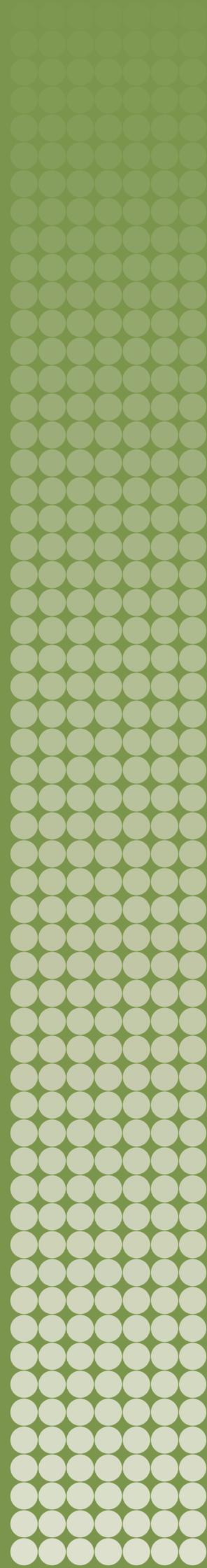


FOOD SYSTEMS IN CONFLICT AND PEACEBUILDING SETTINGS

Pathways and Interconnections

CAROLINE DELGADO, VONGAI MURUGANI AND
KRISTINA TSCHUNKERT



**STOCKHOLM INTERNATIONAL
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Abbreviations

HDP	Humanitarian–development–peace
IDP	Internally displaced person
NSAG	Non-state armed groups
SDG	Sustainable Development Goal

Summary

Food security is closely related to peace and stability. Failing food systems and the resultant increasing world hunger are among the most pressing issues of our time. The figures are stark: in 2020, 155 million people were acutely food insecure—an increase of nearly 20 million from the year before. Nearly 30 million people were on the verge of starvation, meaning that they did not know where their next meal would come from. The world is thus far not on track to achieve the United Nations' Sustainable Development Goal (SDG) 2 (Zero Hunger) by 2030.

Despite the devastating Covid-19 pandemic, violent conflict remained the main driver of global hunger in 2020. The number of active violent conflicts is on the rise, and they are also becoming increasingly severe and protracted. Conflict has a direct negative impact on food systems, affecting people's ability to produce, trade and access food. In most armed conflicts of the late 20th and early 21st centuries, conflict actors have used food as a weapon of war and deliberately destroyed food systems, with lasting food insecurity as a principal legacy of war. Moreover, food insecurity may create grievances that can escalate into instability and violent conflict, acting as a channel for individuals or groups to express broader socio-economic and political grievances. Simply put, without a resolution to food insecurity, it will be difficult to build sustainable peace, and without peace, the likelihood of ending global hunger is minimal. The increases in both acute food insecurity and violent conflict demand urgent and decisive action.

The objectives of this three-part policy paper series are to emphasize the urgency of addressing the relationship between conflict and food insecurity and to point out existing opportunities to do so. This initial paper aims, firstly, to inform policymakers of the intricate relationships between food security and violent conflict. Secondly, it aims to alert policymakers to the potential ability of sustainable and equitable food systems to contribute to peace, and then highlights the action required to enhance this potential. The paper synthesizes existing research and evidence, concluding with four recommendations. The second paper explores the links in context, detailing how they play out in two specific settings: Venezuela and Yemen. The third paper discusses opportunities and practical steps that can help to break the vicious circle of hunger and conflict.

The paper is divided into the following four chapters.

The interconnectedness of food systems and food security

This chapter provides a descriptive overview of food systems, emphasizing their complex, interconnected and adaptive characteristics. In short, food systems comprise every person and every process involved in food-related activities, from production to consumption of food and the broader environmental, political, social and economic settings in which these processes are embedded. Yet, despite their complexities, food systems have a simple core function: getting food from producers via processors and distributors to consumers.

The impacts of violent conflict on food systems and food security

Violent conflict affects most elements and processes of food systems, notably the production, distribution and marketing elements (in this paper, 'marketing' means activities relating to the buying and selling of food at markets). Conflict has a detrimental effect on food production, as farmlands and surrounding rural areas are often conflict

epicentres. Armed actors frequently attack and destroy the means of production; confiscate land; and displace, injure or kill farmworkers and other labours at the centre of production. In this deteriorating and highly insecure operating environment, resources, government spending and private investment are frequently diverted or reduced, with lasting effects on food systems and food security. Violent conflict also negatively affects the distribution and marketing of food. Elevated transport risks and related distribution delays lead to supply reduction, which in turn generates favourable conditions for the emergence of parallel and black markets. Violent conflict can have lasting negative effects on food systems, not least because most countries emerging from conflict need decades to recover.

Food insecurity as a trigger of violent conflict

Food insecurity not only is a consequence of violent conflict but can also be a contributing factor to the emergence and duration of such conflict. Food insecurity is linked to deficiencies in food systems. When combined with other risk factors, food insecurity can become a contributing driver of violent conflict. The most common factors that exacerbate the risk of food insecurity contributing to violent conflict include environmental stress and climate-induced food shortages, production resource competition, and grievances related to social issues and food price.

Environmental stress puts people's lives and livelihoods at risk and may exacerbate grievances, potentially leading to violent conflict. Environmental stress particularly affects food production as agriculture is highly sensitive to fluctuating temperatures and erratic rainfall patterns. The food production sector is crucial to employment opportunities and livelihoods in many countries. Moreover, in countries where the essential means of production—land and water—are scarce, competition increases. Resource scarcity pressures both societies and state institutions, weakening social cohesion and states' functional capacity. In these contexts, food-related and broader social grievances may increase. If there are also sudden food price rises, this can trigger periods of unrest and violence. For some, the opportunity cost of engaging in violence will decrease in these circumstances.

Food systems' potential to reduce violent conflict and enhance peace

There are thus indisputable links between violent conflict, failing food systems and increased levels of food insecurity, as well as pathways through which food insecurity can trigger violent conflict. However, conversely, sustainable and equitable food systems have the potential to prevent or reduce conflict drivers, triggers and impacts, thereby contributing to peace. The final chapter of this paper explores this potential, arguing that there is an urgent need to harness it by better understanding and acting upon the links between food systems and violent conflict. To achieve this, actors need to work holistically, have solid contextual awareness and evidence, and identify the right entry points at the right times. New and innovative approaches to this end are emerging. At the same time, existing structures should be strengthened.

Recommendations

This paper ends with four policy recommendations. These are intended to help guide more effective preventative and mitigating actions to limit (and ultimately avoid) the long-term adverse consequences of violent conflict for food security and exploit food security's potential to foster peace:

1. Donor governments and governments in conflict-affected countries can enhance the efficiency and impact of their support and intervention if they base them on conflict analysis that explores contextual dynamics and processes through a wider food systems lens.
2. Against the increasing levels of conflict-induced food insecurity, exacerbated by the Covid-19 pandemic, humanitarian and development actors should work together with local authorities and security forces to scale up efforts to break the reciprocal relationship between violent conflict and hunger.
3. In conflict-affected contexts, the agency responsible for the coordination of humanitarian and/or development responses should set up Food and Peace Hubs that cut across sectors and different organizations' mandates.
4. Linked to recommendation 3, UN agencies and international and local non-governmental organizations are advised to include the systematic collection, disaggregation, merging and analysis of data on employment and livelihoods linked to agricultural food production within existing assessments and monitoring exercises.

1. Introduction

This paper sets out the pathways and interconnections between food systems, hunger, violent conflict and peace. Its overarching objective is to emphasize the urgency of breaking the relationship between conflict and hunger at the point when both food insecurity and violent conflict are increasing globally. World hunger is among the most pressing issues of our time. In 2020, 155 million people were acutely food insecure—an increase of nearly 20 million from the year before.¹ Nearly 30 million people were on the verge of starvation, meaning that they did not know where their next meal would come from. The majority of these people—almost 100 million—live in countries where violent conflict is the main driver of hunger. There is a two-way relationship between violent conflict and food security. On the one hand, conflict has a direct impact on food systems, affecting people’s ability to produce, trade and access food. On the other, food insecurity can be a contributing factor to the emergence and duration of conflict. Nevertheless, the pathways leading from conflict to increased food insecurity or from increased food insecurity to conflict are complex and unique to each case.

Conversely, when food systems are equitable and sustainable, they have the power to foster peace. Carefully designed interventions that address conflict-induced food insecurity can help to build resilient communities and sustainable livelihoods.

This paper begins with an overview of food systems, including the different elements that make up the systems and the critical drivers that push and pull them. Thereafter, the paper disentangles how violent conflict affects food systems, putting specific emphasis on production, distribution and marketing elements (in this paper, ‘marketing’ means activities relating to the buying and selling of food at markets). The following chapter explores the relationship in reverse, looking at how food insecurity may contribute to the emergence and duration of conflict, focusing on the main risk multipliers of food insecurity that can trigger conflict. Next, the paper considers how sustainable and equitable food systems that build resilience to food insecurity could prevent or reduce conflict drivers, triggers and impacts, and contribute to peace. Leveraging food systems to this end requires a robust understanding of the food systems in place and the root causes and drivers of conflict, and a holistic understanding of peace. The paper ends with four policy recommendations. These are intended to help guide more effective preventative and mitigating actions to limit (and ultimately avoid) the long-term adverse consequences of conflict and violence for food security and exploit food systems’ potential to foster peace.

¹ Food Security Information Network (FSIN) and Global Network Against Food Crises, *Global Report on Food Crisis 2021* (FSIN/Global Network Against Food Crises: Rome, 2021).

2. The interconnectedness of food systems and food security

Food systems are complex, interconnected and adaptive systems comprising every person and every process involved in a set of activities ranging from production to consumption and disposal of food. Food systems also encompass the broader environmental, political, social and economic settings in which these activities are embedded (see figure 2.1). Food systems range from highly localized, rural and traditional food systems to the global agro-industrial food system. Overall, food systems are transforming rapidly, becoming increasingly global, interdependent and complex. Despite these complexities, food systems have a simple core function: getting food from producers via processors and distributors to consumers. This chapter explains the complexities of food systems with reference to this simple core function.

Within a food system, the chain of people, processes and activities is often conceptualized as the food *supply chain* or food value chain. Core elements of the food supply chain include production, storage, distribution, transportation, processing, transforming, packaging, retail, marketing and waste disposal. In general, supply chains tend to be shorter in rural areas and traditional food systems than in urban settings and agro-industrial systems.²

The level of *food security* of a population, household or individual is a principal outcome of food systems (see box 2.1 for a definition of food security). When food systems become stressed, food security deteriorates and people become food insecure. Because food systems are embedded in wider environmental, political, social and economic settings, food systems generate outcomes that affect these settings. Examples of environmental, political, social and economic outcomes include changes or consequences relating to biodiversity, environmental sustainability, income and employment. Outcomes can be expected or unexpected, and desired or undesired.

A food *system* consists of interacting and interrelating elements with linear and non-linear feedback loops, meaning that action in one part of the system has repercussions across the system.³ Moreover, food systems interact with other main systems, such as energy systems, trade systems and health systems. Therefore, a structural change in a food system might originate from a change in another system.⁴

Drivers of food systems are processes or factors that push and pull the elements of a system. Drivers can be either internal or external to the food system and they can arise deliberately or unintentionally. Drivers influence a food system over a long enough period that they have a durable impact on the activities of the system and, subsequently, its outcomes.⁵ When drivers have a negative impact, they can become *stressors* to a food system. In addition to drivers, food systems are affected by sudden *shocks*, which can be closely related to drivers but which do not have the persistent effect of drivers.⁶ Shocks to a food system can be categorized into climate and weather events (such as storms, drought or floods), geopolitical events (such as disturbances from conflict or state dissolution), economic events (such as price hikes

² For further details on food systems, see, e.g., Hawkes, C., Parsons, K. and Wells, R., *Brief 2: Understanding the Food System—Why it Matters for Food Policy* (Centre for Food Policy: London, 2019); and Nguyen, H., *Sustainable Food Systems: Concept and Framework* (Food and Agriculture Organization of the United Nations (FAO): Rome, 2018).

