



center for
inclusive growth

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Unlocking the power of small businesses to drive climate-smart inclusive growth

Data, capital and wrap-around support



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Unlocking the power of small businesses to drive climate-smart inclusive growth



Aimée Christensen
Founder and CEO, Christensen Global

Small businesses must play a crucial role in solving climate change. They are key drivers of economic output globally and within local communities but are disproportionately vulnerable to the impacts of climate change and face unique challenges in accessing emerging opportunities within the green economy. Globally, the 270 million micro and small enterprises (MSEs¹) are 90% of all businesses, generate over 50% of global GDP, and employ 70% of the world's workforce. MSEs make up a significant portion of supply chains for large corporations and can play a major role in addressing today's sustainability and social challenges, often viewed as engine of ingenuity and innovation.

The Mastercard Impact Fund has deployed \$432 million to organizations working with small businesses and local communities in 104 countries to date, aiming to advance inclusive growth that benefits all segments of society, in 104 countries to date. Climate change poses several risks to the resilience and success of small businesses, while also offering opportunities within the transition to the green economy. We must urgently reduce the climate risks facing MSEs, as well as accelerate their ability to deliver climate solutions.

This report seeks to add to the evidence base for the importance of MSEs as climate solutions providers, to bring attention to the strategies that are successful in doing so, and to drive resources to support small businesses tackling climate change around the world. Through desk research, interviews and roundtable discussions with those working with MSEs, this report spotlights that **data, capital** and **wrap-around support** are key solutions to unlock the power of MSEs to accelerate climate-smart inclusive growth, underpinned by digital financial access.

- **Data** to minimize risk and to enable MSEs to tap into new market opportunities.
- **Capital** to address climate risk, such as adequate and affordable insurance, and to access climate solutions opportunities (e.g., de-risking tools, affordable credit and debt, carbon finance).
- **Wrap-around support** to MSEs, such as training, digital financial inclusion or market access tools.

In addition to further discussion of each of these solutions, we feature specific case studies already delivering these solutions around the world for people and planet — some using data, capital or wrap-around support one at a time, but often activating these in combination. For example, some case studies show how data can be used to make insurance affordable, or how accessing capital can deliver climate mitigation and adaptation simultaneously, such as by improving agricultural practices which deliver soil health and therefore increased resilience and carbon sequestration for climate mitigation.

Those of us working to advance climate solutions must prioritize MSEs in our strategies, and those in inclusive economic development need to bring a climate lens to our work, addressing the risks and opportunities climate change poses to our efforts. Let us each, as philanthropists, investors, service providers, NGOs, corporations and governments, come together to resource, scale and replicate solutions with urgency to prepare MSEs for climate impacts and enable them to be agents of climate-smart inclusive growth.

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*Small businesses make up over 90% of companies worldwide, which means that in order to adapt and mitigate climate change, we must support entrepreneurs in building climate resilience and driving impactful climate action. To achieve this, we will continue to connect small business owners to the technology, capital, and insights they need to not only adapt but thrive in a changing world. Through our global **Mastercard Strive** program, we are partnering with key stakeholders around the world to unlock economic opportunities that support climate action for communities around the world.*

Shamina Singh

Founder and president, Mastercard Center for Inclusive Growth



The imperative for action

To meet the challenge and opportunities before us, **small businesses must be prioritized**. They are key drivers of economic output globally and within local communities, but are disproportionately vulnerable to the impacts of climate change and face unique challenges in accessing emerging opportunities within the green economy.

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Small businesses are the backbone of the global economy and essential to tackling climate change. They power local economies, support families, and represent the majority of businesses worldwide. Yet, they're often left out of crucial climate conversations. To meet our climate goals, we must ensure small businesses are not only at the table but equipped to thrive and adapt in a changing world. Governments, NGOs, philanthropy, and larger enterprises must prioritize empowering small businesses to build resilience and lead the way to a sustainable, inclusive future.

Nigar Arpadarai
UNFCCC high-level climate champion and deputy of the
National Assembly of Azerbaijan

To urgently deploy strategies to reduce the harm from climate change already being felt around the world, particularly by the most vulnerable, we must undertake simultaneously climate mitigation, (reduced greenhouse gas concentrations in the atmosphere), climate adaptation, (“adjustments in ecological, social or economic systems in response to actual or expected climatic stimuli and their effects”²), and efforts to build resilience (“The capacity of a community, business, or natural environment to prevent, withstand, respond to, and recover from a disruption”).³



● THE IMPERATIVE FOR ACTION

"Mitigation and adaptation are two complementary ways people can respond to climate change—one of the most complex challenges the world faces today.

Mitigation is action to reduce greenhouse gas emissions and limit the amount of warming our planet will experience. Adaptation is action to help people adjust to the current and future effects of climate change.

These two prongs of climate action work together to protect people from the harms of climate change: one to make future climate change as mild and manageable as possible, and the other to deal with the climate change we fail to prevent."⁴

Globally, the 270 million micro and small enterprises (MSEs⁵) are 90% of all businesses, generate over 50% of global GDP, and employ 70% of the world's workforce. MSEs make up a significant portion of the large corporations' supply chains and can play a major role in addressing today's sustainability and social challenges, building resiliency and generating new ideas. According to the [2023 Survey](#) by the [SME Climate Hub](#) which focuses on enterprises under 500 employees, 41% of SMEs are taking action on climate, but "are struggling with insufficient finance and knowledge to cut emissions as fast as they would like."⁶

Collectively, we must recognize the importance of MSEs as climate solution providers across climate mitigation, adaptation, and resilience and grow efforts to reduce the climate risks MSEs face while unlocking opportunities for them to contribute to climate-smart inclusive growth. "Climate-smart" describes a state of readiness across climate mitigation, adaptation and resilience.

We look forward to collaborating with the philanthropies, investors, small business service providers, NGOs, large corporations and governments, who engage with MSEs, to unlock the power of small businesses to contribute to climate-smart inclusive growth.



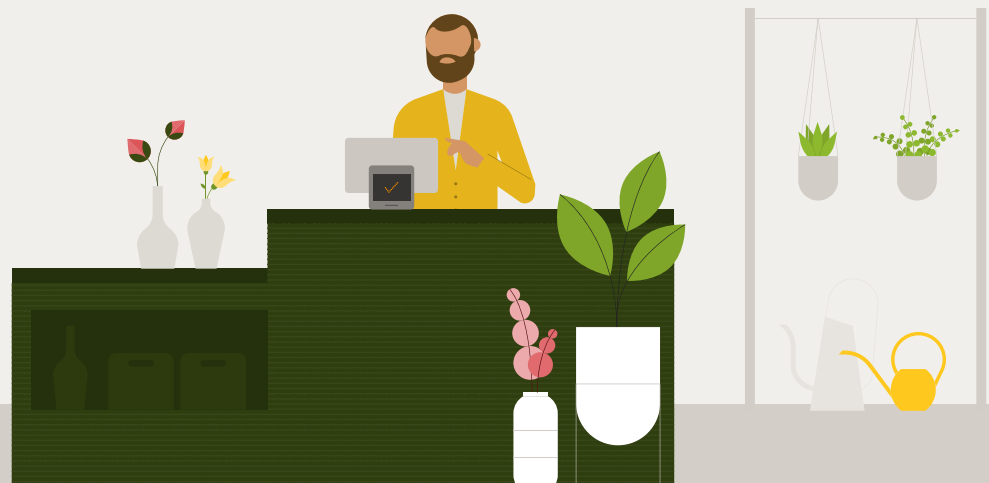
MSE definition

Throughout this report, we refer to micro and small enterprises (MSEs), small and medium enterprises (SMEs) and micro, small and medium enterprises (MSMEs). According to the OECD, micro enterprises have fewer than 10 employees, while small enterprises range from 10-49 employees, and medium enterprises have 50-249 employees. This report focuses on MSEs, and some case studies featured also support MSMEs.

