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Addressing climate change adaptation in fragile settings and conflict-affected countries: Lessons learned from the Adaptation Fund's portfolio



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List of Acronyms

ADB	Asian Development Bank
AFCIA	Adaptation Fund Climate Innovation Accelerator
СВО	Community-based organization
CSO	Civil society organization
EDA	Enhanced Direct Access
EEs	Executing Entities
EWS	Early Warning System (s)
FAO	Food and Agriculture Organization
FCAS	Fragile and Conflict-Affected States
GAP	Good Agricultural Practice
GCF	Green Climate Fund
ICRC	International Committee of the Red Cross
ICVA	International Council of Voluntary Agencies
IE	Implementing Entity
IFAD	International Fund for Agricultural Development
IPCC	Intergovernmental Panel on Climate Change
MIEs	Multilateral Implementing Entities
MIMUSA	Multidimensional Integrated Stabilization Mission in Mali
MTR	Medium-Term Review
NIE	National Implementing Entity
NGOs	Non-governmental organizations
NMHS	National Meteorological and Hydrological Services
The Board	Adaptation Fund Board
The Fund	Adaptation Fund
UNDP	United Nations Development Programme
UNFCCC	United Nations Framework Convention on Climate Change
WMO	World Meteorological Organization

Executive Summary

Climate change presents a pressing global challenge. However, adverse impacts such as extreme weather events, resource scarcity, and population displacement, can be especially detrimental in conflict-affected and fragile states. Such countries face intricate challenges that further exacerbate security issues.

This study examines efforts of the Adaptation Fund (the Fund) to address climate change adaptation and build resilience in fragile and conflict-affected countries. It highlights key findings, challenges, and opportunities from these projects, providing insights to improve future interventions.

The study methodology included an extensive desk literature review and synthesis of Fund policies and guidelines related to the study, and a review of the selected project documents. Semi-structured interviews were conducted with project leaders to understand the project approaches, their effectiveness and lessons learned.

The findings reveal various **challenges** in implementing climate change adaptation projects in fragile settings. In Syria, for example, insecurity and shortages of skilled workers pose significant risks to success. Ethiopia faces challenges related to instability and unpredictable weather patterns, while Mali contends with droughts, floods, and the threat of violent extremism and terrorism. The Volta Basin Authority countries in Africa (Burkina Faso, Mali, the Republic of Benin, and Togo) encounter obstacles due to political instability and weak rural infrastructure. Moreover, continuous government restructuring disrupts and delays Fund projects in some countries.

Despite the challenges, the study identifies **opportunities** for improving climate resilience in fragile contexts. It underscores the importance of approaching risk management differently when working in conflict-affected states, acknowledging their unique challenges. Institutional mechanisms can play a crucial role in mitigating risks, and interdisciplinary and coordinated strategies hold promise for successful climate finance.

Several **lessons** have resulted from the analysis of the case studies. They include:

- In fragile and conflict-affected states, investing in capacity building and strengthening institutions to deliver climate financing effectively is essential.
- Ensuring local ownership of climate finance projects is essential for sustainability and success.
- Climate finance projects in these settings must be flexible and



AF staff visit to drought-affected area in Ghana project where an integrated flood and drought management system is being developed. (Photo by Adaptation Fund)

adaptable to changing circumstances on the ground.

- Building strong partnerships between governments, international organizations, civil society, and the private sector is essential for adequate climate financing in fragile and conflict-affected states.
- Monitoring and evaluation are critical for climate financing projects in fragile and conflictaffected states as these often encounter challenges that lead to project extensions and increased costs; furthermore, project objec-

tives and outcomes may need to be adapted in response to shifting priorities and the evolving environment in such settings.

Overall, the study emphasizes the need to address climate change in the context of fragility, recognizing its potential to exacerbate challenges in vulnerable regions. The Fund's portfolio includes projects in such contexts, reflecting its commitment to resilience-building. By drawing lessons from past experiences, the Fund can better shape future interventions in fragile settings.



Stakeholder engagement meeting in Ghana. (Photo by Adaptation Fund)

Introduction

The frequency of violent conflicts worldwide has risen dramatically over the past decade, leading to enormous human suffering. Conflict is a significant factor in the vulnerability of humans to climate change. Organizations and services necessary for society to deal with the effects of climate change are undermined by conflict and fragile situations, which create weak institutions (Goodman and Baudu, 2023; Hendrix et al., 2023; Pelling and Uitto, 2001). Conflicts and fragility damage livelihoods, weaken social cohesiveness, and exacerbate poverty. Additionally, they divert authorities from the challenges of development, including climate threats to other security concerns (Hendrix et al., 2023; Nevitt, 2023).

The Intergovernmental Panel on Climate Change (IPCC) 2022 Sixth Assessment Report (AR6) on impacts, adaptation, and vulnerability underscores the interconnectedness of conflict and climate adaptation. While socioeconomic conditions and governance primarily drive violent conflict, the adverse impacts of climate change heighten risks for people living in conflict-affected areas. The report warns that more frequent climate shocks and extremes can increasingly affect intrastate conflict by exacerbating vulnerabilities. However, the report also highlights that adaptation efforts can reduce the volatility generated by climate shocks. In addition, adaptation can address compounding risks faced by vulnerable populations in regions likely to experience both climate shocks and enduring conflict.

The IPCC report highlights the urgency of adaptation action to address compounding risks faced by vulnerable populations living in regions susceptible to both climate shocks and enduring conflict. By heeding these warnings and drawing insights from past experiences, the Adaptation Fund can refine its interventions to tackle climate change and promote sustainable development in fragile settings more effectively. Addressing the adverse impacts of climate change in conflict-affected areas is vital to safeguarding the well-being and resilience of vulnerable communities, while also supporting the broader goals of global climate adaptation and mitigation efforts.

Adapting to climate change is now recognized as a moral, economic, and environmental imperative. "Investing in adaptation is not an acceptance of defeat and failure, but rather a proactive approach to build resilience and safeguard the future against the impacts of climate change. It's accepting reality" (Christina Chan, personal communication, 2021; Soanes et al., 2021).

While there is evidence of direct co-relationships between the escalation of the climate crisis and intensification of severe armed conflicts, the climate crisis does not fuel all armed conflicts. In fragile and conflict-prone settings, climate change is particularly risky as climate impacts can accelerate political instability, food insecurity, economic weakness, and large-scale movement of people, all drivers of conflicts. One of the global decisions to advance climate adaptation was the establishment of the Adaptation Fund (the Fund). The Fund, established by the United Nations Framework Convention on Climate Change (UNFCCC), assists developing nations in adapting to the challenges posed by climate change and variability. The Fund finances projects and programmes that help vulnerable communities in developing countries adapt to climate change by supporting initiatives based on country needs, views, and priorities (Adaptation Fund, 2023a). In line with its mandate, the Fund finances projects that help vulnerable communities adapt and build resilience to the harmful effects of climate change through various coping mechanisms. Its strategy allows communities to develop their own responses to challenges posed by climate change and variability. In addition, the Fund provides an innovative direct access modality. This allows accredited national and regional institutions in developing countries to access financing and manage projects directly without the help of intermediaries.