³ FAO, *Climate Smart Agriculture Sourcebook* (FAO: Rome, 2021); Hawkes, Parsons and Wells (note 2); and Béné, C. et al., 'Understanding food systems drivers: A critical review of the literature', *Global Food Security*, vol. 23 (Dec. 2019).

⁴ Nguyen (note 2).

⁵ Béné et al. (note 3).

⁶ Béné et al. (note 3).

or financial crisis) and pandemics.⁷ They constitute a change in the context that brings consequences and that can occur suddenly.

Drivers and shocks can be considerably interconnected. For example, weather-related extreme events, such as floods or droughts, can be considered shocks that can disturb or otherwise affect food systems. Recurrences or increases in the frequency and intensity of such extreme weather events can eventually become drivers that alter a system. Moreover, as a result of feedback loops, drivers can also be outcomes and outcomes can become drivers. For example, as this paper will show, political instability and violent conflict can lead to deteriorating food security, while food insecurity can lead to further political instability and intensify violent conflict.

Food security, compound risk and a systems approach

The frequency of shocks affecting food systems has increased over the past decades.⁸ Moreover, shocks can create complex synchronous or lagged effects across multiple systems. A single shock can amplify existing stressors or potentially initiate a cascade of shocks, leading to compound risks to communities and larger and more sustained impacts on livelihoods and food security. For example, drought can trigger widespread and varied processes; it reduces crop and livestock production, which in turn can result in agricultural market volatility, increased migration and potentially conflict over natural resources, deteriorated soil quality and wildfires.⁹

The ongoing Covid-19 pandemic is a prime example of a shock that has caused compounding and interrelated environmental, socio-economic and political crises. The direct health impact of the virus (illness and death), coupled with the mitigation measures imposed by governments to contain its spread, has exacerbated many of the negative drivers of food systems, such as violent conflict (discussed in the following chapters), displacement and extreme weather events, to name but a few. The pandemic has widened inequalities and exposed structural vulnerabilities in local and global food systems.¹⁰ Containment measures (such as lockdowns) have affected the availability of labour and employment opportunities, including seasonal farmworkers, retailers and transporters, and restricted access to retail outlets. The cumulative impact of lockdowns and other mobility restrictions has degraded purchasing power at the household level and undermined the general capacity to produce and distribute food.¹¹ At the same time, export restrictions on various food and agricultural products, including by some of the world's largest producing countries of staples such as wheat and rice, have had a detrimental impact on national food security in many of the least-developed net food-importing countries.¹²

Populations living in areas affected by existing or anticipated food crises have been particularly exposed to the effects of the pandemic.¹³ The Covid-19 pandemic came amid other shocks that already threatened the food security of billions of people, such as the biggest desert locust invasion in almost three decades in East Africa. There were also large invasions in the Middle East, South Asia and South America.¹⁴ Moreover, drier-than-average weather conditions during the March–May 2021 rainfall season in

⁷ Cottrell, R. S. et al., 'Food production shocks across land and sea', *Nature Sustainability*, no. 2 (2019).

⁸ Cottrell et al. (note 7).

⁹ Sagara, B., *Resilience Measurement Practical Guidance Note Series 2: Measuring Shocks and Stresses* (Mercy Corps: Portland, OR, 2018).

¹⁰ FSIN and Global Network Against Food Crises (note 1).

¹¹ Erokhin, V. and Gao, T., 'Impacts of COVID-19 on trade and economic aspects of food security: Evidence from 45 developing countries', *International Journal of Environmental Research and Public Health*, vol. 17, no. 16 (2020).

¹² Erokhin and Gao (note 11).

¹³ Xu, Z. et al., 'The compounded effects of COVID-19 pandemic and desert locust outbreak on food security and food supply chain', *Sustainability*, vol. 13, no. 3 (2021).

¹⁴ Xu et al. (note 13).

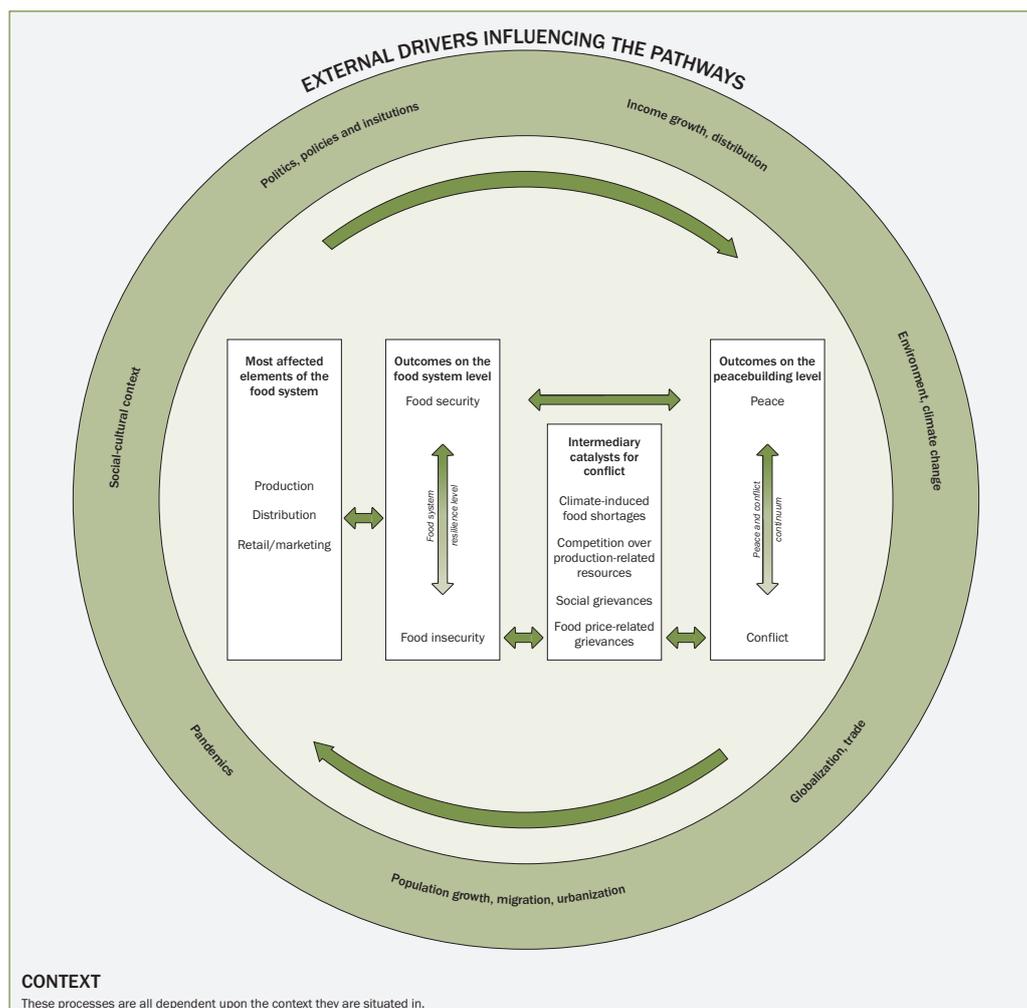


Figure 2.1. Food systems: Pathways to peace and conflict

Ethiopia, Kenya and Somalia are having a negative impact on rangeland and crops.¹⁵ In the Horn of Africa, the combination of Covid-19, desert locusts and adverse weather conditions could result in below-average crop and livestock production, reducing agricultural labour income, restricting food and milk consumption, increasing resource-based conflict and driving up cereal prices throughout 2021.¹⁶

Therefore, fully understanding the complexities of the simple core process of getting food from producers to consumers, via processors and distributors, requires a *systems approach*. A systems approach recognizes that the different actors, elements, processes, drivers and outcomes are connected rather than existing in isolation. By focusing on connections, a food systems approach enables identification of the common causes of multiple outcomes, how these outcomes are connected, and therefore how trade-offs can be managed and connections leveraged for mutual benefit.¹⁷

The need for sustainable and equitable food systems

Although the world has never produced or consumed so much food as today, many food systems are fragile and vulnerable to collapse. Food systems are among the first

¹⁵ FEWS NET, 'Food assistance needs rise in the Horn of Africa, with multi-season drought likely to persist in late 2021', East Africa Food Security Alert, 19 May 2021.

¹⁶ FSIN and Global Network Against Food Crises (note 1).

¹⁷ Parsons, K. and Hawkes, C., 'Connecting food systems for co-benefits: How can food systems combine diet-related health with environmental and economic policy goals?', European Observatory on Health Systems and Policies, Policy Brief 31, 2018.

Box 2.1. Food security and food insecurity

Food security exists when all people, at all times, have physical and economic access to sufficient safe and nutritious food that meets their dietary needs and food preferences, and enables them to live an active and healthy life.^a

Food security is commonly broken down into four components:

- *Food availability*—the availability of sufficient quantities of food of appropriate quality, supplied through domestic production or imports (including food aid).
- *Food access*—access by individuals to adequate resources to acquire appropriate foods for a nutritious diet.
- *Food utilization*—utilization of food through adequate diet, clean water, sanitation and healthcare to reach a state of nutritional well-being where all physiological needs are met. This brings out the importance of non-food inputs in food security.
- *Food stability*—to be food secure, a population, household or individual must have access to adequate food at all times. They should not risk losing access to food as a consequence of sudden shocks or cyclical events. The concept of stability can therefore refer to both the availability of food and access to food.^b

Food insecurity occurs when people's access to the food that they produce themselves or to food in markets is disrupted, reducing the volume and quality of foods available to them; the resulting diets provide them with insufficient nutrients for an active and healthy life. Food insecurity can be experienced either as a normal condition of life (chronic food insecurity) or as a result of cyclical shortages or a shock (acute food insecurity).

^a Food and Agriculture Organization of the United Nations (FAO), 'Rome Declaration on World Food Security' and 'World Food Summit Plan of Action', 1996.

^b FAO, 'An introduction to the basic concepts of food security', 2008.

structures to break down in the face of shocks or longer-term crises. When food systems fail, the resulting disorder threatens education, health and the economy, as well as human rights, peace and security.¹⁸ Collapsing food systems reduce food security, which can trigger further social unrest and political instability. Those who are already poor or marginalized are the most vulnerable.¹⁹ Among the most vulnerable are small-scale producers and women, but these people are vital to food security as they make up a large part of the local and traditional food systems that benefit many of the world's poorest citizens. Local and traditional food systems feed the majority of the rural and urban population in low- and middle-income countries, and a large number of people living in informal settlements under or close to the poverty line. Smallholder farmers, roving pastoralists and traditional fisherfolk produce and trade the majority of their foods, with women playing an important role. However, smallholder farmers are frequently highly exposed and vulnerable to shocks, in large part due to the micro-scale of their operations, the informal structures in which they operate, absence of labour protection, and lack of access to insurance and credit, among other factors.²⁰

Therefore, *sustainable* and *equitable* food systems are essential for stability and peace. Sustainable and equitable food systems are those food systems that aim to achieve food and nutrition security and healthy diets for all while limiting negative environmental impacts, improving socio-economic welfare and ensuring everyone can participate in, prosper from and benefit from the system.²¹ Sustainable and equitable food systems are furthermore a prerequisite for achieving SDG2 and, moreover, critical for achieving progress on all 17 SDGs. As the following chapters will show, unsustainable food systems are more vulnerable to the impact of violent conflict. Moreover, when food systems are inequitable, with high degrees of deprivation and dispossession, the resultant food insecurity can trigger conflict.

¹⁸ United Nations, 'Food Systems Summit 2021', [n.d.].

¹⁹ UN (note 18).

²⁰ Béné, C., 'Resilience of local food systems and links to food security: A review of some important concepts in the context of COVID-19 and other shocks', *Food Security*, vol. 12, no. 4 (Aug. 2020).

²¹ International Center for Tropical Agriculture (CIAT), 'Sustainable food systems', [n.d.]; and Policy Link, 'Equitable food systems resource guide', [n.d.].