Small businesses face disproportionate climate risks

"Lacking access to the capital and resources of large corporations, small businesses can suffer lasting economic damage as a result of a single extreme weather event.

For example, according to the U.S. Chamber Foundations Business Civic Leadership Center, of the 60,000 to 100,000 small businesses negatively affected by Hurricane Sandy, up to 30% are estimated to have failed as a direct result of the storm."⁷



● THE IMPERATIVE FOR ACTION

MSEs are particularly vulnerable to the impacts of a changing climate, both physical risks, such as drought and extreme weather, as well as transition risks tied to shifting regulatory and market landscapes.⁸

Physical climate risks include more frequent and more severe storms, flooding and droughts undermining critical infrastructure, including transportation assets, power and electricity, and water supply, interrupting business operations directly as well as in local and global supply chains. Water scarcity challenges businesses reliant on water for production processes, transportation, or those in the agricultural sector. Increased floods and wildfires damage property and disrupt business operations in affected areas, often forcing relocation or rebuilding. According to the World Health Organization, 700 million people globally are at risk of being displaced as a result of drought by 2030.⁹

Climate impacts cause intense, chronic, and corrosive impacts, all of which uniquely challenge MSEs due to limited financial resources, lower adaptive capacity, lack of insurance availability or affordability, and often localized operations. "Nearly 70 per cent of small firms in sub-Saharan Africa say that environmental risks are significant for their business, but less than 40 per cent have been able to invest in measures to reduce environmental risks."¹⁰ As with large businesses, MSEs will have to divert an increasing share of their cash flows to address growing risks from climate change, including changing weather patterns, food and supply chain uncertainties, and population displacement. However, MSEs often operate with limited capital backstop, making it challenging to face these growing challenges, which can jeopardize their

viability. As Dr. Ron Dembo of Riskthinking.Ai noted, "The difference between MSEs and larger organizations is the ability to adapt. Financial options available to MSEs are limited, increasing their vulnerability and exposure to risk."

As one example, when Hurricane Harvey hit Houston, Texas, a survey of representative businesses in the affected area one year later found that 90% reported losing revenue because of Harvey. "These revenue losses were caused by employee disruptions, lower customer demand, utility outages, and/or supply chain issues. Fewer firms (about 40%) experienced property damage to their building, machinery, and/or inventory. While less common, property damage losses were more costly on average than lost revenue. However, property damage compounded the issue of lost revenue by keeping the business closed: 27% with property damage closed for over a month, and 17% closed for over three months. As a result, revenue losses were about twice as large for firms that experienced property damage. Businesses' credit reports after Harvey show signs of distress as well. Harvey caused many businesses to fall behind on their debt payments. In the worst-flooded areas, the storm increased delinquent balances by 86% compared to their pre-Harvey levels.¹¹ In addition, insurance and government recovery support were inaccessible to the majority of businesses, with only 15% receiving an insurance payment (largely due to no flood or wind insurance and/or insuring property, but not revenue), and only one-third of those applying for government subsidized SBA disaster loans were approved. As a result, businesses financed their recovery themselves, and those who could borrow did, but often had their credit harmed as a result.



70%

of small firms in sub-Saharan Africa say environmental risks are significant to their business



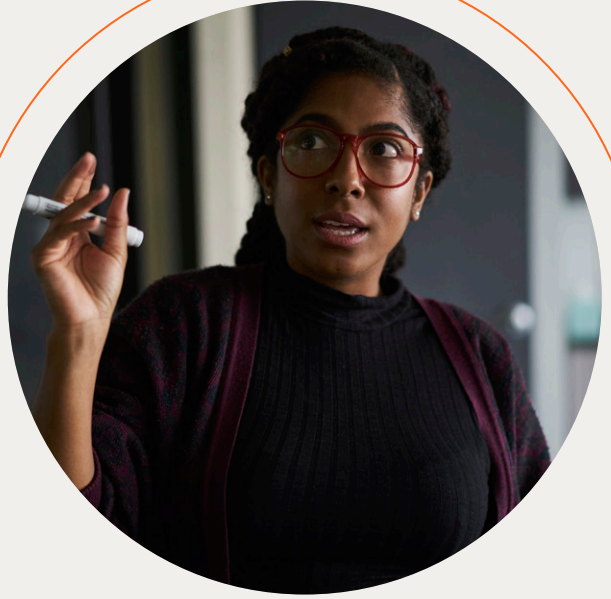
Climate transition risks are driven by the shift to a low-carbon economy and the policy, legal, technology, and market changes that transformation entails. Regulators are increasingly requiring major corporations to disclose their greenhouse gas emissions, beginning with emissions from a companies' own operations (scopes 1 and 2), but increasingly indirect emissions from a companies' value chain both upstream and downstream (scope 3), resulting in pressure on MSEs in supply chains not only to measure and report emissions but also increasingly to reduce their emissions.

Over 23,000 companies worth over half of global market value report to the Carbon Disclosure Project,¹² and supply chain emissions are 11.4 times larger than direct emissions from operations.¹³ Canada's development bank, BDC, reported that "The proportion of major buying organizations that require their suppliers to disclose ESG information is expected to reach 92% in 2024."¹⁴ The need to adopt new, low-carbon production, transportation, and operational systems can be costly and challenging for small businesses with limited resources. In addition, as consumers seek product transparency and greater sustainability, businesses perceived as environmentally unfriendly may face reputational damage, negative publicity, and loss of customers. Banks and investors may become increasingly reluctant to finance businesses that fail to adapt to climate change or cannot report on or reduce their emissions. As larger companies transition to meet regulatory and market requirements, MSEs in their supply chains need to be able to deliver on reporting and emission reductions or risk losing contracts.

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Like women, small business is the backbone of a community. Climate-driven extreme heat is draining opportunity and growth for MSEs around the globe. Heat literacy and training, with financial tools and protections, plus tailored early warning systems, can keep employees safe and productive, at work and at home.

Kathy Baughman McLeod
Climate Resilience for All



23k+

companies worth over half of global market value report to the Carbon Disclosure Project

11.4x

larger supply chain emissions than direct operations emissions

92%

of major buying organizations are expected to require their suppliers to disclose ESG information

MSEs have the opportunity to deliver powerful climate solutions, driving economic growth

On the flip side of these climate risks lie opportunities. MSEs can and must be part of addressing climate mitigation and adaptation, tapping into new capital and market opportunities, and generating economic opportunity and growth, such as by:



Adopting greenhouse gas reporting and climate mitigation practices in their operations, retaining, expanding and attracting major corporate buyers seeking to reduce supply chain emissions



Building climate mitigation businesses, such as solar installation and maintenance or energy efficiency retrofits



Integrating regenerative agriculture and other climate beneficial land practices to increase farm productivity and reduce instability in the face of climate impacts, potentially gaining market access as well as carbon finance income



Providing adaptation services, including addressing heat-related impacts by painting cool roofs, installing air conditioners, and planting trees

According to 60 Decibels, nearly one in five energy consumers in the Global South have tapped off-grid solar to support or start a business and approximately 80% of those users saw an increase in income. Corporations are increasingly willing to enter into longer term contracts and/or pay a premium for climate-smart products which deliver greenhouse gas emission reductions and/or deliver adaptation benefits to reduce climate risk.¹⁵ "Climate-smart MSEs are more resilient and gain a competitive advantage by anticipating the demands for sustainability-related products and services, or by operating under a more resource-efficient business model."¹⁶ MSEs may also access new public and private capital sources aimed at climate and resilience initiatives in the United States from the Inflation Reduction Act including the Greenhouse

Gas Reduction Fund, and globally from grantmakers, governments, and climate and social-impact focused investors.

