

RESEARCH BRIEF

UNPACKING THE BURGEONING CHALLENGE OF ENVIRONMENTAL PROTECTION AND THE RIGHT TO FOOD IN THE CONTEXT OF ARMED CONFLICT

EXECUTIVE SUMMARY

This paper examines whether and to what extent environmental damage rendered during conflict causes food insecurity which is then exported via the globalized food system in the form of price shocks and reduced supply. Specifically, it examines three conflicts – Russia-Ukraine, Myanmar and Syria, the findings from which are then applied to a legal analysis to identify lacunae and potential pathways towards enhanced protection and accountability.

The analysis of Russia-Ukraine conflict yielded the richest findings. Indeed, prior to 2022 Ukraine played a key role in the global food market, feeding roughly 400 million people annually, mostly from food insecure countries. For example, it was the world's fifth largest exporter of wheat, with a distribution of 19 million metric tonnes in the 2021-2022 market year, including to Egypt, Nigeria and Ethiopia. Within a year of Russia's invasion, however, 30 percent of Ukraine's land and 13,500 square kilometers of waterways had been destroyed or contaminated. The country's agricultural export value contracted 15 percent, with wheat exports hit especially hard, declining 30 percent to a record low of 13.5 million metric tonnes.

In the months following February 2022, wheat flour retail prices had increased across all five of Ukraine's top importers; Ethiopia experienced the most severe price percentage fluctuation at 48 percent in April 2022. These shifts in price also correlated with general food price inflation. In Egypt, for example, the price of food increased around 12 percent during the same period. Price hikes also correlated with attacks on environmental assets and political back-steps. On 17 May 2022, the day the third round of Russo-Ukrainian talks failed, the International Grains Council wheat sub-index hit a peak of 399.7. Likewise, the bombing of the Nova Kakhova dam on 5 June 2023, which destroyed 4 billion tonnes of grain and food oil crops, coincided with same-day spike in the global price of wheat by 0.59 percent from USD636.25/Bu to USD 640/Bu.

A similar story played out in Myanmar following the military's declaration of a state of emergency rule in February 2021. By December that year, the value of Myanmar's rice exports had fallen to USD702 million (from 5.87 to 3.5 percent of total exports). This triggered an increase in the retail price of rice both in Myanmar and its main trade partners. Again, this correlated tentatively with generalized food price inflation (including in Malaysia and Madagascar) and with an increase in moderate-severe food insecurity (including in the Philippines, Malaysia, Madagascar and Senegal).

The analysis of Syria underscored that in a globalized economy, food insecurity needs to be understood in terms of its component parts. Here, the losses borne by the petroleum sector translated into fluctuating gasoline and diesel pump prices in key import markets. Between 2010 and 2012, China saw a 23 percent increase in diesel prices, followed by Lebanon at 22 percent, and Turkey at 15 percent. The knock-on effects for food security scarcely need spelling out. The dependence of Syria's agricultural sector on fuel – diesel in particular – impacted production levels, production costs and transport costs, which again translated into food price hikes and reduced export capacity.

These findings must be interpreted with caution. Further testing is needed to understand whether correlation also means causation. In other words, while it is clear that the conflicts examined resulted in environmental asset losses that co-existed with price hikes and heightened food insecurity in importing countries, we must eliminate the possibility that other factors, or mere coincidence, were in also play. What is clear, however, is that in today's globalized and integrated economy, conflict cannot be seen as involving only the belligerent parties. The relationship between conflict, environmental destruction and food production must be understood, not only in a short term and existential sense, but also as an early warning signal that food insecurity, hunger and malnutrition could worsen in countries geographically and politically removed from the battlefield.

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Such externalities are not sufficiently addressed under either International Humanitarian Law (IHL), or International Human Rights Law (IHRL). This is due to both jurisprudential issues (specifically the extraterritorial application of IHL) and practical challenges (establishing causality and requiring proof of direct or indirect harm, as well as scant enforcement mechanisms)¹. Moreover, in the current geopolitical context, the scope for closing these lacunae or creating new law capable of protecting the environment from the negative impacts of war, appears limited. Promoting inclusive narratives that address the conflict-environment-food security nexus; strengthening data gathering and sharing; and deepening community resilience through conflict- and gender-sensitive grants are some ways of closing the gap in the short to medium-term. The findings also underscore the importance of identifying alternate legal pathways and sources of protection, including ones that apply in a specific conflict theatre. These include strengthening regional and domestic laws to provide for accessible avenues of justiciability of the right to food, criminalizing ecocide on a national level, and accessing remedial justice via compensation schemes and reparation mechanisms.

PART 1. INTRODUCTION

The relationship between food insecurity and conflict is complex with multiple lines of causality. First, the phenomenon is a recognized driver of conflict. Food insecurity has a particularly strong relationship with diminutions in safety and security (factor of 0.66), and conflict protraction/prolongation (factor of 0.42).² When food insecurity co-exists with environmental phenomena such as water insecurity, risks increase exponentially.³ Second, conflicts create environmental externalities that can go on to drive food insecurity. Examples include the destruction of habitats and farmlands, and when toxic remnants of weapons leach into the soil, air or water supplies. Damage can also be deliberately or tactically inflicted, for example, the targeting of storage and processing infrastructure, or through weapons designed to contaminate or pollute. Indirect impacts can be equally injurious. Even when a food production system remains physically untouched, physical insecurity can prevent workers from accessing sites or crop fields, transport routes may be blocked and supply chains can be severed, thus bringing food production to a halt.

Importantly, these dynamics can last long after a conflict subsides. While physical plant can be rebuilt and equipment replaced relatively quickly, the presence of pollutants, agricultural plots lying fallow for protracted periods and structural damage to ecosystems, can compromise food production for decades. These complications carry over to delay post-conflict recovery, including in the areas of livelihoods, flows of goods and services, and health. The relationship between conflict, environmental destruction and food insecurity must therefore be understood not only in a short term and existential sense, but also as a risk factor in conflict recidivism.

Third, food insecurity as a driver and consequence of conflict is exported to other countries via the globalized food distribution system. The current conflict in Ukraine, for example, has significantly compromised both Russia and Ukraine's export capacity of grains and vegetable oils. The impacts of this for food insecure, poverty-affected and fragile states are threefold. Principally, states that rely on conflicting countries for food and fertilizer imports face a drop in supply and an increase in price. The results are worst for states already affected by food insecurity and under-development. As poor families' incomes are more strictly rationed, coping strategies often include children being withdrawn from education (especially

girls), child marriage, and children entering the workforce. The gendered dimensions of food insecurity also become accentuated — food shortages correlate with violence against women and girls; malnutrition disproportionately impacts women and girls;⁴ and compromised agricultural livelihoods reduces women's economic autonomy. Finally, while food insecurity is a generalized conflict driver, there is particular concern for countries that are both food import-dependent and already fragile or conflict affected, such as Afghanistan, Iraq, Niger and Yemen.

METHODOLOGY

While the evidence linking food insecurity to conflict is reasonably well developed, the spillover consequences and how these might be avoided, mitigated and dealt with from a perspective of legal accountability remains scantily studied. To shed light on these questions, this paper examines three conflicts — Russia-Ukraine, Myanmar and Syria — to measure how compromised food export capacity has impacted importing countries in terms of food insecurity and responses to price shocks. These findings are applied to a legal analysis to identify lacunae and potential pathways for enhanced protection and accountability.

The case studies provide an overview of the correlation between conflict, food production and export capacity, and their spillover effects on importing countries, principally through price shocks. Ukraine and Myanmar were selected for their exporting of staple food commodities such as wheat and rice, respectively, while Syria's export of fuel products provides insight into the relationship between energy and food security. For each country, the top five importers of selected commodities were identified, and where available, export values prior to and after the onset of armed conflict were tracked. Because resilience to price shocks is closely tied to development, upper-middle and high income countries were excluded from examination to allow for a more accurate reflection of armed conflict on food insecurity.⁵

As far as possible, data was gathered from authoritative sources such as the Food and Agriculture Organization of the United Nations (FAO), the World Food Programme (WFP), the World Bank and national authorities. Effort was also taken to draw from a single dataset across case studies. Where this was not possible, alternative reliable proxies

were substituted. For instance, data on food insecurity in Ukraine and Myanmar was taken from FAOSTAT; however, as data on Syria was not available, the PROTEUS Index was used. It should also be noted that retail prices rather than wholesale prices were used for analysis purposes, as these have an immediate impact on individuals' spending capacity. Importantly, all data presented are available as open access information.

Finally, while the case studies reveal a general positive correlation between armed conflict and food insecurity in importing countries, there are important variables that have not been measured. For instance, the data gathered do not distinguish between urban and rural households; nor do they distinguish groups within a population such as refugees and asylum seekers, married and single households, or male and female-led households. These are important markers for a comprehensive assessment of the question at hand that warrant further investigation.

PART 2. WHAT ARE THE TRANSBOUNDARY SPILLOVER EFFECTS OF CONFLICT-INDUCED FOOD INSECURITY AND THE LEGAL IMPLICATIONS OF SUCH SPILLOVERS?

UKRAINE

Ukraine is the second largest country in Europe with an agricultural land area of over 41 million hectares.⁶ Once among the poorest Soviet republics, the eastern-European nation gained independence in 1991 and now enjoys lower middle-income status. Dubbed 'the bread basket' of the old Russian empire, its extensive arable and fertile land coupled with favorable climate has paved the way for Ukraine to become a key agricultural producer and exporter.⁷ In particular, Ukrainian grain and vegetable oils play a critical role in the global food market, feeding roughly 400 million people annually, most of whom originate from countries already vulnerable to food shortages.⁸

Ukraine's relationship with Russia is complex, and one that not only impacts Ukraine's economic trajectory, but also results in spillover effects to global food supply chains and security. Following a period of steady GDP growth in the 2000s, pro-democratic movements in the form of the Orange and Euromaidan Revolution culminated in Russia's illegal annexation of Crimea and armed conflict

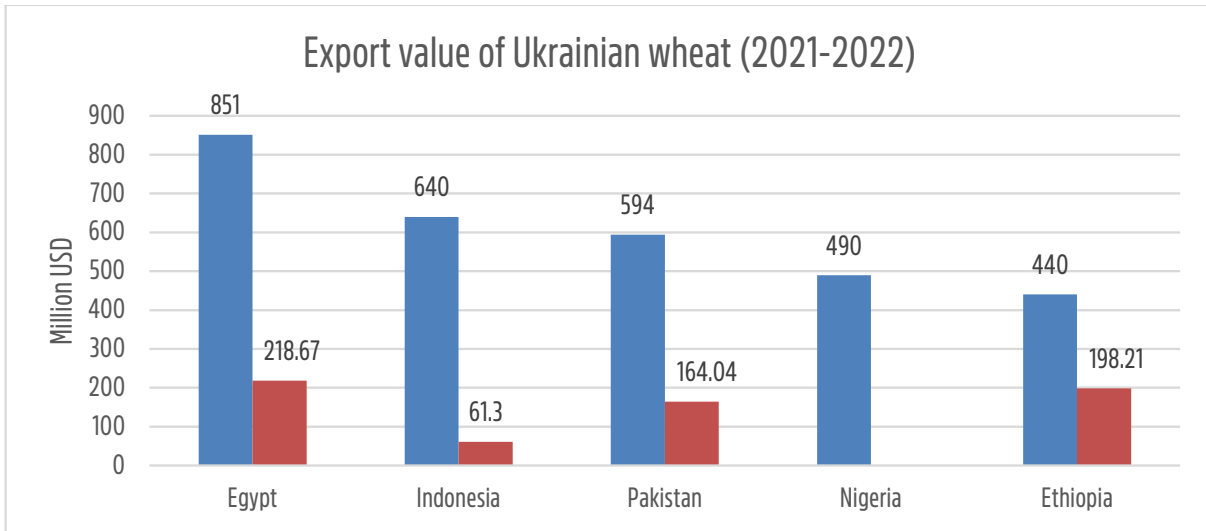
in the Donbas region in 2014.⁹ Against continued fighting between Russian-backed separatists and Ukrainian government forces, the deterioration in Russo-Ukrainian relations peaked on 24 February 2022, when Russia launched a "special military operation" on the pretext of demilitarizing and "de-Nazify[ing]" Ukraine.¹⁰

Ukraine experienced sharp declines in GDP in the years immediately following the 2014 and 2022 conflicts, and it is estimated that roughly 30 percent of Ukraine's land and an additional 13,500 square kilometers of waterways have been contaminated by landmines.¹¹ Within a year of the full-scale armed conflict, Ukraine's agricultural damages topped USD 8.7 billion.¹²

Russia's invasion of Ukraine took place just as the world was beginning to recover from the impacts of the COVID-19 pandemic, exacerbating disruptions to supply chains and rising food, fertilizer and energy prices. Prior to 2022, Ukraine's agricultural export made up 41 percent of its total exports, and was valued at close to USD 30 billion, with 65 percent of wheat exports and 51 percent of maize exports bound for developing countries.¹³ Its agricultural export value dipped by 15 percent in 2022, and while it increased in 2023, it has not returned to pre-war levels.¹⁴ The war continues to have severe implications on global markets and food supply chains, particularly in countries that are already conflict-affected, that have fragile economies and low-income, and/or that are highly food- and energy-import dependent. Indeed, Ukraine was the world's fifth largest exporter of wheat, with a distribution of 19 million metric tonnes in the 2021-2022 market year. Its top importers were Egypt (14.5 percent), Indonesia (10.9 percent), Pakistan (10.1 percent), Nigeria (8.35 percent) and Ethiopia (7.49 percent). In the following market year, wheat exports declined 30 percent to 13.5 million metric tonnes, compelling Ukraine's principal customers to seek alternatives.

