

Partnering for Climate Action

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Table of Contents

Topics

Authors	06
Executive Summary	07
Introduction	11
The Climate Change Induced Displacement Crisis	15
Vulnerability, Planning and Preparedness	21
Way Forward	33





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Executive Summary

The increasing frequency, complexity and scale of climate change events is likely to have debilitating impacts on the state of global development, stability and prosperity. Over 7,000 major disasters occurred between 2000 and 2019, claiming 1.23 million lives and affecting 4.2 billion people worldwide.¹ A total of 389 climate-related disasters were recorded in 2020, resulting in the deaths of 15,080 people, affecting 98.4 million others and inflicting \$171.3 billion in economic damage.² Today, due to extreme climate events, 34 million people are acutely food insecure while approximately 18 million lack regular access to safe water.³ In 2020, apart from causing destruction and scarcity, disasters forced over 33.4 million people to abandon their homes seeking shelter and security,⁴ internally displacing three times the number of people uprooted by violence and conflict.

The climate situation is rapidly fuelling poverty and instability⁵ and is likely to increase economic burdens on governments struggling with the management of the pandemic and ever-increasing humanitarian needs. In the current COVID-19 transition and recovery context, it is desirable for governments to integrate climate change adaptation and mitigation strategies into decision making and policy frameworks addressing recovery and resilience. Integration will secure governments and deliver on the global vision for sustainable development through purposive and indirect reduction in vulnerability and poverty, while building partnerships to protect our collective futures.

To rebuild climate resilient pathways for equitable development while addressing existing and emerging humanitarian needs, support that surpasses typical funding arrangements is available through private sector engagement. Through leveraging domain expertise, skillsets, networks and on-ground presence, collaborations between the private sector, non-profit organizations and governments are successfully addressing diverse humanitarian sector needs, many of which are relevant to countering the impact of climate change through immediate response or more embedded and engaged collaborations for long-term resilience. Successful private sector engagements can potentially be executed via multi-stakeholder collaborative models across geographies and affected communities with a focus on localising capabilities and capacities.

Impact of Disasters

- 7,000 major disasters between 2000 and 2019 worldwide
- 1.23 million lives lost and 4.2 billion people affected

Extreme climate events induced Food Insecurity

- 34 million people acutely food insecure
- 18 million people lack regular access to safe water.

Extreme climate events induced displacement

- 30 million people displaced due to disasters in 2020
- Disasters caused 3 times more displacement than violence in 2020

This paper presents an overview of current and emerging challenges from climate change and climate induced displacement, examples of collaborative models, available expertise addressing similar challenges in varied contexts, an integrative model for designing interventions and next steps for governments, non-profits and the private sector in executing these interventions. The main objective of the paper is to provide recommendations for exploring non-traditional engagement partnerships with the private sector for developing solutions to address climate change induced displacement and its impact on remote, evolving and complex landscapes.

1. The Cost Of Climate Change and the Displacement Crisis

Responding to 335 natural disasters in 2017 cost governments \$340 billion while the cost of damage caused by natural disasters – ensuring response, reconstruction and recovery – increased by 359 percent between 2007–2017.⁶ A recent study on natural hazard mitigation⁷ estimates that \$6 can be saved in disaster costs for every \$1 spent on hazard mitigation. Mitigation funding not only helps governments prevent deaths but also ensures that communities are prepared and act for their safety during climate events. Pre-emptive measures and evacuation protocols not only save lives but also build trust between governments and vulnerable communities.

Disruptive and traumatic⁸ displacement demonstrates the ‘injustice and human cost of climate change’. Displacement caused due to the loss of land, living space and environmental changes including rising sea-levels, salinization and desertification is a potential threat to national stability.⁹ It is expected that 200 million climate migrants will be moving within or outside their countries by 2050.¹⁰ The cost of managing the rehabilitation and humanitarian needs of climate-distressed communities will stretch resources, infrastructure and social security budgets. Governments may need to share the ensuing capital costs in cash and kind through collaborations for health, shelter, food and nutrition support, technology, social infrastructure, finance, education and skills with a focus on preparedness.

2. Planning and Preparedness for Climate Change During Transition

Informed and committed to solving the challenges presented by climate change, governments have actively developed and implemented context specific strategies to mitigate and adapt to the impact of climate events. Some of these strategies have had positive impacts on reducing poverty and building resilience amongst at-risk and affected communities. However, in 2020, COVID-19 set back development goals and increased poverty for the first time in three decades, pushing 97 million more people into poverty in 2020.¹¹

In 2021, a record 235 million people required humanitarian assistance and protection worth \$35.1 billion.

COVID-19 has added a new layer to vulnerability across continents. The needs of the most vulnerable have been further exacerbated due to overwhelming impacts on health, livelihoods, education and social safeguards. It is estimated¹² that in 2021, a record 235 million people needed humanitarian assistance and protection worth \$35.1 billion. We recognize that planning and preparedness to address climate conscious recovery post COVID-19 is complex from a funding priority perspective for governments.

Rethinking health and education infrastructure, capacity building of local governance units and staff, improving digital access and capabilities, while protecting and sustaining livelihoods is critical to ensuring recovery. Through private sector support and social enterprises, advances have been made in designing customized shelters, real-time medical data management and predictive analysis without the Internet, microinsurance models safeguarding female microentrepreneurs against climate events, cashless food support, high quality disaster and displacement maps and mobile schools with minimal infrastructure. Relevant to addressing needs of displaced communities during a COVID-19 transition phase, these models and interventions are discussed in this paper.

3. Building Resilience Through Adaptation and Localization

Climate change has devastating impacts on the most vulnerable and poorest within affected and at-risk communities. Existing research⁴³ indicates that its impacts are disproportionately experienced by least developed countries.

Least developed countries (LDCs), landlocked developing countries (LLDCs) and small island developing States (SIDS) comprising 91 countries with a population of approximately 1.1 billion are the most vulnerable to climate change as they face structural challenges and geographical disadvantages.¹⁴

Fishing communities, indigenous people small scale farmers, and poor people are especially vulnerable due to their dependence on agriculture, fishing and forests. Climate change and its resultant consequences can threaten livelihoods and food security in these communities.⁴⁵

Creating climate champions within at-risk or vulnerable communities, allowing civil society to actively participate in planning and preparation while easing regulations for cross-border support from the private sector and non-profits can further reduce the burden on governments addressing needs of climate hotspots. While resilience building and skilling of refugees for financial independence has been successfully demonstrated through government, multi-lateral and private sector partnerships in refugee camps globally, the emerging role of the private sector in supporting government's response to climate change-induced displacement and protection through socially cohesive models, which bring together host and refugee communities, is an area of ongoing innovations.

This paper presents three cases demonstrating model interventions – addressing the humanitarian needs of adolescent girls in the Lake Chad crisis, an employment program for Nicaraguan youth refugees in Costa Rica and a model intervention anchored by the private sector and non-profit experts with supportive regulatory frameworks from the governments of India and Nepal.

4. Private Sector Engagement, Moving Beyond Typical Funding Arrangements

Along with governments, the private sector has also risen to the challenge of climate change and demonstrated 'climate leadership'. Over 6,000 companies and investors from 120 countries, representing at least \$36 trillion in revenue, have committed to ambitious climate targets. While most commitments are focused on the overall reduction of carbon footprint via reduced gas emissions, it is also time for the private sector to engage in building climate resilience,⁴⁶ with a view to create local competencies in the true spirit of localization.

There is a diversity in expertise presented by private sector players and institutions operating at all levels. The scope for collaboration between the private sector, governments, UN bodies and non-profits working at the forefront of humanitarian response is a developing area. Through assisting in building capacities to providing in kind donations for critical social infrastructure, education, health and social enterprises, the private sector is increasingly engaged in responding to humanitarian needs due to climate events. Through globally relevant examples, we conclude that by providing the private sector a conducive environment to collaborate for building and executing strategies in response to the multiple challenges posed by climate change, positive impacts can be achieved in sustainable and cooperative international development.



Chapter 1

Introduction

Introduction

Historically, a combination of climatic and environmental desiccation led to the emergence of the first large urban societies. For instance, the ancient societies of Egypt and Mesopotamia, emerged as people migrated from drying rangelands and into riverine areas.¹⁷ However today, rapid urbanization and industrialization is increasing climate risks for billions of people.¹⁸ One of the most densely populated areas in the world, Egypt's Nile Delta is extremely vulnerable to sea level rise – a one metre rise in sea level may displace at least 6 million people and flood 4,500 square kilometers of farmland in the region.¹⁹ From propelling human societies forward to becoming a threat with irrevocable impacts, climate change has transformed civilization since its very inception and its damaging impact over the last fifty years.

