



In collaboration with BRAC and the Bayer Foundation

Grassroots to Boardrooms: Social Innovation Partnerships for Climate Adaptation

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Foreword



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Climate change has emerged as an undeniable force, reshaping ecosystems, economies and the very fabric of societies. As the pace of change quickens, the importance of adaptation – the act of responding proactively to the effects – becomes paramount.

This report delves into that adaptation journey, shining a light on the underestimated power of locally led, grassroots solutions of social innovators and underscoring the pivotal role businesses can play in scaling them. We ventured out to bring examples in low- and middle-income countries to the fore through the 100 members of the Global Alliance for Social Entrepreneurship. They have their ear to the ground and solutions rooted in local contexts. They offer a treasure trove of adaptive strategies. When these are amplified and scaled by the resources, reach and influence of the private sector, the possibilities are transformative.

Half of the global population now resides in countries acutely threatened by climate ramifications.¹ But in the face of escalating challenges, the private sector, with its vast resources, technological prowess and extensive networks, emerges as an important ally. It has the capacity to drive transformative solutions tailored to the unique needs of vulnerable regions. By collaborating with locally led social innovators, businesses can co-create adaptive strategies, ensuring that solutions are both effective and culturally and contextually relevant. This synergy between community insights and corporate capabilities can spur innovations in products and services, catering to emerging market demands and fostering sustainable economic growth. Businesses are not just profit-driven entities; they are powerful agents of change, stepping forward to bridge the vulnerabilities and offering communities a resilient and sustainable future in the face of climate adversity.

As you read through these pages, we hope you find, as we did, a profound optimism in the synergy of local innovations and global enterprises. The challenges are manifold and so are the opportunities. And as history has shown time and again, when humanity collaborates, we do more than adapt – we excel.

Executive summary

Partnerships with social innovators enhance climate adaptation outcomes and offer business benefits such as risk mitigation, new market opportunities and access to ecosystems.

The discourse on climate change has been dominated by mitigation efforts, leaving adaptation – the proactive response to anticipated climate shifts – largely underserved. Current strategies tend towards top-down methodologies, neglecting grassroots, bottom-up approaches that might offer more sustainable and localized solutions.

The World Economic Forum underscores the necessity for businesses to proactively engage in climate adaptation and centres its climate adaptation framework on:

- 1. Enhancing resilience: With climate-related disruptions on the rise, businesses must identify vulnerabilities in design strategies that ensure operational continuity and socio-economic robustness.
- 2. Capitalizing on opportunities: The evolving climate situation puts climate-adapted products and solutions in high demand and presents an opportunity for businesses to rise to the challenge. The climate adaptation market is predicted to hit \$2 trillion annually by 2030, with businesses, especially in sectors like construction, on the brink of transformative prospects in impactful ways.
- 3. Shaping collaborative outcomes: Holistic solutions that tackle systemic issues can present transformational change beyond current fragmented approaches. An overhaul in infrastructure, operational dynamics and policy frameworks is encouraged.

Social innovators, deeply entrenched in local ecosystems, bring to the table practical solutions that address the unique needs and nuances of their communities. While they might operate on a smaller scale initially, their innovations hold potential for broader and transformative impact, especially when amplified by the private sector. This report highlights over 50 inspiring examples, such as: Jan Sahas, which provides access to social protection for over 3.5 million migrant workers in global value chains who are threatened by displacement due to climate change; SEKEM, which offers a holistic approach to organic, regenerative and thus more climate-resilient agriculture for more than 2,000 farmers in Egypt; Hindustan Unilever's Prabhat initiative, which works across the company's 26 manufacturing sites in South Asia to increase community resilience and strengthen worker loyalty, all while positively impacting over 9 million people.

Initiatives like these hold the potential for a range of synergies:

- Hybrid capacity building: Traditional capacitybuilding efforts have often been top-down.
 Social innovators, rooted in their communities, can enable a fusion of bottom-up and top-down strategies, catalysing widespread, long-term change. Their unique position promotes the co-creation of localized solutions, potentially leading to more sustainable outcomes.
- Risk and experimentation: Social innovators, by virtue of their size and nimbleness, can afford to take calculated risks, iterate and experiment. When supported by businesses, this experimental mindset can foster increased resilience and innovative breakthroughs.
- Strategic partnerships: When businesses collaborate with social innovators, they can harness grassroots insights and innovations. Examples include global firms partnering with local non-profits to drive community-based solutions, influencing policy and catalysing action on a larger scale.

As the shift from a carbon-centric economy gains momentum, the synergy between social innovators, businesses and grassroots communities offers vast potential. The climate adaptation market beckons businesses to spearhead adaptive solutions. The journey, however, must be collaborative. Grassroots synergies, driven by social innovators and amplified by business partnerships, are essential to achieving widespread resilience, sustainability and a just transition.

Introduction

There is an urgent need to prioritize adaptation and ensure a resilient future by capitalizing on the potential of collaborations between businesses and community-driven social innovators.

Climate change is no longer a looming threat. Abnormal weather occurrences are the new normal and recurrent news of ecological disasters such as floods, droughts and heatwaves herald the fact that the climate crisis is here, leaving communities scrambling to find ways to adapt to their shifting realities and the negative impact on their homes and livelihoods. The situation is even more urgent in communities in low- and lower-middle income countries as they face significant gaps in climate funding while bearing a disproportionate brunt of the impact. Millions of lives are under threat, resulting in large-scale displacement.

To date, efforts to combat climate change have focused mainly on climate mitigation. At a virtual high-level Global Climate Adaptation Summit in 2021, United Nations Secretary-General Antonio Guterres underscored this, warning that, "adaptation cannot be the neglected half of the climate equation" and calling for 50% of the total share of climate finance to be allocated to climate adaptation and building resilience.² From 2016 to 2020, climate adaptation finance made up an average of 5% of the total privately mobilized climate funding during that period.³ The 2022 United Nations Environment Programme (UNEP) *Adaptation Gap Report* estimates annual adaptation needs at \$160 to \$340 billion yearly by 2030.⁴

At the United Nations Climate Change Conference (COP26) in Scotland, climate adaptation began taking centre stage as countries adopted the Glasgow Climate Pact, which seeks to double adaptation finance from 2019 to 2025 levels. And at COP27 in Egypt, the global community built on these efforts by launching the Sharm-El-Sheikh Adaptation Agenda, which consists of 30 adaptation goals for a resilient world by 2030.

These efforts have yet to cascade to the private sector, which has a key role to play. At the same time, the sector's efforts have been focused on mitigation. However, the World Economic Forum's *Global Risks Report 2023* highlights that climate adaptation is the second most relevant long-term risk for companies around the world after mitigation.⁵ For instance, Moody's puts a fifth of all computer and electronics manufacturers in Asia at risk of floods.⁶ Depending on the crop, up to 44% of global agricultural production is at risk, leading to dramatic price increases for input factors.⁷ And Unilever

already estimates that climate-related effects alone can lead to an 11% to 14% price increase for palm oil by 2050. The effect on global asset prices is significant: Even in a net-zero emissions scenario, Cambridge Econometrics estimates a 10% decrease in asset prices versus a no-climate-change scenario. For a failed transition, the differential is 40%.⁸

But there are opportunities to act. In its *Accelerating Business Action on Climate Change Adaptation* report, the World Economic Forum highlights three important reasons why businesses should engage in climate adaptation: enhancing resilience, capitalizing on opportunities and shaping collaborative outcomes.⁹ Beyond the moral imperative to play an active role in supporting the transition, these approaches present concrete business cases.

Once businesses understand the imperative and necessity for action, they require opportunities for engagement. One such opportunity is presented by social innovators. They are employing bottomup, collaborative and inclusive approaches at the forefront of building resilience at the local level. Their work in communities on the frontlines of climate change provides effective solutions in spite of the scale of the challenge. They offer proven models, guidelines and roadmaps for companies to study, build on, partner with or integrate into their business models.

