

# TRIPLE THREAT

Climate change,  
conflict,  
and hunger  
endangering  
children's lives





# CONTENTS

<b>Executive Summary .....</b>	<b>4</b>
<b>Introduction .....</b>	<b>6</b>
<b>Methodology.....</b>	<b>10</b>
<b>A climate crisis.....</b>	<b>12</b>
Climate shocks cause hunger.....	12
Case study: Erratic weather the new norm as floods compound hunger in Afghanistan.....	14
<b>Climate impacts cause conflict .....</b>	<b>15</b>
<b>Increasing food insecurity due to climate impacts feeds conflict.....</b>	<b>17</b>
Migration and Displacement.....	18
Case study: situation in the Dry Corridor pushes children to joining gangs .....	20
<b>Conflict impacting access to food.....</b>	<b>21</b>
<b>Conflict, hunger and environmental damage grow.....</b>	<b>23</b>
Natural resource extraction .....	24
Case study: Lake Bob in Grand Katanga .....	26
<b>Conclusion: Conflict-affected countries the least able to adapt to climate change, worst affected, and least-funded .....</b>	<b>27</b>
<b>Recommendations .....</b>	<b>29</b>
<b>Annex 1: additional tables.....</b>	<b>31</b>
<b>Annex 2: models .....</b>	<b>35</b>



# EXECUTIVE SUMMARY

Climate change has left the world's most vulnerable children facing a dire situation. The combined effects of violence, climate change and hunger are intersecting in alarming ways, trapping vulnerable people in a vicious cycle of poverty.

Weather extremes thrust more than 72 million people into acute food insecurity across 18 countries in 2023<sup>1</sup> and this is only set to worsen as climate change intensifies. The majority of countries identified as most vulnerable to climate change and least prepared to adapt to its consequences are affected by conflict.<sup>2</sup>

Conflict was the biggest driver of acute food insecurity in 20 countries or territories last year, affecting 135 million people.<sup>3</sup> Fighting in Sudan has left 26 million people — half of the population — experiencing acute food insecurity, hunger and malnutrition, and another million facing famine-like conditions.<sup>4</sup> Severe food insecurity is estimated to be twice as prevalent in fragile and conflict affected countries,<sup>5</sup> putting children's health, livelihoods and their futures under strain and further increasing tensions.

All of the above serves as a warning that we must take better care of this planet in order to tackle the root causes of hunger, violence and poverty. This report investigates the intersection of hunger, climate impacts and conflict in 12 fragile countries. People's perceptions and lived experiences confirm that climate change, conflict and hunger are colliding, making it more difficult to rebuild their lives, while deepening already complex humanitarian crises. In many cases, they blame climate shocks for causing hunger and conflict in their communities.

**Nearly 90% of people interviewed see climate change as a serious threat to their communities and 82% believe that climate change is directly increasing food insecurity.** This overwhelming agreement shows the urgency of climate impacts felt by local populations, especially in vulnerable regions. Drought was the most frequently reported climate hazard, especially in countries like Afghanistan and Syria, where 100% of respondents reported experiencing drought in the past year. This aligns with global

concerns about water scarcity and its potential to escalate conflicts, which respondents noted themselves: 53% reported insufficient water supply as the top climate-related reason for conflict. Afghanistan, Iraq, Somalia and Sri Lanka showed even higher rates, with over 60% people connecting water scarcity to conflict, reflecting how essential resources become flashpoints in stressed regions.

In general, **over 60% of the people we spoke to agreed that climate impacts are worsening conflicts, with Afghanistan and Syria showing particularly high agreement (90%+).** This statistic supports the view of climate as a "threat multiplier" in already fragile areas. Almost two out of every five respondents witnessed conflict in the past year, with Somalia at an alarming 97% and Papua New Guinea at 71%, compared to only 12% in El Salvador. Almost 60% of respondents indicated that climate change is displacing people either from or to their communities, demonstrating how environmental pressures are driving migration and potentially fuelling local tensions.

The research also highlights the risks of maladaptation: our analysis found that **actions taken by communities to adapt to climate impacts, like resource sharing, were linked to a higher likelihood of witnessing conflict.** This finding underscores the importance of positive adaptation in order to reduce the negative effects of climate impacts on community tensions, and the need for governments and the international community to provide positive support.

These statistics paint a clear picture of how climate change amplifies existing vulnerabilities and stresses, pushing already fragile communities into deeper crises. By elevating the voices and experiences of people who are affected by conflict, climate impacts and hunger, we gain a greater understanding of how these issues are colliding, the extensive consequences for children, along with insights into the solutions needed to tackle these issues to help the many generations to come.







# INTRODUCTION

In recent years the world has seen an increase in climate shocks, prolonged conflicts and the number of people going hungry. This is not a coincidence; the three are inextricably linked. Climate change, by intensifying environmental stresses, has the potential to amplify social, economic and political vulnerabilities, particularly in fragile regions of the world.<sup>6</sup> These **environmental changes can exacerbate competition over scarce resources, lead to mass migration and heighten political instability**, making climate change a “threat multiplier” that increases the risk of violent conflict.<sup>7</sup>

The majority of people suffering from high levels of food insecurity are hungry because of climate and conflict.<sup>8</sup> Food insecurity weakens a household’s ability to cope with climate shocks and adapt to a changing climate, while climate impacts have been found to exacerbate existing conflict and make it harder to promote peace.<sup>9</sup> The effects of conflict, climate change and hunger are colliding and trapping some of the world’s most vulnerable people in a complex, vicious cycle.

Many of the countries most burdened by the effects of conflict, climate change and hunger are also the least equipped to cope with the effects of climate change. This is especially concerning as global climate data showed **records were broken for ocean heat, sea level rise, Antarctic Sea ice loss and glacier retreat in 2023,<sup>10</sup> and 2024 was the hottest year since records began.<sup>11</sup>** Hundreds of the world’s top scientists now anticipate that global temperatures will soar past 2.5 degrees Celsius this century, well above the internationally agreed target.<sup>12</sup>

With so many people’s livelihoods and food security dependent on agriculture and agri-food systems, and because the sector is particularly vulnerable to climate change, it’s hardly surprising that farming families are among the most vulnerable to climate shocks. Around one quarter of the world’s employed people work in agriculture<sup>13</sup> and farmers are under pressure to produce more food despite these shocks. Global food demand is set to rise by at least 45%

between 2017 and 2050.<sup>14</sup> A twin climate and food crisis looms unless global leaders act swiftly to achieve a just transition to lower-emitting and more resilient food systems.<sup>15</sup>

Research to date has shown three main ways in which climate, conflict and hunger interact:



**Both climate change and conflict are leading to crop failure and food price shocks, which is increasing hunger.**



**Climate shocks increase the likelihood of food insecurity, as well as the magnitude of this impact over time.<sup>16</sup> For every 1 degree Celsius of temperature anomaly, severe global food insecurity has increased by 1.4%.<sup>17</sup>**



**Climate change has the potential to exacerbate tensions in and between different communities.** Although the factors driving conflict are complex, research shows even a small increase in temperature is associated with a significant increase in the likelihood of conflict in areas where farmers and herders live.<sup>18</sup>

Record breaking temperatures and other signs of a warming climate come at a critical time when the world has gone backwards on its plan to eradicate hunger - rates of which are now higher than it was in 2015 when the United Nations launched the Sustainable Development Goals.<sup>19</sup> Without the political willpower to mitigate climate change, provide sustainable adaptation support, address the root causes of hunger and conflict, and put pressure on warring parties to find peace, the misery caused by climate, conflict and hunger will only increase.

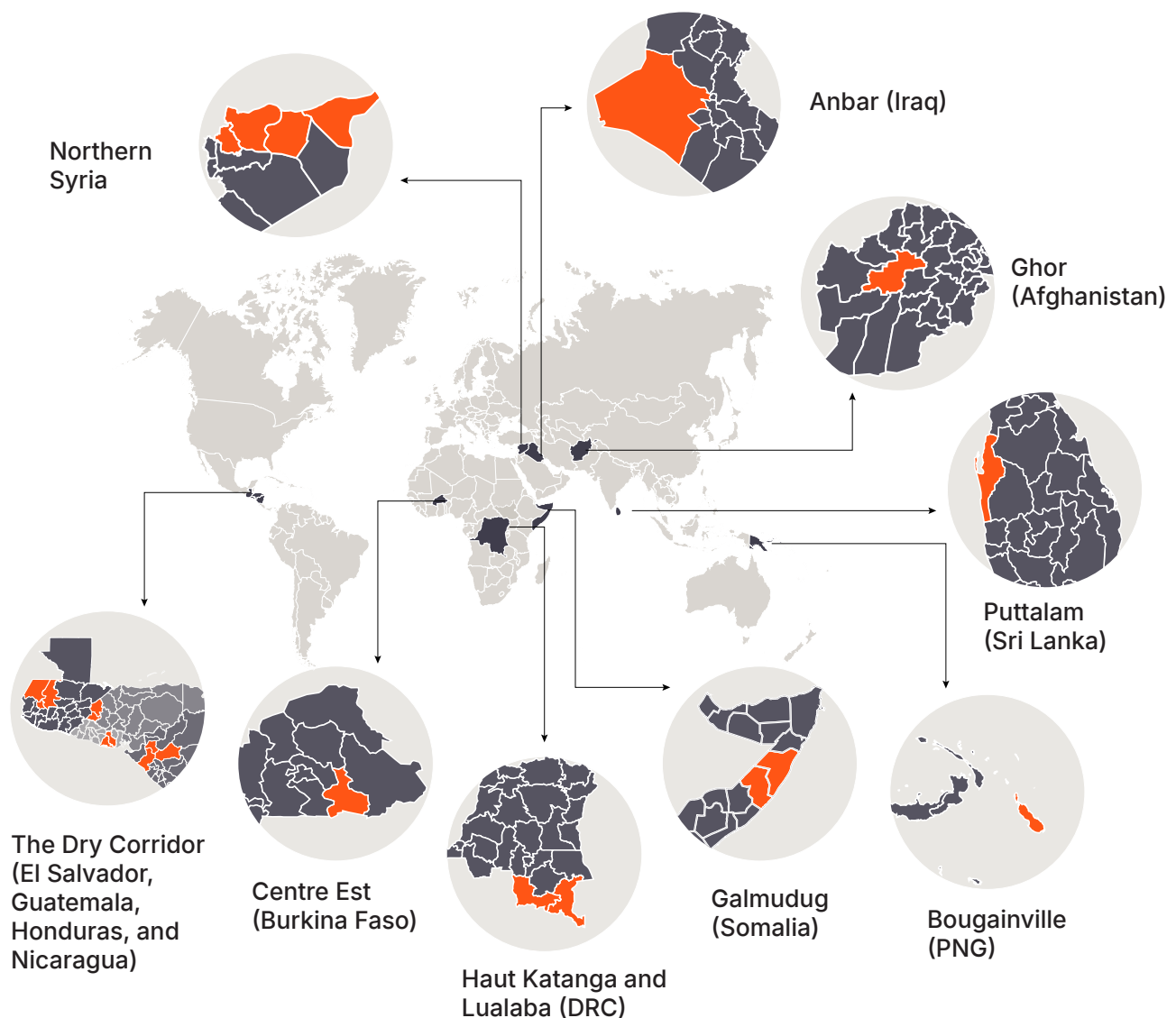
This report details the concerns of people living in some of the world’s most dangerous places. It builds on earlier research from 2023, with the addition of new data from Northern Syria, Galmudug, Somalia and Ghor, Afghanistan. Between August 2023 and September 2024,

respondents from 12 countries in Central America, Oceania, sub-Saharan Africa, and the Middle East detailed their experiences with climate hazards and conflicts. The findings support the growing literature that climate change can act as a “threat multiplier,” exacerbating resource scarcity and social tensions in vulnerable regions.