The Fund supports concrete adaptation activities with tangible results and benefits for the most vulnerable countries and communities. Its portfolio includes various innovative funding windows designed for different stakeholders that promote direct access to finance for effective adaptation:

 Small Grants Projects through Direct Access Modality under the Innovation Facility: This window supports smallscale adaptation projects with a direct and streamlined approach, enabling local organizations and communities to access funding for innovative and practical adaptation initiatives.

Adaptation Fund Climate Innovation Accelerator (AFCIA): The AFCIA targets a broad range of potential finance recipients, including governments, non-governmental organizations (NGOs), community groups, entrepreneurs, young innovators, and other groups with innovative ideas for climate adaptation. Enhanced Direct Access (EDA) Projects: The EDA window provides subnational institutions and civil society organizations (CSOs) with direct access to finance for adaptation initiatives. The EDA window enhances local ownership and participation, empowering communities to implement climate adaptation projects tailored to their specific needs.

The Fund's comparative advantage lies in its robust funding policies and efficient operational and access processes. The Fund is known for swift proposal approval, ensuring timely and high-quality support to developing countries for their climate adaptation efforts. Emphasizing the principles of quality, ownership, and local participation, the Fund strives to empower communities and foster resilience-building at the local level.

With the recent success of its First Medium-Term Strategy (MTS1), the Fund is capitalizing on the lessons learned and the achievements made during this period. The newly approved Medium-Term Strategy 2023-2027 (MTS2) aims to consolidate the gains of the first strategy while increasing ambition under each strategic pillar. The Fund will continue financing adaptation actions, innovations, and learning and sharing to further support vulnerable communities' climate resilience. Additionally, the MTS2 introduces a crosscutting strategic emphasis on promotion, seeking to strengthen the linkage and synergies between strategic pillars to enhance the overall impact of the Fund's interventions.

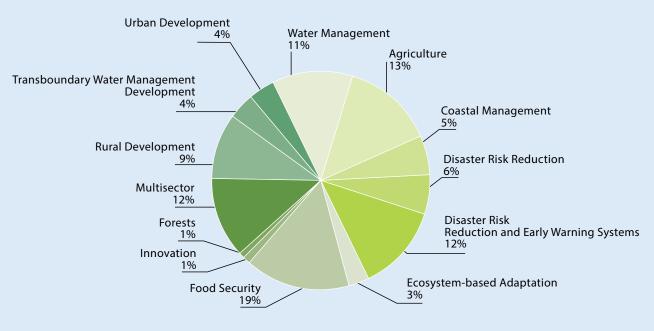
Impact Indicators: some of the impact indicators used by the Fund to measure the effectiveness of its climate adaptation projects include:

- Number of vulnerable communities and households benefiting from adaptation projects
- Increase in climate resilience and adaptive capacity of communities

- Reduction in climate-related risks and vulnerabilities
- Area of ecosystems restored or
- protected to enhance climate resilience
- Number of climate-resilient infrastructure projects implemented
- Increase in agricultural productivity and food security in targeted regions
- Reduction in disaster losses and damages due to climate-induced events
- Number of innovative climate adaptation practices adopted and scaled up

Due to the complex facets of climate change, the Fund works in diverse sectors, including Agriculture, Coast Zone Management, Disaster Risk Reduction, Food Security, Forest, Climate resilience, Ecosystem-based Adaptation, Rural Development, Water Resources Management, Infrastructure, Health and Urban Resilience (Fig 1).

Figure 1. Adaptation Fund investments by sector as of September 30 2023 (US\$ millions)



Source: Adaptation Fund 2023.

This study presents an overview of the Fund's experience and lessons learned from addressing climate change adaptation and strengthening long-term resilience to climate change in fragile and conflict-afflicted countries. In addition, it documents case studies from the Fund's portfolio to advance understanding among the wider adaptation community.

Limitations of the study

As defined by the Terms of Reference, research relied predominantly on desk reviews and analyses of relevant documents. These were validated by virtual consultations with Implementing Entities (IEs). Field investigations that engaged with beneficiaries would have augmented the depth of research, especially regarding impact in fragile environments. The restricted number of projects reviewed was an additional limitation.



AF-funded community-based adaptation project aimed at adapting to extreme rainfall and flooding, and creating alternative livelihoods and training among young persons in Rwanda. (Photo by Adaptation Fund)

Methodology

The study focused on assessment of adaptation projects financed by the Fund in some fragile and conflict-affected countries. Data generation and information gathering, and analysis were geared towards addressing the following key areas:

- Adaptive management: how IEs cope with major uncertain situations during implementation
- Risk and uncertainties: how projects are helping build resilience against climate risk and uncertainties and the interlink to fragile and conflict situations
- Capacity-building and enabling environment: how these were affected by conflict and fragile situations
- Complementarity with other humanitarian and development partners
- Assessment of how fragility has been included in project design and implementation

The study had two phases: **the first phase** drew on extensive desk literature reviews and synthesis of Fund policies and guidelines, as well as in-depth understanding of selected project documents. The documents reviewed included a) the newly approved MTS2; b) Envi-

ronmental and Social Policy; c) Annual Performance Reports (2019-2022); and d) Fund Policy on delays and analysis for reasons for delays.

Other documents extensively reviewed included Project Performance Reports, Mid-Term Reviews (MTRs), Project Completion Summaries, Project Monitoring Missions and Terminal Evaluations (where applicable). In addition, World Bank (n.d.), International Committee of the Red Cross (2002) and Overseas Development Institute (2021) were consulted.

The second phase consisted of structured but open-ended questionnaires that were designed as a data-collection instrument. The questionnaires, shared by email with IEs, were followed by Zoom meetings with respondents from projects in countries chosen due to their conflict and fragile situations. These included Ethiopia, Mali, Syria, and a regional project comprising countries in the Volta River Basin in West Africa (Table 1). The Fund does not categorize countries with such criteria, and the study's use of them for analysis does not imply the Fund's endorsement. Table 1 ranks countries in terms of fragility according to the Fragility State Index (FSI).

Table 1. Fragile States Index 2022

Country	Fragile States Index	Rank
Syria Arab Republic	108.4	1
Ethiopia	99.30	2
Republic of Niger	95.20	4
VBC		
Burkina Faso	90.5	7

Country	Fragile States Index	Rank
Côte d'Ivoire	89.6	6
Mali	98.6	3
Republic of Benin	72.5	9
Тодо	83.6	8

VBC = Volta Basin Countries (Ghana is strong member country of VBC but not considered a fragile state). Source: Hendrix et al., (2023).