Impact of COVID-19

- 235 million people are estimated to need humanitarian assistance in 2021; protection worth \$35.1 billion required
- Overloading of health systems
- Rapid depletion of climate change emergency funds



Global Economic Impact- Internal Displacement

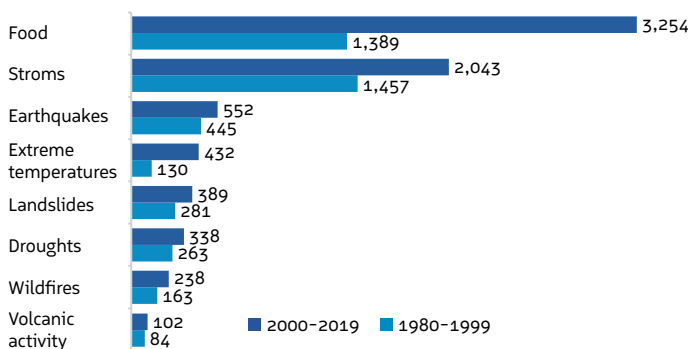
- As per Internal Displacement Monitoring Centre (IDMC), global economic impact of internal displacement due to conflict, violence and disasters in 2020 was approximately \$20.5 billion
- In Somalia, the economic impact of internal displacement-23.6% of its GDP in 2020.

Globally, extreme weather events are leading to climate induced displacement on an unprecedented scale. This situation has escalated humanitarian needs, particularly in fragile regions. The limited budgets of governments and humanitarian agencies are being stretched to address these needs. In 2021, a record 235 million people were estimated to need humanitarian assistance and protection worth \$35.1 billion.²⁰ In the current context, vulnerable countries risk an overloading of health systems and a rapid depletion of emergency funds in response to frequent climate change events.²¹ Using publicly available data, a recent study by the Internal Displacement Monitoring Centre (IDMC) indicates that the global economic impact of internal displacement due to conflict, violence and disasters at the end of 2020 was approximately \$20.5 billion.²² As per the study, for countries such as Somalia, the economic impact of internal displacement was 23.6 percent of their GDP for 2020.²³

With this background, an understanding of vulnerabilities, areas for preparedness and planning, available innovation options and opportunities for collaboration can be useful for all governments.

Climate Change: A 'Threat Multiplier'

Climate change has played a significant role in the migration of various communities over several hundred years. It is also believed to be a primary cause behind the human migration from the Indus Valley Civilization.²⁴ The pacific climate variability linked southward shift of Intertropical Convergence Zone (ITCZ) would have caused lesser monsoon precipitation, drying up the rivers leading to the agricultural difficulty.²⁵ However, recent changes in climate have aggravated this problem many times over.



The Intergovernmental Panel on Climate Change (IPCC) highlighted that the greatest impact of climate change could be on the nature of human migration in 1990.²⁶ Further the World Migration Report 2020 recognized the impact of climate change on human mobility and reported large scale migration due to climate and weather-related hazards.²⁷

Regarded as one of the most profound challenges to “have confronted human social, political and economic systems,”²⁸ climate change continues to be one of the primary causes for displacement and migration. Viewed as a threat multiplier,²⁹ climate change induced events such as floods and cyclones are repeatedly destroying public infrastructure, isolating communities and increasing food insecurity. These events have devastating impacts on marginalized and vulnerable populations struggling with multidimensional poverty. Disruptive and traumatic displacement demonstrates the “injustice and cost of climate change.” The World Bank’s Groundswell 2021 report finds that climate change could force 216 million people across 6 world regions to move within their countries by 2050. By 2050, Sub-Saharan Africa could see as many as 86 million internal climate migrants; East Asia and the Pacific, 49 million; South Asia, 40 million; North Africa, 19 million; Latin America, 17 million; and Eastern Europe and Central Asia, 5 million.³⁴

Varying Vulnerability and its Determinants

Climate change-induced displacement may be attributed to slow-onset changes such as sea-level rise, salinization of agricultural land, desertification, growing water scarcity and food insecurity. Sudden climate events or dramatic natural disasters such as floods, cloud bursts, storms, hurricanes and typhoons, create a separate set of challenges, displacing people in emergencies. Displacement risk and vulnerability due to climate change are mainly dependent upon patterns of population settlements, exposure and existing vulnerabilities.

In the context of slow-onset climate processes, displacement results in wide-ranging impacts on stakeholder groups at the community level. Broadly, these groups are defined as women, children, men, specially-abled individuals and the elderly. The impacts, however, are dependent on various factors including social and political stability, patterns of movement, family situation, gender parity, dependence on other household members and government social service access.

Apart from the psycho-social needs of those who are impacted by climate change induced displacement, the complex, indirect and long-lasting effects on gender due to slow-onset climate events such as droughts are an emerging area of concern.³² In 2016, it was estimated that over 17 million women and girls³³ are engaged in collecting water every day in Africa alone. As families respond to climate change related challenges, girls are more likely to be withdrawn from school to ensure water security for families.³⁴

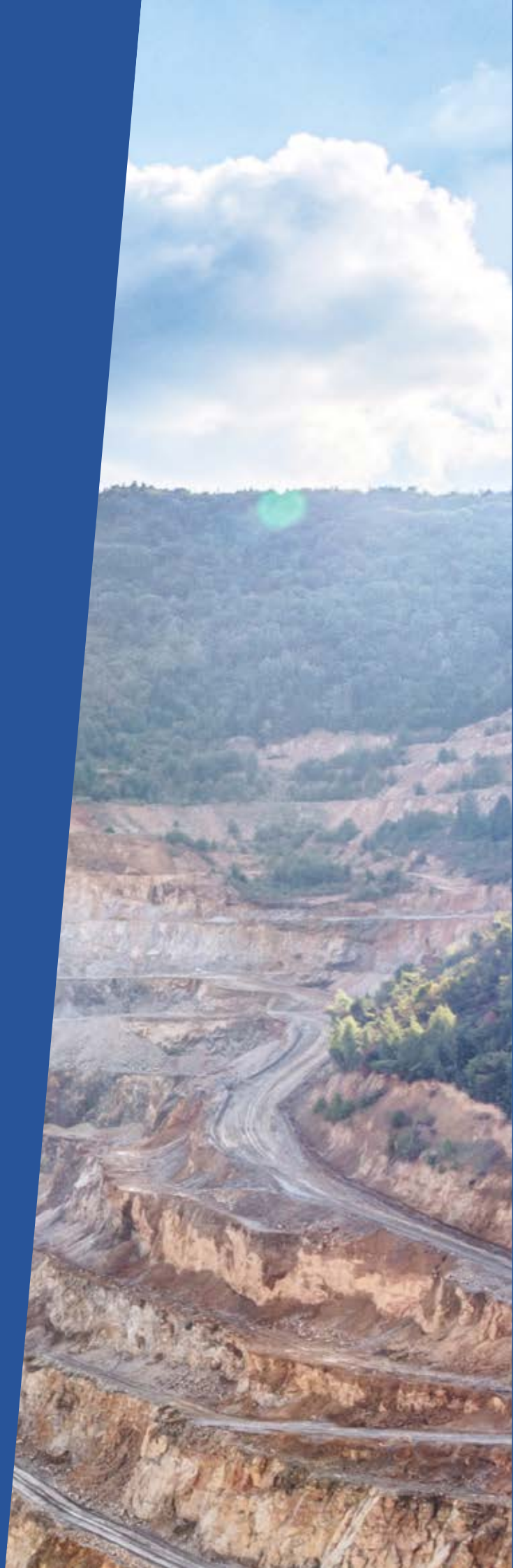
Similar negative coping strategies amongst affected communities create severe development setbacks in middle- and low-income countries experiencing climate change, thereby enhancing pre-existing vulnerabilities.

The Debilitating Impact of COVID-19

COVID-19 has caused the deepest recession since World War II,³⁵ it has led to the first increase in global poverty in generations, leading to 97 million people being pushed into poverty in 2020.³⁶ The pandemic broke out at a time when over 50.8 million people were grappling with internal displacement. Several from within this cohort had been displaced more than once, with COVID-19 adding another layer of complexity to highly challenging humanitarian situations.³⁷

Mobility restrictions due to COVID-19 have also impacted data gathering for global weather observing systems. The limitations to critical observation and measurement activities have reportedly affected the quality of forecasts and other climate services – this is potentially damaging to weather alert systems and analytics.³⁸ Due to COVID-19, there has also been a dramatic increase in unemployment, pushing families into debt and hunger.