The results indicate that both climate change and conflict are having a major impact - or have the potential to have significant effects - on

many aspects of people’s lives, particularly food insecurity and safety. A striking **82% of respondents said that climate change is directly increasing food insecurity in their communities**, while **24% said conflict made it more difficult to access food**. Many people are also making strong observations that climate change is increasing conflict in their communities. **More than 60% of people said climate shocks are creating more conflict in their communities and in Syria and Afghanistan the figure was even higher, above 90 percent.**

Figure 1. Countries and regions studied



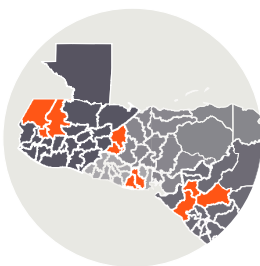




### Anbar (Iraq):

Communities in Iraq are affected by extreme weather events, droughts, and floods, the effects of which are exacerbated by enduring challenges linked to post-conflict fragility. In

Anbar Province, the Euphrates River is the main water source for many residents, but annual water flows have decreased by up to 45% since the 1970s due to the construction of dams and changes in precipitation.<sup>20</sup> Parts have dried up, affecting communities dependent on agriculture, with Iraqi authorities warning it could completely dry up by 2040.<sup>21</sup>



### The Dry Corridor

(Central America): The region is a dry forest area that runs through five countries in Latin America (Costa Rica, El Salvador, Guatemala, Honduras, and Nicaragua) that is highly vulnerable to

climate extremes. Hurricanes and long periods of drought disrupt water availability, livelihoods and food security. The Central American Dry Corridor is home to more than 10 million people<sup>22</sup> who on top of the climate chaos face high levels of violence. Boundary disputes in the area have led to land seizures, inter-communal violence and triggered migration.



### Centre Est (Burkina

Faso): Protracted conflict and insecurity in Burkina Faso have led to the displacement of 1.4 million people.<sup>23</sup> Physical violence, attacks on civilians and kidnappings have disrupted traditional

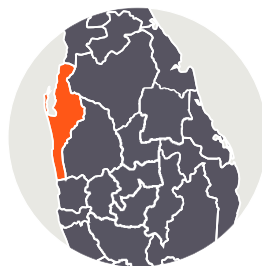
agricultural livelihoods and food markets, while constraining the delivery of humanitarian assistance. Projected food security levels in September 2024 show parts of the Est and Nord regions are classified as IPC 4 'emergency' level, while parts of the Centre Est region are classified as 'stressed' or 'crisis'.<sup>24</sup> Agriculturally productive areas of the country are prone to drought, flash floods and wind storms.



### Haut Katanga and

Lualaba (DRC): Haut-Katanga and Lualaba, formally both part of 'Grand Katanga' are home to most of the cobalt mining in the Democratic Republic of Congo. In Katanga

conflict between rebel and ethnic groups has historically prompted widespread displacement and hunger. In Grand Katanga, the appropriation of land from community members for mining and commercial agriculture, along with the reduced availability of food and subsequent encroachment onto community forests, has worsened food security, fuelling protests and resource pressures. Hunger in Katanga has been classified as being at 'stressed' and 'crisis' levels this year.<sup>25</sup>



### Puttalam (Sri Lanka):

Sri Lanka has suffered from a 22-fold increase in climate-induced hazards during the last decade compared to 1973-1983,<sup>26</sup> threatening economic growth and leading to deteriorating conditions for

vulnerable communities. Sri Lanka was classified as the second most food insecure country in the region last year.<sup>27</sup> Puttalam, in the country's north-west, is vulnerable to rising sea levels, drought, monsoon and floods. The depletion of fish stocks due to rising sea temperatures and overfishing is also affecting household health and financial security, as well as forcing an expansion of the fishing zones which risks triggering competition over decreasing resources with other communities.



### Bougainville (PNG):

The Bougainville Peace Agreement, signed 23 years ago, officially ended a decade of fighting between Papua New Guinea and Bougainville in what had become

the South Pacific's deadliest conflict. But to date, PNG's parliament is yet to formally ratify Bougainville's independence. It also faces climate shocks, the clearing of land and resource

extraction. Overall, Papua New Guinea and the autonomous region of Bougainville are prone to many natural disasters including cyclones, drought, earthquakes, floods, landslides, tsunamis and volcanic eruptions.



#### **Ghor, Afghanistan:**

Afghanistan's mean temperature has increased by 1.8 °C between 1950 and 2010, about twice the global average. This has coincided with shifting rainfall and snowmelt patterns in a country

that is traditionally dry and hot for most of the year. In the 25 years to 2015, Afghanistan lost more than 400 square kilometres (13%) of its total glacial area.<sup>28</sup> Ghor frequently experiences extreme weather, such as drought, wind storms and floods, which have turned deadly and have forced farmers to sell off livestock or migrate. Such shocks hinder households' ability to recover from decades of insecurity. These shocks, rampant poverty and high food prices have pushed one third of Afghanistan's population (15 million people) into high levels of food insecurity, with 30% of Ghor's population facing crisis or emergency hunger levels this year.<sup>29</sup>



#### **Galmudug, Somalia:**

Climate change and the effects of three decades of internal conflict and violence stemming from clan rivalries, political power struggles and poverty exacerbate

Somalia's protracted food security crisis. A rise in interclan fighting and clashes between insurgents and security forces led to 1,000 deaths within

two months in 2024. About a third of the reported fatalities occurred in the Galguduud region in Galmudug state.<sup>30</sup> The area, which is home to nomadic communities that depend on rainfall for grazing, has been impacted by years of consecutive failed rainy seasons and drought. This has triggered conflict between communities and driven widespread displacement. Not long after Somalia's worst drought in four decades, which displaced 1 million people, extreme rainfall hit parts of the country, including Galmudug. Climate projections indicate annual average temperatures will continue to rise in Somalia, likely increasing the frequency and intensity of drought and floods.



#### **Northern Syria:**

Climate change played a significant role in destabilizing Syria by exacerbating droughts, which devastated agriculture. This economic instability

contributed to social unrest that both fuelled the past 14 years of conflict, as well as the recent change in government. Approximately 75% of Syria's farms failed, and an estimated 85% of livestock perished.<sup>31</sup> Northern Syria—the country's breadbasket—has been hit the hardest. Declining water levels in the Euphrates River, which runs through neighbouring countries, are of major concern to farming families that depend on it. Iraq's Ministry of Water Resources has warned the river could be dry by 2040.<sup>32</sup> Apart from heatwaves, the country's northeast also experiences wildfires, harsh winters and land degradation. Previous surveys conducted by World Vision's Syria Response revealed almost everyone identified not having enough food, clean water and forced displacement due to climate change as their top concerns.



© Patrick Abega/ World Vision

# METHODOLOGY

This study builds upon [previous World Vision research](#), which investigated the risks and impacts of climate change on conflict and hunger in nine countries. For this year's research, additional countries (Somalia, Syria and Afghanistan) were added and the data re-analysed to gain a deeper understanding of how climate change could impact communities in other conflict-affected areas.

More than 3,700 adults and children from 12 countries in Central America, South Asia, Oceania, Africa and the Middle East participated in quantitative surveys, key informant interviews, and focus group discussions about the ways in which climate hazards, conflict and hunger are affecting their lives. The survey was first administered in August 2023, and a slightly modified questionnaire was used in September 2024 for Syria, Afghanistan and Somalia, with the addition of several questions to measure

shock exposure. In the results, we analyse whether community members thought climate change and the impacts of climate hazards actually contributed to an increased likelihood of experiencing conflict using basic tables, correlation and regression analysis.

Central America was the most represented region with over 32% of respondents. The countries selected for this research were ranked as some of the most vulnerable to climate change, (on the basis of the Notre Dame Global Adaptation Initiative country index,<sup>33</sup> which ranks a country's vulnerability to climate change and other challenges with its ability to improve resilience) and selected based on capacity of local World Vision offices. The participants were drawn from a specific region within each country, therefore the findings shouldn't be generalised to the countries as whole, but only the specific area.

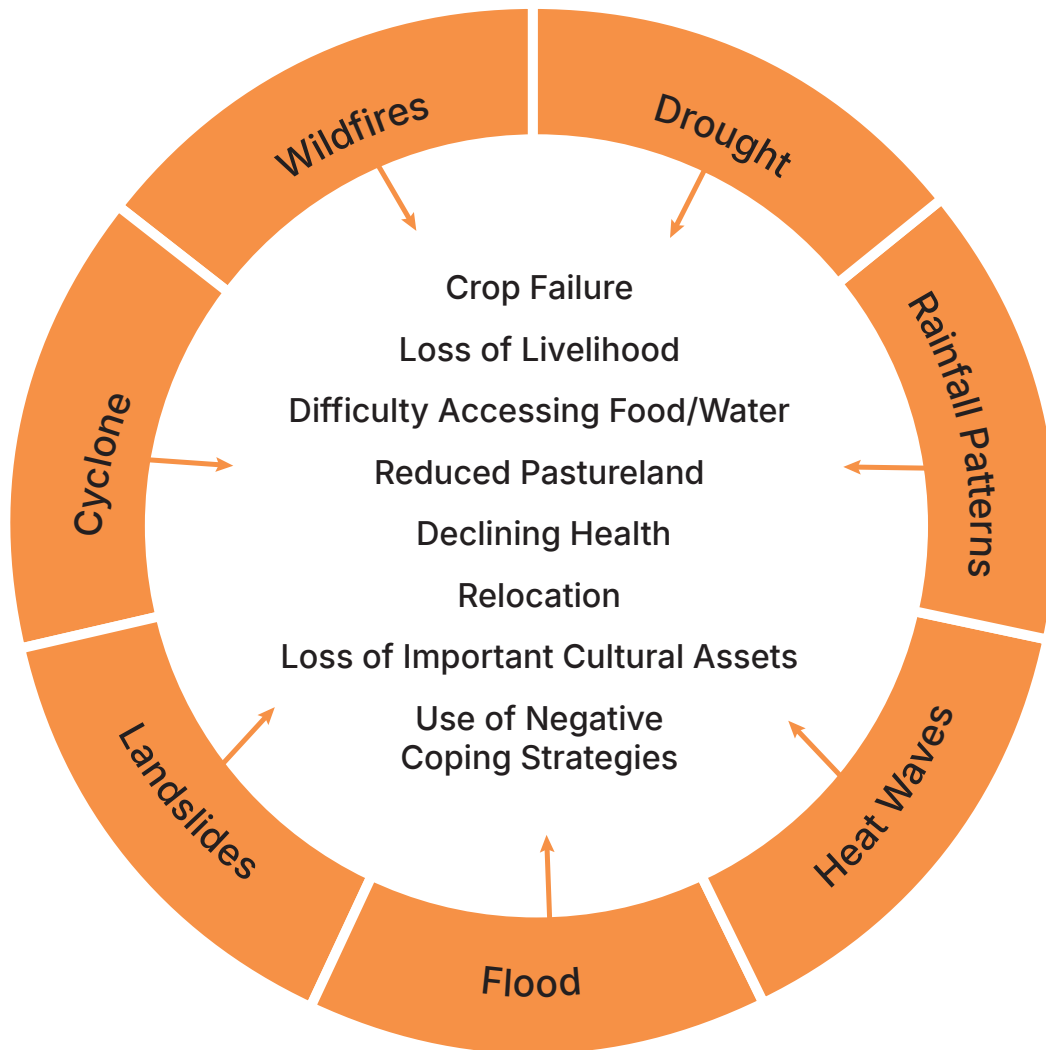
**Table 1: Respondent Countries**

Countries	Respondents	Key Informants	Focus Groups	Child focus groups
Ghor, Afghanistan	276	6	6	2
Centre Est, Burkina Faso	309	10	8	
Grand Katanga, Democratic Republic of Congo	303	13	3	
Dry Corridor (El Salvador, Guatemala, Honduras and Nicaragua)	1247	30	25	
Anbar, Iraq	301	9	8	
Bougainville, Papua New Guinea	297	10	6	
Galmudug, Somalia	300	4	3	3
Puttalam, Sri Lanka	259	13	7	
Syria	318	4	4	2
Grand Total	3,599	99	70	7



Most of the respondents worked in the farming sector or were unemployed (both 27%) at the time of the survey. Most of the countries included are highly dependent on agriculture and subsistence-level farming, and therefore these respondents can be viewed as representative of their countries' populations.

Their education levels were also consistent with typical education levels in their respective countries, with around half of participants having obtained primary school education and a third having reached high school. Respondents were evenly represented along gender lines, with 50% male and 50% female.



# A CLIMATE CRISIS

The locations chosen for the research are some of the most vulnerable to the effects of climate change. Unsurprisingly, most survey respondents perceived climate change to be a serious issue, with **almost 90% of people agreeing (somewhat or completely) to the statement that climate change poses a serious threat to their family**. This was particularly evident in Ghor, Afghanistan, where 82% of people completely agreed with the statement, followed by those in Bougainville, Papua New Guinea (81%). In Ghor and Northern Syria, about 40% of respondents experience floods monthly, 37% face monthly heatwaves **and every respondent had experienced drought in the past year**.



