



# Building climate and conflict resilient livelihoods and food systems: Insights from East Africa

## Introduction

The Horn of Africa is experiencing a historic drought. Now in its fifth failed rainy season, with a sixth projected to fail in early 2023, 26 million people are expected to enter crisis levels of food insecurity or worse in Somalia, Kenya and Ethiopia.<sup>1</sup> Climate change is exacerbating humanitarian crises and leading to increased mobility, displacing millions each year throughout the Horn of Africa.<sup>2</sup> There is clear evidence of the increased frequency and severity of extreme weather events ahead, as well as confident projections of slow-onset climate events including increases in the number of very hot days expected across East Africa,<sup>3</sup> resulting in the expansion of cropland areas exposed to drought, and increasingly variable rainfall patterns.<sup>4</sup>

Countries experiencing protracted crisis or high risk of famine, are often simultaneously affected by violent conflicts and the impacts of extreme climate change events. International geo-political crises further compound these issues by disrupting supply chains, driving record high food prices, and in 2022, triggering a global crisis adding to the 657 million people projected to be undernourished by 2030.<sup>5</sup> The conflict in Ukraine in particular, continues to contribute to escalating fuel prices, driving inflation and increasing the costs of transport, food and imports.<sup>6</sup>

Across East Africa, the local food basket average per capita monthly price has increased by 55.6 percent, and the price of imported wheat has increased by 58.4 percent since before the conflict in Ukraine. Nutrient rich foods like beans, milk and sorghum are also less affordable than a year ago.<sup>7</sup> In these contexts, the impacts of climate change create additional barriers for the poorest

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<sup>1</sup>Anthem, P. WFP and FAO sound the alarm as global food crises tightens its grip on hunger hotspots: Urgent humanitarian action needed as record numbers face starvation. World Food Programme. September 2022.

<sup>2</sup>International Displacement Monitoring Centre. Climate Change, Migration and Displacement in East Africa. Jan 2021.

<sup>3</sup>Median models project Ethiopia will have 18 more very hot days per year in 2030 than in 2000, and 26 more in 2050, while Kenya is projected to have 25 more very hot days per year in 2030 than in 2000, 36 more in 2050, for example.

<sup>4</sup>adelphi. Climate Security Study: Uganda, West-Nile sub-region. 2023. and adelphi. Climate Security Study: Somali Region, Ethiopia. 2023. and adelphi. Climate Security Study: Kenya. 2023.

<sup>5</sup>Global Hunger Index. Global Regional and National Trends. 2022.

<sup>6</sup>World Food Programme. Implications of the Conflict in Ukraine on Food Access and Availability in the East Africa Region - Update #7. October 2022.

<sup>7</sup> Ibid.

households to cope and adapt, which can increase competition over resources, exacerbate grievances and escalate local conflicts. For example, poor harvests, water scarcity and increasing need for pastoralists to move further afield to find fodder can lead to increased resource competition and intercommunal conflict.

The barriers posed by climate change are also amplified for women, as climate hazards are associated with increased violence against women, girls and vulnerable groups, like children and the elderly.<sup>8</sup> Food and hunger are increasingly being instrumentalized as weapons of war, where geopolitical ambitions are confronted with the limits of the current food production and distribution systems, resulting in very real and often fatal implications. The cascading consequences of these global forces has made food and livelihood security a priority for policy makers and practitioners, notably for their important role in supporting sustainable peace and resilience.

For more than 60 years, the World Food Programme (WFP) has been embedded in communities most in need, to bring life-saving assistance and support sustainable and resilient livelihoods. In East Africa, WFP works to tackle structural vulnerabilities as well as address shocks from conflict or climate. WFP aims to effectively utilise its comparative programmatic advantage across East Africa, to ensure the continued functionality of sustainable food systems, strengthening resilience to vulnerabilities, shocks and stressors from climate-related disasters, economic crises, and conflicts.

This paper frames WFP's programming in climate resilience, livelihoods and food security within the climate security discourse. It aims to offer insights into action and investments for WFP's work in East Africa to support climate and conflict informed food systems, and livelihoods that support resilience, ultimately contributing to peace and security.

