental impacts while maintaining output.

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“Climate change is here, and we are already in a world where we are looking to technology and entrepreneurs to help find the way to navigate these changes and find more sustainable ways of living”.

Ngozi Okonjo-Iweala, World Trade Organization⁴⁶

Product Spotlight



“Women on Wheels” in India

Bike Bazaar offers affordable finance for new and used two-wheelers to create economical mobility solutions for India's urban and rural populations. Bike Bazaar's “Women on Wheels” initiative empowers women, providing them with essential transportation solutions through vehicle financing. Bike Bazaar identified that its electric vehicle loans were attracting twice as many women customers as the traditional engine vehicles. Women are finding e-vehicles to be reliable, cheaper to run, easier to handle, and with the added benefit of reducing greenhouse gas emissions.

Importance of gender-diversity in decision-making on climate

Increasing gender diversity in decision-making on climate means including low-income voices when decisions are being made and women leaders as decision-makers.

Gender diversity in decision-making bodies leads to better outcomes. Female representation in leadership leads to the adoption of more stringent policies, resulting in lower emissions.⁴⁷ Countries with more female parliamentary representation are also more likely to ratify international environmental treaties.⁴⁸ **Increasing the representation of women in policy, business leadership, and product design decision-making processes increases the likelihood of developing meaningful solutions and transitioning to a more climate-resilient economy.** At the national and global level, gender diversity in decision-making bodies and women's leadership in environmental governance can promote more equitable and effective climate policy interventions.

Women have unique needs and preferences that also need to be included in the development of climate solutions. Women's World Banking research shows that they value privacy, that they make more sacrifices for their household's financial health, that their goals are more focused on family priorities, and that they spend more time on dependent care responsibilities. Women's unique needs and preferences should be at the heart of every climate solution, whether designed to mitigate climate impacts, to adapt women's lives and livelihoods to climate realities, or to foster resilience.

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“It's no longer about greenhouse gasses, it's about the world we are leaving for our children. Women play an incredible role in bringing that perspective to the conversation.”

[Ko Barrett](#), World Meteorological Organization⁴⁸



Policy Spotlight

Policymakers in Morocco assessing climate vulnerability of women farmers

Bank Al-Maghrib, Morocco's central bank, has a gender-diverse team thinking about the financial needs of low-income farmers in Morocco. As roses are a top export from Morocco, and most rose farmers tend to be women, the team established a goal of measuring the climate vulnerability of these women farmers. With this data, financial institutions can better design for the loan, savings, insurance, and payment needs that women farmers have. The central bank will also be more aware of needs that financial institutions may not be able to fill and may be able to consider these as it creates policy.

Women-centered design of climate solutions

Women’s World Banking’s approach to solution development is centered around the end-user herself. **Solutions built for the most marginalized are more likely to work for everyone.** The women-centered design process to climate solutions considers women’s needs and business goals to ensure both relevance and financial sustainability of solutions

Applying this approach to women’s climate challenges requires alignment with women’s felt challenges, understanding her perspective, creating and validating solutions, and ensuring the solutions create the impact they are meant to create in the world.

[Read our Climate Change and Women's Financial Inclusion Research Agenda](#)

	 Define	 Diagnose	 Design	 Pilot	 Scale
Customer	Align on a common financial challenge women face	Understand the financial challenge in the context of climate realities	Create and refine insight-based design solutions which address financial challenges, considering climate context	Validate and address customer-centric design gaps during pilot	Roll out solutions that address desired behavior change, with the outcome of climate mitigation, adaptation, and/or resilience
Business	Align on a business problem	Understand this business problem in the context of climate realities and responsibilities	Define designs to meet operational feasibility and estimated ROI	Validate and address operational gaps during pilot	Roll out commercially viable solution which enables climate mitigation, adaptation, and/or resilience

The five phases of Women’s World Banking’s Women-Centered Design Methodology →

**Financial exclusion is a climate issue.
Addressing the climate crisis requires us all.**

Addressing climate change is all of our responsibility. This privilege is one we share together with women and men around the world. Using women's financial inclusion to fight climate change and its impact just makes sense. Enabling women to participate in and lead on climate mitigation, adaptation, and resilience will create a better world.