These opportunities, individually and in combination, can provide direct benefits to climate-smart MSEs, including increased, diversified, and longer-term sources of revenue and access to otherwise unavailable capital and insurance in both good times and times of need. This improved financial stability will also increase MSEs' ability to reliably pay employees and suppliers, ultimately strengthening their long-term viability and financial resilience.

However, MSEs face challenges in accessing the solutions needed to reduce the risks from climate impacts and to tap into opportunities to advance climate solutions.

There is an urgent need to identify and resource the solutions that can enable MSEs to be more resilient to impacts of climate change and to be able to access the climate solutions economy.

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We must prioritize micro and small enterprises in order to deliver climate-resilient and equitable economic prosperity and opportunity. Whether philanthropists, investors, NGOs, corporations or governments, we need to urgently scale and replicate solutions that prepare MSEs for climate impacts, and enable them to be partners in delivering climate solutions. We have identified data, capital, and wrap-around support as key levers, and a set of specific strategies to meet this moment of urgent climate risk and opportunity.

Aimée Christensen
CEO, Christensen Global

The keys to unlock the power of small businesses to drive climate-smart inclusive growth: Addressing risk and growing opportunity

To reduce the climate risks facing MSEs, as well as enable them to deliver climate solutions, **data, capital and wrap-around support** are key tools to unlock the power of MSEs to accelerate climate-smart inclusive growth,

underpinned by digital financial access. These solutions must be resourced, scaled, and replicated with urgency in order to prepare MSEs for climate impacts and enable them to be agents of climate-smart inclusive growth.



Data

Critical for climate adaptation and to contribute to and be rewarded for climate mitigation. For example, data:

- Increases MSE capacity to weather climate shocks and growing stressors in different geographic markets
- Provides tools that enable MSEs to be able to track and report greenhouse gas emissions performance

Data is accessed through and collected by intermediaries: digital tools and collaboration are needed to increase data access and measurement flowing from and to the NGOs, governmental agencies and corporations engaging with MSEs.



Capital

Needed for climate adaptation and resilience as well as for climate mitigation to prepare for new market expectations and opportunities.

For climate adaptation, resilience and recovery, capital is needed for:

- Risk mitigation through affordable insurance
- Capital to pay for post-disaster recovery.

For climate mitigation, transition capital is needed which is patient, risk tolerant, and from aligned sources such as impact investors and corporate customers seeking long term partnerships and success of MSEs to deliver desired climate outcomes.



Wrap-around support

Needed from trusted institutions, for example:

- Technical assistance
- Market access
- Training

This can include programs that uplift MSEs as vital climate solutions providers for both climate adaptation and mitigation. Most importantly, we need MSEs prioritized and at the table to design solutions.



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It's so important to include and make room for MSEs and their leaders, (including female leaders), in the discourse, the solutions, the policy making, and the financing for business climate action. MMSEs comprise the largest segment of businesses globally, and thus take leadership in how many of the goods and services we use and consume are manufactured. There's so much room there to infuse climate-responsive practices.

Ruka Sanusi

Executive director, Ghana Climate Innovation Centre

Data

To address the challenges and opportunities MSEs face due to climate change, **data management** is crucial, including data collection, analysis, and communication.

A 2024 analysis by DataKind, with support from the Mastercard Center for Inclusive Growth, observed that Inclusive Climate Finance (ICF) providers, including policymakers, funders, and product and program providers face challenges such as insufficient funding and

the complex relationship between economic conditions and climate change vulnerability. Data science can help address challenges in ICF by improving clarity in definitions and data coordination, providing context for ICF strategies, assessing and managing risk, and evaluating implementation and impact of ICF initiatives. Data science techniques like machine learning, satellite data analysis, and predictive analytics can advance ICF goals across different climate change response pathways. More comprehensive data is needed to understand the impacts of ICF on its recipients and to develop more effective strategies, and supporting these needs can help accelerate the leverage provided by ICF providers.¹⁷

There is a pressing need for investments in localized **data collection** with standardized, clear questions. Standardization allows for reduced complexity for MSEs to know what is most important to be able to measure. Clarity is vital: one caution from 60 decibels is “don't use the word resilience,” and instead, ask whether and to what extent an intervention has increased savings or access to insurance or ability to recover from a climate disaster. Standardization also allows for the development of performance benchmarks, evaluating the progress from an intervention.

Another recommendation is to **integrate climate-related data collection** into existing MSE data gathering efforts by the intermediaries, including financial institutions, corporations, bilateral aid agencies, NGOs and multilateral development banks, rather than creating entirely new programs to produce and organize it. This integration will also help with tracking progress over time and assessing the effectiveness of implemented solutions. For instance, when emergency response organizations engage with small businesses to provide post-disaster assistance, they need to include questions about key contributors to identify effective resilience interventions.

In discussing the data used for its impact, impact investment manager Blue Orchard seeks to increase access to and use of climate insurance products in order “to bolster the resilience of individuals and MSMEs in developing countries against the adverse consequences of climate change.” In assessing how much impact they’ve made, they focus on “the number of climate insurance beneficiaries reached, for which the strategies have set an ambitious impact target and as of Q1 2024, the estimated number of overall impact beneficiaries exceeds 68 million.” One company alone contributed over a third of those: “Skymet, a leading weather data provider in India, has contributed nearly 24 million of beneficiaries to the strategies by Q1 2024 due to the impact that the data it generates has on the development of climate insurance products in India.”¹⁸

Data analysis should focus on providing illustrative and comprehensive climate-related financial risk data to influence institutional decision-making.

For instance, Tom Kerr, lead climate specialist, South Asia at the World Bank, noted the need for data on sector specific climate impact risks, both to help to inform MSEs determining how to reduce those risks, as well as to incentivize the right policies and insurance offerings. Another need is data on extreme heat-related disasters and losses, highlighting the disproportionate burden on MSEs, ranging from productivity losses to increased cooling needs and energy costs, as well as other extreme weather events.

Finally, effective **data communication tools** are essential for informing MSEs about adaptation and mitigation strategies, including timely predictions to warn of extreme weather events, which equip MSEs

to implement protective measures, as well as to reach MSEs with technical training, capital, and support to enable them to build resilience and find place-based and sector-based opportunities responding to climate impacts. For example, WRMS is a climate and agriculture risk management company that leverages data, technology and financial innovation to develop risk management solutions for farmers. Its SecuFarm provides a guaranteed income for over 2.5 million farmers who practice sustainable farming techniques through a collaboration with governments and brands like PepsiCo, WWF, World Bank and HDFC, among others.¹⁹

One powerful solution for data management for MSEs bridges collection, analysis and communication: the development of a common, simpler **taxonomy**. “We need a broadly accepted resilience taxonomy usable by local lending institutions to gather impact information for access to investors seeking reliable data,” said Aleem Remtula, Developing World Markets.²⁰ DWM mobilizes institutional capital for social and environmental impact, working with local financial institutions to collect impact data. While multiple taxonomies are in use by different organizations and alliances, the absence of an industry-standard consensus taxonomy provides the opportunity to bring together market participants to standardize and align behind a consensus taxonomy. This could directly benefit MSEs by focusing their data collection efforts on what is agreed to be most important, whether by investors or corporate customers.