## **How climate change and environmental pressures affect livelihoods and food security in East Africa**

There is no place on earth where the impacts of climate change are occurring without evidence of associated consequences to the environment and food security. Most food production systems are at the mercy of climate, weather and the environment. East Africa is particularly vulnerable to the impacts of climate change. As noted by the IPCC Working Group II report *Climate Change 2022: Impacts, Adaptation and Vulnerability*, adaptation efforts are needed most in the context of conflict or fragility, where pre-existing vulnerability undermines the capacity to manage climatic stresses. What matters most is the vulnerability or resilience of affected communities, economies and political systems, which depend on a number of

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<sup>8</sup>adelphi & PIK. *Weathering Risk : The climate-security nexus in the IPCC report Climate Change 2022 : Impacts, Adaptation and Vulnerability*. 2022.

contextual factors, including; quality of governance, inequality, social cohesion and socio-economic conditions.<sup>9</sup>

Kenya and the Horn of Africa are facing the worst drought in 40-years.<sup>10</sup> Communities in Kenya's arid northwest are seeing 25-85 percent of grasslands negatively affected, as poor rainfall impairs pasture regeneration. Herd sizes have declined as a result; 2.4 million livestock animals have died due to lack of food.<sup>11</sup> In the country's arid and semi-arid lands (ASAL), the pastoral economy makes up 90% of all employment opportunities and 95 % of family income and livelihood security.<sup>12</sup> The current drought has seen 19 of 23 ASAL counties seriously impacted with more than 4.1 million people in need of humanitarian assistance. Smallholder farmers and pastoralists have long suffered inadequate access to inputs, technology, finances and markets, which when combined with increasing pests and increasing extreme weather events, undermines the viability of livelihoods and compounds food insecurity.<sup>13</sup>

With climate projections suggesting higher inter-annual variability in rainfall leading to an increasing number of droughts and floods, pastoralists are increasingly looking further afield in search of pasturage.<sup>14</sup> This escalating competition for land has intensified old land disputes, triggering conflict and bloodshed.<sup>15</sup> Moreover, as many Kenyan youth are left or squeezed out of agricultural systems, and are unable to earn a livelihood, they may become a security threat, at risk of exploitation by extremists' groups.<sup>16</sup>

In Ethiopia's Somali region, the economy is highly dependent on agriculture and pastoralism, with livestock production contributing to 60 percent of regional GDP. The country's agricultural sector and food systems' face major structural challenges including a lack of irrigation, weak market linkages, and limited use of improved seeds, fertilisers, and pesticides. As a result, in Ethiopia, there are an estimated 12.9 million people experiencing high levels of food insecurity. Ethiopia is currently facing two crises simultaneously: a fragile peace deal ending conflict in the north of the country, and a fifth consecutive drought in southern and eastern areas.<sup>17</sup>

High gender inequality in Ethiopia's Somali region also clusters with the highest rates of poor food security outcomes, with a higher proportion of female-led households' food insecure compared to male-led households.<sup>18</sup> Compounding these challenges, frequent cycles of floods

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<sup>9</sup> Adrien Detges and Adrian Foong. Foreign Policy Implications of Climate Change in Focus Regions of European External Action. March 2022.

<sup>10</sup> Kabukuru, W. East and Horn of Africa prep for worst drought in decades. Associated Press. April 2022.

<sup>11</sup> WFP and FAO. 2022. Hunger Hotspots. FAO-WFP early warnings on acute food insecurity: October 2022 to January 2023 Outlook. Rome.

<sup>12</sup> adelphi & World Food Program. Climate Fragility Profile: Kenya. Publication Forthcoming.

<sup>13</sup> Greenpeace Africa. Collectively We Can Secure Kenya's Food System. 2022.

<sup>14</sup> World Bank Group. Climate Risk Country Profile: Kenya. 2021.

<sup>15</sup> United States Institute of Peace. Kenya: As Drought Deepens Land Conflicts, Peacebuilding Respond. September 2022.

<sup>16</sup> Yiran Ning. New Security Beat: Food Security as a Driver for Sustainable Peace in Kenya. Wilson Centre. September 2022.

<sup>17</sup> USAID. Ethiopia: Fewsnets Outlook Update. FEWSNET. August 2022.