The purpose of this report is to demystify the intricate web of climate vulnerabilities, emphasize the critical essence of risk management in traversing these challenges, and highlight the opportunities that emerge when companies collaborate with social innovators to strategically realign their focus on addressing adaptation as a business priority. Rigorous desk research was supplemented by interviews and a survey targeting social innovators who are at the cutting edge of climate-adaptive innovative pursuits. More than 50 real-world examples are provided by world-class innovators who have received awards from the Schwab Foundation for Social Entrepreneurship throughout the years.

The report will be followed by a two-year research roadmap with the University of Cape Town, which will further bring to light insights into the role of social innovators in climate adaptation and the enablers, barriers and opportunities for partnerships with the private sector.

1 Introducing climate adaptation frameworks and pathways

The landscape of climate adaptation strategies and frameworks, especially for the social economy, is still being defined.



1. Current state of adaptation action

Climate change discussions and literature mostly focus on climate mitigation, with little attention to adaptation (the process of adjustment to actual or expected climate change and its effects).¹⁰ As a result, policy and academic outputs related to adaptation frameworks and pathways are limited

and in the process being defined. In parallel, the adaptation literature that exists tends to focus on top-down, prescriptive approaches to climate adaptation and less on the grassroots, bottomup approach that may offer better pathways for implementation and results at scale.

2.

Framework for business action on adaptation

The World Economic Forum's Accelerating Business Action on Climate Change Adaptation report emphasizes the need for business and corporations to begin focusing on climate adaptation efforts.¹¹ It presents three pillars for

corporate action as part of a process that begins with assessing the physical and transition risks that climate change can pose due to its cascading impacts: enhance resilience, capitalize on opportunities and shape collaborative outcomes.

FIGURE 1: The three pillars of corporate action



Source: World Economic Forum Accelerating Business Action on Climate Change Adaptation report¹²

Enhance resilience

According to the International Federation of Red Cross and Red Crescent Societies (IFRC), climaterelated disasters have increased by 35% since the 1990s.¹³ The quarterly *Global Value Chain Barometer*, published by the World Economic Forum and Kearney, reports an average of 2,000 climate-related supply chain disruptions per month.¹⁴ These two figures unveil the nuanced vulnerabilities prevalent within communities and industries, highlighting the looming threats they potentially face. Armed with this awareness, businesses and stakeholders can formulate preemptive strategies, ensuring operational resilience and strengthening the broader socio-economic fabric in which they operate.

Capitalize on opportunities

As the climate evolves, there is an imperative for innovative thought, beckoning businesses and enterprises to conceptualize novel products, services and entire market arenas that were previously beyond the realm of imagination. Bloomberg expects the climate adaptation market to grow to \$2 trillion per year by 2030.¹⁵ And UN Habitat estimates that 3 billion people will require climate-resilient housing by the end of this decade – translating into 96,000 new affordable and accessible housing units every day. The impact on

3. Adaptation pathways

The Intergovernmental Panel on Climate Change (IPCC) provides an additional lens for climate adaptation by introducing the transformational and incremental adaptation pathways to build resilience. An expansion of this framework introduces the transitional pathway and filters the pathways through the dimensions of goal, scope, time and scale, separating adaptation initiatives that are aimed at the grassroot versus those aimed at enabling systemic, transformational change.

| Pathway | Incremental | Transitional | Transformational |
|---------|--|--|---|
| Goal | Functional persistence in a changing environment | Realize full potential through the exercise of rights within the established regime | Reconfigure political economy of development |
| Scope | Change in technology, management practice and organization | Change in governance practices to secure procedural justice and incremental change in governance system | From individual behaviour to global political economy |
| Time | Short to medium term | Medium to long term | Long term and intergenerational |
| Scale | Local or regional | Regional or national | Multiple scales |
| Example | Introduction of new irrigation systems | Loss and damage fund | Global carbon reward |

TABLE 1: Climate adaptation pathways

Source: Pelling, M., Adaptation to Climate Change: From Resilience to Transformation, Routledge, 2011.

a single sector such as the construction industry can be transformative.¹⁶

By transitioning from a reactive stance to one of proactive adaptation, enterprises can both navigate the uncertainties posed by a changing climate and harness these very challenges as catalysts for sustainable growth and transformative positive change.

Yet, this report recognizes that, despite the crucial role of business in driving climate adaptation efforts, there is a need for collaboration at the grassroots level to achieve community and ecosystem resilience. The report's framework presents a third pillar that employs a multistakeholder approach to ensure the protection of people, especially those in vulnerable communities:

Shape collaborative outcomes

Addressing the climate challenge transcends isolated, fragmented solutions. There's an overriding need for sweeping systemic transformations. Previous reports accentuate the imperative of adopting holistic, interwoven strategies between stakeholders – from social innovators to companies, from regulators to grassroots NGOs. The focus can shift from isolated interventions to comprehensive overhauls in infrastructure, power dynamics and policy frameworks.

Pathway 1. Incremental adaptation

This adaptation approach employs marginal changes over time to build resilience within communities and ecosystems under existing system rules. It with a tolerable level of risk in the structures where it operates and seeks to preserve their underlying structures and essence. It may operate within, and may also be considered an extension of, current patterns of behaviour that can decrease losses that occur as a result of climate events.

Pathway 2. Transitional adaptation

This pathway seeks to effect social and technological change within the structures of the system in which it operates. It does not seek to challenge the status quo. Rather, it seeks

Applied frameworks

The social innovation examples outlined in the following chapters are categorized according to the frameworks above. This process illustrates how this systematic approach can highlight reformation within its ecosystems and considers the impact on different groups of stakeholders. Introduced by Pelling as an intermediate pathway, it is focused on adaptation initiatives over the medium to long term.¹⁷

Pathway 3. Transformational adaptation

Transformative adaptation seeks to effect significant shifts in the values, mindsets, power dynamics and relationships of its system.¹⁸ The result is technological and behaviour change at large scale and intensity. These can range from community relocation and policy changes to reshaping of entire cities.¹⁹ in addition to reducing climate risk, transformational adaptation pathways seek to address issues of social justice, the root causes of risks, and power dynamics.²⁰

opportunities for partnerships, identify pathways to scale and outline systemic interventions to allow for accelerated progress on climate adaptation.

Social innovators at the forefront of climate adaptation

Social innovators are employing innovative, community-driven solutions to fight the climate crisis across sectors and offer opportunities for direct integration into global value chains.



Jan Sahas: Building worker resilience to address impacts of climate migration

Background

As labour shortages prevail around the world, the cost to business is estimated at \$1.3 trillion per year, according to a BCG report.²¹ Migration presents both a challenge and a solution. The net economic output of cross-border migration is estimated at \$9 trillion.²² Internal migration migration within the same country - may drive even greater value, as it makes up about 75% or 763 million of the over 1 billion migrants globally.²³ But for the 140 million migrants in India, the situation is still dire: many are forced to migrate due to lack of livelihood opportunities at home. Poor working conditions, long working hours, lack of water, sanitation or safety equipment and forced labour are perennial problems migrant workers and their families face. Increased climate-related migration is expected to intensify the precarious situations of these workers, while further weakening the supply chains that rely on these workers.²⁴ According to a World Bank report, climate change impacts could result in over 200 million additional internal migrants by 2050.25

Jan Sahas is a national grassroots organization committed to ensuring dignity and equality for all. For 23 years, it has worked with excluded communities for safe migration, the prevention of sexual violence against women and children, the eradication of forced labour practices like trafficking, manual scavenging, bonded labour and the commercial sexual exploitation of children.

The innovative solution

Jan Sahas's model ensures reductions in the prevalence of forced labour conditions and improves worker livelihoods across value chains in South Asia. It **ensures prevention** by raising awareness within the communities and safeguarding access to social security schemes for the families of migrant workers. It **improves responses** to human rights violations through the technology-based tracking of migrant workers and immediate case-based assistance. It **enables rehabilitation and economic prosperity** by connecting families to existing welfare measures.



Lastly, it **supports system reform** by working with government departments and private bodies for large-scale policy and practice reforms.