“We had a lot of problems caused by the weather. I remember many floods that have affected us, and what they have done to us has affected our lives and property and we have not yet recovered.” –Ahmed, 17 years old, Galmudug, Somalia

“I was sleeping, my mother woke me up with a scream. When I got up, I saw that our neighbor’s house had been destroyed by a flood.” Nahid, 8–16 years old, Ghor, Afghanistan

## Climate shocks cause hunger

Climate change disrupts the availability of vital resources such as water and arable land, especially in regions heavily dependent on agriculture. Researchers estimate that over the past 50 years climate change has reduced food productivity growth by more than a third.<sup>34</sup> Other analyses have directly tied temperature increases to food insecurity, with estimates that for every 1°C anomaly in temperature there’s a more than 2% increase in the number of people who are moderately and severely food insecure.<sup>35</sup>

Extreme temperatures and climate events make it harder to harvest crops that have been hit by drought, floods, storms and other weather

events. Worldwide, around one quarter of employed people work in agriculture and farmers are among the most vulnerable to climate shocks. All this is leading to a growing food crisis. Nearly 191 million people have faced ‘crisis’ levels of hunger or worse this year and 26 million of those people are one step away from famine and starvation.<sup>36</sup>

Our survey, where many people are experiencing extreme weather, drought and heat waves, clearly shows the links between climate and food insecurity. **Respondents who said climate change was reducing their access to food and water were 59% more likely to be experiencing climate degradation.**<sup>37</sup> The most negative impacts of climate change were related to livelihoods, including reduced pastureland, crop failure and loss of livelihood through decreased crop production. **The vast majority (82%) of respondents said that climate change leads to food insecurity;** in Ghor every single person agreed with this.



“We have lost all the things that we had, even now we don’t have food to eat. We go hungry many times. I was breastfeeding [at the time of the floods] and my child got malnutrition and I myself got sick.” Displaced woman, Ghor

Near-universal agreement was also recorded in Centre Est, Burkina Faso (98%), Northern Syria (97%), Bougainville (92%) and Grand Katanga, DRC (91%). Community members in Puttalam, Sri Lanka were the least likely to say climate shocks were increasing food insecurity (46%), although almost half of them still agreed. Reduced pastureland was particularly a problem for communities surveyed in Galmudug, Centre Est, and Northern Syria, where livestock and herding make up a larger part of livelihoods. Almost all respondents in Northern Syria (98%) and Bougainville (96%) reported that climate shocks, such as drought or flash floods, were wiping out crops.



In Puttalam, local experts pointed to underlying caste, class, ethnic and religious issues among communities, which climate shocks can exacerbate.



“I think the issues related to the fisher people will be very acute. For instance, the degeneration of forest areas, the areas related to the lagoons, are starting to have an impact on the livelihood of people. The fishermen’s livelihood in Puttalam is mainly based on the lagoon, the wellbeing of the lagoon itself, as an ecosystem. We have been observing that these ecosystems are degenerating due to many reasons ... and climate change is reducing the harvesting of the fisheries.” – Government Donor, Sri Lanka

Besides climate impacts making it harder to grow crops, higher CO2 emissions are also decreasing their nutritional content. Research has discovered a link between increased CO2 in the atmosphere and crops such as cassava,<sup>38</sup> rice, wheat, and potatoes having reduced protein and micronutrient content. This particularly threatens communities in Sub-Saharan Africa and South Asia, where rates of malnutrition are highest and people depend on these staples.<sup>39</sup> These regions are also where population growth is expected to be highest in the coming decades, further increasing stress on the food system. Overall, global food demand is set to rise by at least 45 percent between 2017 and 2050,<sup>40</sup> setting many more millions on course for food insecurity unless there is an increase in mitigation efforts and support for adaptation.



© Helene Franchineau/ World Vision





## CASE STUDY: Erratic weather the new norm as floods compound hunger in Afghanistan

Ayatulla is one of the thousands of Afghans struggling to recover from the effects of torrential rains and devastating floods in Ghor and Faryab provinces in 2024.

His family had already suffered through a dry winter, which had made the ground on their farm too hard to absorb water. This was a recipe for destruction when unusually high rainfall struck. The flash flooding was further compounded after unseasonably warm temperatures had also led to greater snow melt in the mountains, causing rivers to overflow and inundate villages. Floods in the two provinces killed more than 130 people, while thousands of homes and businesses were destroyed.

"The flood caused severe damage. During the first flood, the houses began to sink and in the second flood, the houses were destroyed. Eight houses in the surrounding area were all ruined," said the father-of-eight.

Ayatulla's family suffered significant financial losses which will be difficult to recover from.

"We lost everything in our lives, including eight houses. We lost our clothes, food, and everything else. Nothing is left. I had 1.2 hectares of agricultural land, all of which was destroyed. We are a family of ten and I work as a daily wage

labourer earning between 300 to 400 Afghanis. It may take us up to two years to rebuild my and my brother's lives," he said.

Afghanistan is one of the countries most vulnerable to climate change, with the risk of flash floods projected to increase, while parts of the country are set to be affected by changing rainfall and snowmelt patterns, along with the increased likelihood of crop failures, food insecurity and water shortages.<sup>41</sup>

Recovering from the latest disaster is made even more difficult due to the country's economic situation. More than half of Afghanistan's population is estimated to require humanitarian assistance this year. Afghanistan's fragile economy is also heavily reliant on humanitarian aid, as people are already trying to recover after years of insecurity. Climate shocks have the potential to impact several areas of a family's life.

"We had a water well, but the floods have filled it up. [There's] the high prices of goods; the money is quickly spent on purchasing flour and rice," Ayatulla said.

"Families need food, clothing, and other essentials. Five families have become displaced and left this village."

# CLIMATE IMPACTS CAUSE CONFLICT

Of the 25 countries that are considered most vulnerable to climate change and least prepared to adapt to its impacts, 15 are affected by conflict.<sup>42</sup> In 2023, the COP28 declaration highlighted the fact that conflict-affected countries are often among the least developed countries, who in turn are some of the least resourced to adapt to climate change and its associated shocks and stressors.<sup>43</sup> Yet countries affected by both climate change and conflict are being neglected; they receive significantly less climate finance than non-conflict affected areas.<sup>44</sup>

In addition to this lack of support, studies have found that rising temperatures in sub-Saharan Africa are strongly correlated with an increase in the likelihood of civil wars.<sup>45</sup> Climate change does not immediately cause conflict, and in countries with a high capacity to absorb climate-related shocks, climate change is unlikely to do so.<sup>46</sup> However, in conflict-affected areas where resources are scarce and government structures and social protection nets are weak or non-existent, climate change impacts exacerbate and deepen existing social, economic and political tensions.<sup>47</sup>

The communities who said they had been worst affected by climate change and drought in our survey have also experienced widespread conflict in recent years. The Syrian conflict has been partly attributed to a severe drought from 2007-2010, which devastated agricultural livelihoods, spurred rural-to-urban migration, and fuelled underlying social and political tensions.<sup>48</sup> When we asked respondents for the key reasons climate impacts were leading to conflict in their community, over 50% said insufficient water, with even higher numbers in Afghanistan, Iraq, Somalia and Sri Lanka.<sup>49</sup>

“Conflicts over water have led to the deaths of individuals.” child, Northern Syria



© Andre Guardiola / World Vision

It's clear that climate change, by intensifying environmental stresses, has the potential to amplify social, economic, and political vulnerabilities; climate change can be viewed as a 'threat multiplier.' **Over 60% of all respondents agreed that climate impacts are worsening conflict.** Ghor and Northern Syria both had very high levels of agreement to this with over 90% of respondents in each country agreeing that climate impacts are worsening conflict, and 79% in Anbar, Iraq.

We also tested the relationship with regression analysis; **people who had individually said that climate change is a serious issue for their family were twice as likely to have witnessed conflict as those who didn't think climate change was an issue at all.**<sup>50</sup> It's not just perceptions, either, **if you have experienced conflict in the past year, you are 25% more likely to have also experienced a negative climate impact.**<sup>51</sup>



The new data from Galmudug, Northern Syria and Ghor also allowed us to tease out the relationship between frequency of climate impacts and conflict. We found that **people who were in general experiencing fewer climate impacts in the past year (cyclones, droughts, floods, heat waves, landslides, rainfall changes, wildfires, and other) were also generally more likely to be experiencing fewer impacts of conflicts in their daily lives.**<sup>52</sup>

Perhaps the most critical factor in determining whether climate change leads to conflict is the strength of governance and institutions. The capacity of governments and institutions to manage climate risks has been found to play a crucial role in either exacerbating or mitigating conflict.<sup>53</sup> In regions with weak governance, climate stressors can overwhelm the ability of the state to provide basic services, mediate disputes, and ensure equitable access to resources. Conversely, in countries with strong institutions,

climate-related challenges are more likely to be met with cooperative solutions, reducing the likelihood of violence.

The relationship between climate change and conflict is complex and multifaceted but climate change can undoubtedly be considered a “threat multiplier” that increases the risk of violent conflict<sup>54</sup> by exacerbating existing social, economic, and political tensions, particularly in fragile regions. However, climate change is rarely the sole cause of violence. Effective governance, robust institutions and adaptive strategies are crucial in mitigating the worst effects of climate-induced stress, underscoring the importance of climate adaptation and conflict prevention strategies.



“[It has] caused us a lot of problems ... the war, lack of food, constant drought and lack of water.” –Hassan, 14 years old, Galmudug



© Azizullah Hayat / World Vision



# INCREASING FOOD INSECURITY DUE TO CLIMATE IMPACTS FEEDS CONFLICT

Some of the most established links between climate and conflict have been found among pastoralist societies in the Sahel, where state capacity to support climate adaptation is limited and major changes in the environment disrupt the availability of vital resources, such as water and arable land. Therefore, vulnerabilities and existing tensions are high, especially among communities that are heavily dependent on agriculture.

Respondents were asked “in what ways do climate change impacts worsen conflict in your area?” The most common responses were “reduced pasture access” and “limited resources being stretched further”.<sup>55</sup>

Drought and other climate shocks force pastoral communities and farmers to compete for access to the same shrinking but life-sustaining resources, bringing them into conflict.<sup>56</sup> In such contexts, climate variability—such as prolonged droughts or floods—substantially increases the likelihood of political violence.<sup>57</sup>

In Galmudug, Somalia, many people detailed how resource scarcity has contributed to conflict in their communities. Respondents explained there were historical and political roots of conflict between different rural communities, but also a lack of food and water that was adding to tensions:

“There are vulnerable people who are struggling with the problem of lack of food caused by the lack of water in the fields. It is land where drought and conflict are mixed and some livestock are stolen and others are killed by drought then the people are affected by hunger. The conflict is caused by the lack of food and the wars which are based on traditional tribalism.” –women’s organisation member, Galmudug

We found that the greater the climate impacts on a family’s food security, the higher their risk of experiencing conflict.<sup>58</sup> Across the whole sample, **people who said climate hazards were making it difficult for them to access water or food were 27% more likely to have witnessed conflict** and those who had seen pastureland reduced were 32% more likely.<sup>59</sup>

Men in one focus group in Ghor had seen just this. “In our village last year we witnessed conflict for drinking water...drought, food insecurity, and lack of infrastructure exacerbated tensions, sometimes leading to armed confrontations as local communities struggled for scarce resources. Insurgent groups occasionally capitalised on these tensions, further destabilising the villages and peoples. Competition over dwindling resources makes it difficult for traditional conflict resolution mechanisms like Shura [community councils] to find long-lasting solutions. In many cases, resolutions are temporary, as people continue to fight over essential resources when conditions worsen.”



© Azizullah Hayat / World Vision

In Northern Syria, children highlighted how resource scarcity led to both violent and non-violent conflict in their communities, and experts agreed.