Together, we—and she—can combat climate change and its impacts.





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References

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- 1 Zetterli, Peter, Max Mattern, and Jahda Swanborough. [“8 Billion Reasons: Inclusive Finance as a Catalyst for Climate Action.”](#) Washington, D.C.: CGAP, June 2024.
- 2 UN Women. [“Progress on the Sustainable Development Goals: The Gender Snapshot 2023,”](#) 2023.
- 3 ReliefWeb. [“Horn of Africa Drought: Regional Humanitarian Overview & Call to Action](#) (Revised 21 September 2022).” September 21, 2022.
- 4 Klapper, Leora, Peter McConaghy, and Peer Stein. [“Climate Vulnerability and Financial Exclusion Go Hand in Hand – What Can Be Done?”](#) Center for Financial Inclusion at Accion, May 15, 2024.
- 5 Women’s World Banking analysis of microdata from Demirgüç-Kunt, Asli, Leora Klapper, Dorothe Singer and Saniya Ansar. [“The Global Findex Database 2021: Financial Inclusion, Digital Payments, and Resilience in the Age of COVID-19.”](#) World Bank, 2024. Calculated based on the percent of women that would find it “very difficult” or “impossible” to cover an emergency costing 1/20 GNI per capita within the next 30 days. Most climate vulnerable countries

defined as those with a climate vulnerability index value greater than or equal to 0.41 in the ND-Gain database, consistent with the methodology established by Klapper, Leora, Peter McConaghy, and Peer Stein. [“Climate Vulnerability and Financial Exclusion Go](#)

- 6 UN Women. [“New Report Shows How Feminism Can Be a Powerful Tool to Fight Climate Change.”](#) Feature, December 2, 2023. [Hand in Hand – What Can Be Done?”](#) Center for Financial Inclusion at Accion, May 15, 2024.
- 7 FAO. [“The State of Food Security and Nutrition in the World 2023,”](#) 2023.
- 8 WHO. [“Protecting Maternal, Newborn and Child Health from the Impacts of Climate Change: A Call for Action.”](#) November 21, 2023.
- 9 Women’s World Banking analysis of microdata from Demirgüç-Kunt, Asli, Leora Klapper, Dorothe Singer and Saniya Ansar. [“The Global Findex Database 2021: Financial Inclusion, Digital Payments, and Resilience in the Age of COVID-19.”](#) World Bank, 2024. Calculated based on the percent of women that has no account or that has an account that has been used in the past 12 months. Most climate vulnerable countries defined as those with a climate vulnerability index value greater than or equal to 0.41 in the ND-Gain database, consistent with the methodology established by Klapper, Leora, Peter McConaghy, and Peer Stein. [“Climate Vulnerability and Financial Exclusion Go Hand in Hand – What Can Be Done?”](#) Center for Financial Inclusion at Accion, May 15, 2024.

- 10 Ibid. Calculated based on the percent of women that has not sent or received a digital payment in the past 12 months.
- 11 Ibid. Calculated based on the percent of women that does not save in a formal financial instrument
- 12 Microinsurance Network. [“The Landscape of Microinsurance 2023,”](#) 2024.
- 13 The Elders. [“When We Recognise Women as Climate Leaders, We Support a Safer World for All,”](#) March 8, 2024.
- 14 Georgetown University. [“Global Leaders Say Women Adversely Affected by Climate Change, Conflict.”](#) April 2, 2019.
- 15 Women’s World Banking analysis of microdata from Demirgüç-Kunt, Asli, Leora Klapper, Dorothe Singer and Saniya Ansar. [“The Global Findex Database 2021: Financial Inclusion, Digital Payments, and Resilience in the Age of COVID-19.”](#) World Bank, 2024. Calculated based on the percent of women that has no account or that has an account that has been used in the past 12 months. Most climate vulnerable countries defined as those with a climate vulnerability index value greater than or equal to 0.41 in the ND-Gain database, consistent with the methodology established by Klapper, Leora, Peter McConaghy, and Peer Stein. [“Climate Vulnerability and Financial Exclusion Go Hand in Hand – What Can Be Done?”](#) Center for Financial Inclusion at Accion, May 15, 2024.