3. The impacts of violent conflict on food systems and food security

Violent conflict can have a detrimental impact on food systems and resultant levels of food security (see box 3.1). Through various pathways, conflict affects both food systems and those who depend on them, increasing and worsening food insecurity. The pathways play out differently in different conflict settings, as this chapter will show. The elements of the food supply chain most affected by violent conflict are production, distribution and marketing. While these areas are discussed separately below, they are highly interrelated and often mutually reinforcing.

Impact of violent conflict on the production of food

Violent conflict can affect food production through three main pathways: (a) destruction of assets and resources, (b) destruction of human capital and (c) increased risks and diversion of resources in the wider operating environment.

Destruction of assets and resources

Most of today's violent conflicts are intra-state, predominantly affecting rural areas and thereby major food production areas. On the one hand, farmlands and surrounding rural areas are often battlefronts.²² Armed actors can plant landmines in arable land, contaminate or restrict water supplies, and destroy crops, trees and other physical assets, affecting immediate and future food availability. Farmers may struggle to recover from such attacks, causing some to migrate.²³ Violence targeting assets and resources thereby disrupts the production of staple crops and livestock, resulting in a reduction of yields, which threatens household and national food security.²⁴

On the other hand, land, livestock and other assets can be seized.²⁵ The armed forces often use land and assets to produce their own food and to reward loyal supporters; for example, this happened in Somalia during Siad Barre's rule (1969–91) after the coup in 1969.²⁶ Additionally, armed actors may force farmers to produce crops as a way of controlling production, including the production of illicit crops.²⁷ The production and expansion of illicit crops are further facilitated when conflict weakens legislative and judicial state institutions. Conflict-related illegal crop expansion has been noted in Afghanistan and Colombia, where armed actors directly forced or incentivized farmers to abandon traditional crops in favour of the opium poppy and coca, respectively.²⁸ The shift away from traditional crops may reduce the volume of food directed to formal supply chains. Moreover, illicit cultivation is often accompanied by increased insecurity.²⁹

²² Vos, R. et al., 'Refugees and conflict-affected people: Integrating displaced communities into food systems', *Global Food Policy Report* (International Food Policy Research Institute (IFPRI): Washington, DC, 2020).

²³ Olaniyan, A. O. and Okeke-Uzodike, U., 'When two elephants fight: Insurgency, counter-insurgency and environmental sufferings in northeastern Nigeria', *Journal of Contemporary African Studies* (2020).

²⁴ Action Against Hunger et al., 'Conflict and hunger: How the UN & member states can help to break the cycle', Briefing, [n.d.].

²⁵ Koren, O. and Bagozzi, B. E., 'Living off the land: The connection between cropland, food security, and violence against civilians', *Journal of Peace Research*, vol. 54, no. 3 (2017).

²⁶ Eklund, L. et al., 'How conflict affects land use: Agricultural activity in areas seized by the Islamic State', *Environmental Research Letters*, vol. 12, no. 5 (2017); Koren and Bagozzi (note 25); and 'Land, property, and housing in Somalia', Land and Water Digital Media Series, Norwegian Refugee Council, UN Human Settlements Programme, UN High Commission for Refugees.

²⁷ Eklund et al. (note 26).

²⁸ Messer, E. and Cohen, M. J., 'Conflict, food insecurity and globalization', *Food, Culture & Society*, vol. 10, no. 2 (2007).

²⁹ Nilsson, M. and González Marín, L., 'Violent peace: Local perceptions of threat and insecurity in post-conflict Colombia', *International Peacekeeping*, vol. 27, no. 2 (2020); and Bewley-Taylor, D., 'Drug trafficking and organised

Destruction of human capital

Violent conflict affects human capital involved in production through the displacement, injury, maiming or death of skilled farmers, farmworkers and roving pastoralists. Producers who have been displaced by conflict usually lose access to their fields, seed stock, livestock, pastures and stored food.³⁰ Furthermore, internally displaced persons (IDPs) and refugees have limited livelihood opportunities and often have to rely on food aid. In some countries, laws do not permit refugees to work or to access land and water for agricultural production. In others, it might be possible from a legal perspective for refugees to work or farm, but they may face opposition from host communities that are also affected by unemployment and competition for natural resources.³¹

Households that have lost skilled farmers tend to change both the volume and type of crops they produce by switching to less labour-intensive and more short-term production.³² These production changes lead to an overall fall in production. Moreover, conflict changes the gender composition of households, because more men than women are recruited into armed groups, so men are more likely to be injured, maimed or killed in war.³³ The resulting increase in female-headed households can further shift production patterns. For example, the remaining women may shift from producing for markets to producing for household consumption, as in many settings men tend to handle produce marketing.³⁴ Female farmers are more likely to sell their produce at farm gates through intermediaries.³⁵

Increased risks and diversion of resources in the wider operating environment

Violent conflict usually leads to diversion of national resources, spending cuts and reduced investment. Conflict-affected countries tend to prioritize military spending in their national budgets instead of agriculture and development.³⁶ This has lasting effects on national development, well-being and poverty as the underfunded sectors lag. For instance, in South Sudan, a significant portion of the national budget funds the executive and the military at the expense of other sectors, leading to widespread food insecurity.³⁷ Nigeria, Syria and Venezuela have also raised their military expenditure through budgetary reallocations and off-budget expenditure.³⁸ (Off-budget expend-

crime in Afghanistan', *RUSI Journal*, vol. 158, no. 6 (2013).

³⁰ Holleman, C. et al. (eds), *Sowing the Seeds of Peace for Food Security: Disentangling the Nexus between Conflict, Food Security and Peace*, FAO Agricultural Development Economics Technical Study 2 (FAO: Rome, 2017); and Simmons, E., 'Harvesting peace: Food security, conflict, and cooperation', *Environmental Change and Security Program Report*, vol. 14, no. 3 (2013), Woodrow Wilson International Center for Scholars.

³¹ Barman, B. C., 'Impact of refugees on host developing countries', eds S. K. Das and N. Chowdhary, *Refugee Crises and Third-World Economies* (Emerald Publishing Limited: Bingley, 2020), pp. 103–111; and Harild, N. and Christensen A., 'The development challenge of finding durable solutions for refugees and internally displaced people', World Bank, World Development Report 2011 Background Paper, 30 July 2010.

³² Arias, M. A., Ibáñez, A. M. and Zambrano, A., 'Agricultural production amid conflict: Separating the effects of conflict into shocks and uncertainty', *World Development*, no. 119, pp. 165–84; and FAO, 'Migration, agriculture and rural development: A FAO perspective', [n.d.].

³³ Justino, P., Mitchell, R. and Müller, C., 'Women and peace building: Local perspectives on opportunities and barriers', *Development and Change*, vol. 49, no. 4 (2018); Holleman et al. (note 30); and Puechguirbal, N., 'Discourses on gender, patriarchy and resolution 1325: A textual analysis of UN documents', *International Peacekeeping*, vol 17, no. 2 (2010).

³⁴ Gebre, G. G. et al., 'Gender gaps in market participation among individual and joint decision-making farm households: Evidence from Southern Ethiopia', *European Journal of Development Research*, vol. 33, no. 3 (2021); Doss, C. R., 'Women and agricultural productivity: Reframing the Issues', *Development Policy Review*, vol. 36, no. 1 (2018); and Chandra, A. et al., 'Gendered vulnerabilities of smallholder farmers to climate change in conflict-prone areas: A case study from Mindanao, Philippines', *Journal of Rural Studies*, vol. 50 (2017).

³⁵ Quisumbing, A. R. et al. (eds), *Gender in Agriculture: Closing the Knowledge Gap* (Springer: Dordrecht, 2014).

³⁶ International Monetary Fund (IMF), *Sub-Saharan Africa Regional Economic Outlook: Recovery Amid Elevated Uncertainty* (IMF: Washington, DC, 2019); and Bora, S. et al., 'Food security and conflict', World Bank, World Development Report 2011 Background Paper, 22 Oct 2010.

³⁷ African Development Bank Group, 'The political economy of South Sudan', Aug. 2018.

³⁸ Tian, N. and Lopes da Silva, D., 'The crucial role of the military in the Venezuelan crisis', SIPRI Topical Backgrounder, 2 Apr. 2019; Obasi, C. N., Asogwa, F. O. and Nwafee, F. I., 'Military expenditure and human capital

Box 3.1. Violent conflict

This paper understands conflict as a process that transforms societies and that can play a part in the emergence of alternative systems of profit, power and protection.^a Mitchell's triangular typology includes three components of conflict: goal incompatibility between different parties, conflict attitudes and conflict behaviour, and action taken with the objective to make the other party abandon or modify its goals.^b If conflict parties choose to act upon a conflict, potential behaviours include demonstrations and strikes, self-destructive strategies (such as hunger strikes or suicide) and more subtle forms of everyday resistance (such as sabotage, disobedience or non-cooperation).^c Mitchell's components are parts of a dynamic process and they constantly change and influence each other.^d

Individuals and groups may not act upon a conflict situation at all, and violence is not an automatic result of conflict, although violence is often conceptualized as a degree of conflict—as something that automatically occurs when a conflict reaches a certain point.^e For a conflict response to become violent, groups need to perceive that their goals are incompatible and they need to perceive violence as a legitimate way to act.^f

Violent conflict can span situations from wars between states to revolutions; insurgencies; genocides; civil wars; ethnic or religious conflicts; criminal, political or communal violence; and riots or pogroms. It is further characterized by engagement and interaction between actors with distinct identities, needs, interests and levels of operation (e.g. local, global, state or region).^g Violent conflict rarely affects a country evenly; within a conflict-affected country, there will often be pockets of relative peace and stability.

Violent conflict is non-linear—meaning that it is unpredictable, expands and contracts, with no clear progression of events. Violent conflict is a process that can be destructive and/or transformative.^h It can also be legitimate or illegitimate, visible or invisible, necessary or useless, and senseless and gratuitous or rational and strategic. When it is destructive, violent conflict has long-lasting effects on the human population, the economy and local infrastructure.ⁱ The loss of human capital can be significant, through injury, death, and limited access to education and health services. Incidents of violence and insecurity can have a negative effect on infrastructure and the economy and tend to result in displacement of populations.

^a Keen, D., 'Greed and grievance in civil war', *International Affairs*, vol. 88, no. 4 (2012); and Distler, W., Stavrevska, E. B. and Vogel, B., 'Economies of peace: Economy formation processes and outcomes in conflict-affected societies', *Civil Wars*, vol. 20, no. 2 (2018).

^b Mitchell, C. R., *The Structure of International Conflict* (Macmillan: Basingstoke, 1981).

^c Demmers, J., *Theories of Violent Conflict: An Introduction*, 2nd edn (Routledge: London, 2017).

^d Mitchell (note b).

^e Demmers (note c).

^f Schröder, I. W. and Schmidt, B. E., 'Introduction: Violent imaginaries and violent practices', B. E. Schmidt and I. W. Schröder (eds), *Anthropology of Violence and Conflict* (Routledge: London, 2001).

^g Demmers (note c).

^h Scheper-Hughes, N. and Bourgois, P. (eds), *Violence in War and Peace: An Anthology* (Blackwell: Malden, 2004).

ⁱ Cohen, D. K. and Nordås, R., 'Sexual violence in armed conflict: Introducing the SVAC dataset, 1989–2009', *Journal of Peace Research*, vol. 51, no. 3 (2014).

itures are financial transactions that are not accounted for in the budget.³⁹) These increases have come at a cost to nutrition, health and education. Moreover, the private sector may reduce its investment in agriculture due to a reduction in government expenditure.⁴⁰

Increasing physical risk and transaction costs make it problematic for essential service providers to continue operating. Essential service providers include actors involved in input markets, financial services and agricultural extension services. It is often difficult for farmers to maintain production levels without these services. Often these risks work in tandem with trade embargoes or import restrictions on agricultural inputs, which impede production, as foreign currency reserves are directed to other uses. Imports might not cease completely, but the cost of the imported goods makes it hard for farmers with insufficient means to access necessary inputs.⁴¹ For instance,

development in Nigeria', *American Journal of Economics*, vol. 8, no. 5 (2018); and Syrian Center for Policy Research, UN Relief and Works Agency for Palestine Refugees in the Near East and UN Development Programme, *Syria: War on Development—Socioeconomic Monitoring Report of Syria*, Second quarterly report (Apr.–June 2013), Oct. 2013.