DATA ● CALLS TO ACTION

- Standardize questions and metrics needed from MSEs.
- Scale and replicate data access solutions for digitally isolated MSEs, especially Indigenous communities.
- Convene to reach agreement on a simplified resilience taxonomy.

DATA CASE STUDY ● 60 DECIBELS

Connecting local data to global decision makers

Global decision makers, including NGOs and social enterprises, investors and corporations need tools to measure the impact of the solutions deployed. Most impact measurement is either too complex to be scalable or too simple to be useful. 60 Decibels gathers data from customers and suppliers with 15-minute, standardized phone surveys built for repetition and comparability. 60 Decibels trained research assistants, present in more than 80 countries, to ask customers and suppliers a mix of quantitative and qualitative questions, always in their local language.

This has been powerful for understanding climate resilience and climate impacts: 60 Decibels collaborated with global investors seeking to advance resilient agriculture, surveying farmers regarding their adoption of resilient and regenerative practices and the resulting impacts on farmers' own perceptions of resilience. 60 Decibels has also launched a module for measuring the resilience impacts of non-agricultural solutions, like microfinance and off-grid energy. These scalable impact data collection methodologies enable organizations to measure and assess their resilience interventions.



DATA CASE STUDY ● VESTED IMPACT

Using data and digital innovation to enable MSEs to report sustainability performance

With the support of the Mastercard Strive Innovation Fund, Vested Impact is using its award-winning data-driven impact measurement platform to build a small business portal for automated impact assessment of MSEs. The portal empowers MSEs with accessible, automated sustainability assessments, enabling them to easily share science-based and data-backed sustainability reports and position themselves competitively for investors and clients. The solution already has the impact data on over two million small businesses: using over 300 million science-based impact data points to assess the social and environmental impact of the business in seconds and to make the data available to the businesses in shareable reports with AI-driven summaries.

These assessments offer cost-effective pathways for MSEs to meet regulatory standards, enhance market access in supply chains, and attract investment by transparently communicating their positive impacts on people and the planet. It also empowers MSEs to amplify their role in fostering sustainable business practices worldwide.²¹



DATA CASE STUDY ● RESILIENT APPALACHIA DATA INITIATIVE

Data sharing platform to support CDFI lending for resilient communities

With the support of the Mastercard Center for Inclusive Growth, Appalachian Community Capital is building a comprehensive “Data Hub” through the Resilient Appalachia Data Initiative (RADI) project spanning 13 states across the Appalachian region. The Data Hub is a “platform designed to equip regional Community Development Financial Institutions (CDFIs) and the small businesses they serve with the data insights needed to lead the transition to a more sustainable and inclusive regional economy.” RADI will leverage Appalachia’s unique potential for renewable energy, sustainable agriculture, and innovative carbon initiatives to foster a more inclusive, resilient, and sustainable economic landscape, empowering underserved small business owners, particularly those from rural communities and communities of color. Over the 18-month period of the project, RADI plans to support new tools and processes for up to 10 CDFI partners to identify and acquire more than 500 leads for sustainable business and/or projects for underwriting, and to deploy over \$15 million in finance to at least 150 of these businesses.²²



DATA CASE STUDY ● DIGITAL FINANCIAL INCLUSION FOR MSES

Digital financial inclusion for climate impact

The Foundation for Amazon Sustainability (Fundação Amazônia Sustentável or FAS) is using digital connectivity to provide training and create new business opportunities for local communities. Through their course on REDD+ (Reducing Emissions from Deforestation and Forest Degradation) – a global initiative that compensates efforts to reduce emissions, conserve forests, and promote sustainable forest management – riverside communities and Indigenous peoples gain valuable knowledge about emerging market opportunities. These communities can now verify the carbon impact of actions taken, allowing them to access compensation through REDD+ carbon finance.²³

4R Digital has created the Carbon Value Exchange, a digital platform bringing transparency to carbon reductions. Cavex uses remote monitoring to make high-quality carbon credits available to carbon buyers seeking to deliver climate finance to communities in climate-vulnerable countries that are often left behind. Digital, remote monitoring tools are able to capture, verify and report micro-level carbon activity and digital financial services, delivering climate finance funds directly to projects.²⁴





Capital

MSEs urgently require access to new and additional forms of capital, including **risk reduction options** like insurance, and climate transition capital to finance decarbonization.

Compared to larger companies, MSMEs face greater financial constraints in responding to new climate realities, including risks and opportunities.

In developing countries, an estimated 43 percent of formal MSMEs cannot access the finance they need, representing a financing gap of \$4.1 trillion (IFC, 2022).

A survey of small and medium-sized enterprises (SMEs) in the European Union found that three quarters of SMEs plan to implement green measures but cited associated costs and complex legal and administrative processes as common obstacles (European Commission, 2022).²⁵

Capital to reduce climate risk is critical for MSEs, who are often hit harder and have less capital available during times of climate disasters. According to the IFC, the capital gap for adaptation needs for MSEs in developing countries range from \$2.1 to \$2.6 trillion. This gap is largely a result of limited access to affordable credit and insurance, making them particularly vulnerable to climate-related disruptions like extreme weather events. MSEs may not be able to afford insurance premiums or be offered insurance at all based upon their level of vulnerability or they may not be convinced of its value given competing priorities. The industry needs to expand MSE-accessible insurance product offerings for both pre-disaster mitigation and post-disaster recovery. Parametric insurance, which pays out predetermined amounts based on specific triggers like weather conditions or crop performance indices, can reduce the cost of insurance because providers do not need to do detailed assessments or ongoing monitoring.²⁶ Special attention is needed for MSEs in the most vulnerable places, ensuring that they are prioritized for public and donor resources, as investable opportunities are few and far between.²⁷

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MSEs are the backbone of the global economy, but they are increasingly vulnerable in a world made more volatile by climate change. Many are at risk of losing everything in climate disasters. Insurance provides more than just protection — it gives MSEs the confidence to invest in their future, stabilizes their operations, and creates a virtuous cycle of resilience. By reducing risks, insurance unlocks access to finance, one of the biggest hurdles for MSEs growth, ensuring they can thrive even in the face of uncertainty.

Charlie Langdale
Chief executive of Humanity Insured

Transition capital is needed for MSEs to adopt climate mitigation practices and to build new business opportunities in the green economy in the form of patient, risk-tolerant and often blended finance from donors, impact investors, and corporations, ensuring affordable and timely capital. Calvert Impact, a non-profit investment firm, uses its grant resources to offer its Cut Carbon Note, providing low-cost, long-term, bond-rated funding for energy efficiency improvements to commercial, industrial, multi-family, and non-profit buildings in the United States, increasing MSE access to affordable financing of clean energy improvements. Since 2003, Kiva, also a nonprofit, has been lending affordable capital to drive social and environmental impact, reaching over 90 social enterprises globally. Developing World Markets provides credit and equity investment vehicles to attract institutional capital into sustainable development including to the benefit of MSEs.