Increasing the adaptive capacity of natural systems and rural communities to climate change impacts in Rwanda. (Photo by Adaptation Fund)

Climate crisis in the face of conflict and fragile situation: Matters arising

Climate change is a threat multiplier (De Lorenzi et al., 2017), and has severely impacted several regions. It has been established that stresses from climate change may increase the likelihood of violent conflict without prompt action. Numerous world leaders and academics identify the Sahel (which has greatly suffered the consequences of climate change) as a "hotspot for climate-related instability". The most vulnerable fragile nations have limited adaptability. Consequently, stresses caused by climate change may increase the likelihood of violent conflict, if prompt action is not taken (Tänzler et al., 2010). Fragility, conflict, and violence (FCV) are significant development issues threatening attempts in low-income and middle-income countries to end extreme poverty (Martin et al., 2022; Quevedo and Cao, 2022; Schoenefeld et al., 2022; Sturridge, 2023).

The climate crisis has increasingly become entwined with the challenges of conflict and fragility, drawing attention from both academic literature and reputable organizations such as the IPCC and the International Committee of the Red Cross (ICRC). IPCC reports, including AR6 released in 2021, have underscored the severe impacts of climate change on regions already grappling with fragility and conflict (Robinson, 2020). While the causes of violent conflicts are often rooted in socioeconomic conditions and governance, climate change serves as a potent exacerbating factor, heightening vulnerabilities in these contexts.

Within the realm of climate finance in fragile settings, the ICRC policy brief has identified significant barriers and obstacles hindering progress. Risk aversion stands as a primary concern, with potential donors and financing institutions hesitant to invest in projects in regions affected by fragility and conflict due to perceived risks related to security, political instability, and uncertain project outcomes. Additionally, the inflexible bureaucracy characteristic of traditional climate finance mechanisms may prove unsuitable for fast and adaptive responses demanded in fragile situations, impeding the effective implementation of projects.

To address these complex challenges, it is crucial to adopt conflict-sensitive adaptation approaches. Acknowledging the potential for climate adaptation measures to either exacerbate or mitigate existing conflicts, these approaches emphasize the need for understanding and addressing the social, political, and economic dynamics at play in fragile contexts. Tailoring climate finance interventions to



AF project in Rwanda is using agricultural terracing and improved drainage to help vulnerable communities adapt to flooding. (Photo by Adaptation Fund)

the specific circumstances of each region and promoting coordination, flexibility, and conflict sensitivity can advance climate resilience in conflict-affected and fragile settings.

By 2024, the total population living in extreme poverty where FCV is present could be higher than in places where there is no FCV. By 2030, about 59 per cent of the world's poorest people will live in countries where FCV is a problem (World Bank, 2021, 2022). The concept of "fragility" is intricate and multidimensional (Arcagni et al., 2019). Fragility is still not universally understood, and scholars, practitioners, and policymakers have various ideas about it.

The FSI is a yearly assessment of 178 countries based on a measurement of each country's social, economic, and political constraints (Messner, 2017). The Index is built on a content analysis platform (using computers to assess tens of millions of

gualitative data points) and then triangulated with guantitative data and gualitative research inputs. Fragility and resilience are easier to explain than to define (Bosetti et al., 2016; de Boer et al., 2016). Fragility occurs when a country is unable to carry out its essential tasks due to the manifestation of internal and external Political, social, dangers. economic, and environmental risks might all exist. Certainly, thousands of hazards can contribute to fragility, yet only a handful have been demonstrated to connect with the breakdown of functions and services (Muggah, 2015).

Fragility combines risk exposure and insufficient coping capacity for the state, system, and/or communities to manage, absorb, or reduce those risks (Chianca, 2008). Violence, the breakdown of institutions, displacement, humanitarian crises, and other emergencies can all result from fragility. State fragility is closely linked with security issues at the top of donor countries' foreign policy agendas (Faust et al., 2015; Grimm et al., 2014). Generally, a "fragile state" cannot deliver essential services and public goods, compromising its legit-imacy (de Boer et al., 2016). This threatens

livelihoods, worsens the economy, and increases the risk of armed conflict and human insecurity. There are five characteristics of fragility: economical, environmental, political, security, and societal. These dimensions are listed in Table 2.

Dimensions	Explanations
Economical	Economic fragility includes macroeconomic shocks, unequal growth, and excessive youth unemployment. Risk variables include resource rent dependence, the number of vulnerably employed as a percentage of total employment, government debt, young unemployment, aid dependency, gross domestic product growth, and unemployment. Indicators of coping abilities include education, government regulation, distance from global markets, and the split between men and women in employment. The economy is supported by food security.
Environmental	Environmental fragility exposes populations to environmental, climatic, and health threats. Risk factors include natural disasters, air, water, and sanitation quality, infectious disease, uprooted people, and household livelihoods. Climate change raises environmental risk in vulnerable contexts. Strong civil society, rule of law, and food security reduce risks.
Political	Political fragility includes political inclusivity (including elites), transparency, corruption, and society's ability to adapt and resist repression. Regime persistence, state-sponsored violence or political terror, and corruption are risks. Elections, judicial and legislative restrictions on authority, and government accountability are all risk-mitigating capacities. Rape and domestic violence laws show how responsive the state is to a serious fragility.
Security	The term "security fragility" refers to a society's susceptibility to all types of crime and violence, both state-sponsored and otherwise. Homicides, violent organized crime, deaths caused by terrorists or other non-state actors, casualties in conventional wars, and domestic violence all serve as indicators of risk. The prevalence of the rule of law, the amount to which the state has authority over territory, and the existence of institutional alliances associated with decreased interstate conflict are all indicators of coping capacity.
Societal	Societal fragility is a society's susceptibility to risks that affect how well it works. These risks can come from both vertical and horizontal gaps, such as differences between groups that are culturally defined or created and social cleavages. Risk factors include vertical income inequality and gender-based social inequality, as well as the growth of cities and the number of people who have to move. The strength of civil society, the degree to which individuals have access to justice and a voice, and the amount to which the state is responsible to the people are all significant determinants of a society's capacity to cope with challenges.

Table 2. Five dimensions of fragility

Source: The OECD fragility framework - Abel et al., (2016).



A village in Ghana uses river level markings to indicate when local communities should seek shelter. (Photo by Adaptation Fund)

Results of the evaluation

Results of the portfolio assessment are presented as case studies and lessons learned from the four projects. This review considered the countries in this order: Ethiopia, Mali, Syria Arab Republic, and the Volta Basin Countries. The Fund's support in the context of fragile and conflict-affected regions plays a crucial role in addressing the challenges posed by the climate crisis in vulnerable areas.

Despite the complexities and risks associated with such contexts, the Fund remains committed to assisting these regions in building resilience and adapting to the adverse impacts of climate change. Through targeted interventions and projects, the Fund aims to enhance the capacity of countries facing fragility and conflict to cope with climate-related challenges. By prioritizing their support in these regions, the Fund recognizes the unique vulnerabilities and urgent needs of communities and seeks to promote sustainable development in the face of multiple challenges. Results of the portfolio assessment are presented as case studies to provide a comprehensive understanding of the Fund efforts and experiences in addressing climate change adaptation in fragile and conflict-affected regions.

These case studies offer valuable insights into the strategies, successes, and challenges encountered in different contexts worldwide. By drawing lessons from these case studies, the Fund aims to refine and improve its future interventions, ensuring they are tailored to the specific needs and complexities of these vulnerable settings.