- 16 Women’s World Banking analysis of microdata from Demirgüç-Kunt, Asli, Leora Klapper, Dorothe Singer and Saniya Ansar. [“The Global Findex Database 2021: Financial Inclusion, Digital Payments, and Resilience in the Age of COVID-19.”](#) World Bank, 2024. Calculated based on the percent of women that has no account or that has an account that has been used in the past 12 months. Most climate vulnerable countries defined as those with a climate vulnerability index value greater than or equal to 0.41 in the ND-Gain database, consistent with the methodology established by Klapper, Leora, Peter McConaghy, and Peer Stein. [“Climate Vulnerability and Financial Exclusion Go Hand in Hand – What Can Be Done?”](#) Center for Financial Inclusion at Accion, May 15, 2024.
- 17 IOM. [“Strengthening Global Cooperation Vital in Addressing Climate-Induced Migration.”](#) IOM,” February 26, 2024.
- 18 About half of poor women in India did not have an account through which to receive COVID-19 relief payments, according to Pande, Rohini, Simone Schaner, Charity Troyer Moore, and Elena Stacy. [“A Majority of India’s Poor Women May Miss COVID-19 PMJDY Cash Transfers,”](#) Yale, 2020.

References

- 19 Women's World Banking analysis of microdata from Demirgüç-Kunt, Asli, Leora Klapper, Dorothe Singer and Saniya Ansar. [“The Global Findex Database 2021: Financial Inclusion, Digital Payments, and Resilience in the Age of COVID-19.”](#) World Bank, 2024. Calculated based on the percent of women that has no account or that has an account that has been used in the past 12 months. Most climate vulnerable countries defined as those with a climate vulnerability index value greater than or equal to 0.41 in the ND-Gain database, consistent with the methodology established by Klapper, Leora, Peter McConaghy, and Peer Stein. [“Climate Vulnerability and Financial Exclusion Go Hand in Hand – What Can Be Done?”](#) Center for Financial Inclusion at Accion, May 15, 2024.
- 20 Kramer, Berber, Subhransu Pattnaik, and Patrick S. Ward. [“Gender, Demand for Agricultural Credit and Digital Technology Survey Evidence from Odisha.”](#) IFPRI Discussion Paper 02093. International Food Policy Research Institute, 2021.
- 21 Akinlo, Taiwo, and Olumuyiwa Tolulope Apanisile. [“Relationship between Insurance and Economic Growth in Sub-Saharan Africa: A Panel Data Analysis.”](#) Modern Economy 5(120-127), 2014.
- 22 Wright, Graham A.N., and Leonard Mutesasira. [“The Relative Risks to the Savings of Poor People.” MicroSave – Market-led solutions for financial services,](#) 2001.
- 23 Internal Displacement Monitoring Centre. [“Global Report on Internal Displacement,”](#) 2024.
- 24 Diokno, Benjamin E. [“Digital Payments Hold the Key to Climate Resilience.”](#) Project Syndicate, December 7, 2023.
- 25 Abraham, Bobins. [“601 Villages In 23 Districts Of Uttar Pradesh Hit By Floods. Two Lakh People Affected.”](#) India Times, August 31, 2023.
- 26 Women and men have different approaches to risk, and women are more likely to heed early warning systems. Institutionalizing women-centered design of early warning systems is key to financial preparedness for emergencies. See UN Women. [“Early Warning, preparedness, & risk communication systems,”](#) n.d.
- 27 Abass, Jamila. [“Women Grow 70% of Africa’s Food. But Have Few Rights over the Land They Tend.”](#) World Economic Forum, March 21, 2018.