Jan Sahas systematically deploys technology to support its work. It allows companies to onboard workers to a centralized platform where workers are supported in registering for national social security schemes with food subsidies, healthcare access and other benefits. Its tech-enabled migrant worker tracking mechanism maps the shift in post-pandemic migration to track population movements in search of livelihoods. Jan Sahas has introduced an internet-enabled tracking system that periodically registers and tracks migrant workers longitudinally on a real-time basis in source and destinations.

During the COVID-19 pandemic, Jan Sahas and its partner organizations created a database of more than 1 million migrant workers to track their situation and provide access to social protection including emergency cash, food and medical kits. Jan Sahas also deploys a 24/7, toll-free helpline for migrant workers to attend to distress calls. It is the largest helpline for migrant workers in India. Jan Sahas aims to scale its unified database to 10 million workers along with information about their access to social security, responsible recruitment and worker protection.

In 2020, Jan Sahas anchored the formation of the Migrants Resilience Collaborative (MRC), a grassroots-led multistakeholder collaboration between non-profit, philanthropic and private sector actors focused on ensuring safety, security and mobility for over 10 million vulnerable migrant families throughout India. MRC aims to enable the equitable recovery of workers and their families in 100 districts and cities in the coming three years. The organization is also beginning to partner with others in South Asia and South-East Asia to address similar challenges faced by migrant workers.

Impact and outcomes

As part of its direct work, MRC has facilitated social security benefits for over 2.3 million migrant workers, unlocking over \$100 million in government spending and equipping migrants with cash transfers, insurance, rations for their families, and other life-changing benefits. It has enabled redressal for more than 18,000 workers, including rescuing over 1,400 from forced labour. As part of its systems change efforts, its is partnering with four state governments in India to strengthen access to food and other key social protections for migrants and has worked with more than 10 large companies – both employers and investors – to ensure thousands of workers have continued access to social protections.

For the last 15 years, Jan Sahas worked intensively with over 3.5 million migrant households to ensure their social protection and safe migration. Partnering with community-based organizations, philanthropies and governments, it works in 16,000 villages and urban areas in 84 districts in 12 states in India with a team of 900 professionals and field staff and 3,000 community-based volunteers. Some 90% of its staff is from excluded communities. Jan Sahas has also provided social, legal and rehabilitation support to 100,000 survivors of rape, trafficking, CSEC (commercial sexual exploitation of children), manual scavenging and forced labour practices.



Business opportunity

Social events such as factory strikes are the most prevalent single cause of supply chain disruptions.²⁶ With intensifying migration, companies may soon find themselves facing even more fragile supply chains and constant fluctuations in their workforce, with additional costs linked to search, onboarding and training.

Jan Sahas, through the MRC, offers its services at low cost to companies in South Asia and beyond. Through these services, it enables companies to strengthen worker loyalty and climate resilience in their communities to ensure that migration is safe, not forced. In addition, the solution allows companies to avoid and track human rights violations along their entire supply chains in compliance with supply chain due diligence laws. It continues to work with industry partners to develop simple, market-led solutions that can meet worker needs and make it easier for companies to meet their mandates.

Sustainability and future plans

Through the Migrants Resilience Collaborative, Jan Sahas will intensify its work on safe migration. It will expand its operating model to 50 districts directly and support 40 additional civil society organizations to intervene in another 50 districts while scaling operations to countries like Nepal, Bangladesh, Indonesia and the Philippines through partnerships. Simultaneously, the organization will pilot innovations to work at greater scale. Its unified database is expected to reach 10 million workers. Its social security entitlements app, national labour helpline and a new application programming interface (API) for skills mapping and recruitment will enrich the database with additional services. These systems are expected to be integrated with government systems to radically simplify the delivery of benefits to informal and migrant workers across India.

The five-year goal is to have the two organizations partnering with more than 25 companies and investors working in South and South-East Asia to activate industry's role.



During the COVID-19 pandemic, Jan Sahas has tracked the movement of over 1 million migrants. They benefited from the services through emergency cash, food and medical kits, access to social protection and 24-hour helplines.

Build Bangladesh: The Prokriti o Paani (PoP) water tower

Background

An estimated one in three people globally lack access to safe drinking water and over 2 billion people cannot rely on safely managed sources for their water consumption.27 In Bangladesh, a country of over 165 million people, more than 40% of improved water sources are contaminated and heavy metals like arsenic can be found in almost 15% of the nation's water sources.²⁸ Bandarban is an area of Bangladesh whose poverty rates exceed those of the rest of the country. Women and girls from indigenous populations in this area are responsible for traveling long distances to collect water, which is often contaminated by bacteria, making it unsafe to drink despite the community having no alternatives. In recent years, the community has also faced prolonged dry seasons, putting further pressure on the already limited supply of water.

The innovative solution

In 2017, Build Bangladesh started the Prokriti o Paani (PoP) initiative to bridge the gap between water scarcity and community needs via the construction of water towers. They are designed in parallel with local community members and supplemented by holistic capacity building services to tackle the water scarcity challenges arising from the remote location of Alikadam, Bandarban, in Bangladesh's Chittagong Hill Tracts.

The PoP water tower's design harnesses water from the climatic elements that characterize the region – clouds, humidity, precipitation and rain – all with zero energy consumption:

- Cloud water harvesting The towers are strategically positioned to capture moisture from passing clouds, converting ambient moisture into potable water.
- Humidity collection Given the region's frequently high humidity levels, the towers incorporate special systems to harvest moisture even on non-rainy days, ensuring a consistent supply of clean water.
- Rainwater storage During monsoon season, excess rainwater is collected and stored in 5,000-liter reservoirs linked to each tower, serving as a natural source of water during the dry season.
- Use of local materials The building of the towers prioritized sustainability and economic efficiency by employing locally sourced materials for construction, keeping costs in check and enabling community-led maintenance.



 Awareness and sustainability – Throughout the process, the community has received training to ensure their understanding of the need for more reliable, clean water sources and, after construction, has deployed sustained mechanisms for monitoring and maintenance.

Impact and outcomes

With this investment, the towers have provided reliable, clean water supply throughout the year, enabled women and girls to dedicate their time to other activities, increased the focus on education, and decreased health risks for the community, all while preserving other natural sources of water. Build Bangladesh erected 10 PoP water towers in four villages, saving a collective 168 hours daily that had previously been spent on water collection. In addition, there has been a noticeable decline in waterborne diseases, enhanced children's educational engagement, and the fostering of stronger community ties. Beyond improving water quality and reducing environmental pollution, the initiative has empowered women and girls by opening doors to income generation opportunities and created a cultural shift where impacted households now expect clean water and hygiene facilities.

Business opportunity

According to WWF, "some 1.1 billion people worldwide lack access to water, and a total of 2.7 billion find water scarce for at least one month of the year."²⁹ Given this massive challenge related to clean water access globally, there is both a tremendous need and opportunity for companies to increase investments into innovative infrastructure and technologies that address the lack of safe drinking water and hygiene facilities while leapfrogging resource-intense investments into legacy water systems.

The PoP water towers, which use local materials, respond to unique ecological environments and are designed with durability and sustainability in mind, providing an example ready for replication globally.

Sustainability and future plans

The sustainability of the Prokriti o Paani water tower project is paramount. By choosing locally sourced materials for the construction of the towers, Build Bangladesh created both an economic and environmental edge. Periodic maintenance checks ensure the longevity and effectiveness of the towers. Community funds ensure resources for future needs and unexpected challenges. Ongoing, rigorous water quality testing guarantees the continued delivery of potable water. In the face of climate challenges like drought and water scarcity, the PoP water tower project offers a solution that directly combats the pressing issue of water scarcity, ensuring consistent water supplies even during lean periods.

SEKEM: 40,000 farmers creating a regenerative future in Egypt

Background

In the heart of Egypt, among the vibrant markets and its storied past, SEKEM is working on a revolution in agriculture. Its Economy of Love (EoL) initiative has the bold ambition to turn organic produce from an occasional luxury into a regular household choice.