The use of elevated water storage tanks allows the efficient use of drip irrigation to combat drought in AF-funded project in Ethiopia. (Photo by Antonio Perez)

Ethiopia: Climate-Smart Integrated Rural Development

Project amount: USD 9,987,910 Implementing Entity: Ministry of Finance and Economic Cooperation of the Federal Democratic Republic of Ethiopia Implementation period: 2017-2022 (completed)

Background

The project targeted seven highly vulnerable "woredas" (districts) that cut across various areas of different environmental challenges. These included Harera (arid region), Dire Dawa and Tigray (semi-arid) and Oromia, SNPP and Amhara (mixed area). These areas have something in common: they have long been neglected and have had no prior similar development intervention. Therefore, the Ministry of Finance was accredited as a National Implementing Entity (NIE). The project's identified components comprised: (i) awareness and ownership of adaptation plan at the local level; (ii) integration of climate-smart water management plan; (iii) climate-smart agriculture, which integrated land-water-forestry solutions; (iv) livelihood development; and (v) capacity-building. By design, rural infrastructure development was the critical sector with great emphasis on water supply for domestic and agricultural purposes, which was vital for the sustenance of beneficiaries. Overall, the project drilled shallow wells, constructed elevated reservoirs and watering points for livestock, and installed solar panels and submersible pumps and equipment that allow water reuse, recycling, and rationing.

Achievements

- Successfully executed the procurement of consultancy services to undertake studies, desk review, and prepare the climate-smart development plan.
- Implemented activities as planned, contributing to enhanced resilience of communities.

Promoted and adopted climate risk-tolerant crops/varieties and climate-resilient agronomic systems and technologies to mitigate the risk of late rain and improve agricultural resilience.

Adopted an integrated approach, combining restoration of degraded landscapes, agricultural practices, alternative income-generation measures, and access to water, to build resilience towards the impacts of climate change.

Conducted an intense training programme on business skills, financial management, and entrepreneurship when setting up user groups, enhancing their capacity to manage and sustain project interventions.

Conflict/Fragile Dimension to the Project

The project was successfully implemented in the Region of Oromia, Amhara, SNPP and semi-autonomous regions of Dire Dawa and Harera. However, it was unable to undertake meaningful adaptive development activities in Tigray, where there were severe armed conflicts between the Government Forces and the Tigray Defensive Force. Aggravated security concerns, which prevented contractors from entering the field and displaced people, did not help matters either. In Ethiopia, the conflict/uncertain situation related to project implementation was dire. The major challenges emanating from these situations were insecurity, resulting in project delays. Due to insecurity, most materials purchased for the project have not yet been delivered to the site.

Adaptive Mechanisms

The project, implemented between 2017 and 2022, emphasized rural development, targeting six regions and seven woredas. These sites were selected based on their vulnerability to climate change hazards, notably the sharp variability in rainfall, which increases the frequencies of drought and flooding. The project management reported that most regions were relatively peaceful and facilitated implementation of activities. The exceptions were site locations in the Tigray Region, where escalated political crises resulted in serious armed conflicts that displaced some people and prevented contractors and staff from assessing the sites. The project generally adopted the strategy of strengthening institutional capacity to reduce risks associated with climate-induced socioeconomic and environmental losses. It also created awareness and ownership of local adaptation activities, which reduced climate risks. It facilitated

the availability and quality of water for domestic and agricultural purposes. Some of these areas, however, had high levels of fluoride in the groundwater. To support the community, the project engaged municipal authorities to help with water purification since it had not allocated any funds to address polluted groundwater.

Resilience Consideration

The project helped build ecosystem resilience in response to climate change and variability-induced stresses. Water stress, a common climatic occurrence, was assuaged by providing an excellent underground source of potable water. The water facilities also helped drastically limit the conflict between crop farmers and livestock herders, even if this was a localized experience. In addition, the project engaged the various communities and stakeholders to allow common training on using the water facilities. Cooperation and understanding reached are now being leveraged to develop a similar project but with greater scope through the Green Climate Fund (GCF). Knowledge gained from the project will help the GCF project reach as many as 66 woredas. Some risk factors affecting implementation of Fund projects in Ethiopia include the following:

Financial and natural resources are limited, which also limits the ability to invest in the infrastructure and resources necessary for climate change adaptation (i.e., drought-resistant crops, water storage facilities, and irrigation systems). Political instability, ethnic conflict, and violence created significant challenges for implementing climate change adaptation activities. This has disrupted infrastructure development, especially in Southern Tigray.

- Limited access to technology (i.e., information and communication technology) has affected implementation of the climate change adaptation projects.
- Infrastructure (i.e., tables and chairs) is lacking in most offices.
- Local communities lack awareness. This limited the willingness of communities to participate in climate change adaptation activities and reduced effectiveness of awareness-raising campaigns.

Capacity constraints

Capacity was assessed on three levels: (i) project management; (ii) community and beneficiaries; and (iii) service providers/ contractors engaged. Project managers were qualified and experienced professionals and highly knowledgeable in their fields. In terms of community and beneficiaries' capacity, project management conducted training, especially for the beneficiaries, to manage water facilities provided by the project. However, capacity-building was impaired in regions with conflict. The experience and expertise gained through implementing Fund projects have built the capacity of stakeholders and helped Ethiopia access the Green Climate Fund (GCF). Ethiopia has accessed financing from the GCF, and the Fund has played a role in this success. For example, the experience gained through

implementing Fund projects helped Ethiopia develop robust project proposals and build strong partnerships with international and local stakeholders.

Complementarity with other Humanitarian and Development Partners

The cooperation and understanding reached through the project are now being developed for a similar project through the GCF that will scale up to deliver greater scope. The knowledge gained from the Fund's project will help the GCF project reach as many as 66 woredas. The capacity and expertise acquired through implementation of the Fund's project have significantly strengthened capabilities of stakeholders in Ethiopia. This invaluable experience has enhanced the nation's resilience to climate change and played a pivotal role in facilitating access to GCF funding. It can easily be claimed that the valuable insights gained from executing the Fund's project were partially responsible for Ethiopia's success in securing financing from the GCF. One noteworthy outcome of this collaboration is the development of robust project proposals that align with international climate adaptation objectives. The experience garnered from managing the Fund project has empowered Ethiopian stakeholders to craft well-structured and comprehensive proposals that are effective in addressing climate challenges and resonate with the priorities of international donors. Furthermore, partnerships forged during implementation of the Fund project have proven

instrumental in navigating the complex landscape of climate finance. These partnerships extend beyond national boundaries and encompass both international and local stakeholders. Ethiopia's ability to build strong and enduring relationships with various partners has bolstered access to critical funding and resources for climate adaptation initiatives.

Resilience Consideration/Assessment of how fragility has been included in project design and implementation

The impact of armed conflict was probably not foreseen at project design. Therefore, project activities were tailored towards adaptation to stem the tide of climate challenge in the designated regions. However, with the outbreak of armed conflict, the situation introduced significant challenges, disrupting project activities, inflating costs, and endangering the safety of project staff and local communities.