FIGURE 1

Source: Observatory of Economic Complexity (2021 data); Trading Economics (2022)¹⁵



Within one year of the Russian invasion, wheat flour retail prices had increased across all five importing countries, with percentage change peaks occurring within the first seven months of conflict. Ethiopia experienced the most severe price percentage fluctuation at 48 percent in April 2022 (Figure 5). For Egypt and Pakistan, percentage change peaks were recorded at 19 and 17 percent in March 2022 and September 2022 respectively (Figures 2 and 4). Consumers

in Indonesia were the least impacted with a peak of 3 percent change in July 2022, despite the country having no domestic wheat production (Figure 3). This is possibly due to consumption habits (Southeast Asian consumers rely less significantly on wheat for their caloric intake vis-à-vis Sub-Saharan Africans) and/or comparatively lowered purchasing power.

FIGURE 2

Source: FPMA Tool and Statistica¹⁶

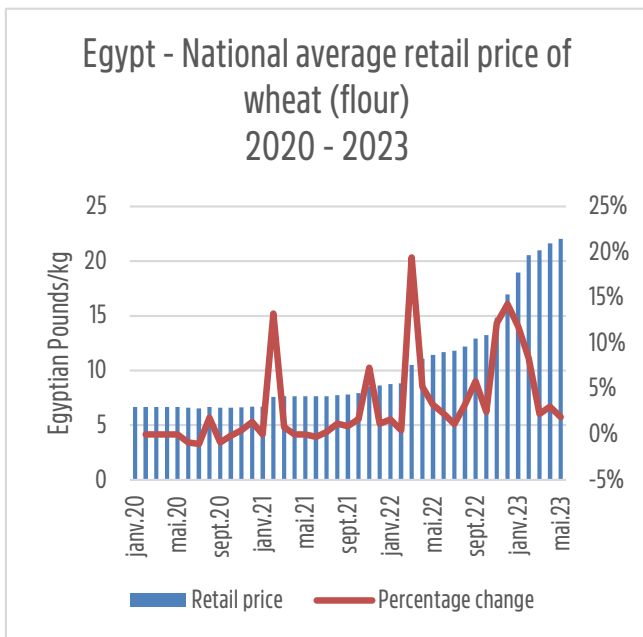


FIGURE 3

Source: FPMA Tool



FIGURE 4

Source : WFP VAM

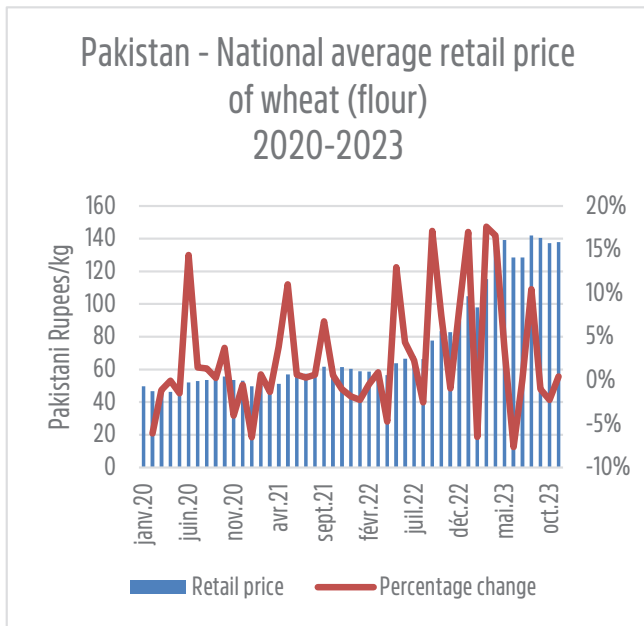


FIGURE 5

Source : WFP VAM

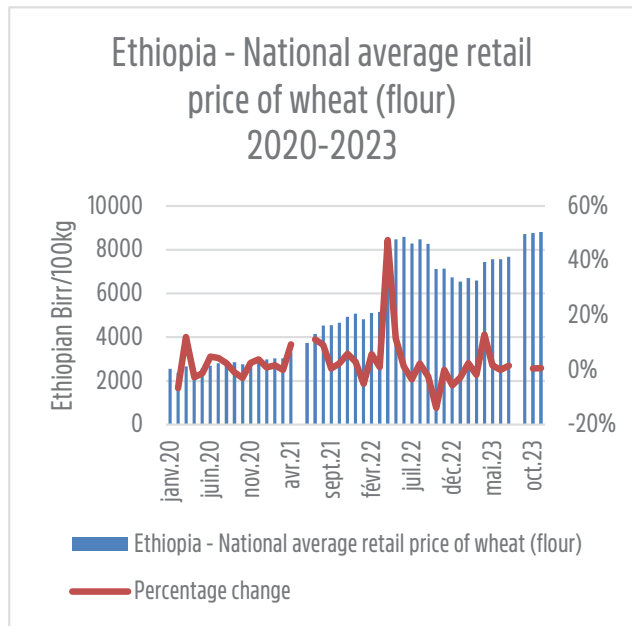


FIGURE 6

Source : WFP VAM

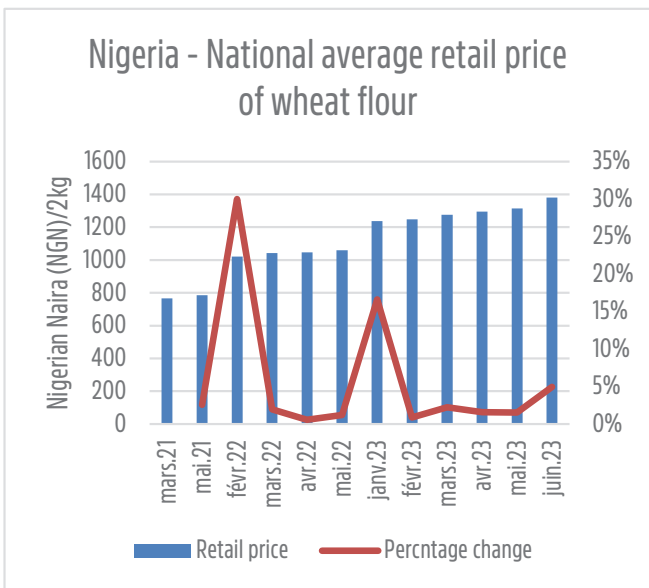
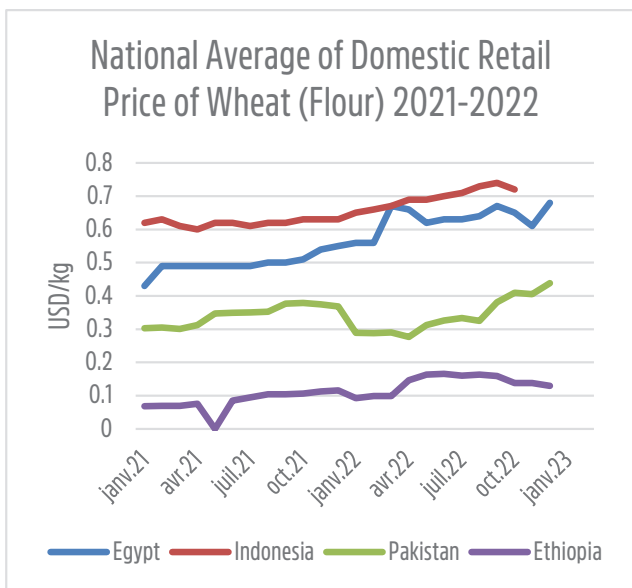


FIGURE 7

Source : US Department of Agriculture



On 23 February 2022, the day before Russia’s invasion of Ukraine, the International Grains Council recorded 304.7 on the wheat sub-index. This increased to 315.41 on the day of invasion and reached a peak of 399.7 on 17 May 2022 (Figure 8) — the same day the third round of Russo-Ukrainian talks failed. Meanwhile, oil prices reached a 14-year high in the US, as leaders proposed sanctions against Russian energy.¹⁷ A similar trend in the global wheat price took place, peaking on 28 February and 9 May 2022 (Figure 9).

Conflict-rendered damage to environmental assets also gave rise to prices shocks. A case in point is the bombing of the Nova Kakhova dam on 6 June 2023, which caused an estimated loss of 4 billion tonnes of grain and food oil crops,¹⁸ and was reflected in a same-day spike in the price of wheat. The global wheat price increased by 0.59 percent from USD636.25/Bu on 5 June 2023 to USD 640/Bu on 6 June 2023.

Armed conflict also hampers the transport of food commodities. Prior to the conflict, approximately 90 percent of Ukraine's grain and oilseed exports were moved through the country's Black Sea ports, facilitating transfers to the Middle East and North Africa (MENA).¹⁹ The blockade of these ports compelled Ukraine to use alternative, more expensive transport routes, thus further inflating prices and reducing export volume. While 'solidarity lanes' facilitating land transport and the Black

Sea Grain Initiative have eased some disruptions, Russia's withdrawal from the Initiative in July 2023 sparked another food price hike.²⁰ Figure 10 not only shows a general increase in the cost of shipping dry goods such as wheat, but also demonstrates a decline in such costs upon the establishment of the EU Solidary Lanes, and a rise in costs when Russia announced its withdrawal from the Initiative in mid-July 2023.

FIGURE 8: WHEAT SUB-INDEX (BASIS JANUARY 2000 = 100)

Source: International Grains Council



FIGURE 9: GLOBAL PRICE OF WHEAT (USD/BU)

Source: Trading Economics



FIGURE 10: BALTIC DRY INDEX

Source: Trading Economics



Each of Ukraine’s top five wheat importer countries experienced a general trend of food price inflation within the first three months of the armed conflict (Figure 11). Between January and May 2022, Egypt experienced the greatest percentage change in food price inflation — from 12.43 percent to 24.81 percent. This was followed by Pakistan from 12.82 percent to 17.25 percent; Ethiopia from 39.9 percent to 43.93 percent; Nigeria from 17.08 percent to 19.44 percent; and Indonesia from 3.4 percent to 5.64 percent. Moreover, FAO data indicate that since the onset of conflict, all importing countries apart from Indonesia have seen an increase in the percentage of moderate/severe food insecure people (Figure 12).