SEKEM recognized a pressing need for sustainable change in an area located in the fertile Nile Delta and with a rich history of agriculture. The conventional methods, often at odds with nature, prompted SEKEM to craft the EoL initiative. This innovative programme combines organic and biodynamic farming with the pillars of sustainable development. Its ambitious goal is to facilitate the transition of 40,000 smallholder farmers in Egypt to this environmentally harmonious approach and reap the rewards of carbon credits.

The Egyptian Biodynamic Association (EBDA) has played an instrumental role in this evolution. Under their guidance and commitment to both nature and farmers, the EoL Carbon Credits scheme was first applied at the SEKEM Wahat farm in 2019. By 2022, the programme had grown to include 2,100 farmers.

The innovative solution

EoL is not merely about organic farming or carbon credits; it's a broader vision of sustainable living.

From ensuring fair compensation across the supply chain to fostering an economy rooted in mutual respect and compassion, EoL reimagines commerce. At its heart, the EoL ethos embodies a dream where societal welfare, economic growth, cultural respect and environmental conservation coalesce – which is structurally reflected in the way SEKEM reports its annual progress.

Central to the EoL strategy is the carbon credit system, a novel approach offering dual benefits. As farmers embrace eco-friendly practices, they contribute positively to the environment and also enjoy financial incentives. The result is a tangible reduction in the prices of sustainably cultivated produce. This means that consumers no longer have to grapple with the price dilemma when choosing between conventional and organic produce. On the production side, the benefits are manifold: from carbon sequestration and afforestation to the recycling of organic waste and the adoption of renewable energy and farmers engaged in a holistic approach to sustainable agriculture.

SEKEM has anticipated and addressed financial challenges – which are often a stumbling block for many – head-on. The introduction of innovative microloans has sought to alleviate this barrier. Farmers, even those just beginning their sustainable journey, can receive loans of up to €500 per acre. This financial boost has facilitated a range of activities from setting up renewable energy sources and animal husbandry operations to establishing beehives, all at a manageable interest rate of 5%.



SEKEM is working on a revolution in agriculture. Its Economy of Love initiative turns organic produce from an occasional luxury into a regular household choice.



Impact and outcomes

As of 2022, SEKEM has \$23 million in revenues (+14% y-o-y), employs 1,959 employees and has cultivated an area of 7,487 hectares through SEKEM farms, which span a network of 2,389 farmers. It has validated, verified and registered 16,603 tonnes of CO_2 and started the same process in 2022 with EBDA farmers, supported the enrolment of 2,777 students in its affiliated courses and planted 370,000 trees. It is now venturing into new markets and segments, while focusing on novel approaches to climate adaptation by sequestering carbon.

Business integration

SEKEM supplies fair and sustainably produced phytopharmaceuticals, organic textiles and food products. As companies strive to create sustainable supply chains, SEKEM offers an example for creating a truly regenerative and fair agricultural model. As carbon offsets are coming under scrutiny and will face assurance requirements in the foreseeable future, SEKEM offers a unique approach to systematically reducing its carbon footprint while employing verifiable, carbon-positive practices. Already today, companies are investing in regenerative agriculture, such as The Body Shop, which is set to invest \$100 million in regenerative farming.³⁰

Sustainability and future plans

As SEKEM's Economy of Love initiative scales up throughout Egypt, its impact resonates deeply. Beyond the evident ecological benefits, the programme promises an agricultural sector where farmers thrive, consumers have healthier choices and the land heals. The harmonization of economic prosperity with environmental stewardship under the EoL banner showcases a model that is replicable globally.

Prabhat: Climate resilience for communities along global value chains

Background

Prabhat is a community development initiative of Hindustan Unilever that focuses on sustainability and holistic social change through the pillars of economic empowerment, health and nutrition and environmental sustainability.

Prabhat started in December 2013 with the aim of creating community resilience around all Hindustan Unilever manufacturing sites in South Asia. Through a ground-up approach, it develops a thorough assessment of needs in communities around the company's supply chain and implements support programmes along its three pillars.

Through its **Livelihood Programs**, Prabhat is creating future-fit individuals, mostly women and youth, by providing training, certification and job assistance. Training areas include tailoring, beautician, information technology (IT), graphic design and accounting. Its farm-based value chain work empowers women dairy farmers and helps them create additional income through dairy products.

The flagship programme of its **Health & Nutrition** pillar – Poshan Saathi (nutrition buddy) – focuses on

the health and nutrition health of adolescent girls, children under five and women, especially pregnant and lactating women. In alignment with the Government of India's National Nutrition Mission, it aims to provide access to positive nutrition to all. Prabhat also provides last-mile access to quality primary healthcare through its mobile medical units.

Prabhat's **environmental sustainability** initiatives focus on the climate resilience of communities along its supply chain and beyond. Its Model EcoVillage initiative focuses on issues ranging from water conservation to waste management and afforestation. Its long-term goal is to enable waterpositive and carbon-neutral communities with zero waste-to-landfill. This is all in an effort to increase resilience to climate change.

The innovative solution

Based on an in-depth community assessment, programmes are planned and carried out in the respective locations. The primary target group is the members of the communities (villages and urban municipalities) around Hindustan Unilever factories and depot locations where these programmes are carried out in India.



Community development initiative Prabhat works along Hindustan Unilever's supply chain in South Asia to increase climate resilience and strengthen economic development.



Applying systems thinking, Prabhat conceived an integrated model, called EcoVillages. By bringing together diverse stakeholder perspectives from each village, the EcoVillages project devises a set of holistic, community-developed and -owned programmes at the nexus of water conservation, waste management and climate adaptation. For example, local water governance committees identify water preservation mechanisms and are run and owned by local villagers. Water for agriculture is conserved by engaging with farmers through scientific farming to reduce water consumption and create water conservation structures. Afforestation and green energy measures are carried out to improve the carbon sequestration potential in the communities.

Many of Prabhat's initiatives are driven by Hindustan Unilever factory leadership and employees who choose to contribute, along with over 20 NGOs and social enterprises.

Impact and outcomes

Prabhat has now spread to all Hindustan Unilever manufacturing sites in India. So far, Prabhat has touched nearly 9 million lives in 21 states and 2 union territories in India. It has helped farming communities save over 130 billion litres of water through demand- and supply-side interventions.

Prabhat covers over 11,000 villages and its Livelihood Centers are active in 18 locations. These centres have provided skills development certifications to 110,000 women and youths and successfully generated employment for nearly 65,000 people, 70% of whom are women. Through farm-based value-chain work, Prabhat has benefited more than 16,000 farmers so far. The Poshan Saathi programme has supported over 1,500,000 mothers, girls and adolescents on their nutrition journey and reached over 91,000 patients and enabled access to healthcare.

Business integration

Prabhat is integrated into Hindustan Unilever's supply chain across India, with its 26 manufacturing sites mostly distributed throughout the semi-urban and rural landscape. It leverages the company's core assets and enhances its supply chain resilience in the face of climate change.

Using the circular economy model, Prabhat is engaging with Unilever brands for a more efficient waste management system in Haridwar and Pondicherry. Using eco-vehicles in Pondicherry, the door-to-door collection of waste is carried out. This waste is then recycled and upcycled. The programme in Haridwar ensures the upcycling of plastic into value added products like handwashing stations, flowerpots, trays and more.

Employment opportunities and sources of alternative livelihoods are being created through Prabhat. Persons with disabilities and people from vulnerable groups receive skills training and are assisted with placements. Through these initiatives, Prabhat has been able to inject INR 750 million (\$9 million) in new income in the local economies.

With **140 million migrant workers in India**, climate migration has become a significant threat to supply chain stability and the availability of labour.³¹ Creating worker loyalty and continuity is therefore a key asset for any company operating in India and other countries exposed to climate change. Prabhat significantly improves family livelihoods, nutrition and health services at reduced or no cost to workers. With motivated employees who take pride in these interventions, it has led to strengthened community relations and influence. Prabhat is working to create conducive and healthy environments around its manufacturing sites in India.