<sup>18</sup> adelphi & World Food Programme Climate Fragility Profile: Ethiopia: Somali Region. Publication Forthcoming.

and successive droughts are already having a significant impact on food security and livelihoods of communities, with 86 percent of internally displaced persons moving as a result of economic reasons in July 2022.<sup>19</sup>

This displacement increases the vulnerability of communities, exposing them to increased risks of conflict, loss of property and food insecurity. Projected climate change impacts are predicted to further increase the vulnerability of the agricultural sector, reliant on ground and surface water supplies, as a result of low recharge quality resulting from reduced precipitation in certain areas. Livestock is also projected to be further negatively impacted by rising heat conditions, including through the effects of temperature, radiation, and humidity.<sup>20</sup> Already, back to back droughts have resulted in the death of more than 4 million livestock, drying up the main source of nutrition for children in Ethiopia, milk.<sup>21</sup>

In South Sudan, long-term climatic trends, like the expansion of the Sahara Desert and rainfall variability has led to a deficiency in natural resource availability to support the livelihoods of different groups in the region. This resulted in tension between smallholder farmers and nomadic pastoralists and over 40% of the population became food insecure in 2017 as a result of drought, conflict and economic hardship.<sup>22</sup> At the same time in South Sudan, longer periods of flooding are exposing more people to serious risks and exacerbating security challenges. Severe flooding at the end of 2022 affected over 900,000 people, making levels of food insecurity even higher, impacting 6.3 million in 2022 and a projected 7.8 million people in 2023. Though parts of South Sudan have long-experienced seasonal flooding during the rainy season May-October, recent flooding in Fangak county, for example, has been exceptional in terms of intensity, geographic extent and duration.<sup>23</sup> The now regular occurrence of severe floods should be viewed as a perpetual threat to lives, property and infrastructure in South Sudan.

Floods, in combination with conflict and poor macroeconomic conditions have led to crop and livestock production losses, loss of livelihood assets, repeated displacement and the erosion of income generating livelihood activities.<sup>24</sup> As a result, two-thirds of the South Sudanese population are likely to face acute food insecurity during the lean season between April and July 2023.<sup>25</sup> Decades of on-going war in the country has led to a lack of infrastructure to be able to withstand shocks from such severe weather events.<sup>26</sup>

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<sup>19</sup> International Organization for Migration. Flow Monitoring Dashboard: Ethiopia. July 2022.

<sup>20</sup> World Bank Group. Climate Risk Country Profile: Ethiopia. 2021.

<sup>21</sup> Save the Children. Ethiopia: Tough months ahead as rains fail for the fifth season in a row, with millions in need of urgent food assistance. Access from Relief Web. Jan 2023.

<sup>22</sup> WFP USA, 2017. Winning the Peace: Hunger and Instability. World Food Program USA. Washington, D.C.

<sup>23</sup> Martinez, S. The rising cost of the climate crisis in flooded South Sudan. The Guardian. Nov 2021.

<sup>24</sup> FEWSNET. South Sudan: Food Security Outlook Update December 2022. Retrieved from Relief Web Jan 2023.

<sup>25</sup> United Nations Security Council. Situation in South Sudan Report of the Secretary-General December 2022. S/2022/918.

<sup>26</sup> International Rescue Committee. Emergency Watchlist 2023. 2022.

## How climate change, food and livelihood insecurity can increase the risk of violent conflict

Worsening climate impacts, while not predetermined to result in conflict, are exacerbating pre-existing socio-economic and political challenges. Evidence suggests that climate-related conflict is more likely to emerge in regions highly vulnerable to climate variability and with low socio-economic development, poor infrastructure and state capacity, and high levels of poverty, socio-political inequality, and dependency on agriculture.<sup>27</sup> Kenya, Ethiopia and South Sudan are among countries that have historically faced systemic governance challenges relating to resource management, access to justice, fiscal transparency and marginalisation. Together, these factors constrain the capacity of households and communities to withstand the impacts of climate change.

Climatic and environmental changes increasingly disrupt the systems that are the basis of the livelihoods of billions of people around the world.<sup>28</sup> The resulting food, water, and energy insecurities can cascade into multiple, wider security risks when they interact with diverse contextual factors. Unsurprisingly, those most affected are least equipped to cope or adapt.

Food-related instability is often driven by competition for resources related to agriculture or pastoralism; like land availability or distribution, and reform processes that can lead to occurrences of land-grabbing. Further instability related to food systems can result from market failures, such as commodity price fluctuations leading to food riots due to the economic inelasticity of food, such as those witnessed in Kenya and Sudan in 2022,<sup>29</sup> or extreme weather events like heat waves, drought or floods.