³⁹ Schick, A., 'Off-budget expenditure: An economic and political framework', *OECD Journal on Budgeting*, vol. 7, no. 3.

⁴⁰ Simmons (note 30).

⁴¹ Hiller, S., Hilhorst, D. and Weijs, B., 'Value chain development in fragile settings', IS Academy on Human Security in Fragile States, Occasional paper no. 14, 2014.

when direct imports of agricultural inputs (such as fertilizers) to Syria stopped, private traders began informally importing products. This raised the price of these inputs beyond the reach of many Syrian farmers, resulting in a reduction in their use and a fall in yields.⁴²

Impact of violent conflict on the distribution and marketing of food

Distribution and marketing are two distinct but interconnected elements of a food system. The impact of conflict on distribution and marketing is to reduce the volume of food that is moved between producers and consumers. Conflict can (a) disrupt distribution and market links, (b) reduce the availability of goods, (c) shift market dynamics and (d) change the market institutional environment.

Disruption of distribution and market links

Conflict disrupts the distribution of food between agricultural communities and their markets. While food production areas may be unaffected by conflict, the distribution system—which provides a physical link to other actors (aggregators, processors or consumers) who reside in or near conflict-affected communities—may be affected. The reverse may also be true. Real or perceived risks linked to violent conflict, such as the failure to deliver goods or non-payment for goods received, may discourage producers from selling to markets outside their local community.⁴³ Similarly, a reduction in produce delivered to the processing sectors can cause a reduction in agricultural processing because of a shortage of raw materials. If there is a disruption in the distribution of processed goods and a fall in their demand, then the agricultural processing sector will shrink.⁴⁴

Reduced availability of goods

Overall risk and distribution challenges will likely reduce the availability of goods. Major risks associated with transporting goods to or through conflict-affected territories include armed checkpoints, war taxes and violent attacks. Furthermore, delays from dealing with or avoiding such risks may spoil perishable produce and goods.⁴⁵

To reduce delays and risks, distributors may enter into agreements with non-state armed forces and use other illegal distribution channels, taking advantage of state weakness.⁴⁶ These goods are likely to be sold in black or parallel markets, most of which take advantage of market information asymmetries, reduced supply and social networks. These markets are unreliable and expensive, often leaving communities with limited livelihood opportunities and little food to eat.⁴⁷ The profits from these black markets often benefit powerful or influential actors in conflict environments and may finance conflict, making it difficult to restore the formal economy.⁴⁸ The different armed actors can also weaponize food by cutting off food supplies, essential services

⁴² Aita, S., 'The unintended consequences of US and European unilateral measures on Syria's economy and its small and medium enterprises', The Carter Center, Dec. 2020.

⁴³ Hiller et al. (note 41).

⁴⁴ Quak, E.-J., 'Food systems in protracted crises: Strengthening resilience against shocks and conflicts', Institute of Development Studies (IDS), Helpdesk report, 25 Sep. 2018.

⁴⁵ Quak (note 44); and Hiller et al. (note 41).

⁴⁶ Krasteva, N., 'Armed conflict's influence on marketing', Proceedings of Business and Management Conferences, International Institute of Social and Economic Sciences, 2015; and Hiller et al. (note 41).

⁴⁷ Quak (note 44); and Breisinger, C. et al., *How to Build Resilience to Conflict: The Role of Food Security* (International Food Policy Research Institute: Washington, DC, Oct. 2014).

⁴⁸ Krasteva (note 46).

Box 3.2. Impact of Covid-19 on food systems and conflict dynamics

The Covid-19 pandemic and the concomitant containment measures have had a significant impact on food supply chains, disproportionately affecting the most vulnerable, exacerbating pre-existing drivers of instability and widening inequalities.^a The economic consequences of the pandemic—as a result of reductions in livelihood opportunities, employment and income as well as quarantine measures and restrictions on travel and movement of goods—have directly affected people’s ability to access food. These economic fallouts are increasing the risk of conflict and destabilization; around 80 per cent of protection clusters in global humanitarian response efforts have reported an escalation of conflict and/or political instability since the beginning of the pandemic.^b

An escalation of the conflict in northern Nigeria is an example of these processes. The pandemic and containment measures further disrupted transport, food market supply and livelihood vulnerabilities, and the number of people affected by food insecurity is estimated to have increased by 1.5 million.^c Full or partial lockdowns at the onset of the pandemic rendered most businesses inoperative, and regulated markets and restrictions on travel between states made it largely impossible for farmers to sell their products, which resulted in spoiled produce and an increase in food prices.^d In the north-east, humanitarian aid workers and civilians faced increasing safety risks (in particular along key supply routes in Borno State), and kidnappings and cattle rustling escalated in the ongoing north-west village raids.^e The restrictions imposed by the government further inflamed already negative community attitudes towards the government with complaints about the very bad quality and inadequate quantity of food assistance. Furthermore, community members in Borno reported politicization of the assistance, suggesting that key food items were channelled through political parties and their loyalists rather than through existing community structures, resulting in unequal distribution of assistance, which has deepened political cleavages.^f

Similarly, consultations with communities suggest that road insecurity, military movement restrictions and resulting inadequate access to local livelihood opportunities have long served as push factors for community members to relocate to territories controlled by non-state armed groups (NSAGs).^g Ongoing remote research conducted by SIPRI with an international humanitarian organization in Nigeria has generated initial findings that point towards hopelessness about a better livelihood situation being a key factor in people joining or being coerced to join NSAGs.^h The risk is that Covid-19 is further exacerbating these dynamics through containment measures and their problematic implementation, possibly resulting in more people moving to such NSAG-controlled territories, where they are allowed to continue fishing, farming and herding their livestock despite having to pay ‘taxes’ to these groups. Through such increases in ‘tax revenue’, the financial clout of the NSAGs is raised, potentially resulting in more insecurity.ⁱ

^a Food Security Information Network (FSIN) and Global Network Against Food Crises, *Global Report on Food Crisis 2021* (FSIN/Global Network Against Food Crises: Rome, 2021); and Leach, M. et al., *COVID-19: Key Considerations for a Public Health Response* (Institute of Development Studies: Brighton, 2020).

^b World Food Programme (WFP), *WFP Global Response to COVID-19: September 2020* (WFP: Rome, 2020).

^c WFP (note b).

^d Search for Common Ground, ‘Conflict snapshot: Nigeria’, Dec. 2020.

^e FSIN and Global Network Against Food Crises (note a).

^f Sloan, B. and Sheely, R., *The Need for Good Governance and Peacebuilding in the Time of COVID-19: Research Brief—Lessons from Northeast Nigeria* (MercyCorps: Washington, DC, 2020).

^g Sloan and Sheely (note f).

^h Delgado, C., Tschunkert, K. and Riquier, M., *The World Food Programme’s Contribution to Improving the Prospects for Peace in Nigeria* (SIPRI: Stockholm, forthcoming).

ⁱ Sloan and Sheely (note f).

and productive capacities, and starving opposing populations into submission.⁴⁹ In the late 1990s, food aid was either pillaged or siphoned off by transporters in Somalia, resulting in thriving markets selling food aid and stolen drugs, and this created a new class of millionaire traders.⁵⁰ Similar dynamics are appearing in the current conflict in Tigray, Ethiopia, with Eritrean troops reportedly stalling and looting food aid amid rising fears of famine.⁵¹

⁴⁹ Barry, H., ‘Starving out the enemy: Withholding food aid as a tactic of war in South Sudan’, *Mapping Politics*, vol. 8, no. 2 (2017); Macrae, J. and Zwi, A. B., ‘Food as an instrument of war in contemporary African famines: A review of the evidence’, *Disasters*, vol. 16, no. 4 (1992); and Maxwell, D., ‘The politicization of humanitarian food assistance: Using food aid for strategic, military, and political purposes’, M. Ndulo and N. van de Walle (eds.) *Problems, Promises, and Paradoxes of Aid: Africa’s Experience* (Cambridge Scholars Publishing: Newcastle Upon Tyne, 2014), pp. 138–70.

⁵⁰ Ahmad, A., *Jihad & Co.: Black Markets and Islamist Power* (Oxford University Press; New York, 2017).

⁵¹ World Peace Foundation, *Starving Tigray: How Armed Conflict and Mass Atrocities have Destroyed an Ethiopian Region’s Economy and Food System and are Threatening Famine* (World Peace Foundation: Somerville, MA, 2021).

Shifting market dynamics

Violent conflict changes market dynamics through the displacement of community members. As communities become smaller, the number of market transactions drops and the remaining households often face rising food prices.⁵² At the same time, their income may fall as the local economy collapses due to the destruction of productive assets and infrastructure, reducing their ability to purchase enough food from markets.⁵³ Meanwhile, in host communities, an influx of refugees and IDPs can increase food demand and cause localized food shortages if the local markets struggle to cope with higher demand.⁵⁴ If these markets cannot adjust rapidly to accommodate growing food needs, this can create famine-like conditions.⁵⁵

Changed market institutional environment

Violent conflict changes the institutional market environment (i.e. the rules and norms that govern transactions) because there is an increase in market actors' risks and vulnerability.⁵⁶ Moreover, governments' ability to enforce market and other regulations diminishes if legislation and judiciary functions are suspended due to conflict.⁵⁷ In some cases, the government's enforcement capacity is challenged by other powerful actors, such as non-state armed forces. As horizontal and vertical links break or shorten, informal institutions based on kinship and local norms, incidental markets and intermediaries can emerge.

When the pathways set out above intersect with other shocks, such as the Covid-19 pandemic and its containment measures, a layer of hardship is added for agricultural workers whose livelihoods and food security are already affected by conflict. Because of movement restrictions and disruptions to production systems, there has been a decrease in planted areas in Burkina Faso, Sierra Leone, Venezuela and other areas. As a result, the farmers in these countries are expected to have both lower yields and reduced agricultural incomes in the 2020–21 season.⁵⁸ The effect of Covid-19 on food systems in conflict-affected environments is further detailed in box 3.2.

A vicious circle

In addition to these immediate negative effects, violent conflict can have lasting negative impacts on food systems. Most countries emerging from conflict need around 15–25 years to recover, though the recovery time depends on the duration of the conflict, the extent of the economic damage and the means through which the conflict is resolved.⁵⁹ Governments of these countries often have limited resources and capacities. They may receive external financial support immediately after the conflict; however, it is often short lived. Furthermore, the institutions and governance structures for using these financial resources may be in the process of being developed. In some cases, there is a lack of political will to address grievances related to the distribution of land and other productive resources or to deal with issues such as reconstruction, re-establishing state institutions and fostering peace among communities affected by conflict. Yet, peace is more likely to be built and sustained when it is linked to

⁵² Action Against Hunger et al. (note 24).

⁵³ McIntosh, K. and Buckley, J., 'Economic development in fragile and conflict-affected states: Topic guide', GSDRC, University of Birmingham, 2015; and Messer and Cohen (note 28).

⁵⁴ Bora et al. (note 36).

⁵⁵ Bora et al. (note 36).

⁵⁶ Quak (note 44).

⁵⁷ Krasteva (note 46).

⁵⁸ FSIN and Global Network Against Food Crises (note 1).

⁵⁹ Mueller, H., Piemontese, L. and Tapsoba, A., 'Recovery from conflict: Lessons of success', World Bank, Working Paper, 2017.

secure livelihoods and food security in conflict-affected communities.⁶⁰ If the livelihood concerns of conflict-affected communities are not addressed, their grievances may fuel a resurgence of violent conflict, creating a vicious circle of conflict and food insecurity.⁶¹

⁶⁰ Vos et al. (note 22).

⁶¹ Strandh, V. and Yusriza, B., 'War widows' everyday understandings of peace in Aceh, Indonesia', *Journal of Peacebuilding & Development*, vol. 16, no. 1 (Jan 2021); and Vos et al. (note 22).