Local Hindustan Unilever teams work closely with the village systems and government institutions to strategically build on India's development priorities. Hindustan Unilever R&D is involved in supporting the programme with scientific content creation on nutrition that is used in communities to incite behaviour change. In addition, internal teams contribute by providing scientific advice and input.

Hindustan Unilever has estimated that the **social** return on its investment of initiatives launched

through Prabhat is INR 15.46 for every INR

1 invested. In addition, Prabhat's sustainability work has significantly reduced the environmental footprint of Hindustan Unilever's activities, leading, for example, to faster environmental approvals from government departments during the expansion of factories and manufacturing sites.

Sustainability and future plans

Prabhat is expanding its model EcoVillages programme with the support of German Development Cooperation (GIZ). It is enabling the organization to expand its footprint along and beyond the Hindustan Unilever supply chain in the region by **creating additional model villages**. Prabhat's ambitious goal spans three main environmental focus areas: access to water, waste management and carbon emissions reduction and storage.



its impact, achieving a social return of INR 15.46 for every INR invested.

Prabhat consistently tracks

3 Social innovation along climate adaptation domains

Far more effective than top-down approaches, community-driven solutions can spark transformative change when bolstered and scaled by multistakeholder partnerships.

Building on frameworks outlined earlier, these examples are distributed across the spectrum of climate adaptation pathways and dimensions for business engagement (see Table 2). Annex A provides the names of 52 other social innovators working on climate adaptation and a link to the full details.

TABLE 2: Categorization of case studies according to climate adaptation frameworks

| Case study | Geographic impact | Climate adaptation pathways (IPCC) | Dimension for business engagement (World Economic Forum) |
|---------------------------|-------------------|---------------------------------------|--|
| Jan Sahas | South Asia | Transitional | Risk management |
| Prokriti o Paani (PoP) | South-East Asia | Incremental | ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ |
| SEKEM | North Africa | Transformational | Systems change |
| Prabhat | South Asia | Transitional | Risk management |

Social innovators are crucial to leading transformative adaptation Literature consensus aligns and argues for the need for more transformational adaptation pathways to meet the harsh realities and scale of the challenge posed by climate change. Although work done by social innovators may largely be classified within the incremental and transitional adaptation pathways, the dominant pathways employed by social innovators can provide a roadmap to achieving transformative adaptation and thus systems change. This is supported by the IPCC framework, which asserts that the sum and example of incremental solutions and pathways can ultimately move a system towards transformation.

Working within the confines of their communities and systems, these innovations to tackle climate change largely lack the critical mass for their solutions to achieve transformational adaptation. At scale, however, these innovations do have opportunities to cause a shift in systems and mindsets:

Capacity building efforts aimed at tackling _ climate change have had a top-down and shortterm focus. Social innovators - representing their communities - can provide the opportunity for a hybrid bottom-up and top-down approach that produces results and effects change on a large scale over the longer term. This is supported by the fact that as a result of the failure of top-down approaches, international organizations have begun integrating local actors into their adaptation efforts.³² Social innovators are positioned to provide new types of capacity building in the first phase of transformative adaptation. Ziervogel et al. assert that if capacity building processes shift from the top-down transferal of existing knowledge to the co-creation of contextual understandings, they have the potential to deliver more transformative adaptation.33

- In addition, social innovators operating at a smaller scale have the potential and can afford to experiment, take measured risks and iterate on their results, thus contributing to the increased resilience and sustainability of their ecosystems. The heterogeneity of these players can afford the opportunity to adopt a bouquet of strategies stretching across multiple pathways that result in transformative adaptation.
- Lastly, with deliberate partnerships, public policies and resource support, these impact enterprises can be empowered to meaningfully implement, scale and achieve transformational adaptation pathways. An illustrative example can be found in the Forum report on Accelerating Business Action on Climate *Change Adaptation*.³⁴ This report includes the story of a global professional services firm that collaborated with a Mexico-based non-profit organization to protect low-income communities from the impacts of climate change-induced heat stress. The aim was to build a coalition of public and private sector partners to influence policy-making related to climate adaptation and catalyse action.

While the goal is transformational adaptation within the context of climate change adaptation in local communities, it is agreed that incremental adaptation, when done at scale or through partnerships with the private sector, can result in transformative adaptation that moves the needle. Social innovators provide the context for incremental adaptation that can be scaled for a catalytic effect.

The four case studies of social innovators from communities in low- and middle-income countries examine their adaptation pathways across three dimensions – opportunity, risk management and systems change. 4

Opportunities and barriers for private sector investments

Addressing barriers like policy constraints or lack of data can unlock business benefits such as access to new markets, new revenue streams or supply chain resilience.

In interviews, social innovators highlighted that the lack of private sector investments can be attributed to **multifaceted challenges**. These include policy obstacles such as regulatory barriers, limited access to reliable information on climate risks and adaptation benefits. Additionally, the private sector grapples with internal barriers such as short-term return on investment (ROI) expectations, limited domain knowledge and a perceived high risk associated with these projects.

 Policy and regulatory constraints: The maze of existing import/export legislation can discourage private enterprises from bringing in novel adaptive technologies. Moreover, the absence of progressive tax reforms to incentivize investment in adaptation keeps the risk-reward ratio skewed unfavourably.

Example of intervention: The ClimSA Programme, a collaborative effort between the European Union (EU) and the Organisation of African, Caribbean and Pacific States (OACPS), addresses policy constraints related to climate change.³⁵ This initiative provides climate science-based information to aid the 79 OACPS members and six regions in meeting their commitments under the 2030 Agenda for Sustainable Development and the Paris Agreement. By emphasizing the delivery of credible and timely climate data, ClimSA supports informed policy-making and the development of climate-resilient policy frameworks.

 Short-term ROI expectations: The private sector's predominant focus on short-term returns on investment acts as a substantial barrier. Climate adaptation projects often require long-term investment and may not show immediate profitability, making them less appealing for businesses trained to prioritize short-term returns.

- Lack of domain knowledge and awareness: Companies often lack the specialized knowledge to understand the imminent threats posed by climate change and the necessity for adaptive measures. This gap in understanding often extends beyond the operational level to the decision-making echelons, thereby limiting the desire to invest in climate-adaptive strategies.
- Absence of standardized metrics and insufficient data: There is a significant gap in standardized metrics to evaluate the benefits of investing in climate-adaptive projects. This lack of a cohesive framework makes it hard for companies to carry out a comparative analysis against traditional investment routes, adding an extra layer of hesitation.
- Perceived high risk: For many private investors, climate-adaptive projects fall into the "high-risk" category primarily because they are relatively new and untested. This perception, whether factual or not, hampers the scaling of such projects due to a lack of substantial investment.

Example of intervention: The collaboration between Green Delta Insurance and PRAN in Bangladesh offers weather index-based insurance to cassava farmers. By covering over 15,000 farmers, the initiative directly addresses the perceived risks associated with unpredictable weather patterns and enables agricultural investments.³⁶

 Lack of clarity on government's role: Private enterprises are often unclear about how their investments in climate-adaptive actions would align with or complement government efforts. This lack of transparency leads to uncertainty, further discouraging the private sector from investing in these projects. Contrasting these barriers, social innovators identify a **range of opportunities** that arise from tackling engagements in climate adaptation. They offer a pathway to business continuity and sustainability, while also unlocking new markets and revenue streams. Below are several examples that make the case for climate-adaptive investments by the private sector:

 Enhanced business continuity and risk mitigation: Proactive investment in climate adaptation initiatives helps companies safeguard their supply chains against environmental disruptions. This resilience equates to a more stable, dependable business model that can weather global uncertainties, turning a potential risk into an asset for long-term operations.