Governments' efforts towards recovery will need to focus on community and institutional resilience – a localized approach to livelihoods planning may help in reducing pressures in urban areas, while rebuilding local governance units and public institutions with climate resilience components will be desirable.



Areas for Preparedness and Planning

Internal displacement has a traumatic and destabilizing impact on affected communities. It also creates an economic burden on governments, humanitarian bodies and host communities. Estimating needs, establishing local governance institutions, and integrating disaster risk reduction strategies into national and regional plans to address climate induced displacement issues is an ongoing process. Based on a purposive secondary review of existing challenges, the following areas for preparedness and planning and subsequent collaborations were found to be common across geographies.



Shelter provision for emergency relief

Catering to the immediate and long-term shelter needs of displaced communities in a sustainable and cost-effective manner. Providing shelter to service providers for health, food and education services.



Health access in response to COVID-19 related challenges

Ensuring access to primary health care, tracking health records, managing the spread of COVID-19 and other infectious diseases. Setting up diagnostic services and providing free or subsidized health care in a crisis.



Nutrition support for the short and long term

Managing hunger, nutrition and aligned support for vulnerable groups through cashless payments, food vouchers, distribution systems and others.



Finance and insurance to rehabilitate families

Financial support for livelihood loss to farmers, fishing communities, micro entrepreneurs and others post a climate change event or in anticipation of an event.



Technology transfer for security and reporting

Building capabilities to address climate change events, to track displaced communities and manage relief operations.



Education and skills for rebuilding communities

Addressing the education and skilling needs of children, youth and adults in complex and remote geographies with limited manpower, infrastructure, technology and energy services.



Critical infrastructure

Critical infrastructure such as telecommunication networks, electricity generation and transmission, water supply systems, transportation, and emergency health services are often most susceptible to climatic disruptions. Adaptation planning with resilient infrastructure design and operations are an integrated part of disaster preparedness.

Apart from addressing needs in the above sectors, governments may also need to plan and prepare to face challenges related to mitigating conflicts between communities during protracted climate crisis situations. For instance, climate events may lead to an intensification of conflict between pastoralist herders and farmers over access to water and grazing rights and droughts may further aggravate existing conflicts. Further, intergovernmental agreements on climate refugees, proper migration management based on the resource availability, planning to avoid social and cultural conflict, and proper grievance redressal mechanisms may also be put in place to address challenges associated with transboundary migration. This paper presents examples of replicable collaborative models that may provide guidance towards resolving challenges that may arise in planning and preparedness in the areas summarized above.

Chapter 2

The Climate Change Induced Displacement Crisis



The Climate Change Induced Displacement Crisis

The Global Displacement Crisis

Displacement caused due to the loss of living space and environmental changes including rising sea-levels, salinization and desertification is a potential threat to national stability.³⁹



Total Displacement due to Disasters: 30.7 million



Weather Related
Total Displacement: **30 million**



Storms
(including cyclones, hurricanes, typhoons and other)

Total Displacement: **14.6 million**



Floods
Total Displacement: **14 million**



Wildfires
Total Displacement: **1.2 million**



Landslides
Total Displacement: **102,000**



Extreme temperatures
Total Displacement: **46,000**



Droughts
Total Displacement: **32,000**



Geophysical
Total Displacement: **655,000**



Earthquakes
Total Displacement: **137,000**



Volcanic Eruptions
Total Displacement: **518,000**

As per the Global Report on Internal Displacement (2021), disasters, including storms and flooding, triggered three times more internal displacements than violent conflicts in 2020. Weather-related events accounted for almost all of the 30.7 million disaster-led internal displacements. Most of these were the result of tropical storms and floods in East Asia and the Pacific and South Asia. China, the Philippines, and Bangladesh, with each recording more than 4 million new displacements largely due to pre-emptive measures taken by governments to evacuate at-risk communities.⁴⁰

In 2009, the International Organization for Migration (IOM) reported that over the previous 30 years, 1.6 billion people have been affected by droughts.⁴¹ Between the 1970s to 1990s, an average of 5.1 million people per decade migrated permanently out of high drought risk zones: 2.3 million in Africa, 2.3 million in South-Central Asia, and the remainder in the Caribbean and South-Eastern Asia.⁴² Climate change induced water scarcity and food shortages are creating persistent large-scale seasonal challenges globally.

Afghanistan had the highest number of people still displaced as a result of disasters at the end of 2019, with 1.2 million IDPs who fled drought and floods in recent years. While in Sub-Saharan Africa, increasing displacement⁴³ on account of conflict has been further exacerbated by climate change triggered weather events. In 2018, a deadly drought in Afghanistan dried up riverbeds, withered crops, and displaced more Afghans than the Taliban conflict had displaced in the year, leading to “acute humanitarian needs.”⁴⁴

Displacement due to sudden disasters has typically been an area for emergency response support, philanthropy, aid and relief from the private sector. However, displacement caused by loss of livelihoods and income from slow onset events is an area that requires more systemic policy support, an incorporation of innovative Public Private Partnership models, direct financing and technical assistance from the private sector.





Climate Change Hotspots and Small-Scale Events

Many of the world's historic 'climate change hotspots' now overlap with regions that host the world's 82.4 million 'refugee and internally-displaced persons' population. These communities are facing secondary or repeated displacement due to climate change impacts. A United Nations High Commissioner for Refugees (UNHCR) survey in 2015 found that refugees and internally displaced persons were exposed to 150 disasters in 16 countries between 2013 and 2014, exposing their vulnerability to disasters associated with floods, severe weather, landslides, and wildfires.⁴⁵

In 2018, a deadly drought in Afghanistan dried up riverbeds, withered crops, and displaced more Afghans than the Taliban conflict had displaced in the year, leading to 'acute humanitarian needs.'

The IDMC⁴⁶ notes that around half of all events in 2020 displaced fewer than 100 people. These events are not part of other popular data repositories including the Emergency Events Database (EM-DAT), which only contain events displacing more than 100 people. "This lack of visibility and importance to small scale events not only leads to less support for the smaller affected populations but also sustains an environment where less research and policy attention is directed towards efforts to prevent future small-scale climate events."⁴⁷

Persistent Challenges, Sustained Crises

Climate change induced challenges and degradation have sustained crises such as the Lake Chad basin crisis and water scarcity in the MENA region. These persistent challenges and sustained crises are indicators of the impact of climate change events on destabilizing countries, sustaining violent conflicts and increasing vulnerabilities.

Lake Chad Basin crisis

Increased water extraction and climate change in the context of growing populaces has resulted in Lake Chad shrinking to a tenth of its former size, leading to increased competition for and conflict over land and water resources. Armed groups, in particular Boko Haram, thrive in this fragile environment. To date, 2.6 million people, including 1.4 million children, have been displaced by the humanitarian crisis in and around the Lake Chad Basin, putting them at risk of violence and malnutrition.⁴⁸

Since 2015, Chad's Lake province has been severely affected by the impact of the north-eastern Nigerian crisis. Ongoing military operations and security incidents, particularly in the border areas with Nigeria and the Niger, have caused population displacements and affected vulnerable local communities. Households' livelihoods have been disrupted, increasing food insecurity and malnutrition in a context of low access to basic services, chronic poverty and climate variability.⁴⁹

10.6 million people, or half the population of the conflict-hit Lake Chad Basin region need humanitarian assistance as the decade-long conflict. 2.8 million are internally displaced, including 2 million in Nigeria alone. Hunger and malnutrition remain high. Abductions, killings and rights' violations are also widespread.⁵⁰

Water scarcity in MENA

The MENA region is expected to be the first to run out of fresh water; 60 percent of the population already live in areas under severe water stress.⁵¹ The occurrence of frequent heat waves has been attributed directly to climate change impacts in recent years. Water scarcity is expected to rise by 15 percent in a 2°C rise situation.⁵² Severe water crises create food shortages and severely impact livelihoods and migration. As the world's most water scarce region, there is an urgent need to improve irrigation efficiency and human water use patterns.⁵³

Addressing climate change impacts on water scarcity and resource sharing are at the center of the climate agenda. Where violence and scarcity overlap, the repercussions on governments can be catastrophic without anticipatory and adaptive action planning to identify and respond to underlying causes.







Chapter 3

Vulnerability, Planning and Preparedness

Vulnerability, Planning and Preparedness

A recent study on natural hazard mitigation⁵⁴ estimates \$6 can be saved in disaster costs for every \$1 spent on hazard mitigation. Most importantly, mitigation funding helps governments prevent deaths and non-fatal injuries to vulnerable communities.