Over the last 50 years, natural resource competition has been linked to 40 percent of civil wars.<sup>30</sup> The economy is the most influential factor in the relationship between food and conflict, and spikes in food prices and agricultural resource competition are frequently driven by short-term weather variations, as agriculture is strongly affected by changes in rainfall patterns and temperature changes.<sup>31</sup> Unusually warm periods correlate with an increase in conflict between nomadic groups and farmers with developing countries disproportionately affected, since crops are grown closer to their biophysical heat limits, making crop yields more vulnerable to temperature increase.

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<sup>27</sup> Ibid.

<sup>28</sup> Rüttinger, Lukas; Raquel Munayer, Pia van Ackern, and Florian Titze: The nature of conflict and peace. The links between environment, security and peace and their importance for the United Nations. 2022.

<sup>29</sup> Reuters. Factbox: Surging food prices fuel protests across developing world. June 2022.

<sup>30</sup> WFP USA, 2017. Winning the Peace: Hunger and Instability. World Food Program USA. Washington, D.C.

<sup>31</sup> Ibid.

In Somalia, between 35 and 40 percent of violence is intercommunal, most of which is due to conflicts over access to land and water.<sup>32</sup> A fifth consecutive failed rainy season has contributed to a serious drought that has left 3 million livestock dead since 2021, and the projection of almost 8.3 million people experiencing crisis level food insecurity and a looming famine by mid-2023. This has put Somalia at the very top of the International Rescue Committee’s Emergency Watchlist for 2023.

The drought and global changes to food prices has put many people over the edge, as 30 years of conflict in the country means weaker institutions and governance systems are unable to cope with new shocks. Spikes

in global food prices, due to the Russian war of aggression in Ukraine, make it even more difficult for people in Somalia to afford food, demonstrating how conflict can also drive food insecurity.

Climate change and long-lasting conflict have devastated domestic food production, making the country 90% reliant on Russia and Ukraine for its wheat supply in addition to relying on imports for many staple foods.<sup>33</sup> Reports of Al Shabab destroying food deliveries and contaminating water supplies further demonstrates the weaponization of famine and drought in conflict.<sup>34</sup> Terrorists groups and clan militia also often use insecurity as a tool for mobilising and recruiting youth and are further consolidating their power and influence through taxation of charcoal and other natural resources.<sup>35</sup>

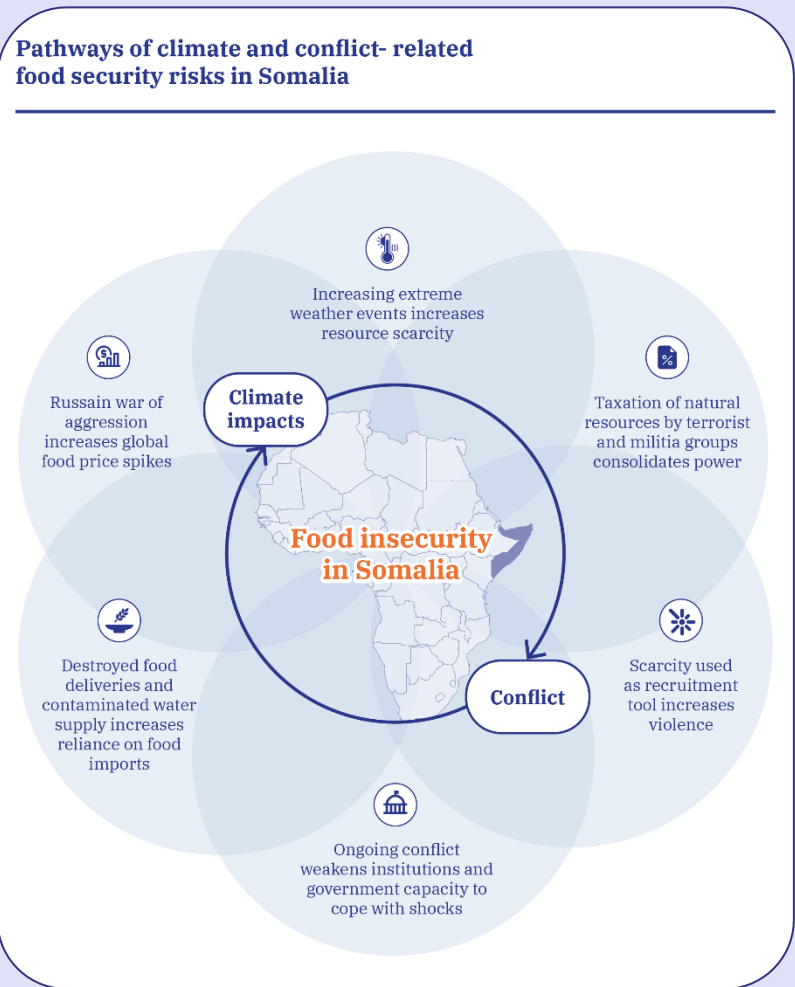


Figure 1: Pathways of climate and conflict-related food security risks in Somalia

<sup>32</sup> International Organization for Migration. As Climate Change Strains Somalia’s Path to Peace, Communities Hold the Key. 2022.