Despite these challenges, the project helped build increased ecosystem resilience in response to climate change and variability-induced stresses. Water stress, a common impact of climate change, is assuaged by the provision of an excellent underground source of potable water. The water facilities also helped to drastically limit the conflict between crop farmers and livestock herders, even if this was a localized experience. In addition, the project engaged various communities and stakeholders to enable common training on use of water facilities.



Solar panels in Ouagadougou, Burkina Faso. A picture chosen from AF Photo contest focused on the theme of "urban adaptation and resilience". (Photo by Adaptation Fund)

Syria Arab Republic: Increasing the climate change resilience of communities in Eastern Ghouta in Rural Damascus to water scarcity challenges through integrated natural resource management and immediate adaptation interventions

Grant amount: USD 9,997,156 Implementing Entity: United Nations Human Settlements Programme (UN-Habitat) Implementation period: 2021-2025 (under implementation)

Background

The project comprised the following components: (i) integrate urban-rural natural resources, including water and land management, to cope with climate change; (ii) increase access to climate change-resilient water supply systems for urban and agricultural purposes (i.e., avoid/minimize waste of water); (iii) increase resilience of water-dependent livelihoods and security of income for vulnerable groups. Although the IEs thought Syria was a post-conflict country, the prolonged conflict-affected implementation of activities. In response, component (ii) addressed climate challenges that could lead to political and community violence escalations. Through effective consultations, the project management directly targeted people's needs and helped preserve the delicate peace in the region. Unforeseen circumstances, occasioned by the region's fragility, included inflated prices for project activities and damaged infrastructure during violent periods. These all led to a slow pace of implementation. Details are shown below.

Achievements

- Supported implementation of sustainable agricultural practices in Syria to enhance climate resilience and food security.
- Contributed to establishment of EWS for natural disasters in the project area, helping reduce the risks and impacts of extreme weather events.
- Worked towards improving water resource management, aiming to enhance water availability and efficiency in the face of climate change challenges.
 Actively engaged local communities and various stakeholder groups in designing and implementing adaptation measures. This involvement has ensured the project's technical specifications address community needs and increased the efficiency of project implementation.
- Built capacities of local communities and organizations to adapt to climate change. This includes providing training on sustainable agricultural practices, water resource management, and disaster preparedness.
- Established sustainable and climate change-resilient water supply systems for urban and agriculture purposes.

 Established sustainable and climate change-resilient irrigation systems and agriculture practices, and security of income.

Contracting was delayed for some activities because of the long procurement process. This affected the implementation time frame and schedule of activities. However, this risk was rated as low. To mitigate the risk, EEs ensured continuous follow-up on all procurement process steps and adjusted the workplan to ensure delivery of activities before the end date.

Conflict/Fragile Dimension to the Project

In post-conflict Syria, the project faced several conflict/fragile dimensions: (i) the crisis resulted in severe insecurity concerns, posing dangers to the safety of IEs and stakeholders implementing projects; (ii) the conflict/fragile situation has also affected governance structures and institutions, which hampered the government's capacity to coordinate and manage adaptation programmes effectively; (iii) most skilled individuals have been forced to flee their country due to security concerns, leaving staff without adequate capacities to carry out projects; (iv) the crisis has intensified social tensions and divides among Syrian communities, which may limit the successful execution of adaptation initiatives.

Adaptive Management

The post-conflict situation is fragile due to population displacement, physical destruction of infrastructure, economic crisis, weak governance, and delicate security. These factors will continue to present substantial obstacles to recovery and reconstruction. Consequently, the country will require significant support and assistance from the international community to overcome these obstacles. Thus, implementation was slow because of inflation. The challenges faced by the staff, beneficiaries, IEs, and contractors included: (i) insecurity of the IEs, beneficiaries, and contractors due to the dangers to life and property. Consequently, they were in most cases unable to access project sites; and (ii) a dearth of skilled labour due to the ongoing crisis, as most skilled workers have left the country. This has compelled the IEs to engage in significant capacity-building for all stakeholders to implement activities. The Farmers Field School, for example, helps farmers increase their capacity to implement good agricultural practices.

Risk and Uncertainties

In the context of post-conflict Syria, some risks and uncertainties emanating from conflict/fragile dimensions to Fund projects include: (i) the severe insecurity concerns that posed dangers to the safety of IEs and stakeholders that are implementing projects; (ii) the conflict/fragile situation that also affected governance structures and institutions, hampering the government's capacity to coordinate and manage adaptation programmes effectively; and (iii) the intensification of social tensions and divides among Syrian communities, which may limit the successful execution of adaptation initiatives.

Capacity Constraints

All aspects of the Syrian economy were affected by the violence. This led to weak staff capacity due to the brain drain of qualified personnel fleeing the conflict areas. The project augmented this with training and retraining at every national, regional, and local level. The method adopted for effectiveness is training trainers, promotion of good agricultural practices and climate-smart agriculture. Implementing projects has helped the country build capacities of stakeholders (i.e., government agencies, CSOs, local communities, and private sector actors). This has enhanced stakeholders' skills, knowledge, and resources to design, implement, and manage adaptation projects effectively.

Complementarity with other Humanitarian and Development Partners

In line with the mandate of UN-Habitat, which acted as the IE, project activities focused on technical issues related to adaptation. There were no humanitarian activities, which was beyond the project's scope. However, UN-Habitat noticed that some UN agencies involved in humanitarian activities and other international humanitarian NGOs were active in the areas where the project was implemented.

Resilience Consideration/Assessment of how fragility has been included in project design and implementation The fragility situation was already rife during the conception and design of the project in Syria. Therefore, some considerations towards building resilience to climate change and fragility were embedded in the design. These activities included establishing EWS for natural disasters; improving water resource management and EWS for natural disasters; and improving water resource management, and stakeholder engagement and consultations.



Communities adapting to drought and floods through improving water security and sustainable forest agricultural approaches in Dominican Republic. (Photo by Adaptation Fund)

Mali: Programme Support for Climate Change Adaptation in the vulnerable regions of Mopti and Timbuktu

Grant amount: USD 8,533,348 Implementing Entity: UN Development Programme (UNDP) Implementation period: 2015-2020 (completed)

Background

The programme's main objective is to increase resilience of vulnerable communities and their adaptive capacity to climate change in the regions of Mopti and Timbuktu, including the Faguibine system zone. The programme has three components: (i) enhanced water control measures in vulnerable water buffer zones, which have the outcome of increased climate change resilience of local water systems in Mopti and Timbuktu regions; (ii) resilience in subsistence livelihoods of vulnerable communities with the planned outcome of enhancing the production of local livelihood systems such as agriculture, fisheries, livestock, and forest under climate change; and (iii) capacity-building and knowledge generation for adaptation to enhance adaptation capacity of local institutions and of communities. Development of six market gardening perimeters of Timbuktu were delayed because of early flooding on the sites. In addition, growing insecurity in the areas concerned made suppliers reluctant to supply with cereal banks with grain. Apart from these set-backs, the other activities planned were carried out correctly and on time. Details are shown below.

Achievements

Increased climate change resilience of local water systems in the Mopti and Timbuktu regions, which helped improve water accessibility and management for communities.