Affordable and timely transition capital is urgently needed at scale by small businesses in the agriculture and energy sectors, two critical climate solutions sectors for both climate mitigation and adaptation. De-risking of investments is needed to be able to attract capital for right-sized loan products and affordable credit, which are especially valuable when digitally accessible. For instance, India has massive market potential for rooftop solar, a sector where MSEs can benefit as installers and/or as customers, but capital access is a barrier. The U.S. International Development Finance Corporation (DFC) and the U.S. Agency for International Development (USAID) provided a US\$41 million loan guarantee to de-risk such investments, with an initial partnership with Encourage Capital, which invested US\$15 million in Indian Lender Electronica Finance Limited (EFL), leveraging the USAID-DFC loan portfolio guarantee to accelerate rooftop solar adoption by small and medium-sized enterprises (SMEs), reducing energy costs and emissions.²⁸

Another capital access tool is a “pay as you go” (PAYGO) structure, removing upfront cost barriers for solutions like regenerative farming and renewable energy. For instance, Koolboks in Nigeria is offering solar-powered freezers to micro vendors in marketplaces, and multiple vendors can share the freezer using a PAYGO model which makes the solar freezer cheaper than the equivalent individual diesel-powered alternatives. The Global Innovation Fund (GIF) leverages grants, equity and debt instruments to find and fund “innovations with the potential to transform the lives of people living on less than \$5 a day.” To advance the value and effectiveness of PAYGO offerings, their Innovating for Climate Resilience Fund invested in Sparkmeter, a key technology enabler of pay as you go energy systems, which unlocks clean energy business opportunities for MSEs.²⁹



● THE KEYS TO UNLOCK THE POWER OF SMALL BUSINESSES

Daan Besamusca, investment principal of Soros Economic Development Fund, shared that The Low-Carbon Agriculture Transition Mechanism will offer long term loans to small and medium-sized farmers while guaranteeing minimum income and technical assistance. The Climate Policy Initiative's Global Innovation Lab for Climate Finance is supporting the incubation and launch of the LCAT Mechanism.³⁰ Steward is a community lending platform which providing loans to farmers and food entrepreneurs across the U.S. who often have a hard time accessing capital. The approach allows the public to learn about and provide loans at a minimum of \$100 and has raised over \$24 million to date.³¹

Smallholders can and do provide many ecosystem services, including the protection of old growth and secondary forests, planting of trees, pollinator-friendly farming, and reductions in soil erosion. If we hope to maximize their potential, smallholders will require technical assistance and technologies that they cannot always afford on their own. Fair payment for these ecosystem services, beyond compensation for the food they produce, is not only just, but necessary to finance their efforts.³²

Financial incentives for MSEs to protect nature can build greater resilience against extreme weather events while also enhancing carbon sequestration, delivering both climate adaptation and climate mitigation through the same investment.

Rabobank's Acorn Platform, for instance, supports farmers as they transition to sustainable agroforestry practices, measuring the carbon sequestered and providing 80% of the €7.9 million in total carbon credit revenue back to the farmers.³³ Government incentives including tax rebates and grants are also funding changed practices: the Inflation Reduction Act (IRA) alone added \$19.5 billion over five years to support U.S. Department of Agriculture (USDA)'s conservation programs which pay farmers to benefit natural systems.³⁴ Consumers are also seeking climate-smart products and greater transparency such as those provided by certification programs for organic practices or biodiversity outcomes, and financial institutions may provide lower interest rates tied to climate-positive outcomes.

To access these incentives, however, performance needs to be validated, and this can be prohibitively complex and expensive for MSEs. Data and technology can deliver the tracking and verification needed: Rabobank's Acorn Platform is able to do so cost effectively by leveraging low-cost satellite imagery tools to verify carbon results, such as LiDAR.



\$19.5b

were added over five years
by the IRA to support USDA
conservation programs



● THE KEYS TO UNLOCK THE POWER OF SMALL BUSINESSES

Corporations also play a powerful role by engaging with and investing in their supply chains and communities — including via MSEs — to enable accountability and climate action, making use of supply chain relationships.³⁵

Large companies often ask businesses along their supply chains to comply with reporting goals, emissions reductions targets and production standards. Fundamentally, SMEs want to comply.

Improving product quality and reducing pollution increases product value, which maintains positive relationships with their buyers.

Failure to do so puts their own business at risk as larger companies can procure necessary goods and services elsewhere. However, adhering to large companies' goals takes significant investment of resources and time — both in short supply for SMEs that face more immediate challenges like keeping the lights on and hiring and paying workers.³⁶

These investments need to expand rapidly, and they need to fund both resilience-building and decarbonization, such as access to clean and resilient energy and climate-smart agricultural practices.³⁷ Given "only 1.7 percent of global climate finance goes to projects with smallholder farmers, who produce up to 80 percent of food in sub-Saharan Africa and Asia,"³⁸ corporate buyers must invest in these transitions for farmers to supply low-emission, resilient agricultural goods. Financial institutions and fintech companies need to develop and scale innovative products and blended capital strategies to meet these needs.

Investment firm Clarmondial develops and implements financing solutions to meet short and long-term transition needs, making use of supply chain relationships. Examples of this include the [Food Securities Fund](#), which provides a much-needed source of pre-harvest working capital finance in emerging and developing markets, and the Biosphere Integrity Fund — a new fund which will provide longer-term capital to transition strategic sourcing landscapes in emerging and developing markets. Environmental changes influence the timing of working capital needs in supply chains, and the increasing need for such capital can both be a lever to promote climate mitigation and enable increased resilience, both for MSEs and the farmers that work with them. Expertise

and networks in specific sectors and geographies are critical for successfully developing such funding solutions.

"Despite the myriad barriers facing MSMEs, their immense potential in climate mitigation and adaptation can help promote a green ecosystem, translating into multiple business opportunities in green sectors such as renewable energy, sustainable agriculture, and waste management."³⁹

For MSEs in climate-vulnerable areas around the world, insurance access remains a shared hurdle — it is frequently unavailable, unaffordable, or unsustainable in the face of recurrent climate threats. These gaps not only limit MSEs' resilience against climate impacts but also constrain their potential to contribute to climate solutions. Addressing this capital access challenge is essential for empowering MSEs to navigate climate risks, secure their operations, and maximize their role in sustainable economic growth.



CAPITAL ● CALLS TO ACTION

- Convene, publicize and advocate for philanthropy, business and investor communities to urgently make MSEs a priority to ensure access to capital for climate adaptation and mitigation.
- Build and market parametric insurance solutions to meet priority needs for MSEs in vulnerable sectors.
- Mobilize blended finance to de-risk investments including innovative technology and new business models, reducing the costs of and increasing access to capital, especially credit.
- Scale and replicate impact investment in U.S. and international markets to provide access to capital for MSEs to deliver for climate adaptation and climate mitigation.

CAPITAL CASE STUDY ● OPPORTUNITY FINANCE NETWORK AND KENTUCKY HIGHLANDS INVESTMENT CORPORATION

Philanthropy and an affordable loan bring resilience to small businesses in southeastern Kentucky

Blended capital can be a powerful tool for climate resilience for MSEs. In this case, a philanthropist partnered with Opportunity Finance Network (OFN), a non-profit CDFI network and financial intermediary, to fund OFN's Renewable and Energy Efficiency Financing Grant Program. The program provided the seed grant to launch the Solar and Energy Loan Fund of the Kentucky Highlands Investment Corporation, (a CDFI). In Monticello, Kentucky, after losing vaccines and other refrigerated medicines during a local power failure, doctors sought to install a rooftop solar energy system with storage to be able to continue to serve the community even in a disaster. Thanks to the Solar and Energy Loan Fund, they could finance the system which now benefits all of the building's tenants, including a pharmacy, a walk-in clinic, and the doctors' offices.