Preparing for climate change does not necessarily have to rely solely on expensive technology but instead, medium and long-term benefits can be accrued through building the capacities of the most vulnerable through adaptation techniques and enabling local government institutions.

Private sector, social enterprises, governments, UN agencies and non-profits are demonstrating successful solutions in the shelter, technology, food, health and education domain. This is being achieved through collaborative resource models that are participative in nature.

Complementing these models with existing initiatives related to community-based early warning systems, disaster education and evacuation plans, better crop and land management techniques⁵⁵ may help governments plan and prepare for climate change induced displacement. Understanding vulnerability prior to preparing for response is critical to strategic planning. Presented below is a brief overview of vulnerability and particularly vulnerable groups in the climate change context.

Vulnerability

Vulnerability may be broadly defined as the predisposition to be adversely affected. The predisposed state of varied stakeholder groups, making them vulnerable to climate change may encompass wide ranging variables including the lack of capacity to cope and adapt.⁵⁶ Vulnerability to environmental change may also be determined by a combination of factors including the exposure, sensitivity and adaptive capacities of communities and individuals who are exposed to climate change. It may also vary within countries, communities and even at the household level between gender and age groups.⁵⁷ For instance, communities living in disaster prone areas such as coastal regions or floodplains, on account of their livelihoods or due to the lack of land in other areas are particularly vulnerable due to their geographic disadvantage.

Measuring vulnerability and assessing the impact of climate change on vulnerability is a time driven process mapping changes over a period. For slow-onset events, communities and decision makers may not immediately be able to identify climate change impacts on exacerbating vulnerabilities, leaving several areas that could be previously addressed through adaptation and mitigation strategies unattended.

Geographic Vulnerability

The World Bank estimates that 143 million people in sub-Saharan Africa, South Asia and Latin America could be forced to migrate within their own countries due to the worsening effects of climate change by 2050. These migrations are expected to be due to a decrease in crop productivity, increasing shortage of water and sea-level rise.⁵⁸ 91 countries comprising of least developed countries (LDCs), landlocked developing countries (LLDCs) and small island developing States (SIDS) with a human population of approximately 1.1 billion are considered to be the most vulnerable to climate change impacts.

The overall vulnerability of communities living in these countries is aggravated due to structural challenges and geographical disadvantage.⁵⁹

Socio-Economic Vulnerability

Existing research⁶⁰ on vulnerability indicates that the exposure of socio-economically weaker sections to the impacts of climate change is often higher as they inhabit high-risk landscapes due to their socio-economic status or due to the nature of their livelihoods. Responding to frequent climate events is imperative as these could severely impact health, have the potential to be fatal, destruct homes, kill livestock and push poor and vulnerable families further into debt and poverty. Health shocks and stresses already push approximately 100 million people into poverty every year, with the impacts of climate change worsening this trend.⁶¹ Climatic and weather events drove almost 16 million people into food crises in 15 countries in 2020.⁶² 75 million children have their education disrupted each year – of which around half are due to weather events such as floods and drought.⁶³

Vulnerability due to COVID-19

The spread of COVID-19 has added an additional layer of vulnerability to communities facing climate change through adversely impacting livelihoods, access and health. Planning for climate vulnerable communities' empowerment in an environment where COVID-19 takes precedence as a health issue, is likely to multiply existing climate threats if not prioritized. It will also adversely impact the vulnerabilities of communities experiencing climate events but being unable to migrate due to restrictions. This is likely to aggravate socio-economic vulnerabilities, necessitating actions towards reduced displacement at source through climate resilience measures.

For instance, in India, COVID-19, cyclone Amphan and monsoon flooding created a compounding crisis, particularly for migrant workers. More than 1 million migrant workers returned to West Bengal alone with the announcement of the nationwide lockdown in March 2020 and were impacted by the cyclone less than a month later. The mobility restrictions and social distancing requirements imposed by the pandemic made it difficult to provide emergency services such as provision of relief material, evacuation and management of shelters, in the face of natural hazards.⁶⁴

Geopolitical Vulnerability

Climate-induced migration can be potentially influenced through geopolitical scenarios. Intergovernmental relations affect the security, stability, and peace of the climate refugees significantly. Irregular and unplanned refugee influxes could emerge as a societal challenge and provoke cultural conflict, as a large inflow of migrants is often perceived as a threat to domestic and international security, and social cohesion in the political sphere. Therefore, a proper framework to manage large flow of migrations should be formulated by governments with requisite context-based assistance by local companies as well as multinationals.

Vulnerable Groups and Communities

Displaced Communities

The number of people displaced by climate change related disasters since 2010 has risen to 21.5 million.⁶⁵

Many refugee communities are located in 'climate change hotspots' - prone to the effects of climate change and natural disasters placing them at risk of secondary displacement.⁶⁶

Children

1 billion children worldwide are at 'extremely high risk' of the impacts of climate change. Migrant and displaced children and young people are among those most exposed to its impacts, with the least resources to cope. Children on the move often face barriers to attending school, accessing healthcare, child protection and other services that help build their resilience.⁶⁷

Elderly People

Climate-related emergencies such as heatwaves, floods and hurricanes can create disruptions to necessary health care and services for older persons. In emergencies, older people with limited mobility may have difficulty reaching safety.⁶⁸

Marginal Communities

Fishing communities, indigenous people, small scale farmers and poor people are especially vulnerable due to their dependence on agriculture, fishing, and forests.⁶⁹

Climate change has and continues to increase their marginalization.

Adolescent Girls and Women

Women - who make up the majority of the world's indigent population and whose livelihoods are largely dependent on natural resources- are exposed to particular calamities. As a result of the climate induced economic and livelihood shocks, girls may be taken out of school and are vulnerable to early marriage.⁷⁰

People with Disabilities

People with disabilities are often the most adversely affected in an emergency, sustaining disproportionately higher rates of morbidity and mortality, and being among those least able to have access to emergency support.⁷¹

Collaborating with the Private Sector

The private sector includes diverse industries - multinational, small and medium-sized enterprises (SMEs), local entrepreneurs and other industry partners at the global, regional and local level. The role of Private Sector Engagement (PSE) in addressing challenges related to migration and displacement has evolved beyond mobilizing resources to leveraging skillsets and core expertise.

In practice, there is a diversity in expertise presented by private sector players and their sub-entities including private sector foundations and philanthropy-implementing bodies. These entities directly undertake projects or constitute and collaborate to form consortiums with other sector experts and non-profits in providing technical, program management or financial support. The scope for collaboration with governments, UN bodies and non-profits working at the forefront of humanitarian response is a developing area. From building capacities to providing in kind donations for critical social infrastructure, education, health and social enterprises, the private sector is engaged in responding to climate events.

Responding to the threat of climate change, the private sector has emerged as a source of significant climate leadership. Over 6,000 companies and investors from 120 countries, representing at least \$36 trillion in revenue, have committed to ambitious climate targets. While most commitments are focused on the overall reduction of their carbon footprint, it is also time for the private sector to engage in building climate resilience.⁷²

Emerging areas for collaborative humanitarian action with the private sector range from generating accurate information regarding displacement and migration⁷³ to innovative and risk financing. Increasingly, private sector companies are seeking opportunities to demonstrate an expansion of their definition of 'value creation' from simply focusing on economic outcomes to a more holistic one where contributing value to social and environmental concerns is of equal importance.⁷⁴ These collaborations may be led by the respective corporate responsibility departments within companies such as IKEA Foundation's investment in a solar energy plant for the UNHCR managed Azraq refugee camp in Jordan - a model for public private financing of infrastructure.⁷⁵

Corporates may also directly collaborate with agencies to meet Sustainable Development Goals while leveraging their domain expertise. Such engagements as well as research or business consortia-based models may directly or indirectly support governments in executing humanitarian response plans.



Private Sector And Social Enterprises Addressing The Challenge

Cases of successful and impactful historic as well as ongoing collaborations are indicative of the possibility of positive resolutions and enhanced action in response to climate change induced displacement. While the needs of governments providing support to climate change or natural disaster impacted and internally displaced communities and refugees are unique from a cause perspective, these needs match existing solutions for the global refugee crisis. With this understanding, available models and examples of PSE players have been summarized below.