Enhanced production of local livelihood systems such as agriculture, fisheries, livestock, and forest under climate change and completed risk and vulnerability assessments.

Increased the capacities of over 400 staff from local institutions and communities to better adapt, mitigate, and report to extreme weather events; this involved knowledge-sharing, training, and building local expertise in climate change adaptation.

 Improved integration of climate-resilience strategies into country development plans, which supported development of national policies and strategies to address climate risks.

Increased adaptive capacity within relevant development sector services and infrastructure assets by establishing over 200 services to respond to new conditions resulting from climate change related events.

Conflict/Fragile Dimension to the Project

Organized crime, especially terrorist attacks, was common in some project areas,

particularly around Timbuktu. On several occasions, the project team was displaced due to insecurity. In some places, armed bandits destroyed project infrastructure. The situation was further aggravated by the COVID-19 pandemic, which limited free interactions. In addition, Mali is highly susceptible to the effects of climate change, including droughts, floods, and desertification, which can potentially worsen the country's already pressing security challenges. Although the Mali government is preoccupied with security, environmental issues like climate change and environmental degradation are essential to stability and long-term growth. The climate-security nexus in Mali takes different forms:

 The effects of climate change, such as droughts and desertification, have intensified resource rivalry, especially among pastoralist populations.
 Conflicts over natural resources have frequently emerged from this struggle, raising tensions and spreading unease.

Droughts and floods brought on by climate change have negatively influenced agricultural productivity in Mali, resulting in food insecurity and malnutrition. This has deepened poverty and exacerbated social tensions, resulting in insecurity.

Communities have been displaced due to climate change, particularly in the northern and central parts of the country. The risk of violent extremism and terrorism has caused tensions and fights over resources.

• The effects of climate change, such as floods and storms, have harmed

important infrastructure, including buildings, bridges, and roads, which has a detrimental impact on the nation's social stability and economic growth.

Adaptive Management

The security situation in Mali remains serious. The country has several conflicts and unpredictable conditions, especially in the north and centre of the country. The presence of armed groups, inter-communal conflict, and terrorism has caused displacement and instability, undermining the population's ability to support itself. In addition, climate change has caused droughts and other weather-related catastrophes, which has made the already difficult conditions for inhabitants even worse. In light of this context, the project considered water availability as critical to building resilience. To that end, it implemented climate-resilient agriculture and water management initiatives to improve the nation's resilience to the impacts of climate change. It also implemented activities to build institutional capacity (via technical support and training). Furthermore, to cope with security challenges, project management continues its collaboration with the Multidimensional Integrated Stabilization Mission in Mali (MINUSMA), the governors of the Mopti and Timbuktu Regions, the Office for the Development of the Faguibine System and elected municipal officials to facilitate implementation of activities, especially in areas with organized crime or terrorism. The project also consistently engaged the 11 municipalities of Timbuktu in managing security challenges.

Risk and Uncertainties

Mali's climate-security nexus takes different forms. First, the effects of climate change, such as droughts and desertification, have intensified resource rivalry, particularly among pastoralist populations. Conflicts over natural resources have frequently emerged from this struggle, raising tensions and spreading unease. Second, droughts and floods brought on by climate change have negatively influenced Mali's agricultural productivity, resulting in food insecurity and malnutrition. This has deepened poverty and exacerbated tensions, resulting in social insecurity. Third, communities have been displaced due to the impacts of climate change, particularly in the northern and central parts of the country. The risk of violent extremism and terrorism has caused tensions and fights over resources. Fourth, the effects of climate change, such as floods and storms, have harmed infrastructure, important including buildings, bridges, and roads, which has a detrimental impact on the nation's social stability and economic growth. All these have culminated into serious risks and uncertainties and therefore threaten development activities of the project.

Capacity Constraints

In Mali, the project has been instrumental in enhancing capacity to manage and sustain adaptation measures in the face of climate change. Capacity activities were, however hampered, in the war-affected zones. As a result of the project's efforts, government agencies, NGOs, and local communities have more excellent institutional and technical resources at their disposal to combat the effects of climate change. The project under the National Food Security Programme aimed at building the capacity of local actors for local government planning. However, the capacity-building activity was impaired in regions where conflict was rife.

Complementarity with other Humanitarian and Development Partners

Management: The terrain and security challenges have limited the work of humanitarian agencies in areas affected by the terrorist insurgencies. However, humanitarian agencies both local and international were active in the non-war zones. The UNDP piggybacks on activities of its sister organizations to undertake some of its activities.

Resilience Consideration

Assessment of how fragility has been included in project design and implementation: Some considerations for climate change resilience and fragility in the design and implementation of this project included: a) enhanced water control measures in vulnerable water buffer zones, especially in Mopti and Timbuktu regions, which will help improve water availability and management for communities; b) the incorporation of resilience in subsistence livelihoods of vulnerable communities; c) capacity-building and knowledge generation for adaptation; and d) addressing organized crime and security challenges.



Engaging with project committee and community leaders in Benin. (Photo by Adaptation Fund)

Regional: Benin, Burkina Faso, Côte d'Ivoire, Ghana, Mali, Togo: Integrating Flood and Drought Management and Early Warning for Climate Change Adaptation in the Volta Basin

Grant amount: USD 7,920,000

Implementing Entity: World Meteorological Organization (WMO) **Implementation period:** 2019-2024 (under implementation)

Background

The Volta Basin is one of the most fragile places in West Africa because it is exposed to water-related tragedies and does not have many ways to deal with them. Climate change events like floods and droughts have hurt this area over the last 20 years, causing social, economic, and natural losses for almost 2 million people. Most of the affected people work in agriculture, which supports about 68 per cent of residents. The project aims to be the first large-scale and cross-border implementation of integrated flood and drought management. It will do this by giving tools to the National Meteorological and Hydrological Services (NMHS) and other competent authorities of the six riparian countries (Benin, Burkina Faso, Côte d'Ivoire, Ghana, Mali, and Togo) (VFDM, n.d.). This is a regional project to guide against climate-induced disaster risk by implementing an EWS. The Volta Basin is a transboundary river system traversing about six West African countries, five of which have a very high fragility index. Over four years, the project aims to provide the first large-scale and transboundary implementation of an integrated flood and drought management system, especially at the local and community-based levels.

The project has three components

- Develop capacity and established frameworks at the local, national, and regional levels to ensure risk-informed decision-making.
- Develop concrete adaptation and environmentally friendly actions with an integrated approach.
- Strengthen policy and institutional capacity for integrated flood and drought management at the local, national, and transboundary levels.

Achievements

- Developed and integrated EWS to predict occurrences of flooding and droughts in the Volta Basin.
 The system will provide timely and accurate information to decision makers at all levels, enabling them to take appropriate actions in advance of potential disasters.
- Developed risk maps that visually represent the risks and uncertainties identified in the risk assessment.
 These risk maps will be used for decision-making and prioritizing allocation of resources, helping identify areas

where additional data-collection and analysis may be necessary.