CAPITAL CASE STUDY ● CLIMATE RESILIENCE FOR ALL

Parametric insurance and wage protection insurance deliver for women-led MSEs

The Women's Climate Shock Insurance and Livelihood Initiative (WCS) was developed by Climate Resilience for All and put into operation with the Self-Employed Women's Association (SEWA) in collaboration with the reinsurance giant, Swiss Re.

The program seeks to address the disproportionate impacts of extreme weather on women, who are at [four times greater risk to extreme heat than men](#), and [in Europe](#), dying at twice the rate. Globally, extreme heat kills more people than any other climate hazard.

WCS financial protections combine an individual parametric insurance product and cash assistance to supplement lost wages due to extreme heat. The insurance policy which pays out quickly when the temperatures exceeds a pre-set threshold can help women recover their losses, keep their families safe and fed, and protect their health on the most brutal of hot days. Small, direct cash payments, made at lower temperature thresholds, play an essential role in ensuring that even at lower (but still health damaging) high temperatures, women have a supplement for lost income and more decision-making power after a heat shock.

This affordable parametric insurance combined with income protection ensures women can protect themselves from the worst threats of heat.





Wrap-around support

Wrap-around support in the form of **training and education, market access and visibility**, and aligned policies and regulations are necessary to building a supportive ecosystem for MSEs to deliver climate solutions.



CDFIs



Chambers of commerce



Other business service provider organizations

CDFIs, chambers of commerce, and other business service provider organizations can use their established presence and relationships to effectively reach and support MSEs. For instance, the SME Climate Hub is providing climate education to enable MSEs to measure and report their greenhouse gas emissions, and Inclusiv, a network of CDFIs, is training lenders on solar loan origination and design. The Carbon Markets Initiative and Fundacao Amazonas Sustentavel are training MSEs on carbon market opportunities; and a

collaboration among Kiva, International Trade Centre's Climate-smart Network and Sustainability Map, and USDA's Partnership for Climate-Smart Commodities are providing SMEs market access and opportunity through visibility and credibility. In addition, the Resilient Cities Network partnered with Citi Foundation to offer its Catalyzing City Resilience Solutions program in the wake of the COVID-19 pandemic to help "a critical SME sector to continue to develop and provide solutions that will allow cities to build urban resilience" and to support SMEs to "recover more inclusively and sustainably."⁴⁰

Throughout efforts to support MSEs, it is crucial to prioritize reducing the implementation burden for MSEs while maximizing their share of the benefits. Solutions should be tailored to account for the limited resources and capacities of MSEs, making it easier for them to adopt climate-smart practices and technologies. It is also critical to make these solutions much more visible to MSEs, as well as to the regulators shaping the market environment, and potential customers. During a collaborative working session considering the recommendations on MSEs and climate, participants with diverse experience working with small businesses, ranging from the U.S. to Ghana and banking to public engagement, all resoundingly agreed on the importance of uplifting MSE climate solutions, such as by creating a global communications campaign.

● THE KEYS TO UNLOCK THE POWER OF SMALL BUSINESSES

Finally, Indigenous communities are responsible for stewarding 80% of the world's remaining biodiversity, and empowering their continued management of these critical ecosystems should be one of the highest priorities to deliver both climate change mitigation and adaptation. Historically, Indigenous communities have relied on healthy, balanced ecosystems for their livelihoods, but with climate change, unpredictable weather fluctuations are upending their way of life and reducing access to food and other forest resources for their survival. Many are now building small businesses to generate income to backstop these challenges — often being sustainable enterprises that keep, preserve and protect forests for ecosystem longevity and the livelihoods of future generations, warranting a particular focus on supporting Indigenous MSEs.

By addressing these challenges comprehensively, it is possible to ensure that MSEs receive the maximum benefit from climate-smart activities.



WRAP-AROUND SUPPORT ● CALLS TO ACTION

- Build a communications campaign to feature solutions that unlock the role of MSEs in climate-smart inclusive growth.
- Fund climate solutions education and technical assistance for MSEs and MSE lenders to connect climate opportunity to MSEs.
- Build coalitions and programs to bring visibility and market access to MSEs.
- Advocate for policies providing climate-related opportunities for MSEs.

WRAP-AROUND SUPPORT CASE STUDY ● INTERNATIONAL TRADE CENTRE

Providing visibility and partnership opportunities to businesses who are leading on sustainability

The United Nations small business agency, the International Trade Centre (ITC), has developed two important tools providing visibility and opportunity for businesses providing climate and sustainability solutions. The ITC's [Sustainability Map](#) is a database of micro, small and medium-sized enterprises (MSMEs) to highlight their "strengths and sustainability credentials to access new markets and preferential credits." Funded by the European Commission, the Map validates MSME sustainability data and is the largest network for businesses committed to sustainability. It brings together MSMEs with sustainability enablers, including brands, certifiers, and governments, to create the enabling environment to build opportunity for MSEs to gain market access business opportunity and grow their sustainability impact via trade. The ITC's [Climate-smart Network](#) was developed in partnership with the U.S. Department of State, providing a "directory of over 60,000 businesses and projects with climate-smart credentials," with the aim of "connecting climate-smart small businesses with international buyers." Climate and sustainability certifiers collaborating with the network include the Global Organic Textile Center, the USDA Organic, SME Climate Hub, and the Gold Standard. One of ITC's core priorities is to connect the nexus between trade and climate action, supporting global efforts to tackle climate change by maximizing the impact that millions of small businesses can bring to the table.



WRAP-AROUND SUPPORT CASE STUDY ● FOUNDATION FOR AMAZON SUSTAINABILITY (FAS)

Solar energy and storage for small business growth, connectivity, and education

The Foundation for Amazon Sustainability (Fundação Amazônia Sustentável or FAS) is providing support to foster small businesses by ensuring reliable power and internet connectivity. A new solar energy and storage system will supply clean, consistent power to more than 530 families in the Bauana community, located within the Uacari Sustainable Development Reserve in the Amazon region. This system will also power internet access for education, research, telehealth, and more.

A key feature of this project is its support for small businesses through the establishment of two mini-processing plants that will produce andiroba and murumuru oils, as well as buriti, açaí, and other products from the Amazon bioeconomy. "This example can be replicated throughout the Amazon. We are advocating for sustainable development hubs, as seen in the Bauana community. These hubs bring hope for a thriving Amazon with improved socioeconomic indicators and a standing forest," said Virgilio Viana, founder and leader of FAS.



Multi-impact recommendations

To reach the speed and scale the climate crisis requires multi-impact solutions that deliver **multiple outcomes with the use of scarce resources**. In many cases, combined strategies are most effective to enable MSEs to deliver climate solutions. In addition to solutions that deliver data, capital, or wrap-around support, there are initiatives that address two or all of these solutions with powerful results. In addition to using scarce resources to deliver multiple outcomes, often combined efforts create a multiplier effect to deliver more effective, enduring impact.

Recommendations of multi-impact initiatives include:

- Convene and build partnerships to increase climate focus and resources for MSEs by aligning multiplier players across philanthropy, business, investment, and nonprofit MSE service providers.
- Create a clearinghouse (possibly both digital and with physical centers) for information, tools and capital for MSE climate resilience.
- Build a communications initiative to uplift the MSE climate resilience solutions to accelerate adoption and replication.