In Egypt, a study by Gadallah and Mamdouh attributed changes in food consumption patterns and the subsequent decline in women and children’s nutrition rates to the armed conflict in Ukraine.²¹

Significantly, there is an increase in the number of food insecure women across all countries between the years 2019-2021 and 2020-2022 (Indonesia again being an exception, Figure 13). Women in Pakistan fared worst among the five countries, with a 13.3 percent increase in the number of moderately or severely food insecure women. Pakistan also experienced the greatest percentage change among all five countries in terms of undernourishment, with a 13.3 percent increase between 2019-2021 and 2020-2022 (Figure 14). Except for Indonesia and Ethiopia, the percentage of undernourished persons in importing countries increased within the years under examination.

FIGURE 11

Source: FAOSTAT

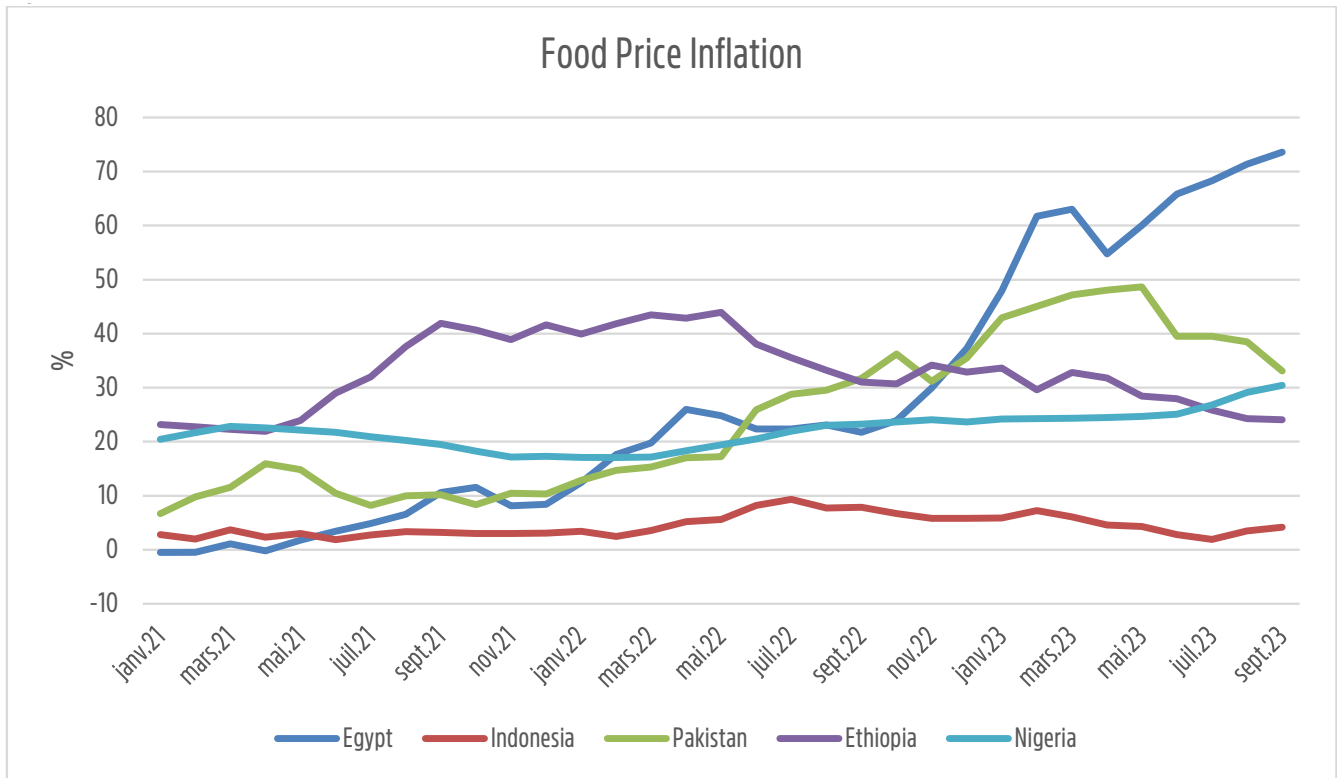


FIGURE 12

Source: FAOSTAT²²

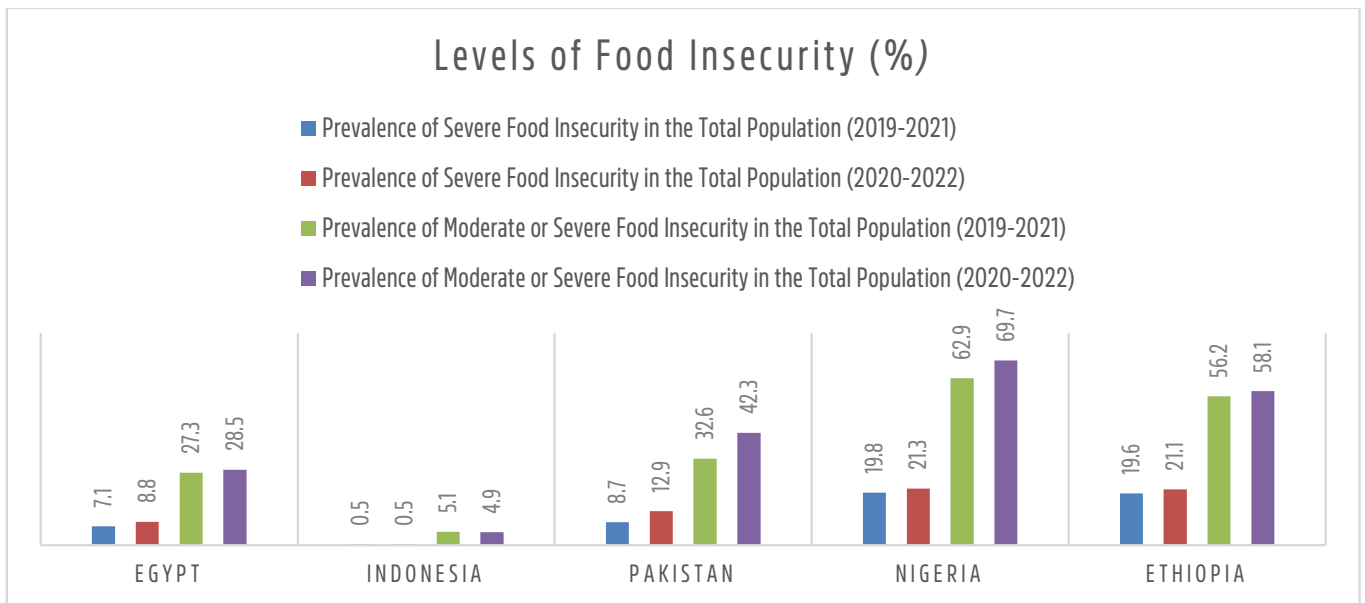


FIGURE 13

Source: FAOSTAT

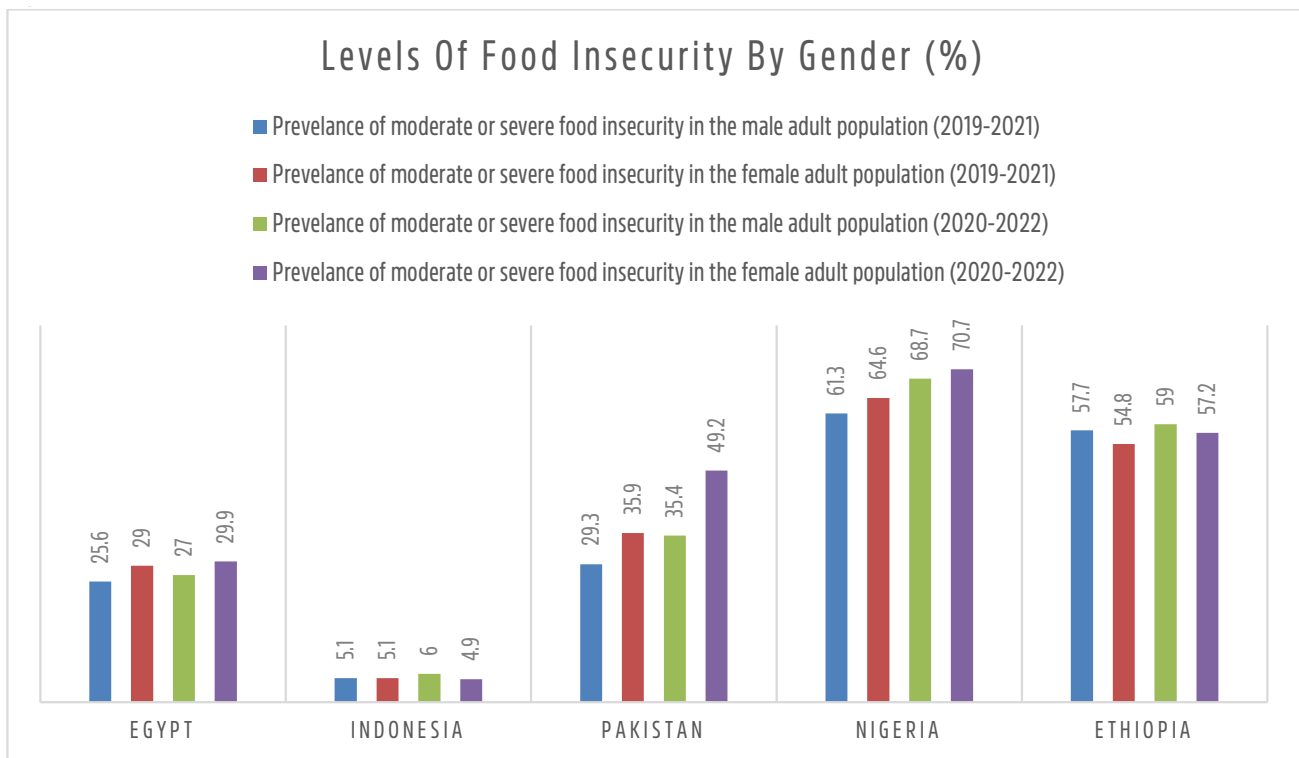
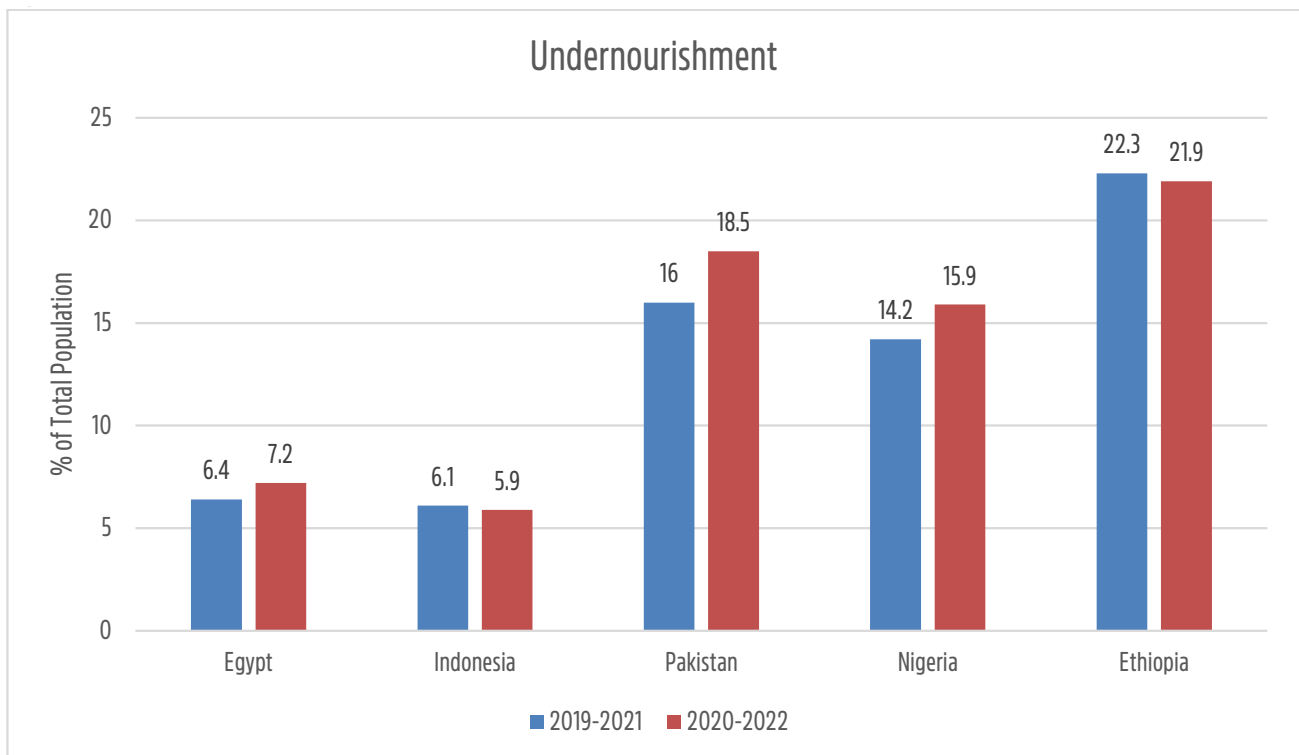


FIGURE 14

Source: FAOSTAT



MYANMAR

Myanmar is the largest country in mainland Southeast Asia with close to 13 million hectares of agricultural land.²³ While the World Bank has classified it as a lower middle-income economy, Myanmar's unusually fertile soil combined with abundant water sources provides strong potential for diverse agricultural production. Indeed, the agricultural sector accounts for 38 percent of the country's GDP and 60 percent workforce employment.²⁴ Myanmar's economy and agricultural sector, however, have regularly suffered setbacks owing to armed conflicts, poor governance and political instability in the country.