Shelter: Providing Shelter in Transit and Emergencies

Providing reliable and quickly deployable shelter to displaced communities and service personnel responding to crisis situations is critical. The usability and standardization of shelter as well as support for tailoring the shelters as per need can be of immense utility and support for governments. Better Shelter Refugee Housing Unit Aktiebolag (RHU AB) is an emerging enterprise in the domain. It is a social enterprise owned by the IKEA Foundation providing temporary shelter units that can transform into dignified homes, learning spaces, clinics and also serve as communal infrastructure including libraries.

The enterprise collaborates with the private sector, governments, not-for-profits and UN agencies across over 23 countries. In response to climate change events, the shelters provide all in one durable solutions in emergency situations where local materials may be difficult to obtain. The innovative design also allows for the units to be improvised using locally sourced roof, wall and floor materials when these become available, extending the overall life span of each unit.⁷⁶ Similarly, Habitat for Humanity, a global non-profit organization present in over 70 countries, works with people to build houses and sanitation facilities in partnership with families in need.⁷⁷

Health: Managing Medical Data for Refugee Patients

Capturing the health needs and data on the spread of infectious diseases, medical facilities, frontline health workers and overall health management for displaced or in transit communities can be challenging across geographies with limited network access. As part of its disaster preparedness and resilience efforts, International Business Machines (IBM) corporation partnered with Medicines Sans Frontiers (MSF) Italy⁷⁸ in 2016 to develop and deploy a mobile application that enables medical personnel to capture data in real-time regardless of Internet connectivity. It also supports medical personnel in understanding and acting on collected medical data quickly and accurately.





The People on the Move app is enabled with Watson Analytics that enables cognitive analysis and predictive capabilities to equip doctors, epidemiologists and analysts to understand and act on collected data in an insightful manner – helping medical staff provide rapid medical support via mobile health clinics on borders.⁷⁹

Finance: Insuring and Empowering Against Climate Impacts

Micro-insurance is an innovative and empowering tool for risk and disaster management. It can empower vulnerable communities affected by climate change,⁸⁰ providing micro-insurance options to communities dependent on agriculture and living in coastal areas. Allianz offers micro-insurance products in disaster prone countries including Egypt, Cameroon, Senegal, Columbia, Indonesia, and India. In 2009, Allianz partnered with HSBC in Brazil to provide farmers protection against strong winds, hail, frost, and excessive rain.⁸¹

In response to the 2004 tsunami in India, Bajaj Allianz collaborated with CARE International in India.⁸² The consortia provided customized packages for fishing communities and agriculture as well as plantation dependent communities living along the coast.

In Haiti, Fonkoze a microfinance organization along with strategic stakeholders launched the Microinsurance Catastrophic Risk Organization (MiCRO) a donor capitalized insurance facility specializing in protecting vulnerable communities from natural disaster risks.⁸³ The catastrophe insurance coverage plan was rolled out to over 55,000 microloan clients – primarily female microentrepreneurs.

Via MiCRO, each beneficiary receives an indemnity payout, cancellation of loan debt and eligibility to receive a new loan when ready to recommence her business. Fonkonze clients pay a small proportion of their loan amount towards insurance premiums while Fonkonze also contributes to the premium cost. This model⁸⁴ protects microentrepreneurs in the face of climate change.

In 2017, Swiss Re partnered with Nature Conservancy and the state government of Quintana Roo to develop the first parametric insurance product aimed at enhancing the resilience of coral reefs, and the communities that depend on them. This insurance solution ensures rapid disbursement of funds to enable trained community members to deal with reef damage following a severe storm.⁸⁵

Nutrition Support: Digital Support and Integrated Giving

Addressing hunger and nutrition needs, particularly for climate change impacted communities with no food security and limited or no resources is a challenge for governments. The Mastercard and World Food Program collaboration has leveraged technology and payment expertise with delivering food assistance.⁸⁶ Mastercard has helped strengthen WFP's electronic voucher program expanded upon pilot programs in Kenya, DR Congo, Sudan and Somalia. Apart from providing a technical solution, the case demonstrates how a corporate can leverage its network, tools and marketing experience to enable its partner brands and consumers to engage with a global issue – hunger.

Via Mastercard, WFP has been able to identify new partnerships for fundraising and advocacy. The Integrated Giving program allows brands to enable donation options into their products. This can translate to donations for school meal programs and response to drought impacts as demonstrated through the 2011 appeal in Poland for life-saving meals for children in the Horn of Africa and 2012 program for sponsoring school meals in Africa in the Netherlands.⁸⁷

Technology: Disaster and Displacement Maps, Medical Deliveries and Mapping by Drones

Climate event alerts and location mapping of affected populations have been enhanced through social media collaborations such as the Facebook disaster map initiative, which enables governments and humanitarian organizations to address information gaps in location data. Facebook is able to aggregate location data and share it via complementary datasets presenting population, movement and safety checks while persevering privacy concerns.⁸⁸ IDMC and Facebook have recently collaborated to develop displacement maps that will help gather information on the number of people displaced, location and time of displacement using anonymized data. The methodology was recently used in the context of Cyclone Fani (India and Bangladesh) where it helped provide city-level estimates of displacement including number of returnees. Similarly, the methodology was used to analyze displacements due to Typhoon Hagibis in Japan. The analysis presented levels of displacement across impacted cities, providing new insights to humanitarian players and the government with regards to displacement flows. For Typhoon Hagibis, Facebook also ran a survey which helped validate displacement map findings and gauge behaviors and decision making in response to the climate event.

Unmanned Aerial Vehicles (UAVs) or drones are being increasingly deployed in emergency response. The Delft University of Technology has tested an ambulance drone that can deliver defibrillators on demand, Facebook is exploring⁸⁹ high altitude solar powered UAVs to provide WiFi Internet access while Project Wing and Prime Air can deliver wind and solar power. In the aftermath of climate events, drones are being used

to successfully assess damage, locate victims and deliver aid. Apart from response, drones can also be fitted with thermal imaging cameras to help in monitoring and combatting forest fires via surveillance.

Another such example is that of a 5G Drone Fleet (UAV) based Network Architecture 'WiND' (Wi-Fi Network on Drone) to restore telecom connectivity in disaster prone zones designed as part of a Government of India project by IIT Kharagpur. The cost-effective, user-friendly, fast-deployable network 'WiND' along with APP 'NerQuake' can be used for Post Disaster Emergency Network Setup, UAV-based Border Infiltration Inspection, Optimal Redeployment of Disaster Aware Telecomm. Infrastructure, Medicine Delivery at Remote Areas, Precision farming, Energy meter inspection in high-rise buildings, Maintain QoS over Network at Social Gathering, Crowd Management, etc. It can also store database of rainfall and earthquake with time stamp information.⁹⁰

Education: Instant Network Schools for Children

In 2013, Vodafone Foundation and UNHCR collaborated to provide young refugees, host communities and teachers access and exposure to digital learning, the Internet and improve overall quality of education in some of Africa's most marginalized communities. The program has impacted over 86,500 students and 1,000 teachers while ensuring that refugees and children receive quality learning.⁹¹ By 2025, UNHCR and Vodafone Foundation expect to connect over 500,000 refugees and host students and 10,000 teachers to digital education using the model.

First developed in Dadaab, 13 centres were tested in 2013, each expansion of the Instant Network School (INS) system has adopted a community-driven model through which the design is co-developed with members of the school community. The locations of schools/community centres, the inclusion of specific resources, the training plan, and the programmatic agenda are decided by building on national priorities and resources. Each school is supported by a local coach who is responsible for providing in-service training and technical support for learners and teachers.⁹² Daily logs of INS use are recorded and uploaded to a global platform; helping to track utilization, flag challenges, and identify areas for redesign or capacity building.

Executing Multi-Stakeholder Collaborations

While the examples listed above provide a brief overview of available models for context specific needs, the cases below demonstrate multi-stakeholder and cross-country collaborations, leveraging on-ground and cross border presence, domain expertise and government support in regulations to ensure the timely delivery of support to vulnerable communities experiencing climate change impacts.



Putting Girls First and Leveraging Cross Border Presence in the Lake Chad Basin Crisis

The Lake Chad Basin crisis has been categorized as a large-scale, complex protracted humanitarian emergency with compounding factors contributing to it.⁹³ An ongoing conflict, climate change events and increasing vulnerability have combined to create high levels of food insecurity, malnutrition, displacement and disease. Millions are currently dependent on humanitarian assistance for survival in the region. Of the vulnerable groups, women and particularly girls are most at risk.