Actively engaged local communities in planning and implementing adaptation initiatives to build resilience against risks and uncertainties. Information obtained from local communities will be valuable in identifying and prioritizing risks and uncertainties in the region.

Enhanced the capacity of NMHS in Benin, Burkina Faso, Côte d'Ivoire, Ghana, Mali, and Togo through training and capacity building programmes and initiatives. The goal is to provide accurate and dependable meteorological and climate information and build a community of practice for sharing data and knowledge.

 Addressed cultural impediments to involving women stakeholders and promote gender equality through engaging with traditional and religious leaders, offering training and education, and establishing women's clubs and networks.

Conflict/Fragile Dimension to the Project

Five of the six Volta Basin Countries are rated as being fragile to some degree or level. The Volta River meanders through some of the climate-challenged and fragile areas in the Basin. The project was designed to lead to some key resilience outputs against risk and uncertainties, including: Early Warning System: An EWS can predict flooding and droughts, helping to anticipate and respond to potential disasters. The system was designed to provide decision makers with timely and accurate information at all levels, enabling them to take appropriate actions in advance.

Creation of Risk Maps: Risk maps visually represent the risks and uncertainties identified in the risk assessment. These risk maps are used for decision-making and prioritizing the allocation of resources. They can also identify areas where additional data-collection and analysis may be necessary.

ostering community participation and ownership: Engaging local communities in planning and implementing Fund projects will help build resilience against risks and uncertainties. Local communities provide valuable information about local conditions and help identify and prioritize risks and uncertainties.

Adaptive Management

Each project in these countries has unique challenges in using the Fund, including the following:

Political instability: Some countries in the region, such as Burkina Faso and Mali, have experienced political instability and conflict in recent years. This has disrupted implementation of development projects, including those related to climate change adaptation.

 Weak infrastructure: Many countries in the region have weak infrastructure, particularly in rural areas. This can make it challenging to implement climate change adaptation projects that require infrastructure improvements.

 Government restructuring has led to disruptions and delays in implementation of Fund projects, especially in Burkina Faso and Mali. In addition, restructuring reduced capacity or resources for the agencies responsible for implementing Fund projects. Most trained staff were re-deployed to other ministries.

Risk and Uncertainties

As a multinational project, the risk was mainly in harmonizing the meteorology data collection methodologies among participating states. This issue was further compounded in states like Mali and Burkina Faso where political uncertainties manifested as weak institutions and reduced capacities for implementation.

Capacity Constraints

The WMO, as IE, undertook meteorology and climate service capacity-building. The WMO has been striving to improve the capacity of NMHS in Benin, Burkina Faso, Côte d'Ivoire, Ghana, Mali, and Togo via different programmes and initiatives. It aims to offer accurate and dependable meteorological and climate information from these nations, as well as to share data and build a community of practice. This training includes forecasting, data gathering and analysis, and communicating weather and climate information to decision makers. The involvement of women in the Volta Basin is critical to ensure the success and sustainability of adaptation efforts in the region. However, for cultural reasons, most women acted as stakeholders in the Volta Basin, rarely contributing during consultations or training. Addressing cultural impediments to women's involvement requires a multifaceted strategy. Engaging with traditional and religious leaders, offering training and education, establishing women's clubs and networks, ensuring inclusive stakeholder engagement procedures, and promoting good female role models are all examples of how this may be done. Achieving gender equality is a long-term process that needs consistent work and dedication.

Complementarity with other Humanitarian and Development Partners

The Volta Basin Authority works with the WMO to implement Fund activities. It is

helping harmonize the project with other partners, especially the Global Environment Facility, which is financing a new project entitled REWard. This initiative aims to reduce socioeconomic pressures on the basin's natural resources and draws on the data emanating from the Fund's financed project.

Resilience Consideration/Assessment of how fragility has been included in project design and implementation

Mali and Burkina Faso are the most fragile states in the Volta Basin. The Fund's project addressed this fragility by i) establishing an EWS; ii) creating risk maps; iii) fostering community participation and ownership; and iv) building capacity for NMHS. Together, they sought to build resilience for likely impacts from climate change and fragile situations.



Community members learn how weather stations gather data in Benin (Photo by Adaptation Fund)

Lessons learned from the case studies

Climate financing in FCAS poses unique challenges and requires careful consideration. Some lessons learned from Fund-financed projects in these countries are noted below.

Weakening of institutions

In FCAS, investing in capacity-building and strengthening institutions to deliver climate financing effectively is essential. It has been established in the literature that capacity and institutional building not only require training and retraining, but also need to address corruption, political instability, and weak governance. This is because the first usual casualty from conflict is the institutions, which are usually depleted due to the departure of people who are searching for a more secure environment. Such situations were witnessed in the reviewed project areas in Mali and the Syrian Arab Republic. Even in the post-conflict era, insecurity, limited institutional capacity, and poor governance were still witnessed in some parts of Syria. This made it challenging to access climate finance funds. Similarly, in Mali, weakened institutional capacity, lack of awareness of available funding, insufficient monitoring and evaluation, and inadequate governance structures all constituted obstacles to accessing project funds.

Poor local capacity of countries

In Ethiopia, local capacity to develop and implement projects, limited access to

technical expertise, bureaucratic impediments and insecurity all affected accessibility to climate finance from the Fund. Also, the country's protracted conflict and political instability posed significant obstacles to its access to climate finance. As reflected in the Volta Basin Regional Project, weak local capacity also manifests in weak governance structures. Lack of technical expertise and capacity to develop and implement climate adaptation initiatives affected project implementation.

Local ownership

Ensuring local ownership of climate finance projects is essential for sustainability and success. It is critical to involve local communities and stakeholders in project design and implementation, as they better understand the local context and needs. In Ethiopia, for example, IE and MIE noted the deep involvement of local stakeholders, but ownership is not guaranteed in situations of conflict and fragility.

Risk management

Climate financing in FCAS is often associated with higher risks due to political instability, security concerns, and weak institutions. These examples were replete in the sampled projects, including Syria, and even Ethiopia where project activities were hindered in locations considered high risks. This calls for implementing robust risk management mechanisms to identify and manage risks.

Flexibility and adaptability

Climate financing projects in FCAS must be flexible and adaptable to changing circumstances on the ground (Hussain, 2023; Okeke-Ogbuafor et al., 2023; Salzinger and Desmidt, 2023; Shyu, 2023). This requires adjusting project design, timelines, and budgets to address emerging challenges. In the Syrian Arab Republic, most of the project equipment purchased could not be delivered to the sites due to insecurity. In some cases, due to inflation, prices of items to be purchased for the project have doubled.

Partnerships

Building strong partnerships between governments, international organizations, civil society, and the private sector is essential for adequate climate financing in FCAS. Partnerships can manage scarce resources effectively through cooperation, collaboration, and harmonization of expertise (human resources), and material resources in supporting successful projects. A good example is from the Volta Basin Authority, where the synergy between the WMO and GWP (i.e., Republic of Benin, Togo and Ghana) has helped build local partners' capacities.