For example: ACI Seeds in Bangladesh collaborated with South Korea's Nongwoo Bio to introduce robust tomato varieties. By emphasizing resilience against diseases and adverse weather, they demonstrate the potential for stable supply chains even in challenging conditions.³⁷

- New market access and revenue streams: Companies investing in climate adaptation solutions can find themselves at the forefront of an emerging market. Offering products or services aimed at resilience and adaptation taps into a growing consumer need and can also offer competitive advantages, thereby creating new revenue streams. This is illustrated, for example, by the Build Bangladesh water tower example outlined above.
- Long-term cost savings: Although the initial investment in climate adaptation might appear steep, the long-term benefits are compelling.
 From reduced operational interruptions to fewer expenditures on crisis management, the ROI on climate resilience can manifest in various ways over time. The initiatives created by Prabhat for Hindustan Unilever's supply chain outlined above illustrate this.
- Opportunity for public-private partnerships: By actively participating in climate adaptation, businesses can collaborate with governments and NGOs, sharing not just the investment but also the expertise and resources. This form of cooperative work can significantly de-risk projects and improve their scale and impact.

For example: Ignitia's collaboration with the Nordic Climate Facility to provide hyperlocal weather forecasts to farmers in Burkina Faso showcases a successful public-private partnership model. This joint effort has enabled the reach of their services to scale far beyond initial expectations.³⁸

 Data-driven decision-making: As more companies enter this domain, the availability of data on the efficacy of climate-adaptive practices will increase. This data can be a powerful tool for decision-makers to allocate resources more efficiently and can be an asset to companies looking to invest in this area.

For example: The Altitude tool created by AXA Climate offers a data and analytics tool that allows investors to easily assess climate change and biodiversity loss risks in their investment decisions.³⁹

 Financial instruments and blended finance: Innovative financial instruments such as green bonds and blended finance combine public and philanthropic funds to attract private capital and therefore reduce the financial risks associated with adaptation projects.

For example: The World Economic Forum's Giving to Amplify Earth Action (GAEA) initiative brings together more than 45 philanthropic, public and private sector partners to mobilize funding for significant climate and nature challenges by establishing and expanding new public, private and philanthropic partnerships (PPPPs).

 Leveraging technological innovations: Companies that invest in R&D for climate adaptation technologies can protect their own operations and license these technologies to other firms. This paves the way for a new vertical oriented toward solutions for climate resilience.

For example: igNEO in Colombia showcases this by using recycled aggregates in its sustainable urban and architectural furniture design. This innovative approach addresses waste management and produces high-quality, durable furniture.⁴⁰

 Supply chain resilience: Businesses that invest in making their supply chains more resilient to climate impacts can market this as a unique selling point. Consumers are increasingly looking at sustainability and resilience as key decision factors in their purchases.

For example: Lal Teer, a seed company in Bangladesh, ensures high-quality seeds reach farmers. Its rigorous seed quality testing ensures the seeds are resilient to various climatic challenges, emphasizing the importance of a robust supply chain in the agricultural sector.⁴¹

 Collaborative ecosystems: Investment in climate adaptation fosters a collaborative ecosystem involving local governments, civil society and other businesses. Such integration into local ecosystems allows companies to drive other business goals through market research, product development and public advocacy efforts, for example. **(5**)

Considerations for research, policy and private sector adoption

Local social innovators can play a key role in climate adaptation but require more visibility, targeted capacity building and public-private sector collaboration.

The impact of social innovation in climate change presented by the case studies is in line with research showing that adaptation to climate change often takes place at the local level. It also requires: a) building capacity at local levels and b) legitimizing and giving voice to local actors who are creating this impact.⁴²

While the case studies in this report provide insights into the role of social innovators in climate adaptation, they also reinforce the urgency to build climate adaptive capacity in communities in the lowand middle-income countries. And they highlight the role of social innovators in driving transformational adaptation at scale. However, key considerations will need to be addressed before adaptation can happen at scale:

 Social innovators need the capacity to identify opportunities for private sector partnerships and understand how to position their enterprises for such collaborations. Furthermore, social innovators should proactively seek avenues for policy dialogue, engagement and influence.

- For that to fall on fertile ground, a collaborative, symbiotic relationship with the public sector is necessary to create an enabling environment.
 Effective government initiatives and policies should integrate the voices of social innovators, such as India's B20 closing statement, which specifically calls for the establishment of a G20 engagement group.⁴³
- To amplify their impact, there is a need to institutionalize capacity-building efforts targeted at social innovators across their dimensions of adaptation impact. This includes assessments of adaptive capacity gaps and how to close them.

Conclusion

Businesses stand at the threshold of vast opportunities in climate adaptation; seizing them serves people and planet and ensures long-term competitiveness.

The survey of initiatives worldwide shows a distinct intersection where innovation meets sustainability, further augmented by community empowerment. Each initiative is a testament to the adaptive nature of humanity's entrepreneurial nature and opportunities to safeguard both the environment and the communities that inhabit it. Collaboration between these entrepreneurs and the private sector holds promise for a just transition from a carbonbased economy to a truly sustainable, fair and equitable society.

Opportunities are ripe for businesses that perceive this not as a reactionary endeavour but as a proactive, transformative journey. With estimates suggesting a climate adaptation market worth trillions, innovative enterprises stand to gain by pioneering adaptive solutions. However, the approach cannot be siloed. While businesses are vital players, grassroots collaboration and multistakeholder synergies will be instrumental in achieving holistic resilience, especially for the most vulnerable.

Along the way, challenges posed by climate change require innovative and multifaceted responses. Literature and the IPCC framework emphasize the importance of transformative adaptation, a goal that, while ambitious, can be achieved through incremental and transitional adaptation pathways. Social innovators are uniquely positioned to drive this transformation. Despite the constraints and limitations they face, when amplified through scale and private sector partnerships, their innovations hold the potential for meaningful and lasting impact.

Challenges to climate-adaptive actions, especially in the private sector, are manifold. Barriers range from regulatory obstacles and a predominant focus on short-term ROI to gaps in domain knowledge and a perceived high risk. These hurdles often dissuade private enterprises from taking proactive steps on adaptation. However, a plethora of opportunities that emphasize the business case for engaging in climate adaptation initiatives are counterbalancing these challenges. These benefits encompass enhancing business continuity, accessing new markets, ensuring long-term cost savings, fostering public-private partnerships, leveraging technological innovations, and promoting supply chain resilience.

The World Economic Forum's emphasis on the urgency for businesses to act aligns with the stark reality of increasing climate-related disruptions. In a rapidly changing world, businesses and communities can ill-afford to remain passive to the encroaching threats of climate change. Through the amplification of grassroots innovations, the fostering of collaborative ecosystems and the leveraging of public and private sector synergies, transformative adaptation can be achieved and become a linchpin for future growth, resilience and sustainability.

Annex A: Adaptation enterprise list

| Organization | Initiative operating location |
|--|--|
| Absolute Water | India |
| ACI Seeds | Bangladesh |
| AFR100, TerraFund for AFR100 Paysages Un message de Wanjira Mathai | East and West Africa |
| Aliet Green | Indonesia |
| ATEC | Bangladesh, Cambodia |
| BRAC Seed & Agro Enterprise | Bangladesh |
| Build Bangladesh, Prokriti o Paani (PoP) Water Tower Project | Bangladesh |
| Burn Manufacturing Co. | Kenya |
| CAP-A | Africa |
| Centre for Environment Concerns | India |
| Classical Handmade Products BD | Bangladesh |
| ClimSA | Southern Africa |
| CMS, Jai Odisha | India |
| Cordaid | Bangladesh |
| DESH KA BAG | India |
| Economy of Love Project: 40,000 FARMERS for a Regenerative Future in Egypt, The Egyptian Biodynamic Association - EBDA | Egypt |
| Espacio de Encuentro de la Culturas Originarias | Mexico |
| Fairtrasa | Latin America, Europe and North America |
| Footsteps Bangladesh | Bangladesh |
| Foundation S | Bangladesh |
| gAgro | Bangladesh |
| GARBAGEMAN | Bangladesh |
| GOONJ | India |
| Grameen Shakti | Bangladesh |
| Green Andina | Colombia |
| Green Delta Insurance, PRAN | Bangladesh |
| Greenhope | Indonesia |