- 28 World Bank Group. [“Global Index Insurance Facility - Index Insurance Forum,”](#) n.d.
- 29 Shum, Lauren, Wonsik Jeong, and Kimberly Chen. [“Climate Adaptation: The \\$2 Trillion Market the Private Sector Cannot Ignore.”](#) World Economic Forum, November 1, 2022.
- 30 [“Adapt Now: A Global Call For Leadership On Climate Resilience.”](#) Global Center on Adaptation: World Resources Institute, September 2019.
- 31 Desai, Zalak, and Ying Zhang. [“Climate Change and Women’s Health: A Scoping Review.”](#) GeoHealth 5,9 (September 1, 2021).
- 32 UNDP. [“A Training Handbook: Climate Finance: Budget Coding, Tracking, and Reporting: Enhanced Transparency of Climate Finance in Kenya 2019,”](#) 2019; UNDP 2018; Roy, Joyashree, Anjal Prakash, Shreya Some et al. [“Synergies and Trade-Offs Between Climate Change Adaptation Options and Gender Equality: A Review of the Global Literature.”](#) Humanities and Social Sciences Communications 9(251), 2022.
- 33 United Nations Environment Programme. [“Underfinanced. Unprepared. Inadequate Investment and Planning on Climate Adaptation Leaves World Unexposed,”](#) 2023. In the analysis of international public finance instruments tagged as adaptation-related, with a gender component, 5% were found to be gender-specific, 19% were found to be gender-integrative, and 2% were found to be gender-responsive, considering the needs of women in the design of the intervention.
- 34 World Food Programme. [“The R4 Rural Resilience Initiative,”](#) n.d.
- 35 Donovan, Kevin. [“The Equilibrium Impact of Agricultural Risk on Intermediate Inputs and Aggregate Productivity.”](#) Review of Economic Studies 88(2275-2307), 2021.
- 36 Water.org. [“Key Water.Org Facts: For Use in 2021-2022,”](#) 2022.
- 37 Rubiano Matulevich, Eliana and Mariana Viollaz. [“Gender Differences in Time Use : Allocating Time between the Market and the Household.”](#) World Bank Group Policy Research Working Paper
- 38 Clean Cooking Alliance. [“Report Shows Economic Impact of Reducing Time Women Spend Cooking and Collecting Fuel,”](#) September 20, 2015.
- 39 World Bank Group. [Enterprise Surveys,](#) 2024.
- 40 Nielsen. [“Wise up to Women,”](#) March 2020.
- 41 Asktrakhan, Irina, Andrius Skarnulis, Peter Knaack, and Peter Zetterli. “World Bank Blogs.” World Bank Group. [Driving a Virtuous Cycle of Inclusive Green Finance](#) (blog), June 24, 2024.
- 42 Sustainable Banking and Finance Network. [“Green Finance Strategy 2023-2028.”](#) Central Bank of Jordan, 2023.
- 43 Solar Sister. [“Women’s Economic Empowerment,”](#) n.d.
- 44 Shell Foundation. [“Explore SF’s Impact,”](#) n.d.
- 45 Gupta, Uma. [“Women Salt Pan Workers in Gujarat to Be Trained as Solar Technicians.”](#) PV Magazine, July 1, 2022.
- 46 WTO. [“DG Okonjo-Iweala: Trade Is Important for Innovation, Women’s Economic Empowerment, Climate,”](#) September 28, 2023.
- 47 Mavisakalyan, Astghik and Yashar Tarverdi. [“Gender and climate change: Do female parliamentarians make difference?,” European Journal of Political Economy,](#) Elsevier, vol. 56(C), pages 151-164, 2019.
- 48 Mavisakalyan, Astghik and Yashar Tarverdi. [“Gender and climate change: Do female parliamentarians make difference?,” European Journal of Political Economy,](#) Elsevier, vol. 56(C), pages 151-164, 2019.
- 49 Tunio, Zoha. [“Leaders and Activists at COP27 Say the Gender Gap in Climate Action Is Being Bridged Too Slowly.”](#) Inside Climate News, November 18, 2022.