Gender-based violence (GBV) and violence against children was widespread in the Lake Chad Region prior to the outbreak of the conflict; however, GBV has increased during the crisis – reported acts of violence include abduction, detention, rape, forced marriages and the forced use of children as suicide bombers. Over 80 percent of child suicide bombers in the area are girls, many of whom are adolescents.⁹⁴ Young women in the crisis region are also vulnerable to sexual harassment, early marriages, childbirth and resultant health risks.⁹⁵

Through leveraging presence in and understanding of these countries, international non-profit Plan International has developed a ‘full spectrum approach’ – working towards aligning humanitarian and development efforts in the Lake Chad Basin to strengthen resilience while investing in social cohesion and addressing underlying causes for the crisis.⁹⁶ Existing projects being implemented by Plan International in the region have integrated gender transformative programming to address root causes negatively impacting gender equality, the key objective being to remove barriers faced by girls in accessing equal opportunities while realizing their fundamental rights.

The Intervention

Plan International’s Lake Chad Program’ (LCP) regional strategy has addressed the needs of girls, boys and their communities by focusing on protection, education and livelihoods. The program has promoted access to formal and non-formal education, and Early Childhood Development up to secondary education. In doing so, the LCP has implemented innovative intervention models such as mobile education units and Accelerated Learning Programs (ALP).⁹⁷

The program has addressed issues related to violence, abuse, neglect, and exploitation faced by children in combating Sexual and Gender-Based Violence (SGBV), working with child survivors and survivors of GBV through a variety of interventions including the establishment of safe spaces.⁹⁸ Savings and loan groups have also been established to train women, adolescent girls and youth in enhancing their incomes. Beneficiaries have been provided start-up kits in diverse income generation activities to promote sustainable and empowering livelihoods.⁹⁹

Plan International’s Lake Chad program’ interventions primarily focus on girls – individually, in groups or in associations through targeted programming and as part of broader interventions. Through this approach, it is expected that results will be delivered not only for the safety and well-being of girls and women, but also, through their empowerment, to their immediate families and larger communities.

Collaboration Model

The Lake Chad Program Strategy is being operationalized by a dedicated Lake Chad Program Unit, which is a shared service between three Country Offices in Cameroon, Niger, and Nigeria, as well as Plan International’s West and Central Africa Hub.¹⁰⁰ It was established to address the crisis in the Lake Chad Basin through an integrated and regional program approach of the non-profit and the Program Departments at Country Office level.

Plan International has improved the overall quality of impact by also including ‘secondary targets’ including ‘gatekeepers’ and guardians of the primary targets (girls) – mainly male partners, adolescent boys, parents or caretakers, family members, civil society organizations and the private sector, as well as government partners in the program.¹⁰¹ This approach is helping build systemic and long-term support for girls and their specific needs and issues.

Outcomes

The outcomes of the intervention are currently due for evaluation.¹⁰²

Youth Engagement Through One Stop Shops in Costa Rica

In crisis situations due to climate change, youth unemployment is likely to increase and intensify vulnerabilities. Providing opportunities to youth to enhance their skills, assess their options and build entrepreneurial capabilities to set up businesses can enhance employability and financial security. In 2009, 21 percent youth (15–35 years old) in vulnerable groups including women and Nicaraguan migrants in Costa Rica were unemployed. The situation had increased poverty in the region. In response, UN agencies led by UNDP developed a Joint Program (JP) – “Youth, Employment and Migration” – with the objective of providing improved access to decent labor. This was achieved through setting up ‘one-stop shops’ targeting the Desamparados and Upala communities and benefiting approximately 9,000 youth.¹⁰³

The program was designed to address the following problems being faced by Costa Rican youth looking for work: 1) lack of structured information on education and work opportunities, 2) insufficient education and training, and 3) weak public policies on unemployment. These issues were more pronounced among migrant communities.

The Intervention

As a first step, a study on the labor market for young people in Upala and Desamparados was carried out. Local governments provided information on work opportunities and prospects for youth. As a pilot, three one-stop shops were set up, these centres provided information on job availability and employment services to young people. By gathering data about youth, their strengths and weaknesses were also analysed.¹⁰⁴

To further integrate young migrants into the workforce, a specific procedure for specialized support was developed and the ‘Pathway for the Regularisation of Migrant Status’ was implemented. Simultaneously, two projects ‘Among Neighbors’ and ‘Integration Pathways’ helped stimulate change in institutional culture towards migrant communities. These projects included sensitisation campaigns on young migrant rights and the promotion of the Interculturality Manual. 1,081 young migrants received mentoring to regularize¹⁰⁵ their situation and access to services that improved their quality of life. 210 teachers from the Ministry of Public Education and 90 Social Work and Counselling teachers from the Instituto Nacional de Aprendizaje were trained in managing interculturality in classrooms.

This model helped the Ministry for Public Education adapt the provision of technical training and provide information to educational institutions. Working in coordination with the institutions involved, two education centers were set up to teach Information Technology (IT) to the most vulnerable amongst the

youth through a mobile unit with 12 laptops. Additionally, 308 young people were able to improve their English language skills through courses run by the Fundación Costa Rica Multibilingüe, the Instituto Nacional de Aprendizaje (INA) and the Cuerpo de Paz.¹⁰⁶

The intervention used different methods in Upala (rural) and Desamparados (semi-urban) to achieve project objectives, which helped cater to the context specific needs of beneficiaries.

Collaboration Model

39 alliances were signed with the private sector to determine market needs and included young people in private sector employment selection processes. The participation of the private sector in various rounds of business discussions provided an opportunity to promote and develop business ideas. Private sector participation also enabled young people to obtain information and evaluator feedback directly from potential partners, buyers and employers.¹⁰⁷ The model was designed, developed and coordinated by UN agencies with aligned government department support.

Outcomes

Post the intervention, participating youth had a better understanding of the different opportunities at their disposal to improve their access to employment and overall employability. One-stop shops also empowered youth to demand them.¹⁰⁸

As a result of the success of the youth-focus model, the Ministry of Labor and Social Security in Costa Rica replicated 16 one-stop shops in ten municipalities as part of the national youth employment strategy ‘EMPLEATE’. A central one-stop shop was also established at the National Directorate for Employment within the Costa Rican Ministry of Labour.¹⁰⁹

Government, Private Sector and NGO Collaboration for Humanitarian Response in Nepal

Over 8,000 people lost their lives, approximately 400,000 families were left homeless and 2.8 million people were displaced in the catastrophic earthquake that hit Nepal on 25 April 2015. With the monsoons fast approaching, several families needed shelter from the rain and winter.¹¹⁰ Along with a partner organization in Nepal, the Chaudhary Foundation, PwC India Foundation and SEEDS India supported 100 families in the Gairung and Taklung villages of the Gorkha district by building interim shelters.¹¹¹

These shelters were to be built quickly before the monsoon in a terrain that was facing extreme weather conditions and had limited transport facilities.

The Gorkha district was one of the worst affected as the epicentre of the earthquake was 15 km from the main city. As a result, people were forced to reside in open areas in tents. With a scattered population and difficult terrain where some villages can only be accessed by making the journey on foot for three to four days, PwC and SEEDS built 100 transitional shelters to support the families by leveraging an opportunity provided by the governments of Nepal and India.¹¹²

Population affected by earthquake in Gorkha, 25 April 2015

271,061

Total population

66,506

Total number of houses

449

Number of fatalities

952

Number of people injured

227

Fully destroyed government buildings

36

Partially destroyed government buildings

59,527

Fully destroyed houses

13,428

Partially destroyed houses

Source: National Society for Earthquake Technology - Nepal (NSET)¹¹³

The Intervention

In adherence to the Core Humanitarian Standards (CHS) principles,¹⁴⁴ extensive community and stakeholder engagement and participation were ensured in the intervention. The key stakeholders included the families who received the shelters, local authorities and the Government of Nepal, local artisans, and the Chaudhary Foundation in Nepal.

The shelters used low-cost construction technology; their structural design took into consideration earthquake and strong wind risks, and the materials used were bamboo and corrugated galvanized iron (CGI) roofing sheets. The shelters were acceptable and adaptable for local community needs and were made by applying local architectural skills. Each shelter was built to house an average family of five to six members and adhered to the Sphere Minimum Standards.¹⁴⁵

Collaboration Model

Our collaboration brought together the private sector and consultancy and NGO skill sets which impacted the efficiency of the project and long-term outcomes. SEEDS was engaged in the training and facilitation of the construction of the shelters and was responsible for safe shelter design, orientation of beneficiaries, preparation of shelter guidelines and handbooks.

The Nepal-based Chaudhary Foundation, a social initiative by the Chaudhary Group, facilitated approvals and permissions from local authorities and assisted in logistic support for material procurement, storage and distribution.