Since its independence in 1948, Myanmar has toggled between civil and military rule, leading to economic decline with staggering poverty levels alongside ethnic armed conflicts.²⁵ In 2011, however, political and economic transitions led to high economic growth and the country held its first democratic elections in 2015.²⁶ Nevertheless, comparative peace was met with renewed violence in 2017 in Rakhine state, resulting in the Rohingya refugee crisis. Most recently, democratic elections in November 2020 were contested by allegations of electoral fraud, leading to the military declaring a state of emergency rule in February 2021.²⁷ The coup and ensuing armed conflict coupled with the onset of the COVID-19 pandemic reversed any political, economic and social gains the country had made.

In 2020, rice constituted Myanmar's largest food commodity export valued at USD 1.14 billion (5.87 percent of total exports). According to the Observatory of Economic Complexity, the top five non-developed importers of Myanmar's rice were China, the Philippines, Malaysia, Madagascar and Senegal (Figure 15).²⁸ Immediately following the February 2021 coup, the retail price of rice in Myanmar increased, along with prices in the top four importing countries, and a spike in the global price of rice (Figures 16-21). Senegal was the only exception; its retail price for imported rice dropped from XOF320.6/kg in February 2021 to XOF313.63/kg in March 2021 (Figure 20). In the months following, food price inflation increased in Malaysia and Madagascar, although not in the Philippines and Senegal. Food price inflation increased again in September 2021, when a state of emergency was declared across Myanmar (although this period also coincides with border trade disruption resulting from the COVID-19 pandemic). Overall, in 2021, the value of Myanmar's rice exports fell to USD702 million (3.5 percent of total exports).

A study by Myanmar's International Food Policy Research Institute found that the conflict had resulted not only in lowered rice production, but that violence intensity negatively correlated with production volume.²⁹ Another study found that disruptions to transport and border access impacted price elasticity, and that this in turn was reflected in rice retail prices.³⁰

FIGURE 15

Source: Observatory of Economic Complexity (2020 & 2021); Trade Map (2022)³¹

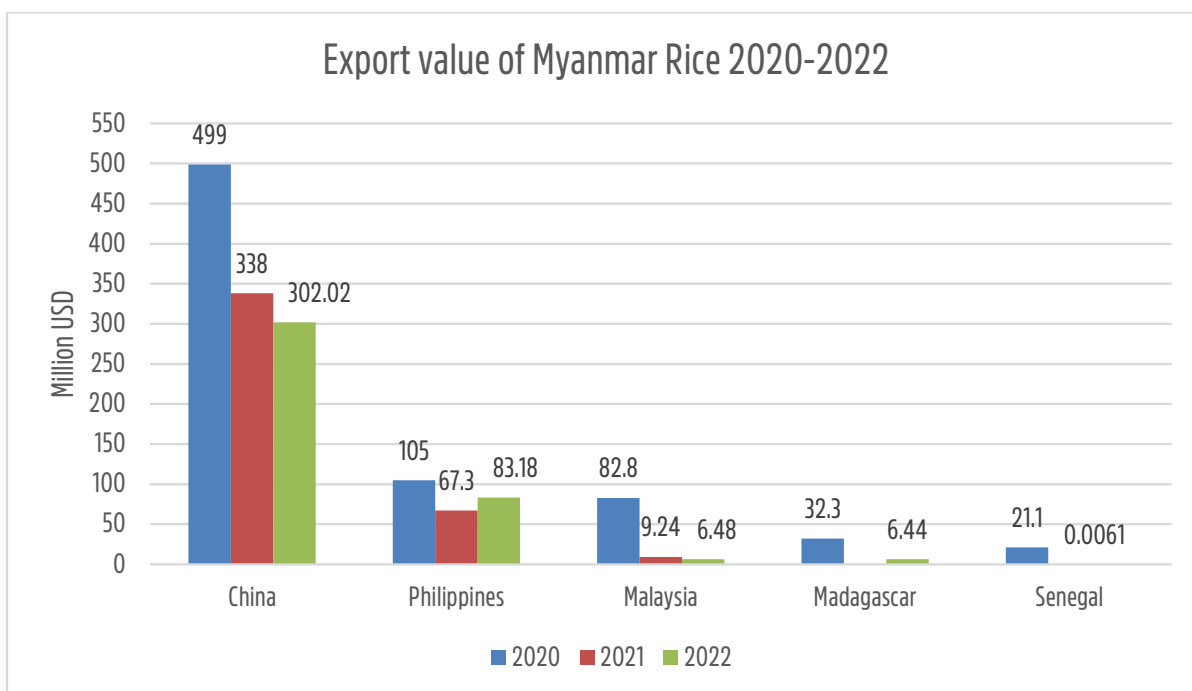


FIGURE 16

Source: FPMA – retail average not available

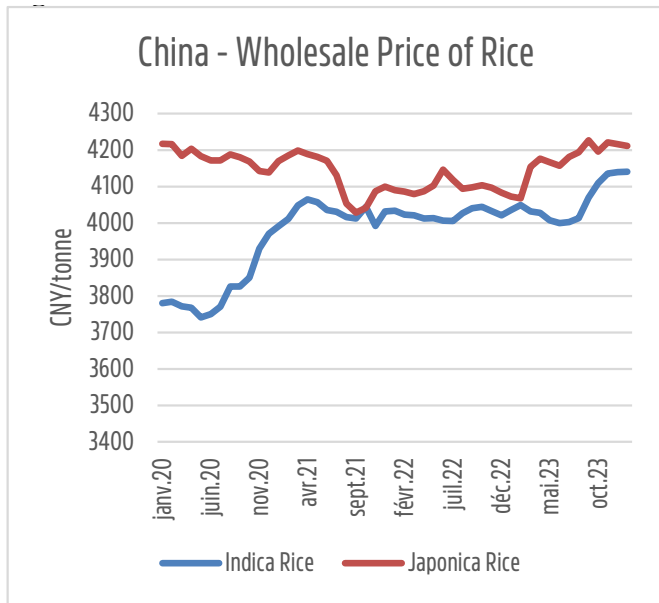


FIGURE 17

Source: FPMA – wholesale price not available – no distinction between indica or japonica