“Disputes arise between neighbours over water usage, distribution schedules, and the amounts allocated to them.” Child, Syria

“There were no conflicts [over this] in our area before. I see that the emerging conflicts are due to the scarcity of resources linked to climate change. For example, the conflicts that have begun to arise are over surface and groundwater. These days, a neighbour does not allow his neighbour to dig a well next to his well because he is afraid that the well from which he drinks and irrigates his crops will dry up. Resources are decreasing day by day and the area of productive land is decreasing. All of this will lead to an increase in conflict.” Food security expert, Idlib

## Migration and Displacement

As climate change renders certain areas uninhabitable due to rising sea levels, desertification or extreme weather events, populations are forced to migrate, often to regions that are already resource-scarce. Migration resulting from climate stress is a growing concern in Sub-Saharan Africa, South Asia and Pacific and Latin America, where millions of people could be forced to abandon their homes by 2050.<sup>60</sup> A warming climate has rendered conditions too difficult to survive in rural Somalia and is increasingly prompting people to risk their lives to travel to Europe by boat across the Mediterranean with the help of people smugglers.<sup>61</sup>

These movements can in turn trigger conflict. The influx of displaced populations can strain local resources, cause social friction and exacerbate ethnic or class-based tensions, particularly when the host communities themselves are struggling to meet their own basic needs. This is particularly a risk when displaced people move into areas where host communities perceive them as competitors for jobs, land or public services.<sup>62</sup>



In Northern Syria, an education official shared:

“[The climate situation] has also negatively affected those working in agriculture, prompting many to seek alternative professions. In recent years, I’ve noticed that most of them are relocating to cities in search of work instead of remaining in rural areas ... One of the primary reasons of violence is economic, particularly ongoing resource disputes in highly populated communities. Daily challenges develop, particularly in refugee camps, where there is ongoing conflict owing to a lack of food supply.”

Displacement was particularly pertinent in Ghor and Galmudug. Only 23% of people overall said displacement was driving climate-related conflict in their communities, but this rose to over 70% in Ghor and Galmudug.<sup>63</sup> They also had the highest numbers of people who said that climate shocks were causing displacement into their communities, at 96% and 90% respectively. Overall, people who said climate impacts were causing displacement to their community were 14% more likely to be experiencing conflict.<sup>64</sup>

“The breakdown of livelihoods also pushes people to migrate, which can fuel land disputes when displaced families settle in new areas.” Male focus group, Ghor



Displaced people, especially when forced from their home because of events such as a drought or flood, face high risks of hunger. Overall, **people who said climate impacts were causing displacement to their community were 15% more likely to agree that climate impacts were increasing hunger.**<sup>65</sup>

In focus groups discussions, adults in Galmudug pointed to situations where displaced people had settled in their area, which they believe triggered food shortages and price increases in the local market:

“There are many people from different areas who moved and settled here because of the changing climate and joined the people who are suffering in the area.”  
Ayaan, 40 years old

“It has also raised the price of purchases in the common markets, and it led to a shortage of food.” Caasho, 48 years old

However, there didn't appear to be a link between displacement *from* a community and climate-related conflict or hunger. This was probably because people in the departure community are not seeing the effects of their former neighbours' arrival in new communities. Assuming that there are problems that are not seen by the community of departure, our data seems to indicate there are probably large unknown needs - **more than 60% of people said that climate shocks were driving people to leave their community.**<sup>66</sup> This was particularly high in Anbar, Ghor, Galmudug and Northern Syria.



© Zaher Jaber / World Vision



## CASE STUDY: situation in the Dry Corridor pushes children to joining gangs

David\* is one of the lucky children from his neighbourhood in Honduras' capital, Tegucigalpa.

The 11-year-old has grown up in 'The Gangster' sector, a neighbourhood where children are frequently exposed to gang violence, neglect and they're preyed upon to join these gangs. However, David was determined to build a future away from the gang violence and focus on his education after meeting a social worker, Miriam.

"He has no support from his parents. He was a kid that the gangs could take because he didn't have any support," the Committee of Protection and Welfare coordinator, Miriam said.

"He tells me 'I'm not going to be like them.' In the morning he goes to his school, and in the afternoons he comes here so we can support him in his studies."

The social workers also provide David with other basic support, such as food.

"We didn't have any school supplies, they bought it for me; they bought me a backpack. Notebooks, pencils, colour and right now they gave me more food supplies. Miriam has taken my hunger away," David said.

However, not all children growing up on the city's fringes are as fortunate as David. Projected higher temperatures and increased extreme weather conditions are set to exacerbate existing water shortages, food insecurity and violence over land in rural areas. One in four people in Honduras is employed in the agricultural sector.<sup>67</sup> Water stress is already high, with less than 14% of water systems in rural Honduras providing potable water,<sup>68</sup> while farming communities have struggled to bounce back from the effects of on-going drought and recent hurricanes, which decimated crops and livelihoods. Such conditions have forced more farming families to migrate across borders or to urban areas within Honduras, such as the gang-controlled areas where David has grown up.<sup>69</sup> The arrival of migrants can undermine social cohesion, as host populations face resource pressures and poverty, while children are at risk of being targeted by gangs for recruitment.

"Because there is no land and the means of production has been affected, people have to go around invading and have to settle in places where there is no legality ... This generates any number of conflicts, and there is no stability or security," a security expert in the Dry Corridor said.

\*Name changed to protect child's identity.



# CONFLICT IMPACTING ACCESS TO FOOD

Just like climate hazards, conflict is also having a significant impact on farming families' livelihoods, and in turn their access to food - and ultimately their health.

Previous studies indicate strong connections between climate and conflict in the Lake Chad area,<sup>70</sup> where temperatures are rising 1.5 times faster than the global average, triggering longer dry seasons and the drying up of major lakes, driving competition for resources.<sup>71</sup> One study focusing on conflict among farmers and herders in Africa has found a one degree Celsius increase in temperature is associated with a 54% increase in the probability of conflict in areas that are home to herders and farmers.<sup>72</sup> According to the FAO, the effects of climate change, as well as conflict, internal migration and increasing pressure on natural resources in the Sahel have led to a 60% decline in fish production, while reducing livestock production and degrading pasturelands.<sup>73</sup> The situation leads to a cycle where the conflict undermines the population's ability to cope with climate extremes, such as drought, while these same climate shocks also make it more difficult to diffuse conflict and restore peace.

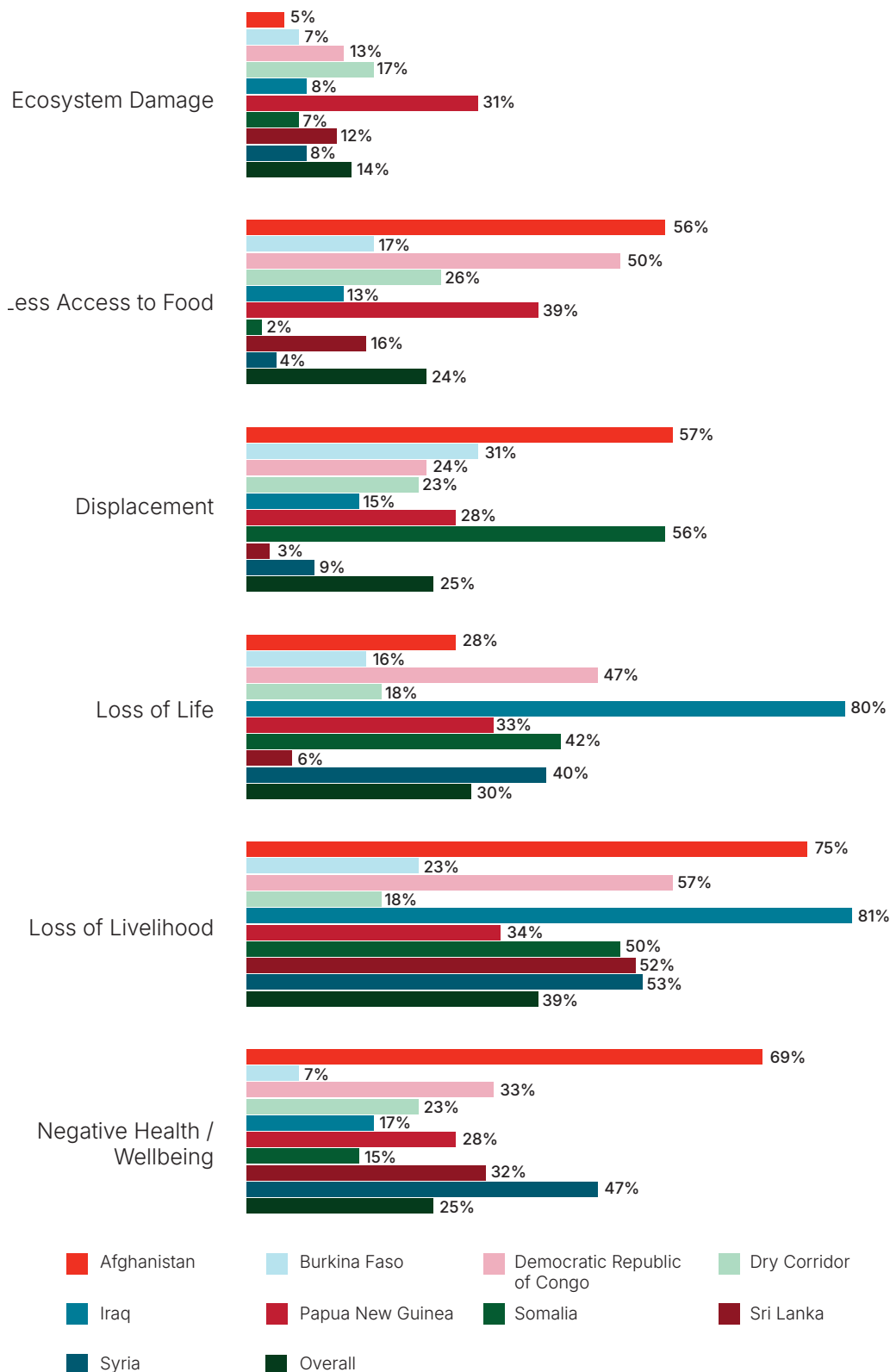


**Almost two out of every five people surveyed said they had witnessed conflict in the past 12 months.** 'Conflict' for the purposes of the survey was defined as any type of conflict or dispute, either violent or non-violent, between different groups in the community. The differences in the results were vast when broken down by country. For example, in Galmudug, Honduras and Bougainville, 71%, 43% and 37% of respondents respectively witnessed conflict every few months, compared to El Salvador where this figure was just 8%. The frequency of this conflict varied from country to country, but overall 8% of all respondents indicated that they witnessed conflict daily or weekly, and 26% witnessed it at least every few months.

In terms of how conflict impacts people's daily lives, most cited multiple impacts. Loss of livelihood (39%) was the biggest impact, while about a quarter of people had also mentioned loss of life, displacement, negative health and less access to food.

Respondents in Ghor reported the highest rates of decreased child wellbeing, displacement, negative health and less access to food. Galmudug also recorded a high percentage of respondents who noted displacement was a consequence of conflict (56%) while Anbar had the highest percentage of people citing loss of life as an impact (80%). It's worth noting that percentages were still relatively high across most countries for all indicators, with the exception of a handful of impacts in some countries. For example, in Galmudug, only 2% of respondents said conflict impacted their access to food, with the driver of food insecurity primarily being climate extremes. However, such lower rates about the impact of conflict were uncommon and more than half of the respondents from Galmudug still cited loss of livelihood and displacement as a consequence of conflict.

Figure 2: Impact of conflict on daily lives



The reduction in crop or livestock production limits displaced families' and host communities' ability to access food. It forces some women to adopt negative coping strategies, including turning to prostitution for survival and child marriage.<sup>74</sup> And as livelihoods and coping mechanisms become depleted, a negative cycle develops of growing conflict and hunger.



# CONFLICT, HUNGER AND ENVIRONMENTAL DAMAGE GROW

Conflict weakens communities' abilities to adapt to the consequences of climate change. For example, it's more difficult for communities to agree to share scarce resources, such as water or land, when there's fighting.<sup>75</sup> As communities struggle to survive, they become less willing to compromise with their neighbours, further entrenching local conflicts.<sup>76</sup> Different armed actors, such as Boko Haram in the Lake Chad Basin region, can exploit compounding grievances over sharing of land, water and other resources and use these grievances to mobilise support for their cause.<sup>77</sup> Reports show some women in displacement camps have chosen to rejoin the armed group because it offered a better life compared to living in undignified conditions in camps and going hungry.<sup>78</sup> This is compounded by social norms in Africa's Sahel region, which tie women to home life and childcare and make it more difficult for them to adapt to their changing environment.

A concerning theme emerged in dry corridor countries, where people were much more likely to say recruitment into armed groups was spurring climate-related conflict (28%). Significant numbers of respondents in Centre Est (14%) also said the same. In such contexts, children often find themselves forcibly recruited or choosing to join gangs or armed groups to survive.