PwC provided the necessary and timely financial support to SEEDS for undertaking the intervention. The PwC team also conducted regular audits and site visits as part of the monitoring and evaluation process.

Government Regulatory Support

This intervention was possible only due to the regulatory support provided by the governments of both countries. In order to respond to the crisis, the government of Nepal allowed access to cross border non-profit and private sector foundations to assist local communities and the government respond and rehabilitate. Similarly, the Government of India eased regulations on non-profits and the private sector, allowing both to freely act in response to needs of the neighbouring country Nepal. Allowing for open access to people and goods movement, teams comprising experts from PwC and SEEDS, skilled masons trained by SEEDS in India and shelter materials as well as hygiene kits could be transported between countries.

Community Participation and Ownership

The intervention supported 100 families through an 'owner-driven' process. Owner-driven reconstruction (ODR), as opposed to the conventional method where a contractor is commissioned to construct a house, treats homeowners as partners. They give their input on design and use of material and contribute labour. This ensures that the local community's shelter construction and masonry abilities are developed, enabling them to be more resilient in the future. One member from each family was trained and oriented in the construction of shelters. Guidance material on shelter construction was also provided to each family.

Local village development committees (VDCs) were also oriented and involved in the intervention from inception and based on their recommendations, beneficiary families were selected. The intervention provided livelihoods and training to several masons and site supervisors from Bihar and Nepal.

Outcomes

Apart from the 100 families with individual shelters, 100 masons were trained to build disaster risk reduction features for shelters as part of the intervention, positively impacting their future livelihood opportunities and increasing resilience in the community. A key outcome of the project was the local upskilling in disaster resilient architecture and disaster response.

Our intervention required synchronization among different teams that were operating simultaneously to meet a short deadline. Within three months, we were able to build 100 shelters for our beneficiaries as well as complete our monitoring and evaluation exercise to ensure the best possible quality of safe shelters.

In addition to our combined response to the earthquake in Nepal, as a rehabilitation measure and to strengthen Nepal's the public healthcare system post the earthquake, a pro-bono project funded by PwC was initiated by PwC India's Healthcare Advisory team in August 2016.¹⁴⁶ The aim of the project was to devise a roadmap for the strategic and operational transformation of Nepal's largest public hospital in Kathmandu. The hospital is over 120 years old and 75 percent of the beds are available free of cost to poor patients.

The pro-bono engagement supported by PwC has helped develop Vision 2030 for the hospital, ensuring it can continue serving the poorest.



Way Forward

Way Forward

Future climate related challenges will include managing humanitarian crises due to extreme weather events, rainfall variability, earthquakes, air pollution, global warming and forced migration. The past six years were the hottest on record, and 2010–2019 was the hottest decade on record. This was characterized by climate-and extreme-weather-related disasters, such as heatwaves, droughts, tropical storms, and acute floods.¹¹⁷ Failed action on climate, extreme weather and lost biodiversity now come first, second and third respectively in a list of the top ten global risks over the next decade, as per the annual survey of perceptions, Global Risks Report 2022.¹¹⁸ Ninety percent of refugees under UNHCR’s mandate, and 70 percent of people displaced within their home countries by conflict and violence, come from countries on the front lines of the climate emergency.¹¹⁹ 70 percent of countries most vulnerable to the impacts of climate change are also among the most politically and economically fragile. Almost half of the 15 countries most vulnerable to climate-related risks host a UN peacekeeping or special political mission.¹²⁰ Further, the impacts of COVID-19 have damaged global efforts towards achieving sustainable development goals, setting back countries by several years.

In this context, deploying a multi-stakeholder approach for collaborations and cross-sectoral engagements to address rapidly increasing and interrelated risks will be pivotal to strategic resilience building. In order to be truly transformational, from inception, all collaborations must engage directly with at-risk communities to devise solutions that are localized and long lasting.

As governments begin to refocus on climate change, we conclude with guidance on designing interventions using an integrative model for collaboration and indicate next steps for key stakeholders in these collaborations – governments, non-profits and the private sector.

Designing an Integrative Model for Collaboration

Based on our experience¹²¹ and understanding of cross-sectoral multi-stakeholder collaborations for humanitarian action, we understand that an integrative model rooted in humanitarian principles is the base for all successful interventions. In order to apply the model to climate change related crisis and address the vulnerabilities of at-risk and affected communities, the following features are central to designing a model intervention:

Key Features Central to Designing a Model Intervention



1. Participatory Approach to Design

From inception to delivery, interventions must be guided by a participatory approach which involves the key collaborators with a special focus on the government and the communities whose specific needs are to be identified and prioritized. All designs must be explored and examined together with affected communities and local government bodies must be made participants in the rebuilding process.

2. Needs' Assessments

Assessments to identify needs to be led by trained teams with expertise in the social sector to ensure nobody is left behind. From the elderly to the specially-abled, the most vulnerable social groups, gender and children, all interventions need to ensure that identified needs reflect the actual status of the community. Experts also analyze the future needs on account of climate change, upcoming seasons and the geography of the intervention site to ensure a more durable solution that will address needs in a sustained manner.

3. Leverage Networks for Efficiency

Each collaborator has access to a wide-ranging network and the private sector can leverage relationships and expertise globally, providing support at each point of the response cycle. This is especially helpful, given the changing dynamic of the intervention. Similarly, non-profit collaborators have in place human resources for the social sector and community outreach initiatives to enable successful implementation.

4. Supporting the Government

In collaborating for humanitarian and climate action, the government, particularly local bodies such as village councils, committees and village leaders become critical stakeholders. Collaborations can benefit from a non-profit's knowledge of local systems and structures as it ensures smooth operations with all elements of the local norms.

5. Feedback and Flexibility

Working together in post-disaster environments that are often fragile or in conflict areas, where communities have experienced extensive trauma and loss, requires immense patience, feedback and flexibility in the collaboration model. In interventions driven by a participatory approach, the feedback received from communities on their needs requires action where possible. Collaborations that can accommodate emerging community needs are likely to deliver more meaningful interventions. It is crucial to build sensitivity and encourage a more flexible yet results-driven approach for each intervention and to act upon community feedback.

6. Sustainability and Resilience

Recovery from climate shocks and stresses can also be an opportunity for 'building back greener'. One aspect of 'building back greener' is to consider more exhaustively how use of sustainable and nature-based solutions (NbS) can be embedded within policy and planning at national and sub-national levels, to build resilient communities and support a just transition to a net-zero society.

In addition to the above features, building resilience through skills training, awareness sessions and outreach programs can have long-lasting impact. Ensuring a resilience component in all interventions by building local capacities will help in future anticipatory actions. Knowledge of how to respond better during a disaster, how to build climate resilient buildings and the strengthening of local social security services and infrastructure can support governments post-crisis.

Sustainability must be a central feature of collaborative interventions; using salvaged or sustainably sourced materials for shelter-building helps adapt shelter designs to the local environment and involves communities at all stages of the shelter-building and sourcing process.

Based on our experience and collaborations, we believe that interventions may provide more long-term support to communities, if participatory and localized approaches that put communities at the center of design and delivery are adapted for varied humanitarian needs and contexts including those related to climate change events.

Next Steps for Governments

Governments managing climate crisis are not alone in their efforts to address vulnerabilities and challenges. While private sector and non-profit assistance has historically been available for sudden climate events, slow on set events also have scope for collaborations and support with strategically designed inclusive model interventions.

In order to make collaborations more effective and to align interests and priorities, it is important for governments to take the following steps forward:

Information Sharing and Participatory Need Assessments

While encouraging collaborations, information sharing at the ground level to assess humanitarian needs in anticipation or in response to a climate event is critical. Where information gaps exist and data gathering capacities amongst local government units are limited, private sector and non-profit teams can be deployed to conduct assessments as part of the collaboration model. Reviewing the parameters by which information is gathered and organized, how impact and threats are measured and aligning these with globally used criteria is useful from a future planning, resource mobilization and management perspective.

Encouraging Private Sector and Non-Profit Partnerships

To indicate the government's interest in mobilizing partnerships, inviting local and international private sector and non-profit entities to draw out a plan for immediate and future needs is an important step towards building stakeholder groups. Stakeholder identification and strategies for resource mobilization can also be drawn by agencies conducting secondary reviews of the private and non-profit engagement areas in similar geographies. A targeted outreach may secure these partnerships quicker.