MULTI-IMPACT CASE STUDY ● A PARTNERSHIP FOR THE MOUNT KENYA LANDSCAPE

Philanthropy, nonprofit, investor and major corporations partner to deliver capital and market access

A coalition is working together to protect and restore vital ecosystems to deliver inclusive growth in the world-renowned biodiversity hotspot and natural “water tower” of Mount Kenya. Strategic crops including fruits and vegetables, rice, coffee, tea, macadamia nuts, herbs and spices are produced by more than 50,000 smallholder farmers and prized by internationally recognized brands, contributing significantly to the Kenyan economy. The landscape and its smallholder farmers are increasingly facing environmental challenges, including climate change, biodiversity loss and soil degradation which are threatening their livelihoods. While local and international companies and government are interested in supporting the transition to more sustainable landscapes and value chains in the

Mount Kenya region, capital remains insufficient. Rainforest Alliance, through their IKEA Foundation-supported Sustainable Landscapes and Livelihoods Program, has developed a comprehensive landscape action plan and established a unique governance structure – the Landscape Management Board, to help channel funding. The foundational work done by Rainforest Alliance Kenya enabled advisory firm Clarmondial to select the Mount Kenya landscape for a pilot transaction of the Biosphere Integrity Fund. The Biosphere Integrity Fund is a new, blended finance fund developed by Clarmondial to finance the transition of strategic sourcing landscapes in emerging and developing countries, so that they deliver additional positive outcomes for local communities and nature, notably on climate and biodiversity, including the potential for integrating payments for ecosystem services (carbon, biodiversity, water) within and beyond value chains.

This collaborative effort delivers on each of the recommended solutions for MSEs, measuring data, providing capital as well as wrap-around support including training and market access.



50k+

smallholder farmers produce crops and contribute significantly to the Kenyan economy



MULTI-IMPACT CASE STUDY ● IMPACT IDAHO FUND

Providing access to loans and business expertise to regional farmers and small businesses

"The Impact Idaho Fund attracts and mobilizes mission-driven capital to community resilience in central and southern Idaho," supporting the resilience of regional farms and businesses pursuing "regenerative, sustainable and renewable practices related to food and farm, land, water, and energy use."⁴¹ Founded within the nonprofit Sun Valley Institute for Resilience, the Impact Idaho Fund (IIF) serves regional farmers and entrepreneurs in southern Idaho in the northwest United States. Since the Fund's launch, a total of \$3.4m has been requested, with the IIF financing \$407,000 in no-interest and low interest loans to applicants that meet certain financial and impact criteria. In addition to the capital, staff work closely with borrowers to offer business

strategy and market access support including critical guidance and introductions to help to ensure their success. "From the first funded company in 2021 to the end of 2023, businesses in our portfolio have produced and sold over 72,000 pounds of food locally, avoiding over 100,000 pounds of carbon dioxide equivalents by reducing the number of miles food travels from farm to plate. The companies have spent over \$800,000 in wages, manage 160 acres, and steward land and water resources with future generations in mind."⁴²

By providing affordable capital as well as technical assistance and business expertise (wrap-around support), the Sun Valley Institute for Resilience through the Impact Idaho Fund are helping farmers and entrepreneurs to create and build their small businesses in service of climate mitigation as well as adaptation and resilience.

MULTI-IMPACT CASE STUDY ● INCLUSIV

Training lenders to advance inclusive finance for climate adaptation and mitigation

Inclusiv, a certified CDFI intermediary, supports community development credit unions (CDCUs) across the U.S., managing \$295 billion in community-controlled assets and serving over 20 million residents.

Through their Center for Resiliency and Clean Energy, Inclusiv offers specialized training programs, such as the Solar Lending Professional Training and Certificate Program, which equips community-based lenders (who are often MSEs themselves) with the skills to implement solar financing initiatives — specifically, to train these

lenders with skills and tools to fund MSE installers of residential and commercial solar systems.

In addition, Inclusiv received a \$1.87 billion federal award to provide grants to credit unions to offer green lending programs that serve low-income and disadvantaged communities (LIDACs). The Environmental Protection Agency awarded these funds to Inclusiv through the Greenhouse Gas Reduction Fund (GGRF) Clean Communities Investment Accelerator. Altogether, 300-400 credit unions will receive grants ranging from \$275,000 to \$11 million to cover operating and capitalization costs for their green lending programs over the next three to four years to help grow affordable green lending programs for LIDACs.

Here Inclusiv is providing wrap-around support as well as capital, with the training programs and grants catalyzing capital availability for renewable energy MSEs.

MULTI-IMPACT CASE STUDY

● **HUMANITY INSURED**

A nonprofit, backed by the insurance sector, making the financial safety net of insurance accessible to communities on the climate frontlines

Insurance protection builds climate resilience for MSEs by providing rapid deployment of capital, enabling swift recovery, stability, and fostering self-reliance, growth, and future investment. Humanity Insured focuses on three core activities: funding premium subsidies for climate insurance (capital), offering access to resilience-building assets and training (wrap-around solutions), and using climate modeling to inform communities' adaptation decisions (data).

Since mid-2024, Humanity Insured has funded Mama Bank and One Acre Fund to mobilize insurance protection

for MSEs facing drought and heavy rainfall. This work builds on previous efforts to close the insurance access gap:

- With Humanity Insured's support, Mama Bank — the first Women's Micro Bank in the Pacific — subsidized insurance for small businesses and farmers in Papua New Guinea, 80% of whom are women. Building on a U.N. Capital Development Fund project, this initiative delivered \$100,000 in payouts to mobile wallets in Fiji within 10 days post-rainfall, benefiting farmers and fishers.
- Humanity Insured's funding helped One Acre Fund, a social enterprise in sub-Saharan Africa, provide insurance to 200,000 Kenyan smallholders. In poor harvests, insured farmers receive cash payouts, supporting household needs and farming supplies. Evidence shows insured farmers save twice as much and invest more in growth assets.

These examples demonstrate Humanity Insured's comprehensive approach, combining capital, wrap-around support, and data to enable MSE workforce continuity, greater savings and investment.



MULTI-IMPACT CASE STUDY ● ENCOURAGE CAPITAL

Providing capital, operational assistance, and key relationships to solarize MSEs in India

"With increasing energy demand, high electricity prices and decreasing costs of solar, MSEs can find rooftop solar as well as energy efficiency retrofits attractive low-carbon solutions for their electricity needs, but financing is still a key barrier," said Adam Wolfensohn, managing partner and chairman, Encourage Capital. Encourage Capital found that the rooftop solar market for MSMEs in India has a 15 gigawatt (GW) potential, a \$9 billion lending opportunity for financial institutions. Encourage Capital's private equity fund, Encourage Solar Finance, is investing in financial institutions that can develop and scale rooftop solar finance solutions for Indian entrepreneurs, providing growth capital, operational assistance and key relationships to develop and deploy innovative and commercial financing solutions to deliver on this massive market potential.

By providing affordable capital as well as wrap-around support, Encourage Capital is advancing the MSE opportunity to deliver climate solutions, save money, and access customers seeking climate-smart MSE partners.



MULTI-IMPACT CASE STUDY ● SME CLIMATE HUB

Supporting small and medium sized businesses (under 500 employees) to act on climate

The [SME Climate Hub](#) is an initiative of the We Mean Business Coalition, the global nonprofit catalyzing business and policy action to halve global emissions by 2030. The initiative was co-founded and is operated in partnership with the Exponential Roadmap Initiative and the U.N. Climate Change High Level Champion's Race to Zero campaign. The [SME Climate Commitment](#) is the official pathway for SMEs to join the global Race to Zero campaign.