4. Food insecurity as a trigger of violent conflict

Food insecurity is not only a consequence of violent conflict (as outlined in the preceding chapter) but can also be a contributing factor to its emergence and duration. Food insecurity is linked to deficiencies in the food supply chain. Deficiencies, coupled with drivers and shocks, can increase the likelihood of food insecurity becoming a contributing driver of violent conflict. Acknowledging that risk factors and drivers of conflict unfold differently in different contexts, this chapter focuses on the most commonly identified risk multipliers in food insecurity that contribute to conflict: environmental stress and climate-induced food shortages, competition over production resources, social grievances and grievances related to food price.

Environmental stress and climate-induced food shortages

Environmental stress puts people's lives and livelihoods at risk and may exacerbate grievances, potentially leading to conflict or increased levels of violence.⁶² This factor is particularly relevant for the production element of the food supply chain. Rising temperatures and erratic rainfall patterns lead to diminishing food productivity (see annex A).⁶³ In countries that rely on agricultural production for local consumption, the sector is crucial to employment opportunities and livelihoods for large parts of the population.

Following a drought, farmers who experience loss of harvests or who have to sell certain crops at prices below market value (e.g. due to a decrease in food quality) risk losing their livelihoods. The risk is particularly high for those farmers who lack social capital and who have not been able to diversify their livelihoods.⁶⁴ Seasonal workers and landless people also tend to experience higher levels of unemployment as a consequence.⁶⁵ As a result, the opportunity cost of engaging in violent conflict might decrease for those parts of the population who tend to rely on the agricultural sector for their livelihoods.⁶⁶ While there has been debate among researchers about whether there is sufficient evidence for such an opportunity cost mechanism,⁶⁷ conflict intensity tends to be higher outside the harvest season, when labour demand in the agricultural sector is lower (examples of where this is the case include Iraq and Pakistan).⁶⁸

Moreover, environmental stress affects roving pastoralists who have to change their grazing routes in search of water and food sources for their livestock. Changes to grazing routes can lead to tensions between the roving pastoralists and settled farmers with whom the pastoralists have no agreements about using resources or land, as

⁶² Mobjörk, M., Krampe, F. and Tarif, K., 'Pathways of climate insecurity: Guidance for policymakers', SIPRI Policy Brief, Nov. 2020.

⁶³ Martin-Shields, C. P. and Stojetz, W., 'Food security and conflict: Empirical challenges and future opportunities for research and policy making on food security and conflict', *World Development*, vol. 119 (2019), pp. 150–164.

⁶⁴ Byg, A. and Herslund, L., 'Socio-economic changes, social capital and implications for climate change in a changing rural Nepal', *GeoJournal*, no. 81, no. 2 (2016); and Niles, M. T. et al., 'Household and community social capital links to smallholder food security', *Frontiers in Sustainable Food Systems*, 5 (2021).

⁶⁵ Wischnath, G. and Buhaug, H., 'Rice or riots: On food production and conflict severity across India', *Political Geography*, vol. 43 (2014).

⁶⁶ Martin-Shields and Stojetz (note 63); Brück, T. et al., 'The relationship between food security and violent conflict', Report to FAO, International Security and Development Center (ISDC), 22 Dec. 2016; and Brinkman H.-J. and Hendrix, C. S., 'Food insecurity and violent conflict: Causes, consequences, and addressing the challenges', World Food Programme (WFP), Occasional paper 24, 2011.

⁶⁷ See e.g. Miguel, E., Satyanath, S. and Sergenti, E., 'Economic shocks and civil conflict: An instrumental variables approach', *Journal of Political Economy*, vol. 112, no. 4 (2004); and Weintraub, M., 'Do all good things go together? Development assistance and insurgent violence in civil war', *Journal of Politics*, vol. 78, no. 4 (2016).

⁶⁸ Guardado, J. and Pennings, S., 'The seasonality of conflict', World Bank, Policy Research Working Paper no. 9373, 2016.

is the case, for instance, in Mali and Nigeria.⁶⁹ Persistent drought and desertification have pushed pastoralists in Nigeria further and further south while settled farmers have expanded their farms into former grazing reserves due to population growth, which has increased competition over scarce resources, fuelling violent flare-ups. Similarly, in Mali both farmers and roving pastoralists rely on the rainy season, and variations in the intensity, frequency and timing of rainfall can cause problems, such as tensions between them if mistimed livestock grazing results in crop losses.

Finally, an environmental shock such as a drought can usually be managed peacefully by capable institutions, but the chance of this happening is reduced if the shock is combined with other factors, such as perceived inequalities. Then, the risk of violent conflict increases.⁷⁰ A decrease in agricultural productivity leading to higher food prices can activate grievances against the state. Moreover, perceived maldistribution, patronage or corruption linked to aid in response to food insecurity following climate-induced food shortages can exacerbate grievances.⁷¹ While in most cases the conflict stays at the local level, in agriculture-dependent, low-income countries, it may eventually threaten stability and peace at the regional or national level.⁷²

Competition over production resources

Land and water are essential for agricultural production. As they become increasingly scarce, competition on both national and international levels increases and negatively affects local food supply chains. Communities that rely on these scarce resources for their livelihoods may clash more frequently if authorities are unwilling or unable to manage the scarcity. If such competition turns into conflict over scarce natural resources, security, production and market access are reduced.⁷³ Recurrent conflicts between roving pastoralists and farmers over access to water and land and the use of agriculture are well documented. In Kenya, for instance, in years of drought, roving pastoralists are often forced to use non-traditional migration routes in search of water for their herds. This commonly causes clashes with local populations when roving pastoralists have to take their herds to natural reserves, as happened in 2015–16 and 2016–17, when rainfall was particularly poor.⁷⁴

Moreover, several quantitative analyses of resource scarcity and conflict have focused on the effect of demographic pressure. They show that interactions between resource scarcity and population growth or density are likely to produce multiple stressors that could trigger resource scarcity conflicts. The reduced availability of natural resources as populations grow may lead to competition and conflict over these resources for existence (see annex A).⁷⁵ However, it is rather the unequal access and the politicization of access to scarce resources that are the key drivers that contribute

⁶⁹ Hegazi, F., Krampe, F. and Smith, E. S., *Climate-related Security Risks and Peacebuilding in Mali*, SIPRI Policy Paper no. 60, (SIPRI: Stockholm, Apr. 2021); and Herbert, S. and Husaini, S., 'Conflict, instability and resilience in Nigeria', Governance and Social Development Resource Centre (GSDRC), University of Birmingham, Rapid Literature Review 1427, 2018.

⁷⁰ World Bank and UN, *Pathways for Peace: Inclusive Approaches to Preventing Violent Conflict* (International Bank for Reconstruction and Development/World Bank: Washington, DC, 2018).

⁷¹ Martin-Shields and Stojetz (note 63); and Brück et al. (note 66).

⁷² Holleman et al. (note 30).

⁷³ Bowles, D. C., Butler, C. D. and Morisetti, N., 'Climate change, conflict and health', *Journal of the Royal Society of Medicine*, vol. 108, no. 10 (2015); and Caruso, R., Petrarca, I. and Ricciuti, R., 'Climate change, rice crops, and violence: Evidence from Indonesia', *Journal of Peace Research*, vol. 53, no. 1 (2016).

⁷⁴ Holleman et al. (note 30); Helland, J. and Sørbo, G. M., 'Food security and social conflict', CMI Report, Chr. Michelsen Institute, 2014; Hendrix, C. and Brinkman, H.-J., 'Food insecurity and conflict dynamics: Causal linkages and complex feedbacks', *Stability: International Journal of Security and Development*, vol. 2, no. 2 (2013); and Mobjørk et al. (note 62).

⁷⁵ Mildner, S.-A., Lauster, G. and Wodni, W., 'Scarcity and abundance revisited: A literature review on natural resources and conflict', *International Journal of Conflict and Violence*, vol. 5, no. 1 (2011); and Homer-Dixon, T., *Environment, Scarcity, and Violence* (Princeton University Press: Princeton, NJ, 1999).

to competition for these resources between different livelihood groups. This has resulted in violent conflict in Sudan, for example, where widespread intercommunal violence over land has been rooted in the policies, institutions and processes that influenced people's access to production-related resources, as well as the power relations between different livelihood groups. The Sudanese state is seen as a vehicle for special interest groups, with these issues enduring regardless of regime change.⁷⁶

Such issues are common features of vulnerability to food insecurity and conflict dynamics. Uneven distribution and seizure of land during conflict and unsettled issues around land titling are present to varying degrees in most conflict-affected countries. The distribution aspect plays a core role in the link between resource scarcity and political violence. These issues can activate grievances among parts of the population who perceive inequality to be detrimental to themselves and their livelihoods. Grievances can be exploited by groups that want to mobilize violence against the state.⁷⁷ Where the government favours some groups and excludes others, the risk of violent conflict increases.⁷⁸

Resource scarcity may put pressure on both societies at large and state institutions, thereby weakening social cohesion and the state's functional capacity.⁷⁹ The likelihood of conflict linked to competition over production resources is greater in countries with failing institutions where regulation of access to and control of resources is ineffective, where distribution of resources is seen as unfair or corrupted, or where exclusive and ineffective governance raises mistrust and tension.⁸⁰ Institutionally weaker states that lack the capacity or legitimacy to fulfil government responsibilities—such as fostering sustainable and equitable economic growth, maintaining transparent and accountable political institutions, and meeting the population's basic needs—are more likely to experience violent conflict. This is because they are less capable of mitigating the effects of resource scarcity and because they are more likely to be challenged by opposition groups.⁸¹ For example, rather than the growing scarcity of water per se, unsustainable use or mismanagement of water is an accelerator of the pathway from water scarcity to violent conflict. For example, the unilateral construction of a dam in the Horn of Africa without any consultation to safeguard the interests of different stakeholders and users risks further escalating water-related tensions in the region.⁸²

Thus, scarcity of production-related resources can be an independent cause of conflict but not necessarily a sufficient or sole cause. Scarcity has the most severe effects in contexts where other economic, political and social drivers are at play.

Social grievances

While the empirical evidence is mixed, several studies show that food insecurity may aggravate social or economic inequalities, increase grievances against the state, or give

⁷⁶ Helland and Sørbo (note 74); and El-Amin, N., '“Beyond regime change”: Reflections on Sudan's ongoing revolution', *POMEPS Studies 40—Africa and the Middle East: Beyond the Divides* (Institute for Middle East Studies, George Washington University: Washington, DC, June 2020).

⁷⁷ Holleman et al. (note 30).

⁷⁸ Mobjörk et al. (note 62).

⁷⁹ Urdal, H., 'Demographic aspects of climate change, environmental degradation and armed conflict', UN/POP/EGM-URB/2008/18, UN Expert Group Meeting on Population, Distribution, Urbanization, Internal Migration and Development, Population Division of the Department of Economic and Social Affairs of the UN Secretariat, 21–23 Jan. 2008.

⁸⁰ Ide, T., 'Renewable resource scarcity, conflicts and migration', T. Krieger, D. Panke and M. Pregernig (eds), *Environmental Conflicts, Migration and Governance* (Bristol University Press: Bristol, 2020), pp. 17–36; and Mildner et al. (note 75).

⁸¹ Urdal (note 79); and Rice, S. E. and Patrick, S., 'Index of state weakness in the developing world', Brookings Institution, 26 Feb. 2008.