However, families were also making other adaptation efforts, that on the face of it were more peaceful. Respondents who were concerned about rainfall were more likely to focus on alternative livelihoods.<sup>79</sup> The more concerned someone was about heat waves, the more likely they were to also be engaging in herd diversification as a strategy.<sup>80</sup> Similarly, livestock mobility was more commonly employed by people who were more concerned about drought, cyclones and wildfires. Having more concern over drought and heat waves raised the likelihood of engaging in resource sharing while

concerns over landslides and wildfires decreased the likelihood.

Unfortunately, just as climate change can lead to conflict, conflict can lead to an increase in environmental degradation and maladaptation. We found that individuals who have experienced conflict more frequently are likely to have witnessed more environmental degradation impacts. Individuals who reported witnessing only one type of environmental impact had a 23% likelihood of experiencing conflict at least every few months. In contrast, those who had witnessed all types of environmental degradation had an 86% likelihood of experiencing conflict. Similarly, **the likelihood of witnessing conflict every week rose from 3% to 31% (a 28% increase) among those experiencing multiple environmental impacts.**<sup>81</sup>

In the face of climate impacts, conflict and environmental degradation, many families struggle to adapt, and some of their efforts may further exacerbate conflict. Turning to livestock mobility, animal raids, resource sharing or agricultural diversification all increased the likelihood of families experiencing conflict. This is likely because many of these strategies will increase competition over increasingly limited land and other resources.

In some cases, just attempting to adapt to climate change may trigger displacement and conflict. In one focus group for displaced women in Ghor, Afghanistan, the respondents indicated that reforestation projects or the expansion of protected areas for environmental preservation sometimes result in the displacement of people who depend on that land for agriculture or grazing. These actions can lead to conflicts over land use and negatively impact the livelihoods of local farmers or pastoralists. Other focus groups in the area spoke about widening inequality causing tensions, with better off families more able to adapt new farming techniques or build higher retaining walls to prevent floods.

### Box: Children lost amidst growing crisis

In addition to fuelling more conflict, the effects of climate shocks in fragile areas have far-reaching consequences for children and young people. Not only are children worried about their physical safety because of the threat of conflict and war, but they view climate change as a direct threat to their survival and quality of life. Participants in focus group discussions spoke about the psychological toll of dealing with floods and droughts. Families facing hunger on top of violence and displacement often experienced anxiety and depression, further impacting their well-being.

Surveys and interviews conducted as part of previous World Vision research, which focused on how children in the Middle East are affected by challenges brought on by climate impacts, found that children frequently worry about environmental stressors like climate extremes or water scarcity affecting their physical and mental health.<sup>82</sup> These findings back up a multitude of research that shows environmental factors, such as droughts and hot climates, often contribute to the development or aggravation of hostile thoughts and mental health conditions.<sup>83</sup>

Impacts vary from one context to another, but nevertheless indicate the potential for climate change to exacerbate existing inequalities for women and girls. World Vision also highlighted that girls are disproportionately affected by climate-induced education disruption and early child marriage.<sup>84</sup> Children in Lebanon, Syria and Azraq camp in Jordan, for example, reported gender-based violence including physical and emotional/verbal abuse related to water and food scarcity, especially at water collection points.<sup>85</sup> As available water decreases, traditional gender roles dictate that women and children will typically spend more time fetching water, which exposes them to greater protection risks and exploitation.<sup>86</sup> Syrian children also reported floods or drought had triggered family disputes, while child marriage disproportionately affected girls after climate shocks.

### Natural resource extraction

Global efforts to mitigate climate change may also be contributing to conflict and competition over natural resources. The extraction of natural resources is necessary to make the transition to green economies, but demand for natural minerals has driven human rights abuses, such as sexual violence in the DRC, while armed groups have profited and continue to profit from exploitation of natural resources<sup>87</sup> according to the US Department of State.

More than 40% of internal conflicts between 1950 and 2009 were connected to the exploitation of natural resources, and conflicts linked to natural resources are twice as likely to relapse during peacetime.<sup>88</sup> The extraction of nickel, which is also critical for the creation of solar panels and energy storage, has been linked to murder, sexual violence and forced displacement in Guatemala.<sup>89</sup> The mining of natural resources has also triggered flare ups in violence between

tribal communities in Papua New Guinea.<sup>90</sup> World Vision's interviews with residents in Bougainville highlighted mining had detrimental environmental impacts, which in turn affected their food source. They reported animals dying from chemicals being washed into rivers, prompting animals to migrate to other areas. This is occurring in a context of land disputes between clans, loss of livelihoods and displacement. Burkina Faso, which is one of Africa's top gold-producing countries, has also recorded violent clashes between artisanal miners and industrial companies amid a complex insecurity situation.<sup>91</sup>

The DRC, home to one of the world's longest running and complex humanitarian crises, is also home to the world's largest-known reserves of cobalt,<sup>92</sup> a critical component of electric vehicle batteries and energy storage systems. Demand for cobalt, primarily driven by electric vehicles as countries seek to reduce emissions and mitigate



climate change, is projected to more than double between 2022 and 2030.<sup>93</sup> While cobalt is not considered a 'conflict mineral', the advance of the M23 militia across eastern DRC has been funded in part by their control of coltan mining towns such Rubaya.<sup>94</sup>

Green energy technologies, powered by natural resources such as coltan, are critical to help achieve the internationally agreed upon Sustainable Development Goals, especially SDG 13 (take urgent action to combat climate change and its impacts). Recent developments in DRC highlight the complex interlinkages between politics, mitigation efforts, key mined ingredients and armed groups' efforts to control natural resources.<sup>95</sup> Given the possibility that increasing demand for such green energy technologies could exacerbate existing tensions, conflict and grievances,<sup>96</sup> it's possible that failing to engage in responsible sourcing practices could increase

conflict and fragility risks. This could stall or reverse local development gains, essentially jeopardising the achievement of one SDG over another, specifically SDG 16, which aims to promote peaceful and inclusive societies.<sup>97</sup>

Deforestation associated with open pit cobalt mining and the extraction and processing of cobalt also risk releasing large amounts of greenhouse gases, primarily in the form of methane and carbon dioxide. This means that a boost in cobalt mining has implications for climate change. The very resource that's integral to help the world transition to a low-carbon economy and slow climate change, could also exacerbate climate change at the same time. While this shouldn't be a cause to halt emissions reductions targets and schemes, it does require careful consideration, investment in exploring other technologies, science and a human-rights based approach to ensure the transition to a green economy isn't undermined.





## CASE STUDY: Lake Bob in Grand Katanga

For years, people living near Lake Bob in Lualaba province in southern Democratic Republic of the Congo have watched their water supply, as well as their livelihoods, dry up.

The lake, located near DRC's copper and cobalt mining belt, has almost disappeared due to the effects of a changing climate, accelerated by environmental degradation from mining activities.

The dire situation has forced many families to leave the area. Tshilombo, a widow, and her seven children are among the families remaining. She used to successfully provide for her children by working around the lake and relied on the water from the lake to irrigate her garden and grow vegetables. However, the family's financial situation has become so dire that her children must now work. They earn money by collecting water for other people in the community.

"We used to eat three times a day. But now we eat once a day, and very late at night. Lake Bob has dried up because of mining activities and the very long dry seasons," said Tshilombo.

Mining activities next to Lake Bob involved removing sand from a quarry and relocating it to

the lake, effectively transforming the lake into a sand fill, with almost no potable water for locals.

Access to water and productive land are critical for both food security and sustainable livelihoods. Lake Bob resident and historian, Kalenga Kazadi, says much of the conflict in his area stems from land disputes and that the threat of hunger or loss of livelihoods also plays a role in driving tensions in the community.

"The lake has been a source of life for me since I was gardening. My garden produced what I needed to support my household ... We ate what we needed. The children didn't ask for anything because the food was within their reach and every one of them was satisfied," said Kalenga Kazadi.

Now his family only eats once a day.

"When foreigners came [for mining], Bob disappeared. There are no more fish, there's no more life. My garden no longer produces crops and the people who live here can no longer afford to support themselves."



© Rodrigue Harakandi / World Vision



## **CONCLUSION:** Conflict-affected countries the least able to adapt to climate change, worst affected and least-funded



This report underscores the profound and intersecting crises of climate change, conflict and hunger, disproportionately affecting children and families in the world's most fragile regions. Communities in Afghanistan, Somalia, Syria, the Dry Corridor and beyond are already experiencing devastating impacts as climate hazards exacerbate resource scarcity, deepen existing conflicts and drive displacement and food insecurity. With global temperatures set to rise beyond critical thresholds, the urgency to act could not be clearer. Yet, countries facing these compounded challenges receive significantly less adaptation funding, further hindering their ability to build resilience.

All of the communities interviewed for this research are highly vulnerable, but families and

communities are taking action in response to the threats that they're experiencing in efforts to adapt to climate impacts.

However, they need significant adaptation support, especially in countries where people are reliant on agriculture. Agriculture is crucial to the livelihoods and food security of many communities in conflict-affected countries, which also makes them some of the most susceptible to climate change. This issue is particularly acute in Somalia, which has one of the largest livestock populations in Africa<sup>98</sup> and where agriculture contributes to more than 70% of GDP.<sup>99</sup> Droughts exacerbate poverty; the average Somali household is estimated to lose 40% of its livestock in each drought event.<sup>100</sup> Climate change threatens the livelihoods of

nomadic and pastoralist communities with the loss of pasture lands and reduces access to water, which can trigger conflict<sup>101</sup> and leave displaced people less able to cope with each additional economic shock.

Wealthier countries are typically more capable of adapting to resource scarcity and mitigating potential conflict.<sup>102</sup> Significant climate change adaptation measures and funding are required so that fragile countries can achieve the same goals. However, conflict-affected countries are being forgotten when it comes to climate change adaptation. For example, over the past four years, Somalia has experienced a devastating drought as well as large-scale flooding (on top of insecurity, widespread hunger and economic shocks as a result of the COVID-19 pandemic) but the country receives less than 1% of the funding it needs to adapt to climate change.<sup>103</sup>

The climate crisis is placing an incredible burden on children living in conflict-affected areas. The respondents and people we interviewed are well aware of this and are already experiencing the various ways in which conflict, climate, hunger and poverty are intersecting and creating disastrous consequences in their daily lives.

Climate change acts as a potent “threat multiplier,” amplifying tensions over essential resources like water and pasture, fuelling displacement, and weakening social cohesion. In turn, conflict erodes communities’ capacity to cope with environmental shocks, trapping vulnerable populations in cycles of poverty, hunger, and violence. These dynamics severely threaten children’s safety, health and future prospects, exacerbating inequalities that will persist and intensify unless decisively addressed.

Children in fragile countries continue to be left behind when it comes to having the tools to cope with climate change, and it’s through no fault of their own. Young people across the globe are expected to face more climate hazards during their lifetime compared to previous generations. A recent study found that **the average child in 2020 will experience 36 times more heatwaves, five times more droughts, four times more crop failures, three times more river floods and twice as many bushfires and**

**tropical cyclones compared to someone born in 1960.**<sup>104</sup> Not only are we witnessing growing inequality between standards of living in fragile and non-fragile countries, but this inequality will further worsen for future generations.

Children are also inheriting a world with increasing and protracted conflict and widespread hunger. The root causes of all of these issues must be addressed. For example, tackling hunger requires a focus on addressing the drivers of food security, which includes dealing with the issues of climate change and conflict. This inevitably involves urgent action, including stepping up efforts to mitigate the effects of climate change, helping vulnerable communities in fragile countries adapt to increasingly worse climate shocks, reducing emissions and also addressing the drivers of conflict and stepping up peacebuilding efforts. It’s also crucial that the world acts swiftly to achieve a just transition to lower-emitting and more resilient food systems.<sup>105</sup>



© Arlene Bax, Elissa Webster / World Vision

# RECOMMENDATIONS

To address the root causes of climate-driven conflict and hunger effectively, World Vision recommends the following actions, in line with our [policy position on Climate Action](#):



## 1. Recommit to 1.5 degrees Celsius.

- Last year was the first year in which the average global temperature was 1.5 degrees above average, but it is still not too late. All countries - particularly wealthier countries - must prioritise sustainable measures to achieve internationally agreed upon emissions targets and go further to accelerate their efforts. The cost of inaction will be higher than the short-term cost of reducing and mitigating greenhouse gas emissions.



## 2. Scale Up Climate Change Adaptation Funding

- Ensure the Fund for Responding to Loss and Damage (FRLD) is available and accessible for the most vulnerable communities in conflict-affected countries, especially for children.
- Industrialised countries responsible for delivering finance under the New Collective Quantified Goal on Climate Finance should provide and mobilise funding that reflects their fair share of the US\$300 billion per annum as soon as possible, and ensure at least 50% of climate finance is allocated to climate change adaptation.