| Organization | Initiative operating location |
|---|-------------------------------|
| igNEO | Colombia |
| Ignitia, Nordic Climate Facility | West Africa |
| Ignitia, Nuru International / NiCOP | Nigeria |
| Ignitia, Securing Water & Energy for Food | West Africa |
| industree | India |
| INMED South Africa NPC | South Africa |
| IPÊ - Instituto de Pesquisas Ecológicas (Institute for Ecological Research) | Brazil |
| KARO SAMBHAV | India |
| Lal Teer | Bangladesh |
| Madat Balochistan | Balochistan, Pakistan |
| Materials In Works (MIW) | Malaysia |
| OXFAM, Green Delta Insurance | Bangladesh |
| PaCT (The Partnership for Clean Textile) | Bangladesh |
| Pastoral Women's Council | Tanzania |
| Reverse Resources | Estonia, Bangladesh |
| Sahakarmi Samaj | Nepal |
| SAJIDA Foundation | Bangladesh |
| SOLshare | Bangladesh |
| Square | Bangladesh |
| Supreme seed | Bangladesh |
| SWAP | Bangladesh |
| Syngenta Foundation for Sustainable Agriculture | Bangladesh |
| Tetra | Bangladesh |
| Wanwod Development Organization | Sierra Leone |
| Watershed Organisation Trust | India |

Read the full details on these Social Innovators

Annex B: Methodology

To identify and highlight the roles of social innovators in fighting climate risks, the team distributed and reviewed the responses to a survey sent to the Global Alliance for Social Entrepreneurship community of over 100 members from corporate organizations, intermediaries, social innovators, philanthropies and academia in Africa, Asia, North America, Latin America and Europe.

The survey sought responses from and nominations of social enterprises at the forefront of climate change in communities in low- and middle-income countries. Responses from the survey were extracted based on questions such as:

- Has your organization collaborated on climate adaptation initiatives?
- Which specific challenges related to climate adaptation has your organization focused on addressing through its initiatives?
- Which of the following options did the project/ initiative focus on?

- Have these initiatives been replicated? If these initiatives have not been replicated, are you planning to scale and replicate? If these initiatives have been replicated, please share your experience in 100 words.
- How do you envision your initiative contributing to broader climate resilience goals in the long term?

The information provided by survey participants was recorded and reviewed against the relevance to climate adaptation and proximity to community. From the responses provided, the team further interviewed select respondents, four of which provided information for the case studies highlighted in the report.

The team conducted desk research to compile its database of climate adaptation social enterprises. Each social enterprise is examined across the risks, opportunities and system change that it effects.

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Members of the Global Alliance for Social Entrepreneurship

Thank you to the various members of the Global Alliance for contributing to this report by nominating social enterprises and innovators from their own ecosystems, whose stories have been drawn into this report as valuable insights.

About the Global Alliance for Social Entrepreneurship

The Global Alliance for Social Entrepreneurship is an initiative of the World Economic Forum, hosted by the Schwab Foundation for Social Entrepreneurship. It is a multistakeholder, member-led coalition of NGOs, social innovators, impact investors, academia and global leaders from the public and private sectors collaborating to mainstream social innovation in business and public policy. Through thematic Action Agendas, it identifies and advances emergent, topical and future issues that intersect with and enable the social economy.

About BRAC

BRAC is a leading international non-profit with a mission to empower people and communities in situations of poverty, illiteracy, disease and social injustice. It designs proven, scalable solutions that equip people with the support, skills and confidence they need to lift themselves out of poverty and achieve their potential. Founded in Bangladesh in 1972, BRAC touches the lives of more than 100 million people in 17 countries throughout Asia and Africa. BRAC runs programmes in education, climate change, healthcare, financial inclusion,

Recognizing the collaborative effort required to act on climate adaptation, the Global Alliance for Social Entrepreneurship, under the leadership of BRAC and with the support of Bayer Foundation and Foundation S, has convened a diverse group of leaders from the private and public sectors, social enterprises and academia to support the climate adaptation action agenda. This working group has collaborated to identify and draw on insights from social innovators at the frontline of climate adaptation.

youth empowerment, humanitarian response and more. BRAC also operates 12 revenue-generating social enterprises and BRAC University, a private university in Bangladesh.

BRAC has over 50 years of experience implementing programmes with communities in some of the world's most climate-vulnerable places. Through its network of partners, it provides comprehensive, integrated, adaptive programming to reach millions in Asia and Africa.

Endnotes

| 1 | Intergovernmental Panel on Climate Change (IPCC), Climate Change 2023 - Synthesis Report, 2023, https://www.ipcc.ch/report/ar6/syr/downloads/report/IPCC_AR6_SYR_SPM.pdf. |
|----|--|
| 2 | United Nations Framework Convention on Climate Change (UNFCCC), "António Guterres: 50% of All Climate Finance Needed for Adaptation", 25 January 2021, <u>https://unfccc.int/news/antonio-guterres-50-of-all-climate-finance-needed-for-adaptation#:~:text=%E2%80%9CAdaptation%20cannot%20be%20the%20 neglected,covered%20by%20early%20warning%20systems.</u> |
| 3 | Organisation for Economic Co-operation and Development (OECD), <i>Climate Finance Provided and Mobilised by Developed Countries in 2016-2020</i> , 2022, <u>https://www.oecd.org/environment/climate-finance-provided-and-mobilised-by-developed-countries-in-2016-2020-286dae5d-en.htm</u> . |
| 4 | United Nations Environment Programme (UNEP), <i>Too little, too slow: Climate adaptation failure puts the world at risk: Adaptation Gap Report 2022</i> , 2022, <u>https://www.unep.org/resources/adaptation-gap-report-2022</u> . |
| 5 | World Economic Forum, <i>Global Risks Report 2023</i> , 2023, <u>https://www.weforum.org/reports/global-risks-report-2023/</u> . |
| 6 | Houlder, V., Thomas N. (2023), "Lex in depth: how investors are underpricing climate risks", <i>Financial Times</i> , 2023, <u>https://www.ft.com/content/899472a8-e5e2-4fde-bc91-7e548ba35294</u> . |
| 7 | Houlder, V.; Thomas N. (2023), "Lex in depth: how investors are underpricing climate risks", <i>Financial Times</i> , 2023, <u>https://www.ft.com/content/899472a8-e5e2-4fde-bc91-7e548ba35294</u> . |
| 8 | Houlder, V.; Thomas N. (2023), "Lex in depth: how investors are underpricing climate risks", <i>Financial Times</i> , 2023, <u>https://www.ft.com/content/899472a8-e5e2-4fde-bc91-7e548ba35294</u> . |
| 9 | World Economic Forum, <i>Accelerating Business Action on Climate Change Adaptation</i> , 2022, <u>https://www.weforum.org/whitepapers/accelerating-business-action-on-climate-change-adaptation/</u> . |
| 10 | Intergovernmental Panel on Climate Change (IPCC), Synthesis Report Annexes – Glossary, <u>https://www.</u> i <u>pcc.ch/site/assets/uploads/2019/01/SYRAR5-Glossary_en.pdf</u> . |
| 11 | World Economic Forum, <i>Accelerating Business Action on Climate Change Adaptation</i> , 2022, <u>https://www.weforum.org/whitepapers/accelerating-business-action-on-climate-change-adaptation/</u> . |
| 12 | World Economic Forum, <i>Accelerating Business Action on Climate Change Adaptation</i> , 2022, <u>https://www.</u> weforum.org/whitepapers/accelerating-business-action-on-climate-change-adaptation/. |
| 13 | Matheou, A., "Tackling the humanitarian impact of the climate crisis together", International Federation of Red Cross and Red Crescent Societies (IFRC), 2020, https://www.ifrc.org/article/tackling-humanitarian-impacts-climate-crisis-together . |
| 14 | Kearney, "The calm before the storm - 2Q 2023 Global Value Chain Barometer", 2023, <u>https://www.kearney.com/service/operations-performance/article/-/insights/global-value-chain-barometer-the-calm-before-a-storm</u> . |
| 15 | Quinson, T., "Investors Bet Climate Adaptation Will Soon Be Profitable", <i>Bloomberg</i> , 2021, <u>https://www.</u> bloomberg.com/news/articles/2021-11-17/why-investing-in-climate-adaptation-will-soon-be-very- |
| | profitable-green-insight?leadSource=uverify%20wall. |
| 16 | UN Habitat, "Housing for All", 2023, <u>https://unhabitat.org/topic/housing#:~:text=By%202030%2C%20</u> UN%2DHabitat%20estimates,accessible%20housing%20units%20every%20day. |
| 17 | Longinova, J., Batterbury, S.P.J., "Incremental, transitional and transformational adaptation to climate change in resource extraction regions", <i>Global Sustainability</i> , volume 2, 23 September 2019, <u>https://www.cambridge.org/core/journals/global-sustainability/article/incremental-transitional-and-transformational-adaptation-to-climate-change-in-resource-extraction-regions/4DE54B44B1BF5C88F597E76A0521F5BB</u> . |
| 18 | Dilling, L. et al., "The role of adaptive capacity in incremental and transformative adaptation in three large U.S. Urban water systems", <i>Global Environmental Change</i> , volume 79, March 2023, 102649, <u>https://www.sciencedirect.com/science/article/pii/S0959378023000158#:~:text=The%20climate%20adaptation%20</u> <u>literature%20distinguishes,et%20al.%2C%202015</u>). |
| 19 | Sixth Assessment Report – Working Group II – Impacts, Adaptation and Vulnerability, "Concepts, approaches and examples of transformational adaptation", Intergovernmental Panel on Climate Change (IPCC), https://unfccc.int/sites/default/files/resource/FINAL_IPCCContribution_GGA_5thWorkshop_IPCC.pdf . |
| 20 | Ziervogel, G. et al., "Supporting transformative climate adaptation: community-level capacity building and knowledge co-creation in South Africa", I, 22:5, 607-622, 2022, https://www.tandfonline.com/doi/full/10.1080/14693062.2020.1863180 . |
| 21 | Harnoss, J. et al., "Migration Matters: A Human Cause with a \$20 Trillion Business Case", BCG, 2022, https://www.bcg.com/publications/2022/global-talent-migration-the-business-opportunity. |