⁸² Krampe, F. et al., *Water Security and Governance in the Horn of Africa*, SIPRI Policy Paper no. 54 (SIPRI: Stockholm, Mar. 2020); and Holleman et al. (note 30).

individuals incentives to join or support conflicts and rebellions. Decreases in labour demand due to shifts in agricultural production may lower the opportunity cost of engaging in or supporting armed factions.⁸³ However, such materialistic explanations alone are insufficient. Strong feelings of frustration regarding political and economic inequalities and an unjust political economy, depending on context, are some of the main drivers of violent conflict linked to food insecurity.⁸⁴ Food insecurity can act as a channel through which people express these broader socio-economic and political grievances (e.g. youth frustration and inequalities).⁸⁵

In particular, although not enough is known empirically or theoretically about this area, youth frustration and exclusion—sizeable populations of both educated and uneducated youth with few, or no, livelihood opportunities—has emerged as a central component of explanations of conflict dynamics. Youth unemployment or underemployment and idleness feed grievances such as social alienation and can thus contribute to social instability. There is some evidence that countries with relatively high shares of 15- to 24-year-olds experience more protests, riots and civil conflict, especially when there are few employment opportunities among this demographic in urban areas.⁸⁶ As a result, the risk of this population engaging in illicit economic activities and armed groups is higher.⁸⁷ Similarly, in rural areas, conflict intensity tends to be higher outside the harvest season, when demand for agricultural labour is lower.⁸⁸ In northern Mali, where poverty has been high and droughts over the past four decades have created a crisis in local production systems, a pervasive sense of marginalization and a lack of livelihood opportunities for young men have fed into the region's recurrent conflicts.⁸⁹ Furthermore, youth who have migrated from rural to urban areas and who lack a sense of belonging are more likely to engage in protest or conflict action. Grievances related to the type of work they can do, the work environment, their wages, and the competing demands of managing their expenses and sending remittances to their rural families can be driving factors in them joining armed groups. However, such grievances are only likely to lead to conflict when other risk factors are present, such as motivated leaders of group mobilization and lines of identity difference, which explains why high levels of unemployment or underemployment have not led to conflict in, for example, Malawi or Zambia.⁹⁰

These political and socio-economic factors that influence agricultural production systems may trigger protest and unrest through which people express broader grievances about those factors.⁹¹ Perceived or real inequalities play a core role in activating these grievances. Countries with greater economic inequality experience higher levels of violent conflict.⁹² However, the type of inequality matters; vertical inequality (across individuals and households) has not been robustly linked to conflict. In contrast, horizontal inequality (across groups defined by region, ethnicity, class, religion

⁸³ Martin-Shields and Stojetz (note 63); and Brück et al. (note 66).

⁸⁴ Sneyd, L. Q., Legwegoh, A. and Fraser E. D. G., 'Food riots: Media perspectives on the causes of food protest in Africa', *Food Security*, vol. 5, no. 4 (2013).

⁸⁵ Holleman et al. (note 30).

⁸⁶ Helland and Sørbø (note 74); and Abebe, T., 'Lost futures? Educated youth precarity and protests in the Oromia region, Ethiopia', *Children's Geographies*, vol. 18, no. 6 (2020).

⁸⁷ Brinkman, H.-J. and Hendrix, C. S., 'Food insecurity and conflict: Applying the WDR framework', World Bank, World Development Report 2011 Background Paper, 2 Aug. 2010.

⁸⁸ Martin-Shields and Stojetz (note 63).

⁸⁹ Benjaminsen, T. A., 'Does supply-induced scarcity drive violent conflicts in the African Sahel? The case of the Tuareg rebellion in Northern Mali', *Journal of Peace Research*, vol. 45, no. 6 (2008).

⁹⁰ Stewart, F., 'Employment in conflict and post-conflict situations', Think Piece, UN Development Programme (UNDP) Human Development Report Office, 2015; and Hilker, L. M. and Fraser, E. M., 'Youth exclusion, violence, conflict and fragile states', Social Development Direct, Report prepared for the Department of International Development's (DFID) Equity and Rights Team, 2009.

⁹¹ Holleman et al. (note 30).

⁹² Helland and Sørbø (note 74).

or another political division) may be more clearly associated with mobilization of violence as a form of expression of group grievances.⁹³

Linked to this, exclusionary policies are one of the most important causal factors in violent conflict relapse.⁹⁴ Countries with higher levels of inequality face greater difficulty in mitigating the risk of conflict.⁹⁵ Particularly, higher levels of gender inequality (e.g. levels of violence against women, labour market participation and income disparities) are associated with increased risk of violent conflict.⁹⁶ Moreover, for groups that are commonly marginalized (such as peripheral rural, ethnic or religious minorities) and that are subject to discrimination by the state, violence can be a tool of resistance when non-violent forms of expression no longer work.⁹⁷ People experiencing food insecurity as a result of inefficient, unsustainable and inequitable food systems have agency to self-organize and protest policies that are perceived as failing them. People, thus, make political calculations and seek to express their discontent and grievances. When grievances cause anger and frustration, this sometimes leads to violent conflict, especially if the frustrations include mistrust of the state due to (for instance) lack of support by the state in food-insecure times.⁹⁸ The Naxalite movement in India demonstrates this, as the communists have mobilized among people in rural areas since independence in 1947, gaining popularity by providing basic services and standing up for the demands and needs of their supporters. The movement is known for mobilizing tribal groups and vulnerable parts of the population to loot rice mills and houses of vendors, rich landlords and government officials for food, supplies and other items.⁹⁹

Grievances related to food price

Rising food prices can trigger incidents of conflict or political unrest. Some studies argue that rising food prices, specifically the prices of basic staples such as wheat, are strongly associated with social unrest.¹⁰⁰ This is because consumers cannot easily substitute staple foods.¹⁰¹ The phenomenon of rising food prices is a shock (as defined in chapter 2).¹⁰² It is a crisis not of production but of access. While food can be readily available in local markets, access is hindered if consumers cannot afford prices.¹⁰³ Rising food prices hence disrupt the ability of food systems to fulfil their core function: to get food from producers through the market to the consumers. Food price rises can be a trigger of conflict, but this is dependent on context and conditional on other, context-specific drivers. The most commonly referenced compounding factors that increase the risk of grievances around food prices leading to conflict are state capacity and response as well as power dynamics in markets.

Markets represent points of food access. As institutions, they can mediate mutually beneficial exchanges and serve as arenas where parties with different bargaining powers interact. Currently, the power relations in the food system are asymmetrical.

⁹³ Brinkman and Hendrix (note 87).

⁹⁴ World Bank and UN (note 70).

⁹⁵ Hegre, H. et al., 'Forecasting civil conflict along the shared socioeconomic pathways', *Environmental Research Letters*, vol. 11, no. 5 (2016).

⁹⁶ World Bank and UN (note 70).

⁹⁷ Wischnath and Buhaug (note 65).

⁹⁸ Brück et al. (note 66).

⁹⁹ Wischnath and Buhaug (note 65).

¹⁰⁰ Martin-Shields and Stojetz (note 63); and Brinkman and Hendrix (note 87).

¹⁰¹ Weinberg, J. and Bakker, R., 'Let them eat cake: Food prices, domestic policy and social unrest', *Conflict Management and Peace Science*, vol. 32, no. 3 (2014).

¹⁰² World Bank and UN (note 70).

¹⁰³ Smith, T. G., 'Feeding unrest: Disentangling the causal relationship between food price shocks and sociopolitical conflict in urban Africa', *Journal of Peace Research*, vol. 51, no. 6 (2014).

Box 4.1. Peace and peacebuilding

Peace—like conflict—is a complex phenomenon that takes many different forms and has many different qualities. Some peace scholars draw a distinction between negative and positive peace. Negative peace entails the absence of direct violence whereas positive peace emphasizes the absence of structural and cultural violence.^a Importantly, peace is a process rarely—if ever—fully achieved and sustained. Moreover, peace is also multifaceted, culturally shaped and contested. This means that peace is perceived in different ways by different people at different times in different cultures and political systems.

Peacebuilding takes place at all levels, from the macro level to the micro level. Traditionally, peacebuilding interventions have focused on technocratic state-building and good governance.^b However, it is often the case that peace and conflict are described by external actors in ways that are alien to the societies that are experiencing conflict or a transition to peace, and that alternative ways of reading conflict and peace are undervalued.^c The importance of local everyday aspects of peacebuilding is increasingly recognized.^d Everyday peace is context-specific and involves the observations and decisions made by individuals and communities as they navigate their day-to-day environment.^e The everyday practices of so-called ordinary people in this sense include responding to structural attempts to organize life, negotiating structural and overt violence, and reappropriating spaces that have been lost to conflict.^f This is achieved through engagement with the community and its daily experiences, and through relationship-building within these spaces. The space of the everyday is therefore a political space where those who are most marginalized and excluded from formal political discourses find collective meaning and organize in response to conflict, violence and exclusion.^g

^a Galtung, J. and Fischer, D., *Pioneer of Peace Research* (Springer: Berlin, 2013).

^b Campbell, S. P., *Global Governance and Local Peace: Accountability and Performance in International Peacebuilding* (Cambridge University Press: Cambridge, 2018).

^c MacGinty, R., 'Indicators+: A proposal for everyday peace indicators', *Evaluation and Program Planning*, vol. 36, no. 1 (2013).

^d MacGinty, R. and Richmond, O. P., 'The local turn in peace building: A critical agenda for peace', *Third World Quarterly*, vol. 34, no. 5 (2013); Mac Ginty, R. and Firchow, P., 'Top-down and bottom-up narratives of peace and conflict', *Politics*, vol. 36, no. 3 (2016); and Björkdahl, A. and Höglund, K., 'Precarious peacebuilding: Friction in global-local encounters', *Peacebuilding*, vol. 1, no. 3 (2013).

^e MacGinty and Firchow (note d).

^f Berents, H. and McEvoy-Levy, S., 'Theorising youth and everyday peace (building)', *Peacebuilding* 3, no. 2 (2015); and Richmond, O. P., 'Becoming liberal, unbecoming liberalism: Liberal-local hybridity via the everyday as a response to the paradoxes of liberal peacebuilding', *Journal of Intervention and Statebuilding*, vol. 3, no. 3 (2009).

^g Berents and McEvoy-Levy (note f).

The most powerful actors are large monopoly agricultural producers, processors and market actors. Their power is in determining the crops that are grown, focusing on a few mainstream varieties while excluding local crops and varieties from markets. Smaller producers, market actors and consumers have less power.¹⁰⁴ Poor farmers often have to sell products at low price periods and then become buyers in the lean season when food supplies are scarce and prices high.

Such asymmetries are also evident between urban and rural populations. Urban dwellers tend to depend on markets and are thus significantly vulnerable to price changes.¹⁰⁵ However, urban consumers are more concentrated and more likely to engage in collective action.¹⁰⁶ Therefore, governments often accommodate urban populations to avoid urban unrest.¹⁰⁷ On the other hand, poor rural consumers are likely to be more vulnerable than urban consumers due to urban consumers having higher incomes and better market access in cities.¹⁰⁸ An increase in international commodity prices can benefit domestic producers, who predominantly reside in rural areas. This means that the opportunity cost of engaging in violence for this part of the population might increase, potentially reducing the risk of conflict. However,

¹⁰⁴ Mabhaudhi, T. et al., 'Mainstreaming underutilized indigenous and traditional crops into food systems: A South African perspective', *Sustainability*, vol. 11, no. 1 (2019).

¹⁰⁵ Holleman et al. (note 30).

¹⁰⁶ Hendrix, C. S. and Haggard, S., 'Global food prices, regime type, and urban unrest in the developing world', *Journal of Peace Research*, vol. 52, no. 2 (2015).

¹⁰⁷ Rudolfsen, I., 'Food insecurity and domestic instability: A review of the literature', *Terrorism and Political Violence*, vol. 32, no. 5 (2020).