- Advocate for climate change adaptation funds to be accessible to multi-sector programs that combine food, water, protection and peacebuilding outcomes.
- Promote innovative financing mechanisms, such as climate resilience bonds or blended finance, to increase resources available for fragile states.



## 3. Promote nature-based solutions such as Farmer Managed Natural Regeneration for enhancing sustainable and climate resilient agri-food systems

- Support small-scale farmers and pastoralists to implement sustainable agricultural practices, diversify livelihoods, and improve access to resilient infrastructure.
- Encourage innovations that increase agricultural productivity sustainably, while addressing water scarcity and environmental degradation.



## 4. Enhance Peacebuilding and Conflict Prevention Efforts

- Integrate climate resilience and resource management into peacebuilding initiatives, focusing on community-level dialogue and reconciliation.
- Strengthen governance and institutions in fragile states to effectively mediate conflicts over scarce resources, thereby reducing climate-induced tensions.





#### 5. Strengthen Collaboration Between Humanitarian, Development and Peace Actors

- Facilitate joint planning and programming between climate adaptation experts, humanitarian responders and peacebuilders.
- Support the design of triple nexus initiatives that intentionally address food security, resilience and conflict prevention together.



#### 6. Address Migration and Displacement Proactively

- Provide robust support to host communities receiving climate-driven migrants, ensuring adequate resources, services and employment opportunities to minimise social tensions.
- Affected and host governments should protect the rights of the forcibly displaced and support durable solutions as part of climate action.



#### 7. Ensure Responsible Natural Resource Management and Extraction

- Establish stringent standards and monitoring systems for responsible sourcing and mining practices to prevent exacerbation of conflicts and environmental degradation.
- Promote transparency in global supply chains for minerals critical to green technologies, ensuring they support rather than undermine peace and community resilience.



#### 8. Develop Youth/Children Leadership in Climate-Conflict Action

- Promote youth-led solutions and education in climate adaptation and peacebuilding through targeted funding and mentoring.
- Support the inclusion of young people—especially those in fragile settings—in policy consultations and decision-making processes.

Through these targeted actions, governments, international donors, and humanitarian agencies can begin addressing the intertwined crises of climate change, conflict, and hunger. By putting children's rights and community resilience at the heart of interventions, the global community can work towards a future where vulnerable populations are no longer left behind.

# ANNEX 1: ADDITIONAL TABLES

**Table I : Level of agreement with the statement "Climate change poses a serious threat for me and my family."**

	Completely Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Completely Agree
Afghanistan	0%	0	0	18%	82%
Burkina Faso	0%	6%	2%	29%	63%
Democratic Republic of Congo	4%	3%	3%	24%	66%
Dry Corridor	7%	6%	10%	26%	52%
Iraq	0%	9%	6%	22%	63%
Papua New Guinea	2%	1%	2%	13%	81%
Somalia	0%	0%	4%	63%	34%
Sri Lanka	5%	2%	16%	50%	26%
Syria	0%	0%	0%	41%	59%

**Table II: Concerns of Climate Hazards**

Q: On a scale of 1-5 (with 1 being the greatest) what climate hazards are of greatest concern to you in your area? (Average Scores)							
Country	Drought	Rainfall Patterns	Heat Waves	Flood	Landslides	Cyclone	Wildfires
Afghanistan	1.2	1.7	2.2	1.1	3.4	2.0	4.5
Burkina Faso	2.0	1.9	2.4	2.2	4.7	4.7	4.3
DRC	1.6	2.3	3.0	3.6	4.0	4.0	4.2
Iraq	1.4	1.7	1.9	4.4	4.3	4.5	4.5
Papua New Guinea	2.2	1.2	3.0	1.7	3.0	2.5	4.0
Somalia	1.6	2.2	4.2	1.6	3.5	4.5	4.4
Sri Lanka	2.4	2.4	4.3	2.5	4.5	4.3	4.6
Syria	1.5	2.4	1.6	3.8	3.0	3.2	4.6
Grand Total	1.8	2.1	2.5	2.6	3.4	3.4	3.9

**Table III: Climate Impacts on Livelihoods**

	Crop Failure	Loss of Livelihood	Difficulty Accessing Food/Water	Reduced Pastureland	Declining Health	Relocation	Loss of Important Cultural Assets	Use of Negative Coping Strategies
Afghanistan	87.91%	83.88%	68.50%	35.53%	53.85%	65.93%	24.54%	4.76%
Burkina Faso	91.91%	66.99%	65.70%	80.58%	54.69%	51.78%	22.98%	31.07%
DRC	93.40%	73.27%	67.00%	25.08%	50.83%	15.51%	23.76%	11.88%
IRAQ	100.00%	81.82%	81.82%	54.55%	81.82%	27.27%	0.00%	0.00%
Papua New Guinea	96.28%	41.89%	49.66%	47.64%	46.62%	22.64%	32.43%	18.58%
Somalia	30.77%	55.52%	34.78%	56.86%	5.02%	12.37%	4.68%	5.02%
Sri Lanka	41.90%	72.73%	48.62%	20.95%	37.55%	2.77%	1.58%	3.16%
Syria	98.39%	82.64%	67.85%	77.81%	29.26%	36.66%	1.61%	3.54%
Grand Total	78.53%	57.01%	53.30%	45.00%	40.99%	23.38%	14.99%	10.16%

**Table IV: Climate Change impacts (moderate or strong agreement with the following statements about climate change)**

	Leads to displacement from my community	Leads to displacement to my community	Creates divisions in my community	Worsens my economic situation	Worsens my health	Increases risk of hunger/food insecurity	Serious issue for people in this area	Serious threat for me and my family
Afghanistan	97%	96%	99%	100%	100%	100%	100%	100%
Burkina Faso	60%	61%	70%	88%	84%	98%	94%	92%
Democratic Republic of Congo	39%	42%	38%	92%	91%	91%	96%	90%
Dry Corridor	54%	51%	41%	76%	78%	72%	80%	77%
Iraq	74%	48%	61%	85%	83%	80%	87%	85%
Papua New Guinea	52%	47%	54%	95%	91%	92%	94%	94%
Somalia	87%	90%	83%	95%	88%	88%	99%	96%
Sri Lanka	23%	17%	20%	72%	50%	46%	83%	77%
Syria	78%	50%	74%	100%	87%	97%	99%	99%
Overall	61%	55%	55%	86%	82%	82%	89%	87%



**Table V: Reasons for climate-related conflict in your area**

	Competition over resources (drinking water, irrigation, livestock, etc.)	Corruption	Displacement	Insufficient water supply	Recruitment into armed groups
Afghanistan	14%	24%	74%	64%	0%
Burkina Faso	10%	45%	16%	49%	14%
Democratic Republic of Congo	16%	18%	23%	55%	8%
Dry Corridor	25%	21%	5%	47%	28%
Iraq	14%	38%	37%	69%	9%
Papua New Guinea	38%	33%	24%	40%	8%
Somalia	2%	31%	71%	70%	0%
Sri Lanka	11%	19%	4%	65%	2%
Syria	34%	2%	8%	37%	0%
Overall	20%	24%	23%	53%	13%

**Table VI: In what ways do climate change impacts worsen conflict in your area?**

	Conflict diverts government responses and service delivery	Conflict preventing groups from overcoming	Preventing access to other pasture or water	Competition over decreasing resources provides fuel to conflicting groups	Limited resources stretched further
Afghanistan	12%	60%	27%	16%	47%
Burkina Faso	43%	45%	24%	14%	55%
Democratic Republic of Congo	12%	41%	23%	15%	26%
Dry Corridor	6%	14%	41%	12%	49%
Iraq	24%	78%	60%	10%	14%
Papua New Guinea	26%	41%	42%	17%	51%
Somalia	53%	47%	56%	2%	3%
Sri Lanka	13%	6%	8%	46%	40%
Syria	0%	51%	45%	8%	1%
Overall	17%	35%	38%	14%	36%

**Table VII: How do you think climate change changed land use, environmental features or natural resource management?**

	Deforestation	Intensive farming	River irrigation	Transhumance	Waste management
Afghanistan	26%	37%	36%	46%	50%
Burkina Faso	77%	67%	62%	58%	31%
Democratic Republic of Congo	82%	52%	18%	26%	36%
Dry Corridor	80%	44%	9%	24%	27%
Iraq	22%	63%	31%	51%	16%
Papua New Guinea	55%	49%	52%	44%	37%
Somalia	39%	21%	14%	50%	48%
Sri Lanka	15%	18%	17%	7%	54%
Syria	4%	37%	5%	59%	1%
Overall	54%	44%	22%	37%	31%

**Table VIII: Conflict Impacts on daily life**

	Damage to ecosystem	Damage to infrastructure	Decreased child wellbeing	Decreased food access	Displacement	Loss of life	Loss of livelihood	Negative health	Weaken social cohesion
Afghanistan	5%	13%	75%	56%	57%	28%	75%	69%	46%
Burkina Faso	7%	6%	6%	17%	31%	16%	23%	7%	50%
Democratic Republic of Congo	13%	15%	40%	50%	24%	47%	57%	33%	25%
Dry Corridor	17%	13%	20%	26%	23%	18%	18%	23%	10%
Iraq	8%	10%	16%	13%	15%	80%	81%	17%	40%
Papua New Guinea	31%	24%	17%	39%	28%	33%	34%	28%	40%
Somalia	7%	16%	1%	2%	56%	42%	50%	15%	1%
Sri Lanka	12%	25%	28%	16%	3%	6%	52%	32%	26%
Syria	8%	1%	46%	4%	9%	40%	53%	47%	16%
Overall	14%	14%	22%	24%	25%	30%	39%	25%	23%

**Table IX: What actions are your community taking to overcome challenges brought about by climate change?**

	Agricultural diversification	Animal raids	Diversification herd	Livestock mobility	Resource sharing
Afghanistan	29%	18%	37%	57%	23%
Burkina Faso	14%	2%	37%	32%	23%
Democratic Republic of Congo	34%	9%	10%	9%	10%
Dry Corridor	16%	8%	9%	16%	37%
Iraq	51%	7%	30%	19%	13%
Papua New Guinea	35%	6%	14%	10%	49%
Somalia	1%	19%	36%	50%	20%
Sri Lanka	27%	7%	3%	13%	8%
Syria	41%	0%	52%	45%	25%
Overall	25%	8%	21%	25%	27%

# ANNEX 2: MODELS

Key to significance codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

## Climate and Conflict Models

	Climate Conflict Experience Model	Climate Perceptions – Conflict Experience Model	Climate Perceptions – Conflict Perceptions Model
Dependent Variable	Witnessed Conflict	Witnessed Conflict	Belief Climate impacts are creating conflict
Negative Climate Change Impacts Index	.25***	0.05	0.12***
Environmental Degradation Index	.26***	0.06	0.12*
Belief that climate change serious issue for people in their community		-0.06	0.25***
Belief that climate is serious threat for their family		0.27***	0.40***
Age	0.02	.07	-.05
Male	0.03	.16	-.20*
Education Level	0.08*	.08	-0.00
Burkina Faso	-2.41***	-0.08	-16.05
DRC	-0.71***	0.02	-17.65
Dry Corridor	-1.84***	-0.61***	-17.16
Iraq	-0.94***	0.60**	-16.00
PNG	-1.19***	1.29***	-16.79
Somalia	1.67***	3.88***	-14.67
Sri Lanka	-1.31***	0.24	-18.13
Syria	-1.60***	0.95***	-14.94
info friends		0.10	-0.13
info family		0.35***	-0.05
info colleagues		0.44***	0.09
info leaders		-0.021	0.05
info cso		0.50***	0.28*
info local gov		-0.03	-0.01
info national gov		-0.03	-0.27*
info media		0.13	-0.08
info other		-0.30	-0.33
(Intercept)	2.32***	-2.18***	14.75
Observations	3,103	2,988	3,391
R2	0.30	binomial	binomial