Easing Cross-Border Collaborations

To address climate change challenges related to displaced populations and complex or wide-spread humanitarian needs, cross-border collaborations are vital to ensuring long-term resolutions. This is especially important for repeat or annual events such as floods. Cross-border collaborations between governments can be positively enabling as seen in the case of India and Nepal in response to the 2015 earthquake. Assuring a brief and regulated window of opportunity within which cross-border skilled responders and material movements can be made free of custom duties can speed and enhance response quality as well as quantity.

People Movements

By allowing regulated cross-border movements during climate change events, including the movement of skilled volunteers, humanitarian agencies and private sector entities, it is possible to improve the quality of response. In the case of Nepal and the Lake Chad region, the ability of non-profits to respond to the needs of communities impacted by crisis situations was positively executed due to the access provided by governments across borders. This helped create local resilience and improved response quality by anchoring it in the affected region itself.

Material Movements

Materials such as hygiene kits, medical goods, shelter materials and other in-kind aid provided by private sector entities and managed by non-profits or other volunteers may not be charged duties during the specific 'response window' time period. The window however should be determined after a participative and agreed upon need assessment, allowing for various players to provide in-kind aid across borders.

Building Regulated and Agreed Safe Zones

Communities displaced due to climate change often first live in unplanned housing and shelters or scattered dwellings, making access to social security services as well as assessments of numbers of persons in need complex. To improve this, governments may create 'safe zones' or buffer regions between borders that are agreed and regulated spaces providing the non-profits, humanitarian agencies and the private sector access in a planned manner to respond to community needs.

Safe zones can be time bound shelter spaces that serve as interim service stations for communities that require assistance. By creating these designated areas, efforts may be more focused towards resolving immediate, mid- and long-term needs by all collaborators including host governments.

Next Steps for Non-Profits

The PwC India Foundation and SEEDS experience provided insights into a mutually beneficial operational dynamic that delivered a community centered, resilience enhancing and sustainable intervention on time. This was possible due to the support of two governments and private sector entities in India and Nepal. Based on our experience of collaborating with non-profit SEEDS for more humanitarian action in the face of four climate change events, we recommend the following:

Engaging with Governments and the Private Sector to Share Knowledge and Expertise

Engaging and sharing feedback on the experience of climate change by vulnerable communities – impacts on health and livelihoods – is essential for sensitising both stakeholder groups. However, providing ready examples of adaptation, anticipatory and other climate resilience related strategies can help both groups analyze evidence to plan support for communities and non-profits addressing these challenges. Knowledge sharing and expertise beyond advocacy can create critical pathways towards collaborations with a shared vision for addressing climate change.

Crisis Response Collaborations Across Borders

In climate-vulnerable regions, creating cross-border relationships with non-profits and private sector entities as well as understanding local governance structures and regulations can help during crisis response preparation. When governments change regulations to allow for cross-border support, sharing skills and knowledge for implementation in neighbouring geographies can be achieved through these relationships, understanding and on-ground presence.

Transparency and Reporting

Donors within the private sector are regulated by reporting frameworks and management systems that measure impacts for investments. While these processes and structural frameworks may be time consuming, meeting reporting standards with full and historic transparency can be reassuring for private sector entities seeking to explore giving in remote and complex environments. By providing confidence to governments and private sector entities through detailed information sharing, sectoral knowledge and comfort is also built and invested in.

Integrating Climate Change Adaptation and Mitigation Strategies Across Programs at the Community Level

While non-profits continue to operate in challenging landscapes across sectors, particularly in the COVID-19 transition stage with limited access and interactions with communities in certain regions, realigning all programs across themes – education, women empowerment, skills training, livelihoods and health – to include a climate component is expected to support the overall effort towards mitigating climate change impacts. All programs at the community level can benefit from a climate change related component – from sustainable agriculture, water conservation and treatment to disaster risk response actions.

As collaborators, non-profits are leaders in identifying the most vulnerable within communities, transforming the most vulnerable into climate champions at the community level is one of the many mediums through which non-profits can contribute to intervention models.

Next Steps for the Private Sector

The historic and emerging role of the private sector in humanitarian response has been central to meeting the needs of affected communities through funding and in-kind donations. While response to climate change related events has usually focused on immediate relief or rebuilding exercises, the private sector can do more. This paper presented various examples of collaborations in technology, shelter, health, education and others. Designing interventions that leverage private sector expertise is possible through engaging with governments and non-profits but may require flexibility. Determining the period of engagement and thematic issues where contributions can be made and communicating these early may help private sector entities in shortlisting areas for collaboration in varied climate affected contexts and needs.

In order to contribute and act impactfully towards delivering a climate action intervention, private sector entities may consider taking the following next steps.

Next Steps for Private Sector



Exploring Collaboration Models

Explore models based on needs, context, thematic areas, communities addressed, geographies and other modalities related to the climate change event or threat.

Leveraging Networks

Leverage international and local level network collaboration opportunities to effectively respond and coordinate during an extreme weather event.

Demonstrating On-Ground Presence Through Participation

Actual in-person on-ground engagements, may help private sector in understanding challenges and sharing knowledge with collaborating partners and communities.

Strategic Giving

Giving may no longer be limited only to funds and fund raising; it is a strategic sharing of resources including skilled personnel for capacity building and strengthening or giving in-kind.

Building Back Better: Resilience for Recovery

Private sector collaborations with governments and non-profits hold the potential to limit the spread of damage and losses caused by climate change events, strengthen community resilience and reinvigorate local governance.

Exploring Collaboration Models

Guidance towards designing an integrative collaboration model has been provided above, however as private sector engagement is a constantly developing area, expanding the existing range of models as they are conceived and implemented is important. Models can be explored basis needs, context, thematic areas, communities addressed, geographies and other modalities related to the climate change event or threat. While selecting or developing a model, determining the parameters for measuring success or impact will assist in providing intelligence to other stakeholders.

Leveraging Networks

Through partnering with local private sector entities related to the wider network, private sector collaborators can add more value to their giving. Local private sector partners can similarly benefit from global or international private sector leaders seeking local level network collaboration opportunities. While response time is critical in climate change events, building and leveraging these networks in anticipation of climate events and future challenges is desirable.

- Critical infrastructure such as communications, healthcare, some power Transmission and Distribution utilities are largely owned by the private sector and will have a specific role to play to support governments in tackling climate emergencies.
- Start-ups with innovative climate/social protection solutions, as well as collaboratives that brings together such start ups can be leveraged.
- Academia, including private institutions can play a big role in bringing innovation from labs to field. Government funded institutions have project budgets that allow them to contribute pro bono for state welfare.

Demonstrating On-Ground Presence Through Participation

By bringing resources, knowledge and skillsets to collaborations, private sector collaborators add value to and mobilize model interventions. However, by demonstrating a willingness to participate on-ground while assessing needs, seeking feedback from communities and delivering solutions, particularly in a COVID-19 impacted environment is a prerequisite not only for building confidence but also towards improving solutions. Through actual in-person on-ground engagements, private sector entities at all levels may benefit from understanding challenges and sharing knowledge with collaborating partners and communities.

Strategic Giving

Giving may no longer be limited only to funds and fund raising, it is a strategic sharing of resources including skilled personnel for capacity building and strengthening or giving in-kind. New technologies and developments allow for exploring strategic giving opportunities at different levels – to governments, communities and non-profits. Similarly, giving over a period, in short bursts, as needs arise and even after projects are delivered to help sustain more long-term models that may be occasionally revisited.

Strategic giving, driven by deep contextual understanding and government regulatory support is expected to assist in solving climate change and displacement related issues that are complex and varied.

Building Back Stronger: Resilience for Recovery

Private sector collaborations with governments and non-profits hold the potential to limit the spread of damage and losses caused by climate change events. Given the criticality of response time in climate events as well as the need to address underlying factors causing slow-onset climate events, it is imperative that future collaborations are agile and flexible to on-ground realities.

Strengthening at risk communities while reinvigorating local governance units and structures as we emerge from a COVID-19 transition phase will be an important area for focusing collaborative efforts. The resilience of public institutions in health and education will be of significance as both sectors require support for establishing stronger and more skilled communities. Efforts in digitization, building climate resilient architecture, supporting sustainable agricultural practices and improved access to health services with measured outcomes will also contribute towards efforts for resilience and recovery from COVID-19.

Through cases and examples highlighted in this paper, we conclude that by leveraging presence, expertise, networks and capacities of diverse stakeholders, governments can respond quicker and more impactfully.

The journey to achieving the goal of a climate safe future must not be travelled alone but instead with stakeholders who seek to add value and share responsibilities while standing shoulder-to-shoulder with governments, to serve the most vulnerable within and across borders.



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