<sup>33</sup> International Rescue Committee. Emergency Watchlist 2023. 2022

<sup>34</sup> *ibid.*

<sup>35</sup> International Organization for Migration. As Climate Change Strains Somalia’s Path to Peace, Communities Hold the Key. 2022.

**Pathways of climate and conflict-related food security risks in Tigray region Ethiopia**

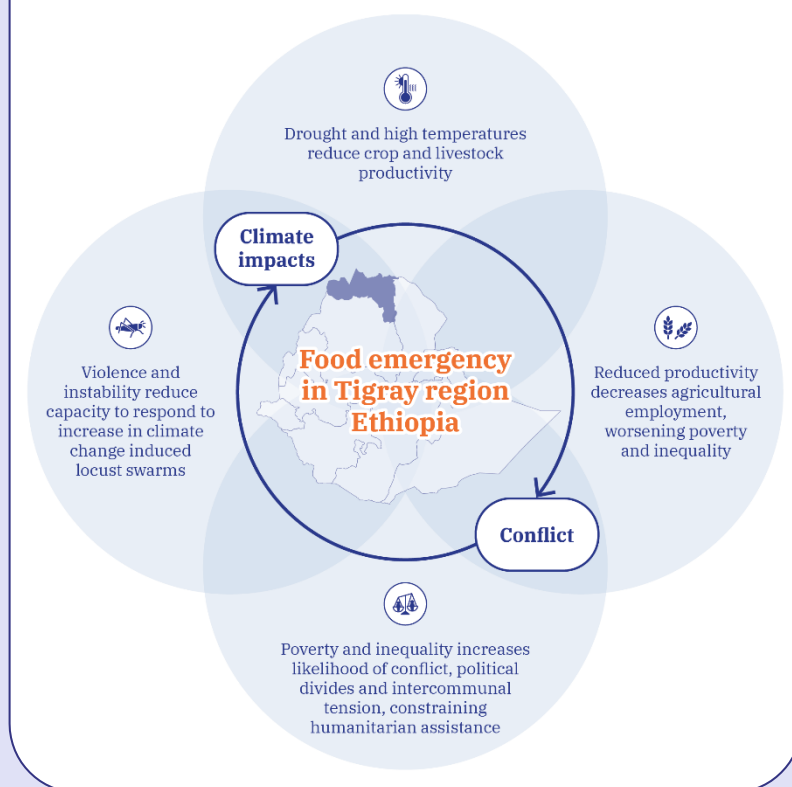


Figure 2: Pathways of climate and conflict-related food security risks in Tigray region Ethiopia

Similarly, Ethiopia, is a context of high climate variability, high political insecurity, conflict, as well as widespread food and nutritional insecurities across the population. The conflict between the government and forces in the Northern Tigray region plunged the country into sustained turmoil. Ethiopia is beset by political factionalism which permeates intercommunal relations and enables violence. This instability made it harder for communities to respond to the uptick of climate change induced locusts' swarms, which decimated crop production in 2020. In addition, drought and high temperature extremes hinder crop production and livestock productivity, increasing household food and nutritional insecurity. These trends

then compound poverty and inequality, by decreasing agricultural employment, in turn creating a higher likelihood of conflict and intercommunal tension.<sup>36</sup> What's more, as a result of ongoing conflict and instability, humanitarian organisations are often constrained from accessing communities to provide lifesaving assistance, which in 2020 saw upwards of 400,000 people in the Tigray region alone facing a catastrophic food emergency.<sup>37</sup>

It is important to note that the cascading effects of climate on peace and security are highly complex, with multiple moving parts influencing each other. Just as climate change can increase food insecurity and have negative cascading impacts on stability, so too can violent conflict have severe consequences on food systems and security. Conflict is also a reliable predictor of child malnutrition. Acute malnutrition can, for example, lead to increased displacements as individuals move in search of food or new pasture, increasing competition for scarce resources and threatening the carrying capacity of new settlements. This negative reinforcement can trap

<sup>36</sup>CIGAR & World Food Program. Assessing the relationship between climate, food security and conflict in Ethiopia and in the Central American Dry Corridor : Quantitative analysis on the impact of climate variability on conflict in Ethiopia and in the CADC countries. 31 Oct 2021.