- 22 Harnoss, J. et al., "Migration Matters: A Human Cause with a \$20 Trillion Business Case", BCG, 2022, https://www.bcg.com/publications/2022/global-talent-migration-the-business-opportunity.
- 23 United Nations Department of Economic and Social Affairs (UN DESA), Technical Paper No. 2013/1 Cross-national comparisons of internal migration: An update on global patterns and Trends, 2023, <u>https://www.un.org/en/development/desa/population/publications/pdf/technical/TP2013-1.pdf</u>.
- 24 The Institute for Economics and Peace (IEP) estimates that more than 1 billion people may be subject to climate migration by 2050. Source: Institute for Economics and Peace (IEP), "Over one billion people at threat of being displaced by 2050 due to environmental change, conflict and unrest", 2020, <u>https://www.economicsandpeace.org/wp-content/uploads/2020/09/Ecological-Threat-Register-Press-Release-27.08-FINAL.pdf</u>.
- 25 Clement, V. et al., *Groundswell Part 2: Acting on Internal Climate Migration*, Washington, DC: The World Bank, 2021, <u>https://openknowledge.worldbank.org/entities/publication/2c9150df-52c3-58ed-9075-d78ea56c3267</u>.
- 26 Kearney, "The calm before the storm 2Q 2023 Global Value Chain Barometer", 2023, <u>https://www.kearney.com/service/operations-performance/article/-/insights/global-value-chain-barometer-the-calm-before-a-storm.</u>
- 27 World Health Organization, *Progress on drinking water, sanitation and hygiene: 2000-2017: Special focus on inequalities*, 2019, <u>https://www.who.int/news/item/18-06-2019-1-in-3-people-globally-do-not-have-access-to-safe-drinking-water-unicef-who</u>.
- 28 World Bank, *Promising Progress: A Diagnostic of Water Supply, Sanitation, Hygiene, and Poverty in Bangladesh*, 2018, <u>https://www.worldbank.org/en/news/press-release/2018/10/11/bangladesh-access-to-clean-water-will-reduce-poverty-faster#:~:text=Today%2C%2098%20percent%20of%20 Bangladesh's,to%20water%20retrieved%20from%20ponds.</u>
- 29 WWF, "Water Scarcity", 2023, <u>https://www.worldwildlife.org/threats/water-scarcity#:~:text=Billions%20</u> of%20People%20Lack%20Water,may%20be%20facing%20water%20shortages.
- 30 Natura&Co (2023), "Commitment to Life: Embrace Circularity and Regeneration", <u>https://www.naturaeco.</u> <u>com/sustainability-vision-2030/embrace-circularity-and-regeneration-2/</u>.
- 31 Centre for Science and Environment (CSE), *State of India's Environment 2023 in Figures*, 2023, <u>https://</u> <u>csestore.cse.org.in/usd/state-of-india-s-environment-2023-in-figures-ebook.html</u>.
- 32 Baudoin, M.A., Ziervogel, G. "What role for local organisations in climate change adaptation? Insights from South Africa", *Reg Environ Change* 17, 691–702, 2017, <u>https://link.springer.com/article/10.1007/s10113-016-1061-9</u>.
- 33 Ziervogel, G. et al., "Supporting transformative climate adaptation: community-level capacity building and knowledge co-creation in South Africa", I, 22:5, 607-622, 2022, <u>https://www.tandfonline.com/doi/full/10.1080/14693062.2020.1863180</u>.
- 34 World Economic Forum, *Accelerating Business Action on Climate Change Adaptation*, 2022, <u>https://www.</u> weforum.org/whitepapers/accelerating-business-action-on-climate-change-adaptation/.
- 35 European Union (EU) and the Organisation of African, Caribbean and Pacific States (OACPS), ClimSA Programme, <u>https://www.climsa.org/</u>.
- 36 Asian Venture Philanthropy Network (AVPN), *Social Investment Landscape for Climate Action in Bangladesh*, 2023, <u>https://www.lightcastlebd.com/wp-content/uploads/2023/05/Public-Version_Climate-Action-in-Bangladesh-.pdf</u>.
- 37 Advanced Chemical Industries (ACI), "ACI Seed's Promising Tomato Variety 'SCARLET' & 'RED ROCK'", 2023, <u>https://www.aci-bd.com/all-news/aci-seeds-promising-tomato-variety-scarlet-red-rock.html</u>.
- 38 Nordic Climate Facility (NCF), "Localised weather forecasts improve farmers' climate resilience", 2021, https://www.nordicclimatefacility.com/news/localised-weather-forecasts-improve-farmers-climate-resilience.
- 39 AXA Altitude, "Understand your impact", 2023, https://www.axa-altitude.com/.
- 40 igNEO, homepage, <u>https://igneocolombia.com/</u> (in Spanish).
- 41 Asian Venture Philanthropy Network (AVPN), *Social Investment Landscape for Climate Action in Bangladesh*, 2023, <u>https://www.lightcastlebd.com/wp-content/uploads/2023/05/Public-Version_Climate-Action-in-Bangladesh-.pdf</u>.
- 42 Ziervogel, G. et al., Policy support for climate adaptation and transformation: capacity building and community resilience in Cape Town, African Climate Development Initiative (ACDI), 2020, https://science.uct.ac.za/sites/default/files/content_migration/science_uct_ac_za/155/files/Ziervogel%2520et%2520al%252C%2520Policy%2520support%2520for%2520climate%2520adaptation%2520and%2520transformation_0.pdf.
- 43 B20 India Secretariat, Confederation of Indian Industry, "B20 India 2023", 2023, <u>https://www.g20.org/</u> <u>content/dam/gtwenty/gtwenty_new/document/B20_Communique.pdf</u>.



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