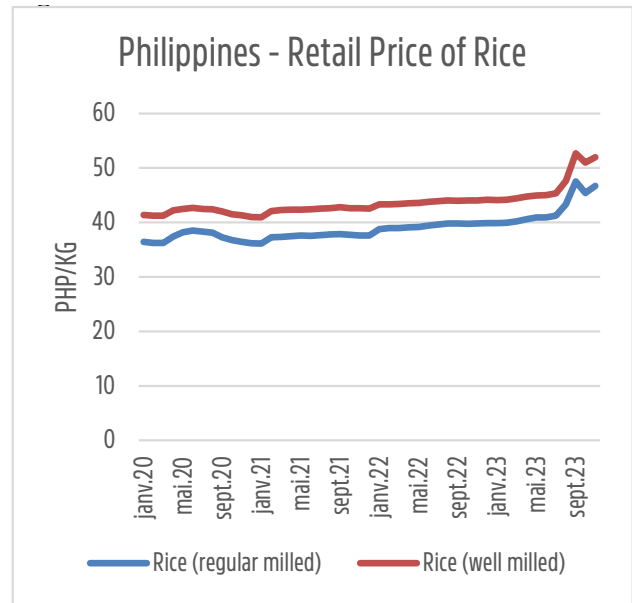


FIGURE 18

Source: Ministry of Economy, Department of Statistics, Malaysia

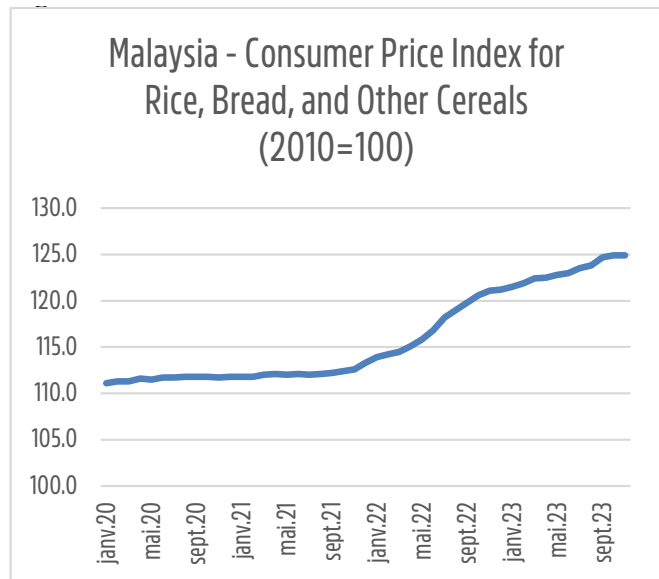


FIGURE 19

Source: WFP VAM – data unavailable before April 2020 and after Feb 2023

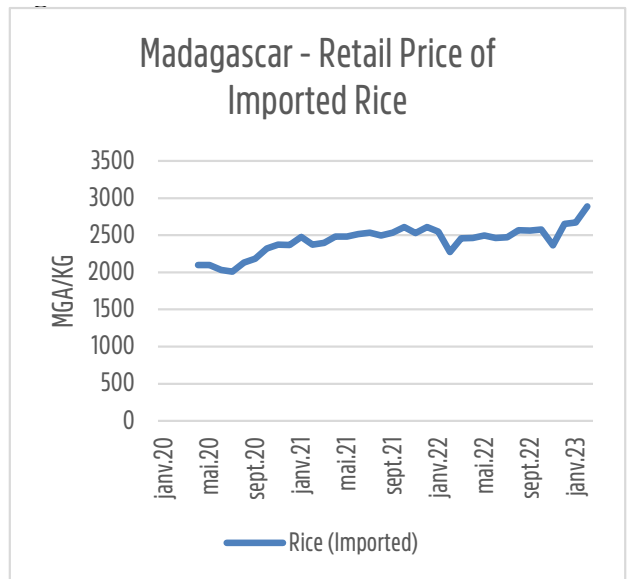
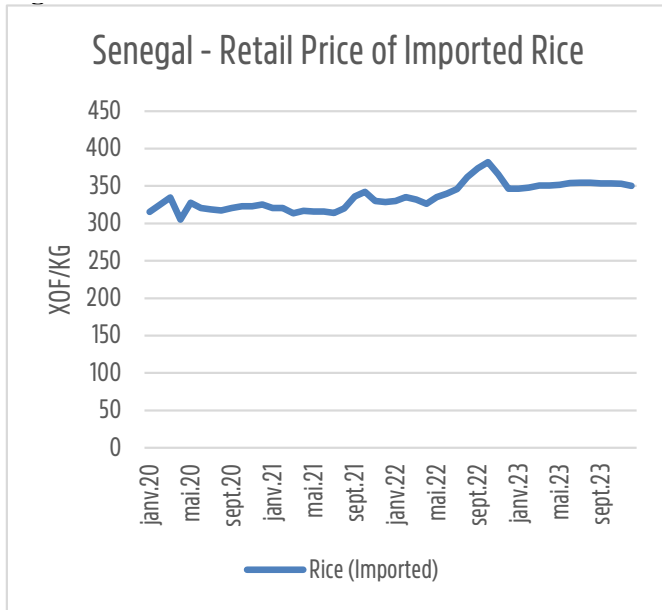
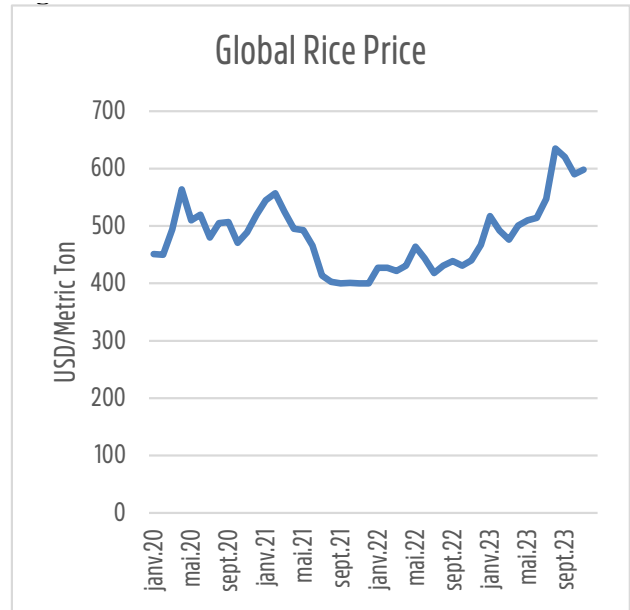
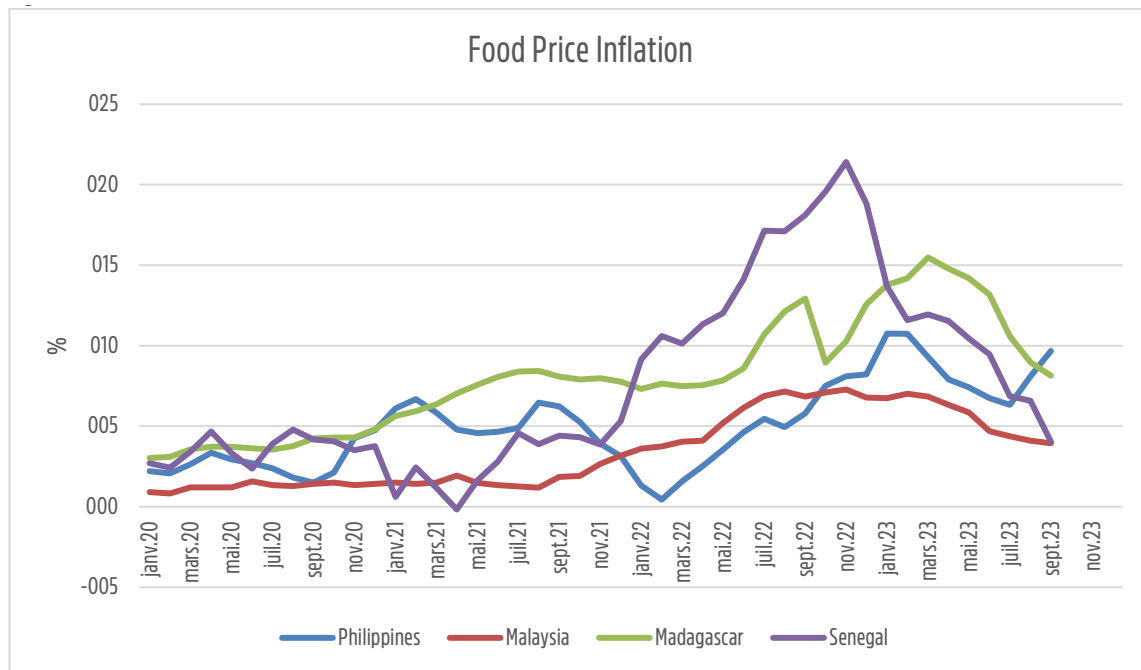


FIGURE 20

Source: WFP VAM

**FIGURE 21**

Source : IndexMundi

**FIGURE 22**Source: FAOSTAT ³²

Across the Philippines, Malaysia, Madagascar and Senegal, prevalence of moderate or severe food insecurity increased between 2019-2021 and 2020-2022, with Madagascar experiencing the greatest increase of 61.1 percent to 64.9 percent (Figure 23). While undernourishment appears to have improved in the majority of the five top importing countries, Madagascar again experienced the greatest increase in levels of undernourishment, moving from 49.5 percent of the population to 51 percent. While severe food insecurity in Malaysia and Senegal appears to have

stabilized, these countries are now being impacted by the Russian-Ukrainian conflict.³³ Finally, the percentage of moderately or severely food insecure adult males and females increased across the board, with Senegal's adult male population being an exception.

FIGURE 23

Source: FAOSTAT³⁴

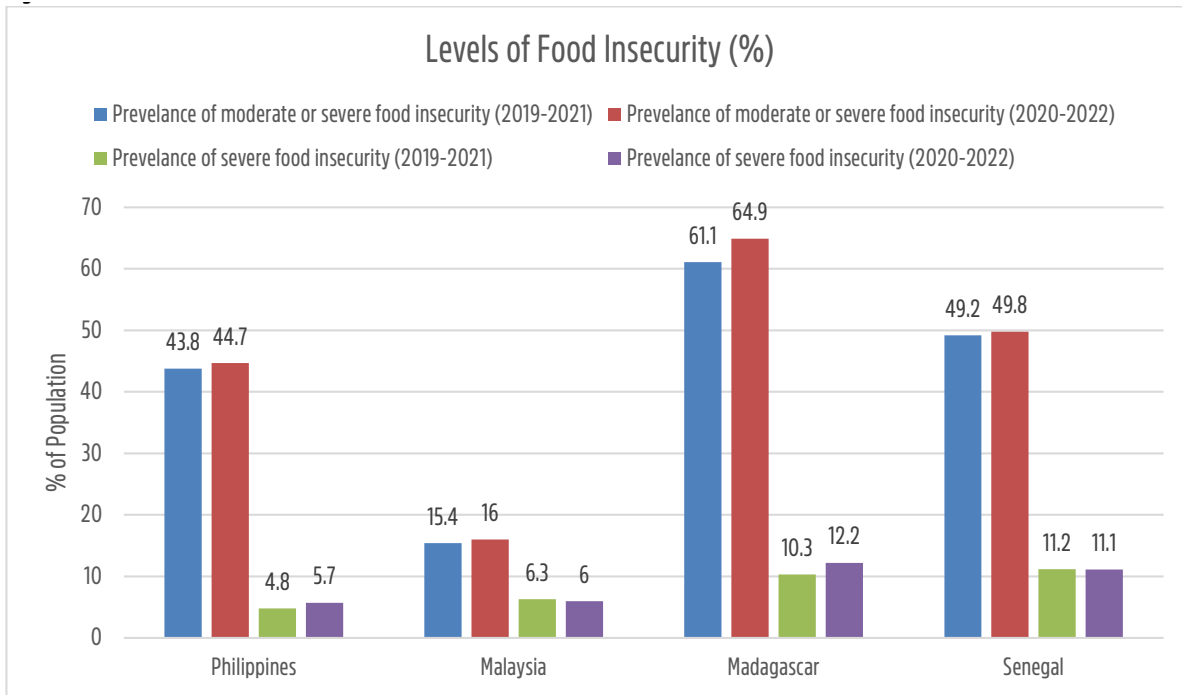


FIGURE 24

Source: FAOSTAT

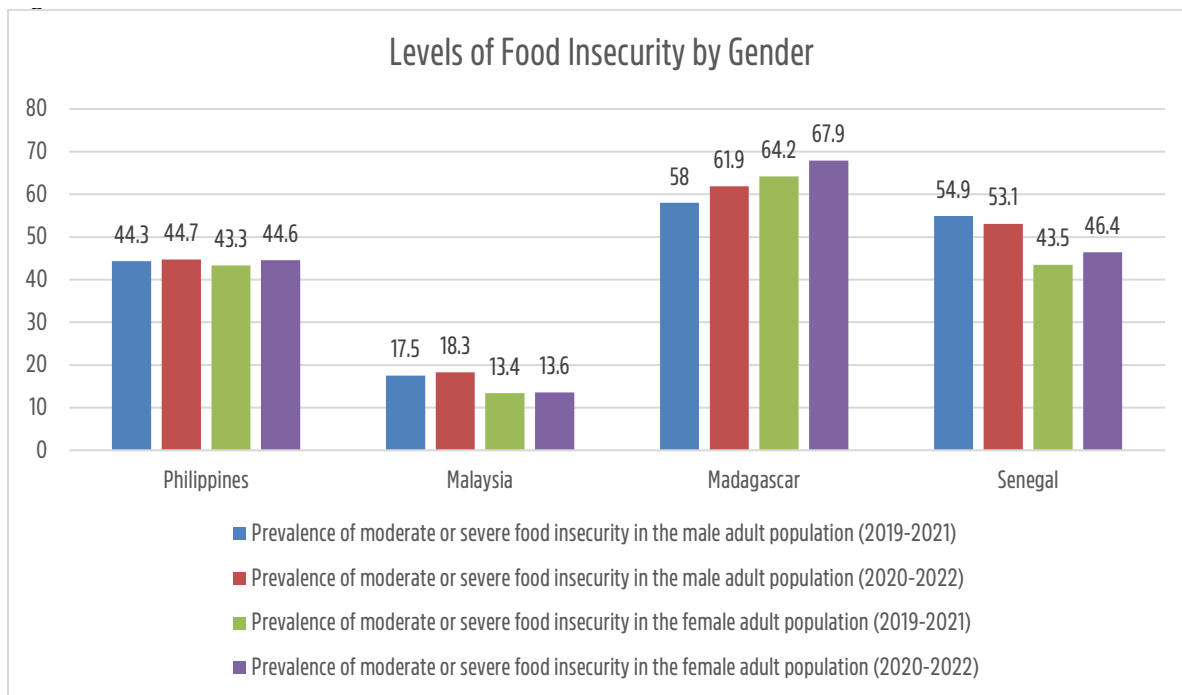
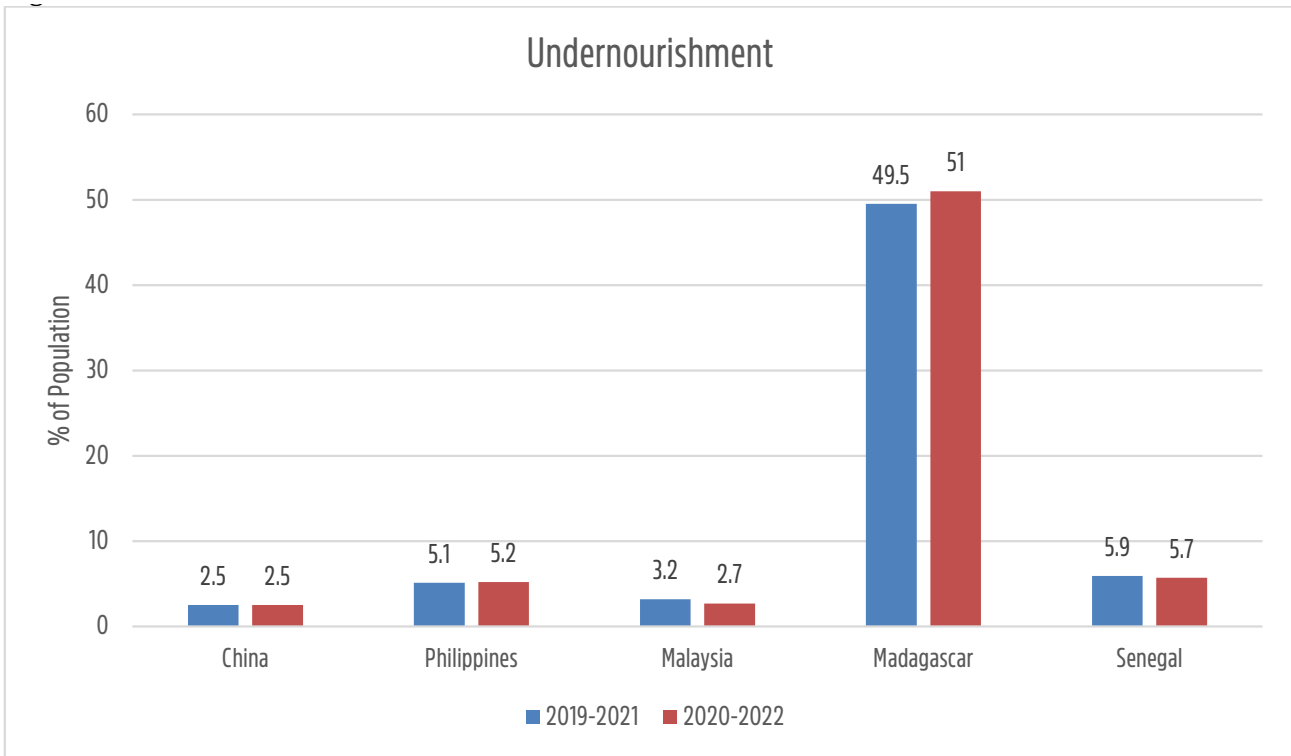