¹⁰⁸ Hendrix and Haggard (note 106).

such an increase in international commodity prices could in turn also lead to local small-scale conflicts over agricultural surplus production or enable insurgents to extort agricultural producers and thereby gain strength.¹⁰⁹ Whether smaller-scale incidents lead to larger, more widespread conflict, such as civil war, depends on the government's response and other existing dynamics within the country.¹¹⁰

Sharp food price rises can trigger periods of unrest, but this tendency is intermingled with other grievances. The way that national governments respond to world market food price rises depends on the extent to which these world market prices are transmitted to national markets.¹¹¹ In addition, domestic factors influence domestic food prices, being influenced by context, the country's income level, dependence on food imports or exports, and whether the state is democratically or autocratically governed.¹¹² This debate would go beyond the scope of this paper. In order to understand how food price rises disrupt the core function of food systems (to get food from producers to consumers) and why this leads to wider grievances that can trigger conflict, it is important to know that societies handle price shocks peacefully if capable institutions manage them through adequate mechanisms.¹¹³ But in places where high or multiple risks are present, price shocks can trigger effects such as violence by overwhelming institutions' capacity to cope.¹¹⁴ If a state's leadership fails to provide food security in response to price spikes, these price increases can lead to a breakdown of the state's authority and legitimacy, which can activate and exacerbate grievances against it.¹¹⁵ Furthermore, if national governments provide aid, grievances can emerge due to perceived injustice regarding food distribution. This particular type of grievance might lead people to want to act against those actors perceived to be profiteering from this perceived injustice.¹¹⁶ When producers and consumers perceive that the authorities are interfering in the market in ways that go against their moral preconceptions about how the market should work and what is fair, they may rally against price rises and changes in the market structure because of felt injustices.¹¹⁷

The different parts of the food system are highly interlinked, as demonstrated by its functioning during the Covid-19 pandemic. Through the restrictions on movement and gatherings, Covid-19 has directly affected several components of the food system—production, processing, distribution and marketing. For instance, the comparatively long time it took to restock shelves resulted in shortages of goods and price rises in high-income countries, such as the United States, and low- to middle-income countries, such as Nepal, Nicaragua and Nigeria.¹¹⁸ After these initial challenges, the food system stabilized, showing its resilience. However, as a mapping of 337 documents from 62 countries showed, this came at a cost for smaller and informal actors, who commonly disappeared, leaving larger supermarket chains to make additional billions of dollars in profit.¹¹⁹ In the conflict environment, where small and informal actors may be the only suppliers, this leaves a vacuum that state and non-state armed

¹⁰⁹ Martin-Shields and Stojetz (note 63).

¹¹⁰ Weinberg and Bakker (note 101).

¹¹¹ Pinstrup-Andersen, P., *Food Price Policy in an Era of Market Instability: A Political Economy Analysis* (Oxford University Press: Oxford, 2014).

¹¹² Pinstrup-Andersen (note 111); Breisinger et al. (note 47); and Berazneva, J. and Lee, D. R., 'Explaining the African food riots of 2007–2008: An empirical analysis', *Food Policy*, vol. 39 (2013); Hendrix and Haggard (note 106); Hendrix and Brinkman (note 74); and Helland and Sørbo (note 74).

¹¹³ Hendrix and Brinkman (note 74).

¹¹⁴ World Bank and UN (note 70).

¹¹⁵ Holleman et al. (note 30).

¹¹⁶ Smith (note 103).

¹¹⁷ Rudolfsen (note 107).

¹¹⁸ Webb, P., 'The 2020 Nobel Peace Prize rewards the persistent vision of a world without hunger, famine, or malnutrition', *American Journal of Clinical Nutrition*, vol. 113, no. 2 (2021).

¹¹⁹ Béné, C. et al., 'Impacts of COVID-19 on people's food security: Foundations for a more resilient food system', International Food Policy Research Institute, Feb. 2021; Webb (note 118).

forces can occupy. For example, in Afghanistan, non-state armed forces distributed soap to communities.¹²⁰

The links explored in this chapter mean that while deficiencies in certain parts of the food system, such as production and distribution, may be more prone to triggering violent conflict, processes in one part of the food system affects all other parts too. Thus, while paying attention to those parts of the food system that are specifically linked to conflict prevention is important, other parts of the system should not be neglected altogether.

¹²⁰ Hegazi, F., 'Climate change, disease and the legitimacy of armed non-state actors', SIPRI Essay, 1 July 2020.

5. Food systems' potential to reduce violent conflict and enhance peace

As chapters 3 and 4 have shown, there are indisputable links between violent conflict, failing food systems and increased levels of food insecurity, as well as pathways through which food insecurity can trigger violent conflict. While the relationships—and the pathways within the two relationships—have been described separately, the divisions are not always clear-cut. As described in chapter 1, drivers and shocks to food systems are considerably interconnected. Moreover, as a result of feedback loops within and between food systems and conflict-affected settings, drivers can become outcomes and outcomes can become drivers. Conversely, sustainable and equitable food systems have the potential to prevent or reduce conflict drivers, triggers and impacts, thereby contributing to peace. There is, however, an urgent need to better understand and act upon the links between food systems and violent conflict to harness this potential. To do so, actors need to work holistically, have solid contextual awareness and evidence, and identify the right entry points at the right times. New and innovative approaches to this end are emerging. At the same time, present structures should be strengthened.

Existing research strongly argues that the pathways through which food security can contribute to peace go through resilience.¹²¹ The main pathways identified include climate-adaptive (or resilient) livelihood support, addressing factors related to the motivation to participate in conflicts and the opportunity costs of doing so, and social protection. While these are essential pathways, what much of this research fails to do is to consider how the pathways interact with the broader elements of food systems at multiple levels. Take, for example, livelihood support. Humanitarian and development agencies have widely implemented livelihood interventions in conflict-affected countries to enhance resilience to shocks and bolster efforts towards peace. At the same time, national governments, supported by donors, often promote the agricultural sector as an engine of stabilization and recovery for people living in fragile contexts. Investing in agriculture and local food systems provides people with a means to continue surviving.¹²² Rebuilding local agricultural economies can help people move beyond subsistence agriculture, re-join produce markets, adopt resilience-enhancing measures such as climate change adaptation, and stay in their community when it is safe for them to do so.¹²³ The contributions to peace thereby range from tangible material welfare benefits and revived local economic activity to enhanced cooperation and trust.

However, if interventions are not considered against broader food systems and contextual dynamics, their potential to contribute to peace is reduced. Moreover, interventions risk inadvertently reinforcing drivers of violence. A case in point is the exponential rise in demand for avocados and its impact on conflict-affected small-scale farmers in Colombia. Capitalizing on rising demand for avocados in China, the US and Europe—which in China increased by 126 000 per cent between 2004 and 2014—the Colombian government is actively promoting avocado exports through policies to shape agricultural practices.¹²⁴ Small-scale farmers are largely unable to pro-

¹²¹ FAO et al., *The State of Food Security and Nutrition in the World 2017: Building Resilience for Peace and for Food Security* (FAO: Rome, 2017); Holleman et al. (note 30); Delgado, C. et al., *The World Food Programme's Contribution to Improving the Prospects for Peace* (SIPRI: Stockholm, 2019); and Breisinger et al. (note 47).

¹²² FAO, *Corporate Framework to Support Sustainable Peace in the Context of Agenda 2030* (FAO: Rome, 2018).

¹²³ Vos et al. (note 22); and Delgado et al. (note 121).

¹²⁴ Serrano, A. and Brooks, A., 'Who is left behind in global food systems? Local farmers failed by Colombia's avocado boom', *Environment and Planning E: Nature and Space*, vol. 2, no. 2 (2019).

duce export-quality avocados, being unable to invest in the equipment and measures required to meet export standards. Due to increased competition from farmers who have more substantial resources and are seeking to enter the global commodity chain, small-scale farmers are also being squeezed out of the domestic market. This development is significant given the history of land conflicts and the correlation between inequalities in agriculture and violence over the past decades in Colombia. Moreover, these outcomes illustrate how international demand driven by shifting consumer preferences for a product has spillover effects on local economies outside global commodity chains that are seeking to emerge from conflict. Livelihood interventions targeting the most vulnerable can alleviate the immediate humanitarian needs of those left behind in wider economic transitions. However, if interventions do not take these transitions into consideration, also factoring in all elements of the food system at various levels, they risk creating aid dependency. At worst, interventions could reinforce drivers of violence tied to inequalities and resource scarcity.

Using a contextual understanding to identify entry points

Few food security interventions are designed and implemented taking the broader processes and dynamics of food systems into account. The complexities of food systems and the conflict and peacebuilding environments make it difficult for individual organizations and actors to consider the diversity of actors and the multiple levels, processes and feedback loops that exist. There are, however, concrete steps and actions that can be taken. At the very minimum, leveraging the potential of food systems to contribute to peace requires a robust, multidimensional understanding of the root causes and drivers of conflict (see chapter 4) and a holistic understanding of peace (see box 4.1). Partnerships can facilitate such an understanding. In most conflict-affected countries, there will be a range of internal and external actors engaged in food security interventions, conflict prevention, peacebuilding or resilience programming. Forming partnerships across the humanitarian–development–peace (HDP) nexus, while thinking and acting in integrated ways that cut across traditional boundaries, allows these actors to draw on a breadth of specialist knowledge to produce linked-up, context-specific, multidisciplinary analysis. In this way, partnerships can generate a better understanding of the complex relationships between food systems, violent conflict and peace. The approach has strong potential to holistically consider needs at the system level, including how the diversity of actors, multiple levels, processes and feedback loops interact with one another.

A robust multidimensional understanding of the conflict and peacebuilding environment furthermore helps actors to identify the right entry points at the right times and places to leverage the potential of food systems to contribute to peace. Identifying entry points is essential. Conflict is a process that transforms societies (see box 3.1), and conflict-induced food insecurity is, in many ways, the outcome of social practices. As an outcome of social practices, food insecurity is also amenable to social solutions, emphasizing local capacities instead of externally imposed or engineered solutions. Entry points are highly context-dependent and tied to everyday local dynamics.

Local dynamics tied to markets demonstrate this point. Research conducted in 2018 found that everyday business activities in contemporary Lebanon had positively affected community relations through philanthropy, shared experiences and relationship-building across sectarian divides, which subsequently dissolved some barriers between previously warring sectarian groups as well as host and refugee communities. Importantly, however, this was only the case when the groups had

equivalent operating conditions.¹²⁵ In Nigeria, in contrast, at times of tension the marketplace becomes a place where conflict easily turns violent. However, due to pre-existing social networks fostered through trading relationships, quick and peaceful resumption of non-violent activities after such flare-ups is common.¹²⁶ Understanding everyday economic relations in these contexts, including processes in the marketplace that represent the diversity of economic life in people's day-to-day activities, is vital to identifying when, where and how food systems can contribute to peace. Local socio-economic processes and the impact of economic exchange on peace must be understood against the social and political spheres and processes of everyday life; this enhances the potential of market-based interventions, such as cash-based transfers, to nurture economies that will support structures conducive to everyday peace.¹²⁷

Generating the required evidence

There is an urgent need to better understand the links between food, conflict and peace in local contexts. No two contexts are identical; how the relationships between violent conflict and food insecurity, and food security and peace, play out will differ across settings. Actors at all levels working in and on conflict must base their interventions on a thorough understanding of conflict dynamics and the root causes of violence and food insecurity, incorporating the experiences of affected communities. Actors must also consider existing governance structures and the capacity, legal frameworks and political will of governments in affected countries as well as wider power dynamics. Without such detailed contextual understanding, it is hard to anticipate risks and ensure that preventative action reduces the potential for food insecurity and instability to escalate into a full-blown crisis.

The establishment of Food and Peace Hubs in countries facing the risk, reality or aftermath of a conflict-related humanitarian crisis would be a concrete step towards generating the knowledge and evidence required.¹²⁸ The facilities would bring together local, regional and international actors engaged in humanitarian action, development work and peacebuilding. An important feature would be their inclusive structure, building on local knowledge and capacity through the meaningful participation of populations most affected by conflict and food insecurity, including women, minority ethnic and social groups, and small-scale farmers, to name but a few. These facilities would, among other activities, provide context-specific multidisciplinary analysis on the interrelations between food systems, violent conflict and peace. Their work would generate the important contextual evidence needed to increase the awareness of these interrelations at the local, national and regional levels.

The establishment of new structures should not substitute continued efforts to operationalize the HDP nexus across the existing food-security-related initiatives in most conflict-affected countries. Many structures, hubs and networks exist. Research on operationalizing the HDP nexus shows that, while slow and fragmented, there is progress among national governments, the UN and donor institutions.¹²⁹ The establishment of Food and Peace Hubs would be a way to operationalize the wider

¹²⁵ Joseph, J., Katsos, J. E. and Daher, M., 'Local business, local peace? Intergroup and economic dynamics', *Journal of Business Ethics* (2020).

¹²⁶ Porter, G. et al., 'Conflict and cooperation in market spaces: Learning from the operation of local networks of civic engagement in African market trade', *Human Organization*, vol. 69, no. 1 (2010).

¹²⁷ Tschunkert, K., 'Aiding conflict? The implications of humanitarian cash and voucher assistance for host-refugee relations in Lebanon', Unpublished PhD thesis, University of Manchester, 2020; and Boâs, M., *The Politics of Conflict Economies: Miners, Merchants and Warriors in the African Borderland* (Routledge: Abingdon, 2015).