<sup>37</sup>United Nations Environment Program. Story: Climate Action. Locust Swarms and Climate Change. 06 Feb 2020.

vulnerable communities in a dangerous cycle where climate change drives hunger, hunger drives conflict, and conflict exacerbates hunger and environmental degradation.

## Building climate and conflict resilient livelihoods and food systems

In 2022, WFP assisted over 43.5 million people across East Africa, the highest number of people in need to date due to the Global Food Crisis. WFP’s response to this crisis is centred on three pillars: (1) the emergency distribution of food and cash, (2) the expansion of local and national safety nets as an immediate response to acute food and nutrition needs, and (3) a food systems response. A large part of the food systems response is to invest in programming to strengthen the abilities of vulnerable communities to adapt to recurrent climate events. WFP supports communities to anticipate climate hazards before they turn into disaster, restore ecosystems to support against climate hazards, and protect the most vulnerable with safety nets and insurance against climate extremes. Importantly, WFP also supports communities to access sustainable energy solutions, enabling climate adaptation.

The regional learning facility on climate security, a joint initiative between adelphi and the World Food Programme (WFP) Regional Bureau for Eastern Africa is one such action, which aims to explore ways for WFP to better mainstream climate adaptation and resilience-building, whilst being conflict-sensitive in its strategies, programs and projects in East Africa. This expanding base of work is in recognition that production and distribution systems of food are currently not equipped to ensure equitable access to food for the world’s population, and few places are prepared to weather increasing risks posed by the impacts of climate change. The acute

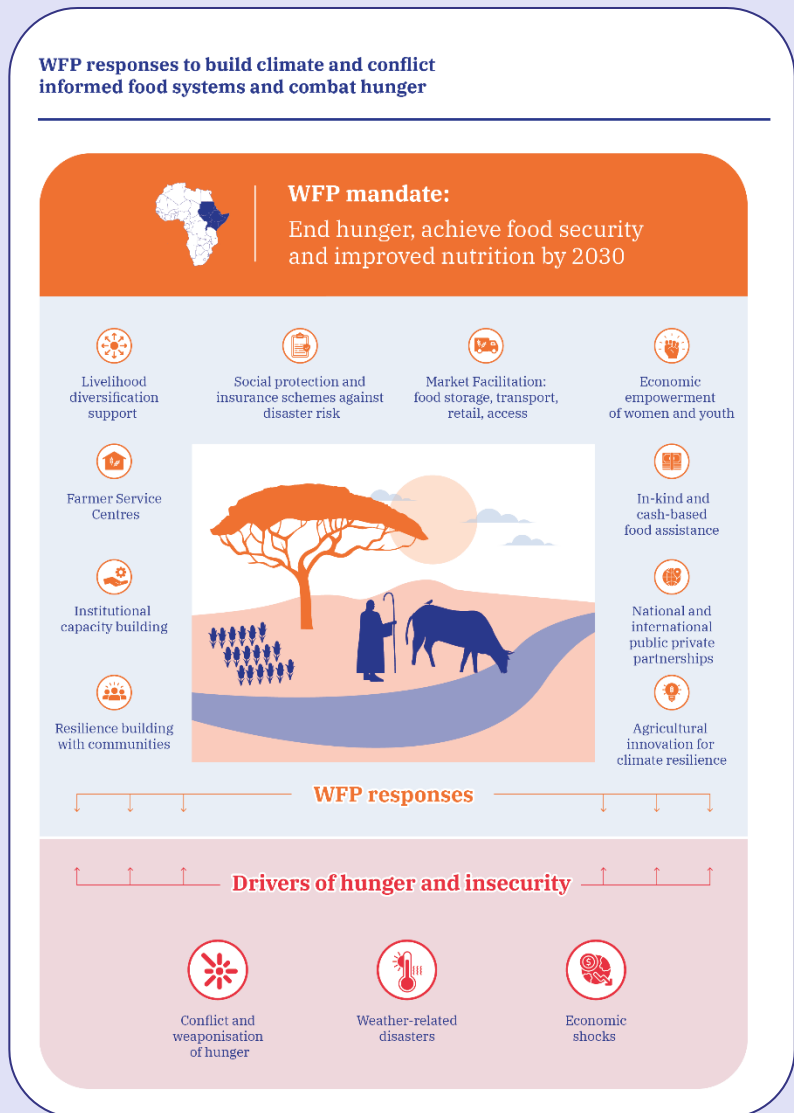


Figure 3: WFP responses to build climate and conflict informed food systems and combat hunger