FIGURE 25Source: FAOSTAT³⁵**SYRIA**

With 18.5 million hectares of land and over one third of this ripe for agricultural production, Syria was the only country in the region to have been self-sufficient in terms of food prior to the commencement of the armed conflict in 2011.³⁶ Syria's agricultural sector formed one of the main pillars of the economy, employing over 20 percent of the population.³⁷ Dramatic decline in GDP, however, moved Syria from lower middle-income status to low-income in 2018.³⁸ While the FAO has estimated that between 2011 and 2016 Syria's agricultural sector suffered losses of USD 16 billion, internal estimates place losses from the petroleum sector at USD 100.5 billion between 2011 and 2020.³⁹ Indeed, pre-2011, Syria was the dominant energy producer among its eastern neighbors, with its oil industry contributing to 25 percent of the state's revenue.⁴⁰ Together, these consequences of the war including physical destruction and loss of control over critical lands, combined with political ones such as sanctions on Syrian oil, have taken a drastic economic toll.

As the Arab Spring swept through the region in late 2010-2011, peaceful pro-democratic protests took place in Syria. Underlying divisions along ethnic, religious, and political lines, however, quickly surfaced as violent responses to the protests escalated.⁴¹ The emergence of various factions such as the Free Syrian Army was further entangled by the rise of the extremist group, ISIS, thus propelling foreign involvement in what initially appeared to be a non-international armed

conflict.⁴² Today, several armed conflicts are ongoing in Syria involving Russia, Iran, Turkey and the United States-led coalition. Further, part of Syria's territory continues to be occupied by Israel.⁴³

Although Syria was never considered a major global exporter of oil, in 2010 crude and refined petroleum made up 44.3 percent of Syria's exports.⁴⁴ Its top five non-developed importers of fuel products were Turkey, Lebanon, Egypt, China and Brazil.⁴⁵

FIGURE 26

Source: World Integrated Trade Solution⁴⁶

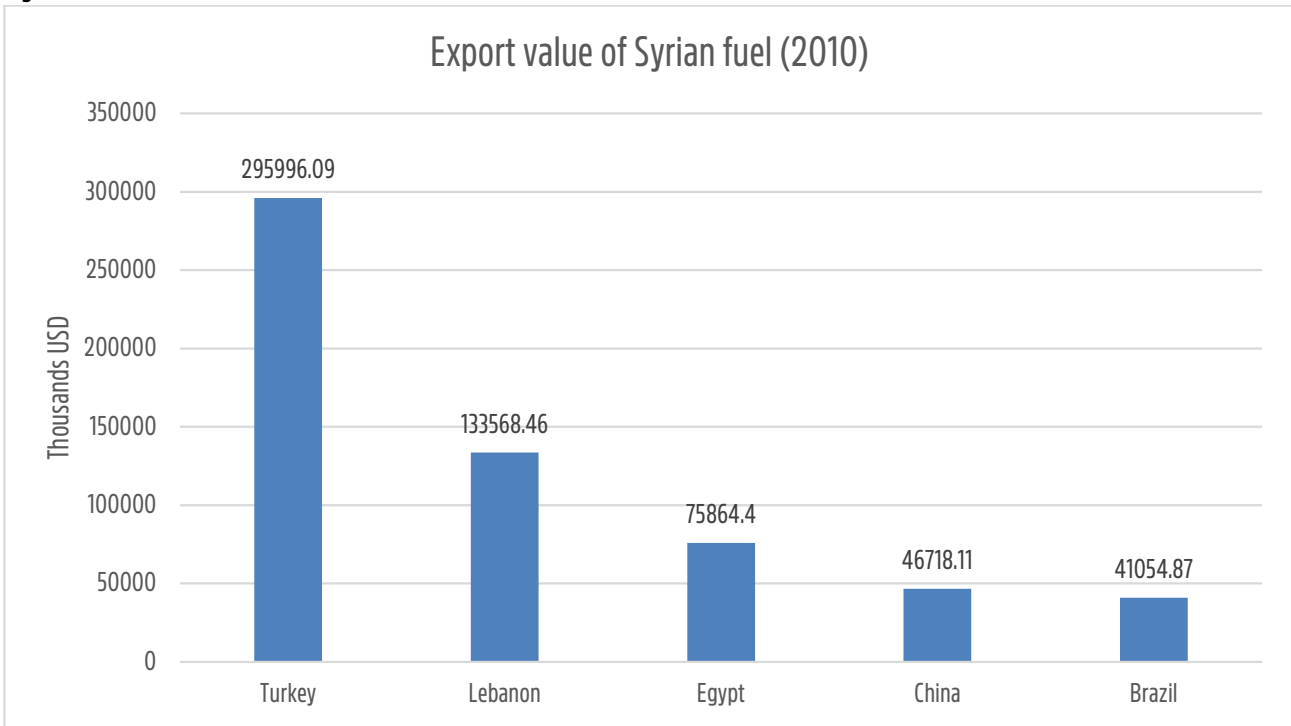
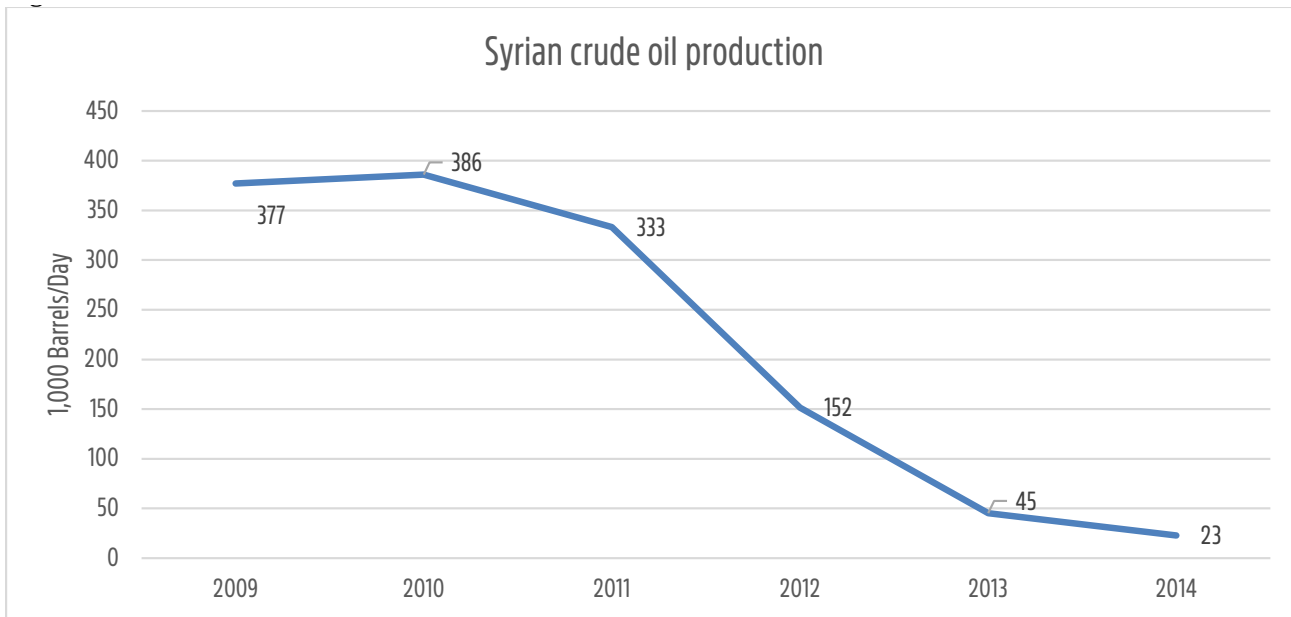


FIGURE 27

Source: OECD



Importing countries experienced a mix of increasing and decreasing pump prices for both gasoline and diesel, with Turkey experiencing the highest pump prices for both gasoline and fuel (Figures 28 and 29). The most significant shift related to diesel pump prices between 2010 and 2012. China saw an increase of 23 percent, followed by Lebanon at 22 percent, and Turkey at 15 percent (Figure 29). At the same time, global prices of crude oil, gasoline, and diesel saw sharp increases between 2010 and 2011 (Figure 30). Diesel prices surged from the third quarter of 2010 at USD 1.1/liter to USD

1.4/liter in the second quarter of 2011; the price of gasoline went from USD 0.9/liter to USD 1.2/liter in the same period; and the price of crude oil went from USD 0.5/liter in the fourth quarter of 2010 to USD 0.7/liter in the first quarter of 2011.