¹²⁸ The proposal for Food and Peace Hubs was presented by a working group on peace resilience, chaired by SIPRI, under Action Track 5, part of preparatory work and dialogues leading up to the UN Food Systems Summit in Sep. 2021.

¹²⁹ Nguya, G. and Siddiqui, N., 'Triple nexus implementation and implications for durable solutions for internal displacement: On paper and in practice', *Refugee Survey Quarterly*, vol. 39, no. 4 (Dec. 2020), pp. 466–480.

HDP nexus further while emphasizing the generation of much-needed contextual evidence.

Evidence linking food insecurity and conflict is increasing. Enhancing this evidence base with solid and robust findings from a variety of conflict and peacebuilding settings will help to establish a much-needed common understanding of the relationship between violent conflict and food insecurity and the potential of sustainable and equitable food systems to contribute to peace.

6. Conclusions and recommendations

This paper has outlined and discussed the overarching interconnections between food systems, violent conflict and peace. Food systems are complex, interconnected and adaptive systems. They comprise every person and every process involved in a set of activities ranging from production to consumption of food, as well as the broader environmental, political, social and economic settings in which they are embedded. Yet, despite their complexities, food systems have a simple core function: getting food from producers via processors and distributors to consumers. Violent conflict affects almost all of these processes, though predominantly the production, distribution and marketing elements of food systems. The way conflict affects these elements will differ across conflict settings and over time. However, the outcome is collapsing food systems and increased levels of food insecurity—at worse, famine. Moreover, conflict has an immediate and detrimental impact on food systems as well as long-lasting adverse effects.

Food insecurity can also trigger social instability, which under certain circumstances can lead to armed violence. Environmental stress, climate-induced food shortages, resource competition, and social and food-price-related grievances are among the most common pathways through which food insecurity can trigger violence.

Importantly, sustainable and equitable food systems can also generate conditions conducive to peace. There is, however, an urgent need to better understand and act upon the links between food systems and violent conflict to leverage this potential of food systems. The pathways leading from conflict to increased food insecurity and from increased food insecurity to conflict are complex and unique to each case. This paper has argued for the importance of a robust, multidimensional and contextual understanding of food systems and the drivers of conflict and peace. To this end, the paper makes four specific recommendations.

Recommendations

1. Donor governments and governments in conflict-affected countries can enhance the efficiency and impact of their support and intervention if they base them on conflict analysis that explores contextual dynamics and processes through a wider food systems lens. This includes efforts seeking to both address immediate food needs and—in pockets of relative peace and stability—build longer-term capacities around agricultural production and market participation.
2. Against the increasing levels of conflict-induced food insecurity, exacerbated by the Covid-19 pandemic, humanitarian and development actors should work together with local authorities and security forces to scale up efforts to break the reciprocal relationship between violent conflict and hunger. Support for vulnerable populations should focus on addressing immediate needs and building capacity to strengthen post-pandemic recovery. This will save lives, build hope for a future where people can provide for themselves and reduce grievances on which NSAGs are currently thriving.
3. In conflict-affected contexts, the agency responsible for the coordination of humanitarian and/or development response should set up Food and Peace Hubs that cut across sectors and different organizations' mandates. The hubs should include local, regional and international actors engaged in humanitarian action, development work and peacebuilding, to

generate the knowledge and evidence required to identify entry points and connections that enhance the potential of food systems to contribute to peace.

4. Linked to recommendation 3, UN agencies and international and local non-governmental organizations are advised to include the systematic collection, disaggregation, merging and analysis of data on employment and livelihoods linked to agricultural food production within existing assessments and monitoring exercises. This will support the design of livelihood programmes that are specific to different conflict and peacebuilding environments and that can effectively respond to the loss of employment and livelihood opportunities due to deficiencies in the food system linked to agricultural production.

Annex A. Critical drivers of food systems

Violent conflict affects food systems, as this paper discusses. In addition to violent conflict, the following are some of the critical drivers that push and pull the elements of food systems in different directions. Although they are presented here as separate drivers, they often interlink and outcomes can be difficult to attribute to any one driver. Additionally, outcomes can become drivers.

Population growth, urbanization and migration

The world's population is expected to exceed 10 billion by 2050. Over two-thirds of people are expected to be living in urban areas.¹ Global food production will need to increase significantly to meet the demands of the growing population. Moreover, equally as important as population growth is population dynamics, including diversity in regional trends, structure by age groups, and location (rural and urban).² The largest increases in population are expected to be concentrated in sub-Saharan Africa and South Asia, which are already among the most food-insecure regions, and in large cities.³ Rapid population growth in agriculture-dependent countries with limited land and water resources is of particular concern.

Rapid urbanization is changing our relationship with food as it affects consumption patterns, increasing demand for food that uses more resources (e.g. energy, land and water) or produces more greenhouse gas emissions, such as processed foods and animal proteins.⁴ Urban areas are typically centres of food technology innovation and are associated with easier access to food. However, urban food systems have longer supply chains, which together with limited agricultural land makes urban food systems more vulnerable to shocks. Moreover, although approximately 70 per cent of the global food supply is for urban consumption, hundreds of millions of urban dwellers suffer undernutrition.⁵ This points to a problem with access, as nutritious foods are more expensive than foods of low dietary quality.⁶

Importantly, urbanization is not necessarily a permanent one-time rural-to-urban shift. Many migrants continue to be members of rural households while forming or joining other households in an urban area. The resulting links and interactions are essential components of livelihoods and production systems in many areas, creating a complex web of connections in a landscape where much is neither 'urban' nor 'rural'.⁷

Close to 300 million people are international migrants, of which 164 million are labour migrants.⁸ Nearly 80 million are internally displaced people or refugees.⁹ Large-scale migrations are also triggered by climate and weather-related hazards in many parts of the world, Migration can place more stress on food systems in destination areas while reducing the agricultural labour force in countries of origin.

¹ United Nations Department of Economic and Social Affairs, Population Division, 'World population prospects 2019', Aug. 2019.

² Food and Agricultural Organization of the UN (FAO), *The Future of Food and Agriculture: Trends and Challenges* (FAO: Rome, 2017).

³ FAO (note 2).

⁴ FAO (note 2); and Satterthwaite, D., McGranahan, G. and Tacoli, C., 'Urbanization and its implications for food and farming', *Philosophical Transactions of the Royal Society B: Biological Sciences*, vol. 365, no. 1554 (2010).

⁵ FAO, *Cities and Local Governments at the Forefront in Building Inclusive and Resilient Food* (FAO: Rome, 2020).

⁶ Headey, D. D. and Alderman, H. H., 'The relative caloric prices of healthy and unhealthy foods differ systematically across income levels and continents', *Journal of Nutrition*, vol. 149, no. 11 (Nov. 2019).

⁷ Crush, J., 'Linking food security, migration and development', *International Migration*, vol. 51, no. 5 (2013).

⁸ International Organization for Migration (IOM), *World Migration Report 2020* (IOM: Geneva, 2019).

⁹ UN High Commissioner for Refugees (UNHCR), *Global Trends: Forced Displacement in 2019* (UNHCR: Copenhagen, 2020).

Income growth and distribution

Increasing incomes change consumption patterns and have been linked to increased demand for animal proteins.¹⁰ Income distribution is of particular importance and an essential element of projecting food demand.¹¹ While increases in gross domestic product per capita tend to coincide with declines in individual food insecurity, high income inequality undercuts economic growth benefits in reducing food insecurity.¹² Research has found that urban poor spend an estimated 28 to 43 per cent of their income on food.¹³ Moreover, multi-country analyses suggest that higher food prices will generally increase poverty and food insecurity. Price increases are associated with sharp reductions in food consumption, suggesting that, at least at the scale of national economies, higher prices are likely to reduce nutrient intake.¹⁴

Globalization and trade

Globalization and trade have shifted traditional production and consumption patterns, and this in turn has shifted economic and political power. Trade and globalization have increased access to, and diversity and affordability of, food for many people. However, globalization and trade have also resulted in most of the global population now living in net food-importing countries.¹⁵ At the same time, many food staples are now produced in a limited number of countries, creating key regions upon which a significant proportion of the world's population depends. Shocks to these bread-basket regions can have far-reaching implications. Localized and even relatively minor disruptions to the food system can have a sizeable impact on the global price of essential commodities such as wheat, maize, soybean and rice. Moreover, the increasing international trade in food has resulted in growing interconnectedness of the agricultural sector in the energy and finance markets. This has increased the range of factors that can contribute to the volatility of global food prices.¹⁶

Climate change

Food systems are highly vulnerable to the effects of climate change. Climate change particularly affects agricultural production, as it is sensitive to changes in temperature and precipitation.¹⁷ Reduced agricultural production and increased spatial and temporal variability in food production patterns affect food availability and stability. This variability in food production patterns can also lead to more significant price fluctuations.¹⁸ The distribution of food produced is affected by the widening disconnection between where food is produced (and able to be purchased) and where food is needed, exacerbated by rapid urbanization.¹⁹

¹⁰ Henchion, M., et al., 'Future protein supply and demand: Strategies and factors influencing a sustainable equilibrium', *Foods*, vol. 6, no. 7 (2017), p. 53.

¹¹ Cirera, X. and Masset, E., 'Income distribution trends and future food demand', *Philosophical Transactions of the Royal Society B: Biological Sciences*, vol. 365, no. 1554 (2010).

¹² Holleman, C. and Conti, V., 'Role of income inequality in shaping outcomes on individual food insecurity', Background paper for *The State of Food Security and Nutrition in the World 2019* (FAO: Rome, 2020); and Cirera and Masset (note 11).

¹³ Tacoli, C., 'Food (in)security in rapidly urbanising, low-income contexts', *International Journal of Environmental Research and Public Health*, vol. 14, no. 12 (2017).

¹⁴ Myers, S. S. et al., 'Climate change and global food systems: Potential impacts on food security and undernutrition', *Annual Review of Public Health*, vol. 38 (2017).

¹⁵ Hamilton, H. et al., 'Exploring global food system shocks, scenarios and outcomes', *Futures*, vol. 123 (2020).

¹⁶ Hamilton et al. (note 15).

¹⁷ Vermeulen, S. J., Campbell, B. M. and Ingram, J. S. I., 'Climate change and food systems', *Annual Review of Environment and Resources*, vol. 37 (2012).

¹⁸ Myers et al. (note 14).

¹⁹ Myers et al. (note 14).

Low-income producers and consumers of food will be more vulnerable to the effects of climate change. They tend to spend a more significant percentage of their incomes on food and are therefore more strongly affected by food price increases. Moreover, they have a greater risk of suffering from reduced income generation; they are more likely to depend on the climate-sensitive sectors of agriculture and ecosystems, and have reduced adaptive capacity because they have fewer assets.²⁰ Climate change may also exacerbate social exclusion by increasing competition for scarce natural resources and forcing migration. Finally, while climate change is a core driver of food systems, food systems are a core driver of climate change as many food systems give rise to production of greenhouse gases.²¹

Technological innovations, intensification and homogenization

Technological innovations—such as irrigation, plant-breeding, automation, and increasing access to global and locally specific information—have led to substantial and sustained growth in agricultural yields and productivity in most of the world.²² However, these highly connected systems and narrow margins leave the system vulnerable to accidental failure or malicious action.

Closely related to technological innovations are intensification and homogenization processes, which have contributed to the increase in per capita outputs. These processes have led to efficiency gains, allowing for greater production volume at a lower cost.²³ At the same time, intensification and homogenization have resulted in increased environmental degradation, including soil degradation and a decline in on-farm biodiversity.²⁴ A lack of diversity can also increase the potential for rapid disease spread, which, together with increased commodity specialization, increases producers' vulnerability to ecological and economic risks.

²⁰ Vermeulen et al. (note 17).

²¹ Vermeulen et al. (note 17).

²² Béné, C. et al., 'Understanding food systems drivers: A critical review of the literature', *Global Food Security*, vol. 23 (2019).

²³ Béné et al. (note 22).

²⁴ Hamilton et al. (note 15).

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