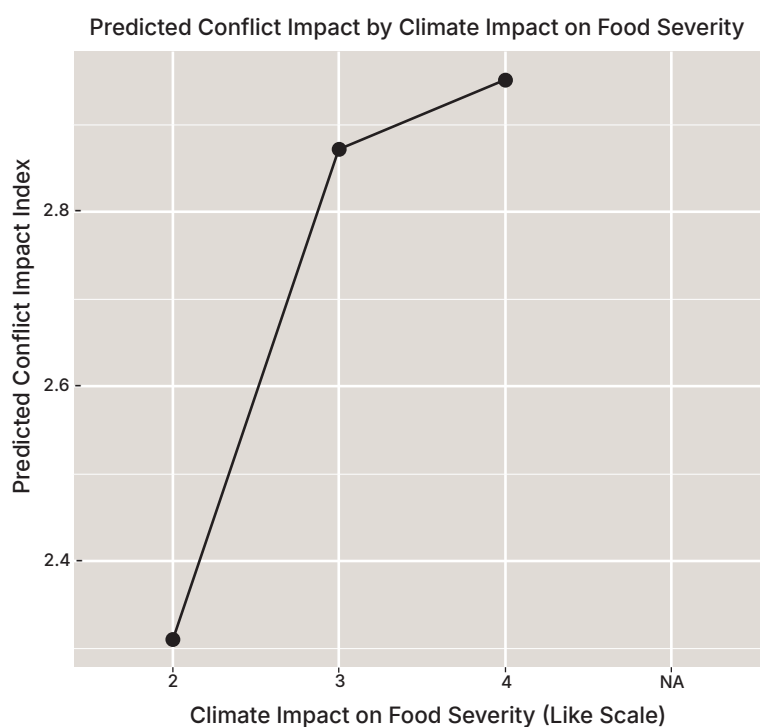


## Climate Impacts on Conflict Outcomes Regressions

	Model 1	Model 1a	Model 2	Model 3
Dependent Variable	Witnessed Conflict	Witnessed Conflict	Witnessed Conflict	Witnessed Conflict
Belief that climate change serious issue for people	0.09	0.09	0.05	-0.04
Agreement Climate is Serious Threat for Family	0.27 ***	0.26 ***	0.12 *	0.12
Belief that climate impacts creating conflict			0.21 ***	
Belief that climate impacts worsening conflict			0.16 **	
Negative Climate Change Impacts Index	0.03	0.05 *		-0.26 ***
Environmental Impact Index	-0.01	0.01		0.21 **
Age	0.01	0.04	0.04	-0.05
Male	0.22 **	0.21 **	0.18 *	0.39 **
Education Level	0.01	0.01	0.06	-0.13
Info Sources Index	0.15 ***		0.16 ***	0.17 **
info friends		0.13		
info family		0.28 ***		
info colleagues		0.40 ***		
info leaders		0.01		
info cso		0.39 **		
info local gov		0.01		
info national gov		-0.28 *		
info media		-0.13		
info other		-0.50 **		
Minority				-0.61 *
(Intercept)	-2.12 ***	-1.99 ***	-2.54 ***	-0.79
Observations	2,995	2,995	2,995	970
R <sup>2</sup> Tjur	0.036	0.056	0.084	0.049
Note: Coefficients in log odds				

## Climate, conflict and hunger models

Predicted conflict impact by severity of climate impact on food



Dependent Variable	Conflict Impact Index
Strength of climate impact on your food security (linear)	.45***
Strength of climate impact on your food security (quadratic)	-.20*
Age	0.22*
Male	0.19
Education Level	0.24*
Info Sources index	.61***
(Intercept)	.33
Observations	356

\*Because data was only available for 3 countries for this variable, and not everyone answered completely, we were not able to add country controls due to the limited sample.

## Conflict Experience – Climate Livelihood Hunger Impacts Model

Dependent Variable	Witnessed Conflict
Climate hazards impacting your life: Difficulty accessing water/food	.27**
Climate hazards impacting your life: crop failure	.07
Climate hazards impacting your life: reduced pastureland	.32***
Climate hazards impacting your life: loss of livelihood	-.29**
Environmental Degradation Index	.07
Age	0.08
Male	0.14 .
Education Level	0.09
Burkina Faso	-.34 .
DRC	-.11
Dry Corridor	-.92***
Iraq	-0.38 .
PNG	1.11***
Somalia	3.58***
Sri Lanka	0.02
Syria	0.70***
info friends	0.09
info family	0.32***
info colleagues	0.40***
info leaders	-0.00
info cso	0.44**
info local gov	-0.07
info national gov	-0.06
info media	0.14
info other	-0.36*
(Intercept)	-1.30***
Observations	2,988

## Climate Food Impacts Model

Dependent Variable	climate change impacting food and water access
Environmental Degradation Index	0.59***
Age	0.02
Male	0.07
Education Level	-0.02
Burkina Faso	-0.75***
DRC	-0.22
Dry Corridor	-.92***
Iraq	-0.72***
PNG	-1.19***
Somalia	-1.25***
Sri Lanka	-0.38 .
Syria	0.37 .
info friends	0.12
info family	-0.22**
info colleagues	-0.02
info leaders	0.14
info cso	0.22 .
info local gov	0.10



Dependent Variable	climate change impacting food and water access
info national gov	-0.14
info media	0.18*
info other	0.69***
(Intercept)	-0.57*
Observations	3391

## Climate displacement and conflict

Dependent Variable	Displacement-Conflict Model Conflict Impact Index	Displacement-Hunger Model Agreement climate impacts increase hunger risk
Agreement displacement from	0.02	0.21***
Agreement displacement to	0.14***	0.15***
Age	0.00	0.03
Male	0.05	-0.03
Education Level	0.12**	-0.06*
Burkina Faso	-2.05***	0.20*
DRC	-0.71***	0.32***
Dry Corridor	-2.21***	-0.44***
Iraq	-1.24***	-0.23**
PNG	-1.20***	0.21*
Somalia	-2.29***	-0.55***
Sri Lanka	-1.77***	-1.03***
Syria	-1.84***	0.10
(Intercept)	3.44***	2.60***
Observations	3,103	3,391
R2	0.32	0.31

## Conflict and Environmental Degradation

Predictors	
agreement issue climate change serious threat to family	0.01
Climate Negative Impacts Index	-0.06
Environmental Degradation Index	-0.64 ***
Age	0.14
Male	0.51 **
Education Level	0.02
Info Sources Index	-0.08
employment entrepreneur	-0.75
employment civil servant	-1.57 **
employment farmer	-0.53 **
employment semi skilled laborer	-0.04
employment small business owner	-0.38
shock exposure index	0.14
(Intercept) × 1	-0.5
(Intercept) × 2	-0.3
(Intercept) × 3	0.7
(Intercept) × 4	1.98 **
(Intercept) × 5	2.73 ***
(Intercept) × 6	4.40 ***
Observations	653

Table: Predicting conflict witnessed frequency based on environmental degradation impacts experienced

Environmental degradation index	Never	Don't know	About once or twice a year	Every few months	About once a month	Weekly	Daily	Every Few Months +
1	50%	5%	22%	15%	4%	3%	1%	23%
2	36%	5%	24%	22%	6%	5%	1%	35%
3	23%	4%	23%	28%	10%	9%	2%	50%
4	14%	3%	19%	31%	14%	15%	4%	64%
5	8%	2%	13%	29%	18%	23%	7%	77%
6	5%	1%	8%	23%	18%	31%	13%	86%

Percentage indicates the likelihood of witnessing conflict at that frequency.

#### Adaptation- Conflict Model

Dependent Variable	Conflict Impact Index
Negative Climate Change Impacts Index	.23***
Environmental Degradation Index	.20***
Herd diversification	0.10
Livestock mobility	0.24***
Animal Raids	0.46***
Resource Sharing	0.21***
Agricultural Diversification	0.42***
Other Actions	0.03
Age	-0.00
Male	0.04
Education Level	0.06
Burkina Faso	-2.10***
DRC	-0.44**
Dry Corridor	-1.60***
Iraq	-0.81***
PNG	-0.99***
Somalia	-1.47***
Sri Lanka	-1.08***
Syria	-1.56***
(Intercept)	2.08***
Observations	3,103
R2	0.32

## Endnotes

- <sup>1</sup> FSIN & Global Network Against Food Crises. (2024). Global Report on Food Crises. GRFC 2024. Rome.
- <sup>2</sup> Notre Dame Global Adaptation Initiative. (2024). ND-GAIN Country Index Scores 2024. University of Notre Dame.
- <sup>3</sup> FSIN & Global Network Against Food Crises. 2024.
- <sup>4</sup> World Vision. (2024). Unprecedented. The crisis for children and families in Sudan.
- <sup>5</sup> World Bank Group. (2024). Fragility, Conflict & Violence.
- <sup>6</sup> World Vision. (December 2024). Climate Action Policy Position.
- <sup>7</sup> Homer-Dixon, T. (1999). Environment, Scarcity, and Violence. Princeton University Press, Princeton. Koubi V., Bernauer T., Kalbhenn A., & Spilker G. (2012). Climate variability, economic growth, and civil conflict. *Journal of Peace Research*, 49(1), 113-127.
- <sup>8</sup> United Nations. (13 February 2024). Climate Action Can Help Fight Hunger, Avoid Conflicts, Official Tells Security Council, Urging Greater Investment in Adaptation, Resilience, Clean Energy
- <sup>9</sup> Nagarajan, C., Pohl B., Rüttinger L., Sylvestre, Vivekananda, F. J., Wall, M. & Wolfmaier, S. (2018). Climate-Fragility Profile: Lake Chad Basin. Berlin: Adelphi & Singh, A. (2022). Environment-Conflict Nexus in the Sahel Region: Lake Chad as a Case in Point, Consortium of Indo-Pacific Researchers, 4(2).
- <sup>10</sup> Hausfather, Z. (2024). State of the climate: 2024 now very likely to be warmest year on record. CarbonBrief.
- <sup>11</sup> World Meteorological Organisation (January 2025). WMO confirms 2024 as warmest year on record at about 1.55°C above pre-industrial level
- <sup>12</sup> Carrington, D. (2024). World's top climate scientists expect global heating to blast past 1.5C target. The Guardian.
- <sup>13</sup> Roser, M. (2023). Employment in Agriculture. Our World In Data.
- <sup>14</sup> Falcon, W. P., Naylor, R. L., & Shankar N. D. (2022). Rethinking Global Food Demand for 2050. *Population and Development Review*, 48 (4), 913-1222.
- <sup>15</sup> Boehm, S., L. Jeffery, J. Hecke, C. Schumer, J. Jaeger, C. Fyson, K. Levin, A. Nilsson, S. Naimoli, E. Daly, J. Thwaites, K. Lebling, R. Waite, J. Collis, M. Sims, N. Singh, E. Grier, W. Lamb, S. Castellanos, A. Lee, M. Geffray, R. Santo, M. Balehegn, M. Petroni, & M. Masterson. (2023). State of Climate Action 2023. Bezos Earth Fund, Climate Action Tracker, Climate Analytics, ClimateWorks Foundation, NewClimate Institute, the United Nations Climate Change High-Level Champions, & World Resources Institute.
- <sup>16</sup> Dasgupta S., Robinson EJZ. (2022). Attributing changes in food insecurity to a changing climate. *Sci Rep*. 12(1) 4709.
- <sup>17</sup> Ibid.
- <sup>18</sup> Eberle, Ulrich et al. (2020). ESOC Working Paper No.22: Heat and Hate, Climate Security and Farmer-Herder Conflicts in Africa. (ESOC Working Paper No. 22). Empirical Studies of Conflict Project & Fisker, P, S. (2021). Technical Paper 5 : Conflict and Climate Change in the Lake Chad Region. World Bank Group.
- <sup>19</sup> FAO, IFAD, UNICEF, WFP and WHO. (2024). The State of Food Security and Nutrition in the World 2024 – Financing to end hunger, food insecurity and malnutrition in all its forms.
- <sup>20</sup> Lahn, G. & Shamout, N. (2015) The Euphrates in Crisis: Channels of Cooperation for a Threatened River. Shamout & Lahn, 2015 & Venturi, L., & Capozzoli, C. (2017). Changes in the water quantity and quality of the Euphrates river are associated with natural aspects of the landscape. *Water Policy*, 19 (2): 233-256.
- <sup>21</sup> Hellon, S. (2022). Iraq's fertile valley is dying. *Le Monde*.
- <sup>22</sup> Food and Agriculture Organization of the United Nations. (2021). Land of Opportunities: Dry Corridor in El Salvador, Guatemala and Honduras.
- <sup>23</sup> UNOCHA. (2024). Humanitarian Response Plan for Burkina Faso 2024.
- <sup>24</sup> Famine Early Warning Systems Network. (14 November 2024). Burkina Faso – Food Security Outlook: Crisis (IPC Phase 3) outcomes or worse persist in highly insecure areas, October 2024 – May 2025
- <sup>25</sup> Integrated Food Security Phase Classification. (2025). Democratic Republic of the Congo: Acute Food Insecurity Projection Update for January – June 2025.
- <sup>26</sup> Climate Change Secretariat, Sri Lanka Ministry of Environment. (2023). National Policy on Climate Change.
- <sup>27</sup> FSIN & Global Network Against Food Crises. (2024).
- <sup>28</sup> Islamic Republic of Afghanistan National Environmental Protection Agency. (2019). Initial Biennial Update Report under the United Nations Framework Convention on climate change (UNFCCC).