FIGURE 28

Source: Worldbank

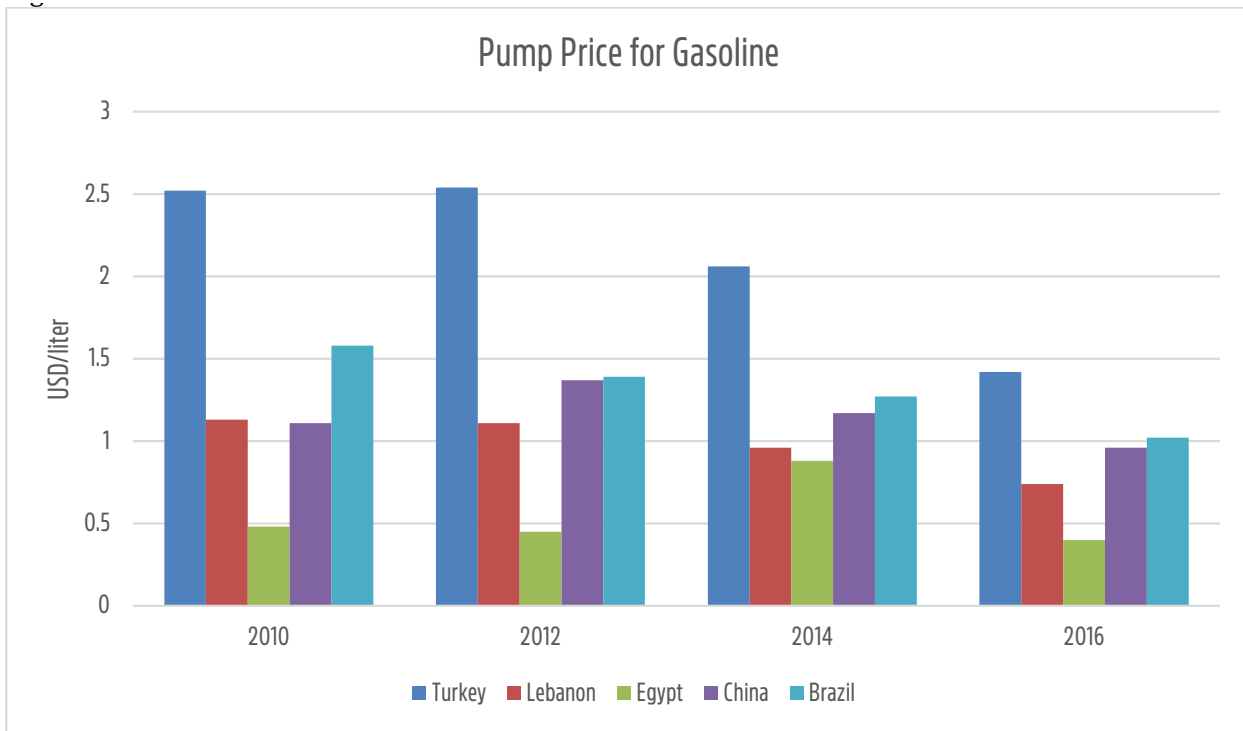


FIGURE 29

Source: Worldbank

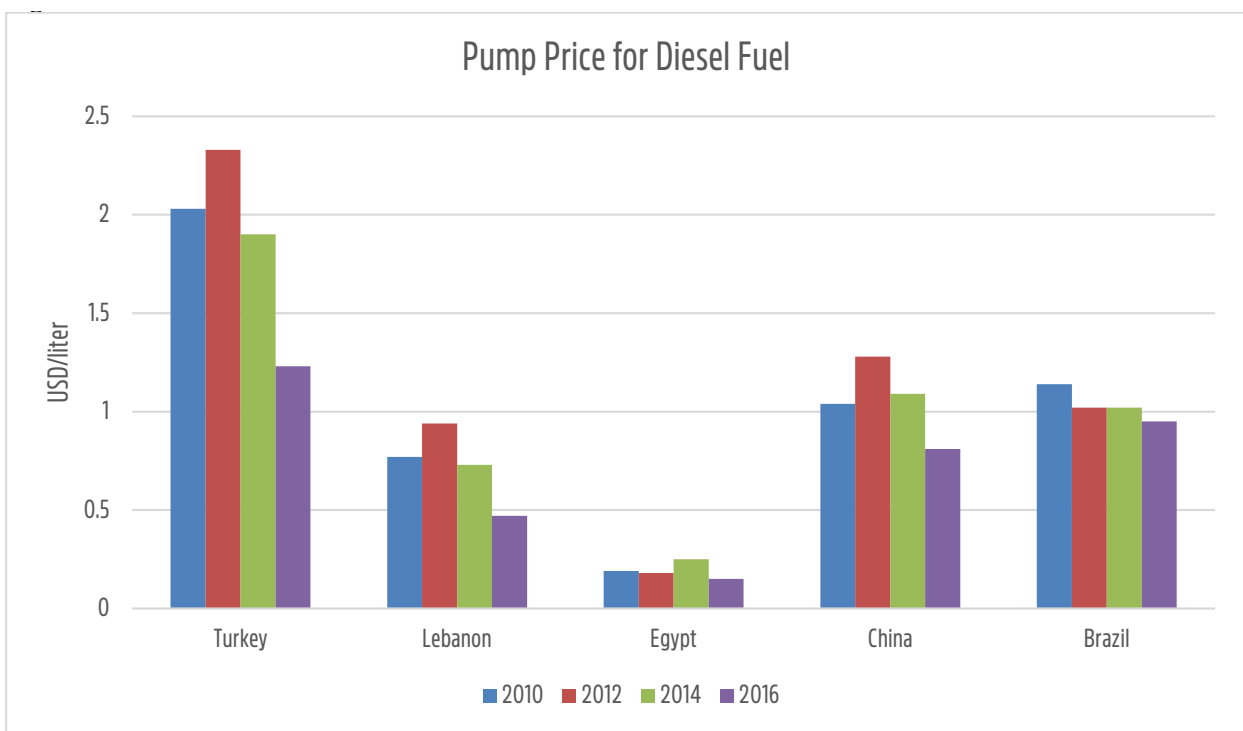
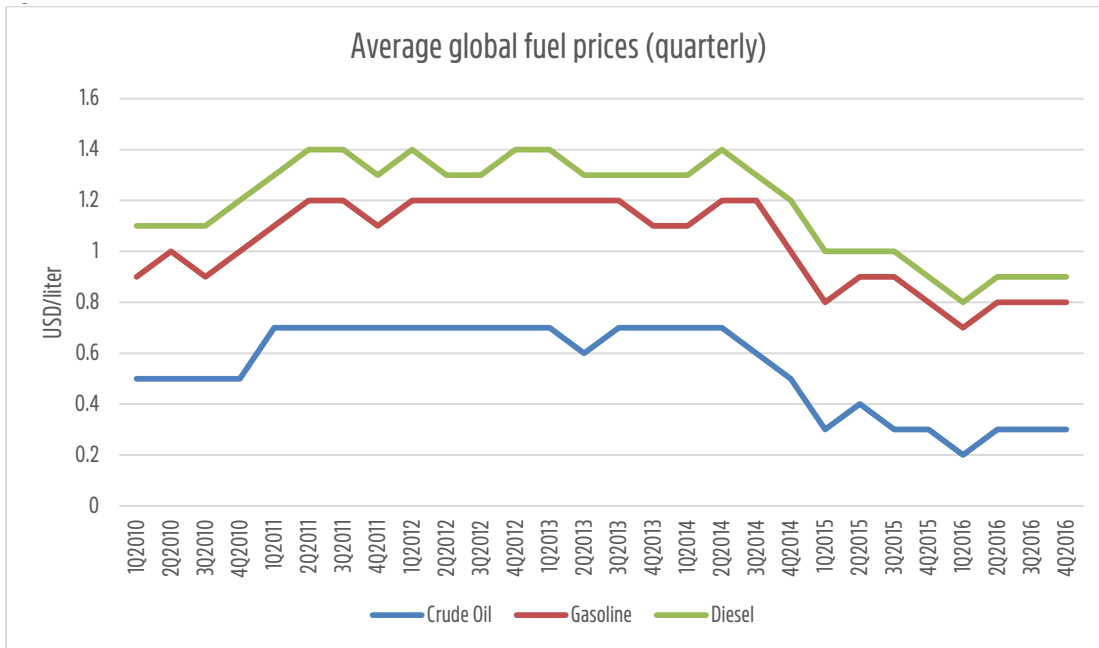


FIGURE 30

Source: International Energy Agency

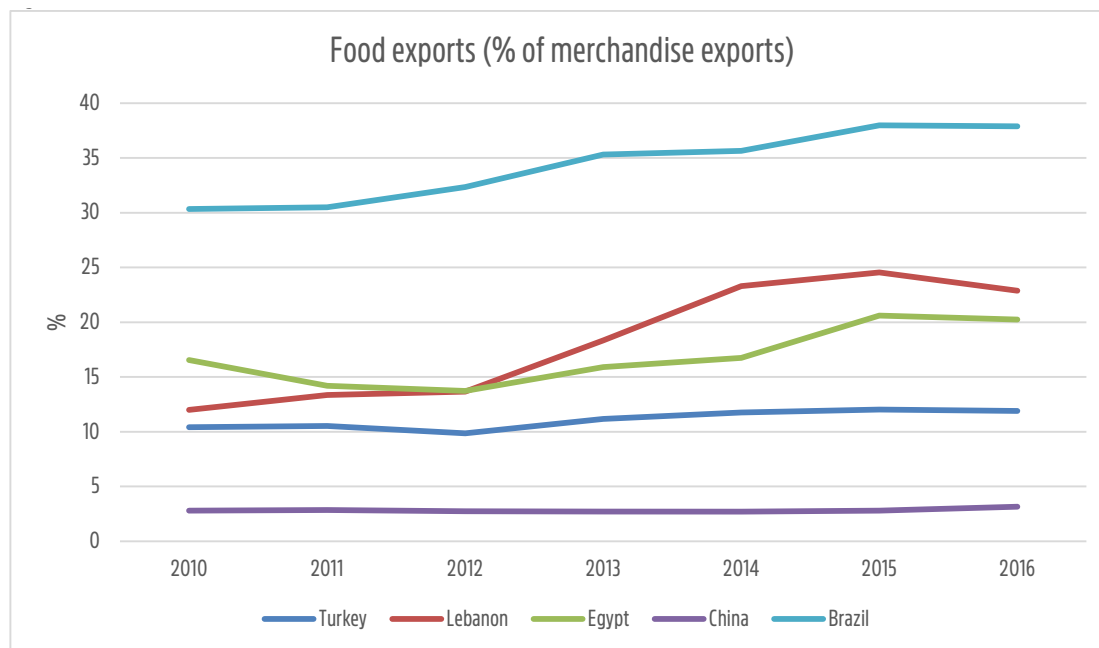


The agricultural sector’s dependence on fuel — diesel in particular — impacted production levels and costs, which then translated into food price hikes (and thus export capacity). Further, the impact of the armed conflict on food export routes — both availability and the additional costs incurred by taking safe alternate routes — was largely borne by Syria’s neighbors. In particular, Turkey and Lebanon had typically exported significant amounts

of food produce through the Bab al-Hawa and Masnaa crossings respectively.⁴⁷ While Lebanese food exports increased marginally between 2010 and 2012, Turkey’s food exports declined, in line with increased diesel costs (Figure 31). Turkish border cities were particularly affected, both in terms of increased food prices and sharp declines in income.⁴⁸

FIGURE 31

Source: Worldbank



Consumer purchase prices also typically respond to changes in the food value chain.⁴⁹ Except for Egypt, which experienced exceptionally high food price inflation in January 2010, food price inflation increased between January 2010 and January 2012 across Turkey, Lebanon, China and Brazil (Figures 32 and 33). Overall, three

(Lebanon, Egypt and Brazil) out of five importing countries experienced a rise in food price inflation between 2010 and 2016. At the same time, the PROTEUS Index⁵⁰ indicates that (except for Lebanon) food insecurity across the four fuel importing countries increased between 2010 and 2016.