risks posed to peace and stability both as a result of, and as a driver of failed food systems must therefore be adequately considered to chart a path forward.

### **Pathways to Peace & Accelerated Action**

As climate, peace and security are interconnected, the responses to them must also be interconnected. By linking the climate adaptation of food systems and livelihoods to peacebuilding, communities can increase their resilience enhancing prospects for long-term peace.

International and multilateral organizations have a key role to play in supporting the links between climate change, conflict, food security and livelihoods by collaborating with governments and communities to address not only the moderating factors increasing risks for conflict, but also supporting locally informed, sustainable and equitable livelihood and food systems adaptation strategies. Doing so requires a holistic and integrated approach which addresses both adaptation and peacebuilding priorities in a mutually reinforcing manner. This requires future oriented strategies which are both climate smart and conflict responsive.

Responsibilities to address these pressing challenges are dispersed across the UN system, national governments, multilateral institutions, think tanks, academic and NGOs. Many funds, programmes and organisations have individual roles to play which ladder up to create transformative change. No one actor will be able to meet the scale of the challenge alone. It is imperative therefore that diverse actors and institutions across the global development and policy architecture work together to act more comprehensively on this overarching challenge. Effective action requires multi-sectoral, integrated investments with a peace multiplier effect.

### **Recommended approach**

With demands for multilateral funds and foreign aid increasingly stretched thin over a canvas of urgent needs worldwide, it is critical to tackle the dominant disruptors undermining food security and livelihoods, and increasing the risks for conflict. With effective, collaborative action, investments in livelihoods and food systems and climate adaptation can enable a multiplier effect, promoting a transformative climate for peace.

### **WFP priorities should include:**

#### **1. Investments in livelihood strategies, specifically the pastoral value chain.**

Pastoralism accounts for 75 – 90 percent of livelihoods in the semi-arid and arid regions of East Africa. Pastoralism is, by its nature, an adaptive livelihoods strategy, yet in the face of an accelerated changing climate, urgent action is needed to support these livelihoods. Targeted, context driven investments across the pastoral value chain is needed; including regenerative agricultural models which promote synergies between

farming and pastoral systems. Leading from contextually driven and locally informed gaps and opportunities, support for skills-sharing to plan for, mitigate and adapt to the impacts of climate change on these livelihoods is essential.

## **2. Accelerating peace-positive climate adaptation and regeneration strategies**

To underpin the successful adaptation of livelihood strategies, investments must be matched in environmental and ecosystem restoration to enable Adaptive Agricultural Systems. Adaptation efforts must be carried out in the right place, including fragile contexts, and ensure local communities including women and young people, play an active part in making decisions to avoid creating additional harm or unintended side effects that increase social tensions. Environmental peacebuilding through natural resource sharing, conflict-sensitive adaptation, collaborative farming and climate-resilient peacebuilding offer promising avenues with additional benefits for addressing conflict.

## **3. Support social cohesion through inclusive governance and social systems**

Across contexts, the evidence is clear that violence in connection with climate extremes is more likely to occur where government and institutions are less effective, people are marginalized and basic services are lacking. To support an enabling environment for climate adaptation and secure livelihoods, improvements must be made in governance to reduce the security risks of climate change. Investments in cross-border governance, conflict resolution and social cohesion can support community resilience in the face of climate extremes. Supporting locally owned, inclusive and dynamic informal and formal processes will ensure sustainability of peace and development gains.

The World Food Programme can contribute to building food systems that are resilient under a range of climate-related and environmental pressures, support the sustainable diversification and resilience of livelihoods while enabling response that address the underlying contextual factors which heighten risks of conflict. WFP is well placed to increasingly expand investments to meet peoples' needs, mitigate vulnerabilities and move towards sustainable peace in the face of projected climatic and environmental change.

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