- <sup>29</sup> Integrated Food Security Phase Classification. (2025). Afghanistan: Acute Food Insecurity Situation for September - October 2024 and Projection for November 2024 - March 2025.
- <sup>30</sup> Armed Conflict Location & Event Data. (2024). The looming threat: A resurgence of Islamic State and inter-clan fighting in Somalia.
- <sup>31</sup> World Vision. (2023). Growing up in the climate crisis. Impact of Climate Change on Children and Young People in Northeast Syria.
- <sup>32</sup> Hellon, S. (2022).
- <sup>33</sup> Notre Dame Global Adaptation Initiative. (2024).
- <sup>34</sup> ACAPS. (2022). Thematic Report - Lake Chad Basin: Impact of extreme weather and climate events on livelihoods and food security.
- <sup>35</sup> Dasgupta, S., Robinson, E.J.Z. (2022). Attributing changes in food insecurity to a changing climate. *Sci Rep.*, 18(12) 4709.
- <sup>36</sup> IPC-CH Dashboard. Accessed October, 2024.
- <sup>37</sup> Climate Food Impacts Model in Annex 2
- <sup>38</sup> Medek, D.E., Schwartz, J. & Myers, S.S. (2017). Estimated Effects of Future Atmospheric CO<sub>2</sub> Concentrations on Protein Intake and the Risk of Protein Deficiency by Country and Region. *Environmental Health Perspectives*, 125(8) 087002-1-8.
- <sup>39</sup> Ibid.
- <sup>40</sup> Falcon, W. P., Naylor, R. L., & Shankar N. D. (2022).
- <sup>41</sup> USAID. (2016). Climate Risk Profile: Afghanistan.
- <sup>42</sup> Notre Dame Global Adaptation Initiative. (2024).
- <sup>43</sup> Mauricio Vazquez, Yue Cao. (3 December 2023). COP28 finally shines a spotlight on conflict-affected countries. ODI
- <sup>44</sup> Manisha Gulati, Yue Cao, Amir Khouzam, Mauricio Vazquez. (24 October 2024). Climate change, conflict and fragility: a recipe for disasters. ODI.
- <sup>45</sup> Burke, M. B., Miguel, E., Satyanath, S., Dykema, J. A., & Lobell, D. B. (2009). Warming increases the risk of civil war in Africa. *Proceedings of the National Academy of Sciences*, 106(49), 20670-20674.
- <sup>46</sup> Theisen, O. M. (2017). Climate clashes? Weather variability, land pressure, and organized violence in Kenya, 1989–2004. *Journal of Peace Research*, 54(5), 642-657.
- <sup>47</sup> Vivekananda, F. J., Wall, M., Sylvestre, F., & Nagarajan, N. (2019). Shoring up Stability: Addressing Climate and Fragility Risks in the Lake Chad Region.
- <sup>48</sup> Kelley, C. P., Mohtadi, S., Cane, M. A., Seager, R., & Kushnir, Y. (2015). Climate change in the Fertile Crescent and implications of the recent Syrian drought. *Proceedings of the National Academy of Sciences*, 112(11), 3241-3246.
- <sup>49</sup> Table V: Reasons for climate-related conflict in your area in Annex 1
- <sup>50</sup> Model 1 in Annex 2 "Climate Impacts on Conflict Outcomes Regressions"  $p < .001$ , coefficient .27 in log odds
- <sup>51</sup> Climate Conflict Experience Model in Annex 2
- <sup>52</sup> The two variables were shown to be correlated at 0.42 alluding to a moderate correlation between the two variables. This aligns with previous literature that shows a slight to moderate, but not direct, impact of climate change on conflict through drought, floods, and other impacts. Other factors such as governance, culture, and economic disparity might be more correlated towards predicting conflict for various regions.
- <sup>53</sup> Barnett, J. & Adger, W. N. (2007). Climate change, human security and violent conflict. *Political Geography*, 26(6) 639-655.
- <sup>54</sup> Homer-Dixon, T. (1999).
- <sup>55</sup> Table VI in Annex 1
- <sup>56</sup> Akinyertun, T.S., Ogunbodede, N.E. (2023). Conflict Weather: Climate Change as a Driver of Pastoralist Conflicts in the Lake Chad Region. *Jurnal Politik*. 9(1) Art. 2.
- <sup>57</sup> Cullen, H. & Glaser, S.M. (2007). Trends and triggers: Climate, climate change and civil conflict in Sub-Saharan Africa. *Political Geography* 26 (6): 695–715.
- <sup>58</sup> Chart and model in Annex 2: "Predicted conflict impact by severity of climate impact on food"
- The conflict impact index is the summed value of people who had said they had experienced the following Conflict impacts: loss of life, loss of livelihood, negative health, displacement, damage to ecosystem, damage to infrastructure, weaken social cohesion, decreased child wellbeing, decreased food access and other.
- The climate impact on food severity is a self reported value, asked as a follow up question. The respondent

was first asked if they had experienced any of the following climate shocks in the past year: cyclone, drought, flood, heat waves, landslides, rainfall pattern changes, wildfires, none or other. For any response other than none, they were then asked a binary question of whether there was impact on their livelihoods, or household food security, and if they answered yes, to then rate the impact. The climate impact on food severity is that score.

<sup>59</sup> Conflict Experience – Climate Livelihood Hunger Impacts Model in Annex 2

<sup>60</sup> Rigaud, K. et al., (2018). Groundswell: Preparing for Internal Climate Migration. World Bank.

<sup>61</sup> Hayden, S., The Guardian. (2022). Droughts in Somalia are partly our fault. We could at least let more migrants in.

<sup>62</sup> Reuveny, R. (2007). Climate change-induced migration and violent conflict. *Political Geography*, 26(6):656-673.

<sup>63</sup> Table V in Annex 1: Reasons for climate-related conflict in your area

<sup>64</sup> Displacement-Conflict Model in Annex 2

<sup>65</sup> Displacement-Hunger Model in Annex 2

<sup>66</sup> Table IV in Annex 1: agreement with the following statements about climate change

<sup>67</sup> International Labour Organization. (2024). ILO modelled estimates database ILOSTAT.

<sup>68</sup> The UNFCCC, (2024). Communities Organizing for Watersheds - Honduras.

<sup>69</sup> Pinnow, F. The New Humanitarian. (2024). Snapshots: How the climate crisis is hurting people in Honduras.

<sup>70</sup> Vivekananda, F. J., Wall, M., Sylvestre, F., & Nagarajan, N. (2019). & Lamarche, A. Refugees International. (2023). Climate-fueled Violence and Displacement in the Lake Chad Basin: Focus on Chad and Cameroon.

<sup>71</sup> Fisker P., (2021).

<sup>72</sup> Eberle, U. J., Rohner, D. & Theonig, M. (2020).

<sup>73</sup> FAO. (2024). Lake Chad, a system under threat.

<sup>74</sup> Gordon, E. & Jay, H. (2018). Adolescent Girls in the Lake Chad Basin: Complex Emergency and Compound Threats.

<sup>75</sup> Okpara, U., Yunus, S. (2024). The Nexus of Climate and Conflict in the Lake Chad Region: What We Know, Don't Know and Need to Know.

<sup>76</sup> Ibid.

<sup>77</sup> Newman, E., Hashemvand Khiabani, P. & Chandran, R. (2023). Intercommunal Violence, Insurgency, and Agropastoral Conflict in the Lake Chad Basin Region. *Small Wars & Insurgencies*, 1-31.

<sup>78</sup> Vivekananda, F. J., Wall, M., Sylvestre, F., & Nagarajan, N. (2019). & Moveni, A. (2019). What would make a woman go back to Boko Haram? Despair. The Guardian.

<sup>79</sup> Going from the lowest concern of rainfall to the highest level of concern increased the likelihood of the community engaging in alternative livelihoods by 16%.

<sup>80</sup> Moving from lowest concern to the highest level raised the likelihood of engaging in herd diversification by 9%

<sup>81</sup> Conflict and Environmental Degradation Model in Annex 2

<sup>82</sup> World Vision. (2023).

<sup>83</sup> White, B. et al., (2023). Mental Health Impacts of Climate Change Among Vulnerable Populations Globally: An Integrative Review. *Ann Glob Health*, 6;89(1):66 & Dodgen, D. et al., (2016). Chapter 8: Mental health and well-being, in Crimmins, A. et al. (eds), *The Impacts of Climate Change on Human Health in the United States: A Scientific Assessment*. U.S. Global Change Research Program, pp. 217–246.

<sup>84</sup> World Vision. (2024). Impact of Climate Change crisis and environmental actions. Mental models of children and young people in Lebanon, Syria, Jordan, Iraq and Jerusalem-West Bank.

<sup>85</sup> Ibid

<sup>86</sup> ACAPS. (2024). Afghanistan: Key climate change related risks between 2024-2030.

<sup>87</sup> US Government Accountability Office. (2022). Conflict Minerals: Overall Peace and Security in Eastern Democratic Republic of the Congo Has Not Improved Since 2014.

<sup>88</sup> Rustad, S.A. & HM Binningsbø, H.M. (2010). Rapid recurrence: Natural resources, armed conflict and peace. *Journal of Peace Research*.

<sup>89</sup> Kassam, A. (2017). Guatemalan Women Take on Canada's Mining Giants over "Horrific Human Rights Abuses." The Guardian.

<sup>90</sup> Al Jazeera. (2024). Tribal violence over Papua New Guinea mines kills at least 20: UN.

- <sup>91</sup> The Nordic Africa Institute. (2021). Insecurity in Burkina Faso – Beyond Conflict Minerals : The complex links between artisanal gold mining and violence & Yabre, S. (2024). Issue 30: Mediating conflict between gold miners in Burkina Faso: A GIS-based approach to low connectivity.
- <sup>92</sup> Statista. (2025). Global cobalt reserves by country 2024
- <sup>93</sup> Crane, J. (2022) The Cobalt Market.
- <sup>94</sup> VOA Africa. (2024). M23 rebels claim control of DRC's smartphone mineral rich town.
- <sup>95</sup> IPIS (7 February 2025). The (new) M23 offensive on Goma: Why this long-lasting conflict is not only about minerals and what are its implications? – Q&A - Democratic Republic of the Congo
- <sup>96</sup> Clare, C. & Crawford, A. International Institute for Sustainable Development (2018). Green Conflict Minerals: The fuels of conflict in the transition to a low-carbon economy.
- <sup>97</sup> Ibid.
- <sup>98</sup> International Bank for Reconstruction and Development/The World Bank and the Food and Agriculture Organization of the United Nations. (2018). Somalia: Rebuilding Resilient and Sustainable Agriculture
- <sup>99</sup> International Trade Administration. (2024). Somalia - country commercial guide.
- <sup>100</sup> UNFCCC. (2023). Somalia. Biennial update report.
- <sup>101</sup> Ibid.
- <sup>102</sup> Raleigh, C. & Urdal, H. (2007). Climate change, environmental degradation and armed conflict. *Political Geography*: 26(6) 674-694.
- <sup>103</sup> Gulati, M. ODI. (2023). What the case of Somalia can show us about financing climate action in conflict-affected countries.
- <sup>104</sup> Thiery, W. et al. (2021). Intergenerational inequities in exposure to climate extremes. *Science*: 374(6564) 158-160.
- <sup>105</sup> Boehm, S., L. Jeffery, J. Hecke, C. Schumer, J. Jaeger, C. Fyson, K. Levin, A. Nilsson, S. Naimoli, E. Daly, J. Thwaites, K. Lebling, R. Waite, J. Collis, M. Sims, N. Singh, E. Grier, W. Lamb, S. Castellanos, A. Lee, M. Geffray, R. Santo, M. Balehegn, M. Petroni, & M. Masterson. (2023). State of Climate Action 2023. Bezos Earth Fund, Climate Action Tracker, Climate Analytics, ClimateWorks Foundation, NewClimate Institute, the United Nations Climate Change High-Level Champions, & World Resources Institute.