The SME Climate Hub has developed free, practical resources specifically tailored to support SMEs on their net zero journey through strategic emission reductions and opportunities for climate leadership. Through the SME Climate Hub's [Action Space](#), businesses can calculate and report on their emissions, learn how to take action, and access support to reduce their operational and supply chain emissions.

With these resources, the SME Climate Hub is addressing data and wrap-around support needs including training, tools and access to opportunities as climate solutions providers.



MULTI-IMPACT CASE STUDY ● THE GHANA CLIMATE INNOVATION CENTRE

A business incubator and accelerator to climate-align businesses and support climate entrepreneurs

The Ghana Climate Innovation Centre (GCIC) is a national business incubator and accelerator providing business advisory services and technical support to enable the creation and growth of small green businesses, with a special program for women in the green economy. The Centre also conducts policy advocacy with the national government to support policies and laws needed for the low-carbon transition. The Centre hits on all three levers:

Data

Retrieving from the businesses they work with to inform the work GCIC does around the policies needed for green transition.

Capital

MSEs in its business incubation programs are eligible for grants to support their growth, with its Green Business Competitions participants eligible to receive direct grants of up to \$10,700

and its Supporting the Green Economy of Ghana participants eligible to receive direct grants of up to \$15,300.

Wrap-around support

- The Centre's business programs provide training including regarding sustainability practices and [marketing green leadership to corporations and consumers](#); and
- The Centre identifies policies to grow MSE opportunities in the green economy.

So far, the GCIC has incubated close to 200 "transformational businesses and entrepreneurs who are pioneering adaptive and mitigating solutions for climate change issues in Ghana... in six key economic sectors, namely: climate-smart agriculture, solar power, energy efficiency, domestic waste management, greening and water management and purification." This includes helping a catering business to adopt solar and gain climate-sensitive customers and reduce energy costs, as well as helping small farmers adapt to more climate resilient crops and practices.

This combination of data, capital and wrap-around support addresses the complex sets of needs of these emerging businesses face in a climate destabilized world.





Conclusion

Micro and small enterprises play a vital role in driving economic opportunity, especially in the face of climate change, yet they need significantly greater prioritization for research, resources and support. MSEs are particularly vulnerable to the impacts of climate change, but they are also critical drivers of climate solutions, from local community development to global supply chains.

To help MSEs thrive in the face of climate change, we must advance proven strategies across three critical areas – data, capital, and wrap-around support:

- 1 Data**
Establish and simplify standardized metrics that allow MSEs to compete equitably with large businesses.
- 2 Capital**
Foster an investment environment that prioritizes MSEs, promotes accessible parametric insurance, and reduces investment risk.
- 3 Wrap-around support**
Build coalitions and targeted programs that equip MSEs with education, technical assistance, and resources for climate-smart growth.

To unlock the future of MSEs and empower them to build a more resilient, sustainable economy, it is essential to **elevate, scale, and invest** in these strategies. By aligning resources and support, funders, corporations, investors, NGOs, and policymakers can enable MSEs to become leaders in delivering climate-smart inclusive growth.

mastercardcenter.org/focus-areas/small-business

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Interviewees

Name	Organization
Kaylene Alvaraz	Athena Global Alliance
Amal-Lee Amin	British International Investment
Andy Gunther	BroadBranch Capital
Meagan Fallone	CARE / Step Up Advisers Ltd / Social Entrepreneur
Kathy Baughman McLeod	Climate Resilience for All
Rick Nogueira	Coalition for Green Capital / DC Green Bank
Dr. Caitlin Augustin	DataKind
Aleem Remtula	Developing World Markets
Adam Wolfensohn & Ameya Joor	Encourage Capital
Ajaita Shah	Frontier Markets
Kippy Joseph	Global Innovation Fund / International Development Innovation Alliance
Martha Brantley	Kiva
Elizabeth Littlefield	M-KOPA and West Africa Blue
Salah Goss	Mastercard Center for Inclusive Growth
Daan Besamusca	Open Society Foundation
John Morton	Pollination Group
Dr. Ron Dembo	Riskthinking.Ai
John Arensmeyer, Brian Pifer	Small Business Majority
Janet Shulist	Mastercard Strive
Tom Kerr	The World Bank
Nicole Steele	U.S. Department of Energy (DOE)

Roundtable on strategic approaches to support the inclusive growth of small businesses through climate mitigation and adaptation

● WASHINGTON, DC, APR. 17, 2024

Name	Title and organization
Aimée Christensen	Founder and CEO, Christensen Global
Sara Lichtenberg	Sustainability Consultant, Christensen Global
Ali Schmidt-Fellner	Vice President, Insights, Mastercard Center for Inclusive Growth
David Eichberg	Vice President, ESG Strategy, Mastercard Center for Inclusive Growth
Ajaita Shah	Founder and CEO, Frontier Markets
Amy Bailey	Director of Climate Resilience and Sustainability, C2ES
Hannah Schiff	Managing Director, Impact Strategy, Developing World Markets
John Arensmeyer	Founder and CEO, Small Business Majority
Kathy Baughman McLeod	Founder and CEO, Climate Resilience for All
Michelle Lee	Analyst, Climate Policy Initiative (CPI)
Paula Pagniez	Head of Origination and Client Management, Climate Risk and Resilience
Peter Hall	Managing Director, Resonance Climate Impact Advisory
Sasha Ditcher	Co-founder and CEO, 60 Decibels
Stacy Swann	Founder and CEO, Resilient Earth Capital
Valeria Ramundo Orlando	Partner and Co-founder, Greensquare Ventures
Verena Radulovic	Vice President for Business Engagement, Center for Climate and Energy Solutions (C2ES)

Roundtable on advancing climate-smart inclusive growth for small businesses: The power of data, capital and digital solutions

● NEW YORK CITY, SEPT. 25, 2024

Name	Organization
Brendon Miller	Opportunity Finance Network
Paula Pagniez	Howden Group Holdings
Peter Hall	Resonance Global
Key Hill	Resilient Cities Network
Aleem Remtula	Developing World Markets
Stacy Swann	Resilient Earth Capital
Erica King	African American Alliance of CDFI CEOs
Storm Taliaferrow	NALCAB
Dominique Souris	Goodwall
Tanja Havemann	Clarmondial
Rachel Small	United Way Worldwide
Aimée Christensen	Christensen Global
Ellie Turner	60 Decibels
Ruka Sanusi	Ghana Climate Innovation Centre
Jesse Fripp	Appalachian Community Capital
Janene Yazzie	NDN Collective
Christina Stanton	Climate Resilience for All
Henrietta Southby	Humanity Insured

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British International Investment	<u>How and why we finance SMEs</u>
Center for Financial Inclusion	<u>Green Inclusive Finance: A Framework for Understanding How Financial Services Can Help Low-Income and Vulnerable People Respond to Climate Change</u>
CBI/WRI/CRC	<u>Climate Resilience Principles: A Framework For Assessing Climate Resilience Investments</u>
Dalberg	<u>Resilient Rural Women: Applying Personas And Insights For Climate-Smart Innovation</u>
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World Bank	<u>The World Bank's Country and Climate Development Reports</u>
WSP	<u>Unleashing the potential of MSEs in Emerging Markets to Advance Sustainable Finance</u>

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