Monitoring and evaluation

Monitoring and evaluation are critical components of climate financing

projects, especially in FCAS. The experiences and lessons learned from the Fund's project implementations highlight several important considerations in this regard:

 Flexibility: Projects in fragile contexts often encounter challenges that lead to extensions and increased costs. The dynamic and uncertain nature of fragile environments demands a flexible approach to project timelines and resource allocation to accommodate changing conditions and challenges.

Shifting priorities: Project objectives and outcomes may need to be adapted in response to shifting priorities and the evolving environment in conflict and fragile settings. This adaptability is essential to ensure projects remain relevant and effective in addressing the urgent and changing needs of vulnerable communities.

Conflict dynamics: Conflict and fragile situations are not always fully integrated into project design, leading to implementation issues. To mitigate risks and enhance the success of projects in such contexts, conflict sensitivity should be incorporated in the early stages of project design. By proactively considering conflict dynamics and context-specific challenges, projects can be better equipped to navigate complexities and maximize positive impacts.

 Capacity-building: The type of actors involved in such conflict and fragile settings may not always prioritize sustained capacity development. For instance, the presence of central governments and external actors like humanitarian organizations may be temporary. This leaves local communities without the necessary resources and skills to maintain and build upon project outcomes once the project ends.

The integration of robust monitoring and evaluation mechanisms is essential to ensure effectiveness and sustainability of climate financing projects in conflict and fragile contexts. These mechanisms will enable project implementers to track progress, measure outcomes, and identify areas for improvement. By systematically col-

lecting data and evidence, projects can be continuously fine-tuned to better meet their development objectives and positively impact local communities. Interviews with IEs and MIEs have already indicated monitoring and evaluation practices through the Project Performance Report. Consolidating and strengthening such practices is imperative to ensure long-term impact and sustainability. By doing so, the Fund can enhance the effectiveness of its projects and ensure they contribute to building resilience and fostering positive change in the face of climate change and fragility.



Flood water level markings are an important element of warning residents when they must evacuate their homes in Ghana. (Photo by Adaptation FundF)

Recommendations and conclusions

The common features in all the projects/ countries sampled included: weak governance and institutional capacities, especially of the National Project Offices occasioned by the threat posed by insecurity and the displacement of people. Therefore, when implementing climate-financed projects in conflict-affected states, it is essential to approach risk differently due to the unique challenges in FCAS (Birkmann and von Teichman, 2010; Eisenack et al., 2014; Ide et al., 2023). This is particularly important because fragile countries could barely meet the traditional requirements such as controlling fiduciary and programmatic risks imposed upon multilateral financial institutions, climate funds, and bilateral assistance agencies. Therefore, making decisions about climate adaptation funding under "business as usual" depends on low financial and corporate risks (Quevedo and Cao, 2022). Some specific recommendations are:

Adopt a specific policy on fragile and conflict countries

The Fund does not have a specific guiding policy for the strategic direction in developing and implementing projects in fragile and conflict-affected countries and regions (IMF, 2022). As a first step, and like similar multilateral institutions, the Fund could consider developing such a policy. In doing this, it should allow special consideration for projects in fragile settings in planning, programming, and implementation (and indeed throughout the entire project cycle).

Adopt a context-specific approach

Apart from the above, conflict-affected regions present unique obstacles that necessitate a customized approach to risk management (Ghossein and Rana, 2023). Consequently, (while noting some risk

management strategies in place), the Fund could consider upscaling and devising risk management strategies tailored to the local environment and circumstances. Promote quick, proactive, and early detection of likely environmental problems that could induce crisis and conflicts

The Fund could adopt a participatory approach to management of climate-related problems at their early stages before they get too big to manage easily. Aggravated climate challenges have been known to fuel some armed conflicts and local skirmishes that, if unchecked, snowball into greater crises and lead to full-scale wars. The drought and water scarcity for households and livestock, particularly in the Sahel and Middle East, contributed to the armed conflicts in Mali, and Syria, for instance. While the study commends the Fund on its efforts on these issues to date, it recommends a more proactive engagement of stakeholders (including national authorities and local communities). It should help advance adaptation activities by promoting projects that will quickly address the emerging climate issues to prevent escalations to full-blown crises. This approach to risk management should include the participation of communities, particularly those most affected by conflict and climate change (Salauddin and Ayinde, 2022). This strategy will help identify and prioritize local climate adaptation risks and opportunities.

Incorporate specific adaptive management in project activities

The Fund could develop a specific criterion on adaptive management style for IEs in its funding guidelines, especially in conflict-affected communities. This should aim to enhance communities' resilience to the effects of climate change, provide access to climate information and EWS, and promote sustainable resource management practices, among other issues.

Invest more on Hydromets

Adequate and timely climate information and data are essential to successfully build beneficiaries' adaptive capacities. Therefore, the Fund could systematically support activities enabling communities to be better informed through reliable hydromet data and information. Climate data are a necessity for local adaptation management. The Fund would need to invest more in projects that support expansion and improvement of the national hydro-meteorological services to strengthen their capabilities. This is especially true for EWS that could prevent climate crisis and bring people up-todate on how to manage and adapt to the challenges. Early management of such climate challenges may prevent likely conflicts induced by worsening climate phenomena. The Fund should give priority assistance to NMHS in conflict contexts. Modern hydromets are good incentives to assist in collecting and standardizing raw data and incorporating traditional knowledge for decision-making.

6 Factor interrelationships into project design

Climate change is frequently associated with other dangers, such as political instability and economic insecurity, in conflict-affected regions. Therefore, Fund projects should consider interrelationships, especially in fragile settings. One such area would be augmenting livelihood components as a coping mechanism to complement the humanitarian agencies.

Explore possibility of co-financing with the private sector

Involving the private sector can help leverage funding and expertise for climate adaptation in conflict-affected regions (Heidler et al., 2023; Pauw and Pegels, 2013). Therefore, the Fund could develop financing mechanisms to incentivize private sector climate adaptation investment.

Enhance support to NGOs and CBOs in project design and management in fragile states

As evidenced in this study, the first casualty in fragile but climate-challenged situations is depletion of institutional capacities at both national and community levels (Al Jayousi and Nishide, 2023; Kolk and Lenfant, 2015). This occurs because people are displaced and trained professionals emigrate due to security concerns. Therefore, Fund interventions in fragile settings need to deliberately provide for the adaptive use of NGOs and CBOs to deliver on their mandate. NGOs and CBOs can help fill the gap in knowledge and skills required to manage climate risks effectively. They may also be useful in reaching and engaging stakeholders. To that end, they could provide training and technical assistance and encourage the formation of networks and alliances to facilitate exchange of information and best practices.

Integrate conflict sensitivity criteria into the project review sheet

The Fund should ensure that projects in not only climate-responsive but also confragile and conflict-affected regions are text-specific and conflict-sensitive. This approach will help identify and address the unique risks and challenges arising from fragility and conflict, allowing for more effective and sustainable climate adaptation measures. Emphasizing the importance of conflict-sensitive project design will strengthen the overall impact of the Fund's interventions. In this way, it will help reduce climate-related risks and foster peacebuilding in these vulnerable areas.

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