FIGURE 32

Source: FAOSTAT⁵¹ – missing China

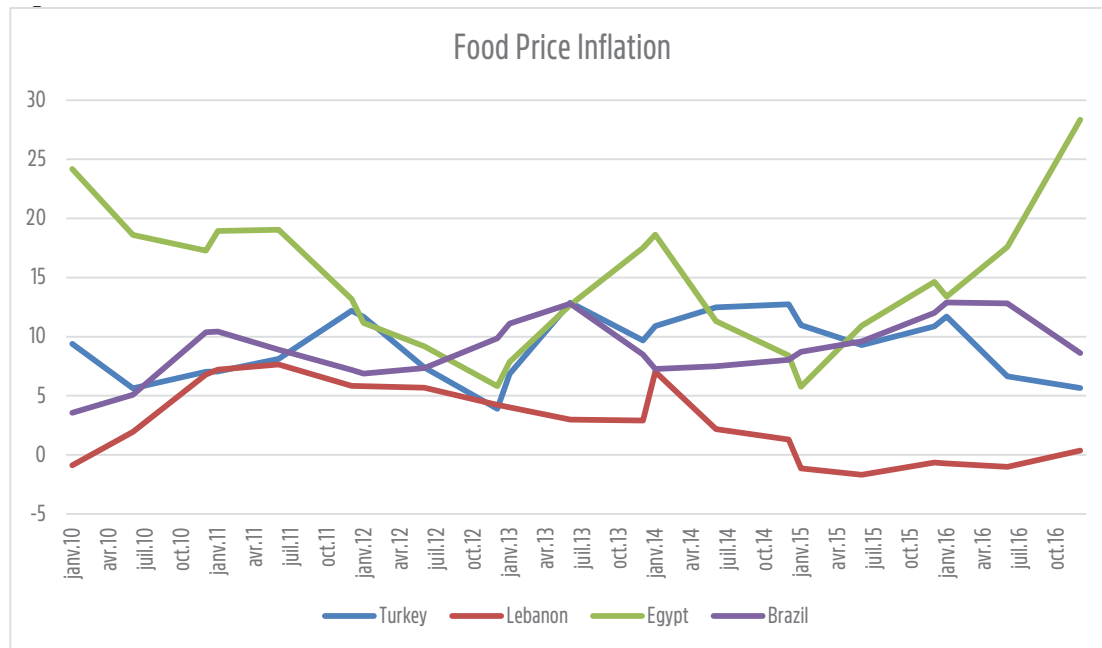


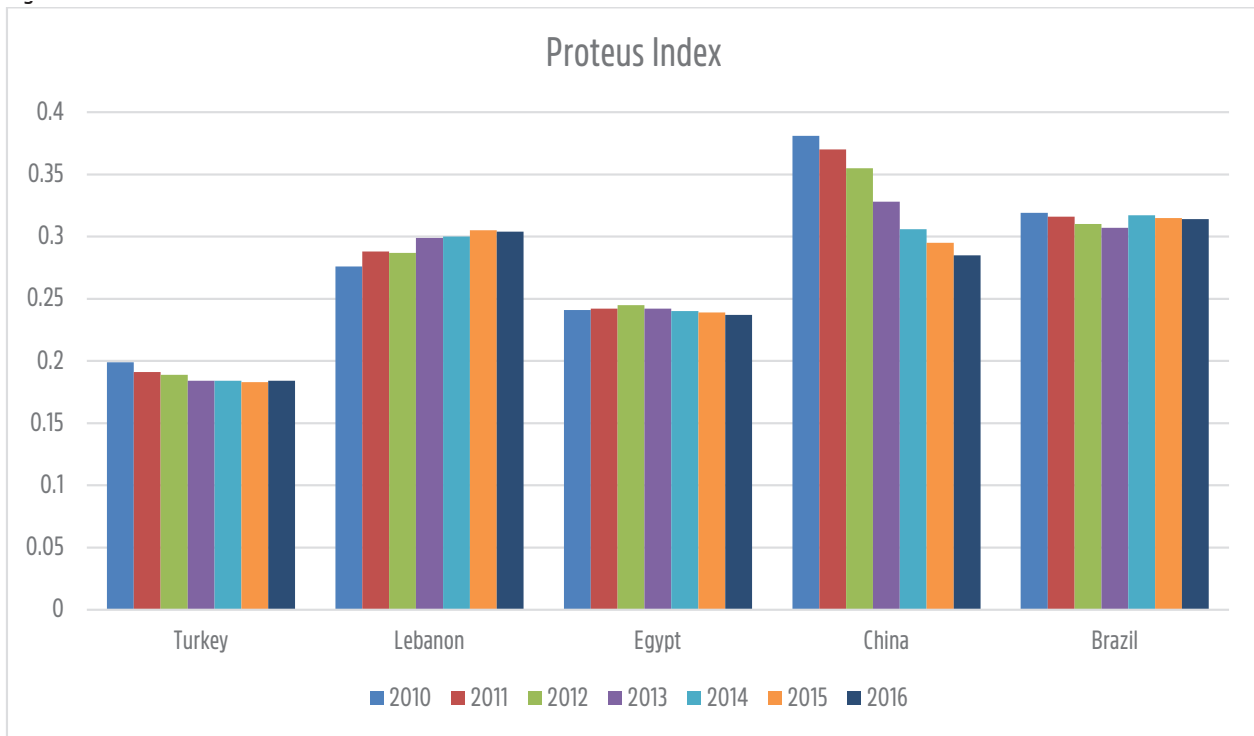
FIGURE 33: FOOD PRICE INFLATION - CHINA

Source: Trading Economics



FIGURE 34

Source: World Food Programme



PART 3: HOW COMPREHENSIVELY DO IHL AND IHRL COVER CONFLICT-INDUCED ENVIRONMENTAL DAMAGE LEADING TO FOOD INSECURITY? WHAT LEGAL APPROACHES COULD BE INVOKED TO CLOSE SUCH LACUNAE?

The food insecurity impacts caused by armed conflict create implications under both the rules of war during armed conflict (IHL) and IHRL. For each, different challenges and lacunae can be identified.

IHL

During an armed conflict, IHL obligates parties to protect the environment.⁵² Articles 35(3) and 55 of Additional Protocol I to the Geneva Conventions provide that the conditions of “widespread, long-term and severe damage to the natural environment” is prohibited.⁵³ Jointly held, the threshold of these conditions remains onerous and unclear. Given that the definition of civilian objects is framed in the negative,⁵⁴ elements of the environment are civilian objectives, insofar as they do not constitute military objectives. Provided they do not qualify as military objectives,⁵⁵ belligerents cannot make environmental assets a deliberate target of attacks. Should parts of the environment be regarded as military objectives (as a result of which they may be targeted), IHL prohibits

attacks that may expectedly cause incidental damage to the environment that is excessive when compared to the anticipated military advantage to be gained from the attack.⁵⁶ Additionally, IHL prohibits belligerents “to attack, destroy, remove or render useless objects indispensable to the survival of the civilian population”.⁵⁷ This includes objects that may form part of the environment.⁵⁸

Separately, and irrespective of whether it is done by way of acts that impact the environment, starvation of civilians as a method of warfare is prohibited under the 1977 protocols to the Geneva Conventions as well as in customary international law.⁵⁹ A challenge related to starvation, albeit not necessarily involving the environment, is that wartime events often result in food scarcity and IHL allows for certain restrictions to the flow of humanitarian aid. In addition, as demonstrated in the Ukraine conflict, sieges (while foreseen under IHL) can be undertaken in a manner that manifests in civilian starvation. If the starvation is incidental to an otherwise lawful siege, the harm caused to civilians may, arguably, not be disproportionate. Deliberately causing starvation of civilians is a violation of IHL, but the means to counter such violations are limited. When done through criminal law, domestic courts may not be in a position to act and international courts must first have jurisdiction over the

events. Even if an international court has jurisdiction over the alleged conduct, it is very difficult to meet the burden of proof in such cases. Moreover, current international law and jurisprudence is not sufficiently developed to reliably predict how cases of deliberately caused severe environmental damage and acts which result in starvation may be adjudicated.

A second challenge relates to direct attacks on the environment. Elements of the environment may become military objectives themselves, thereby losing protection as civilian objects. In addition, even though the environment as such is a civilian object, militaries tend to not consider areas that are not built-up or non-valuable as ‘civilian objects’. Indeed, militaries may use the natural environment for targeting practice or to jettison excess payloads. Attacks that accidentally strike the environment are not seen as contrary to IHL, and in case a strike must be aborted — because it becomes known the intended target is not in fact a military objective, or the attack would cause collateral damage to civilians or civilian structures — a missile in mid-air may be re-directed towards an open area; an area that is part of the environment. However, the concept of ‘natural environment’ in IHL should be understood in the widest sense.⁶⁰

Damage to elements of the natural environment is damage to a civilian object that must be considered in proportionality assessments. Such damage to the natural environment need not cause harm to civilians or other civilian objects. Damage to elements of the natural environment may already render an attack unlawful.⁶¹ In addition, any harm to civilians and other civilian objects that will be caused by expected damage to the environment must, to the extent it is foreseeable, be taken into account for the proportionality assessment. Although Article 8(2)(b)(iv) of the Rome Statute appears to suggest that only expected environmental damage that is “widespread, long-term and severe damage” ought to be taken into account, that is merely for the purposes of the International Criminal Court (ICC) war crime and must not be seen as the standard under IHL.

An overarching challenge to the application of IHL to conflict-induced food insecurity lies in its scope of application. IHL applies, in principle, to the territory of the parties to the conflict, occupied territory, and those in the power of a party to the conflict. The rules governing

attacks apply wherever an attack takes place, also at the high seas or in third countries. The abovementioned rules related to targeting and means and methods of warfare, also known as rules on the conduct of hostilities, protect persons who are not (yet) in the hands of the party to the armed conflict that is conducting the relevant military action. This is generally understood to be the civilian population directly affected by the military operation. Other rules of IHL, such as those laid down in the four Geneva Conventions of 1949, aim to protect the civilians, protected objects, and combatants hors de combat of the warring states, or, in case of a non-international armed conflict, those not taking a direct part in hostilities.

Under IHL, the ‘civilian population’ does not refer to all civilians of the world, but rather the civilian populations of the warring states, or the civilian population of a state where a non-international armed conflict takes place. Generally, populations and the environment in third countries not involved in the conflict fall outside the scope of IHL protection, including when any suffering in such countries results from food insecurity arising out of the situation in the conflict state(s). The environment transcends state boundaries and is protected as such, but — as noted above — the threshold is set extremely high.

It is thus a question whether IHL actually regulates many of the situations considered in this paper. Yet, the Russia-Ukraine war has shown that military operations may also have severe impacts on food security of civilian populations that are far removed from the conflict, such as those dependent on grain produced in Ukraine. Notwithstanding the aforementioned limitations to IHL’s scope of application, the law allows for an expansive reading of the concept of ‘civilian’ and ‘civilian object’ in relation to the proportionality rule. If an impact on the population of a third state that would result in loss of civilian life due to famine ‘may be expected’⁶² — in other words, is reasonably foreseeable — there is no reason why this should not be taken into account in the proportionality assessment.

In recent years, arguments have been posed, including by the International Committee of the Red Cross, that the indirect effects or ‘knock-on-effects’ on civilians must be considered when planning or deciding on attacks. Following this approach, the consequences of attacks carried out as part of a conflict between states A and B on

the food security of civilian population elsewhere, such as strikes at a harbour that qualifies as a military objective but is also essential for grain shipments to third countries, ought to be taken into account when they are foreseeable.

Further difficulties are encountered when ascertaining responsibility, both individual criminal and state responsibility, for incidental environmental damage as a result of a military operation, particularly with respect to longer-term harm. Since such collateral damage can only be measured relatively, and must be “expected”, the assessment must be performed prior to the damage actually arising (i.e., *ex ante*).⁶³ A key challenge therefore lies in the varied and interwoven causes and consequences of environmental damage, which make causality difficult to establish. Thus, while attacks that cause widespread, long-term and severe environmental damage could be tried as a war crime,⁶⁴ the ICC’s adoption of the wording of Article 35 and 55 of Additional Protocol I appears to set the threshold for culpability extremely high. Moreover, scantily deliberated questions around proportionality and lack of universally agreed upon definitions can pose challenges to actors in (international) criminal justice.

Notwithstanding these challenges to enforce violations of IHL involving the environment, customary law is clear that a “[l]ack of scientific certainty as to the effects on the environment of certain military operations does not absolve a party to the conflict from taking[...]precautions”.⁶⁵ Indeed, the principle of precautions in attack is one of the well-entrenched principles of IHL underpinning this body of laws. Arguably, the Security Council (SC) could position itself to take more concrete action in response to alleged violations of the principles of precaution, proportionality and effectiveness, and underscore the customary nature of these principles and the need for accountability.

The law in its current form is therefore unable to address the spillover effects of conflict-induced food security as this affects third states and their civilian populations, unless it would be clearly foreseeable from an attack.⁶⁶ The Security Council could, however, draw attention to the importance of states to ensure respect for the Geneva Conventions. Common Article 1 of the Geneva Conventions is understood to have no temporal or geographical boundaries in that states must do whatever is reasonably in their power to ensure respect for IHL and prevent IHL violations. As evinced by concern over the

conflict-induced environmental degradation and damage in Iraq, history has shown that when the international community demonstrates solidarity and political will to act, progress can be made.⁶⁷

IHRL

IHRL applies during both peacetime and armed conflicts, thus offering a broader temporal scope for protections and arguably a potential to complement IHL where it falls short on addressing the transboundary impacts of conflict-induced environmental damage. International human rights treaties and soft law provide for the right to life, the right to (clean) water, and the right to (adequate) food, among many other substantive rights, creating a pathway to enforce extraterritorial obligations where the enforcement of IHL rules is unlikely to occur.⁶⁸ Although human rights may be derogated from in times of armed conflict, such derogation by a government can only be done to one’s own territory.⁶⁹ The adoption of the Framework Principles on Human Rights and the Environment and the recognition of the Human Right to a Safe, Clean, Healthy and Sustainable Environment by the Human Rights Council (HRC) and General Assembly, reflect increasing efforts to safeguard the environment in line with human rights obligations.⁷⁰ IHRL is also strengthened by regional and national legislation and practices where resort to remedy at a regional human rights organ is possible.

In relation to food security, IHRL presently suffers from underdeveloped jurisprudence, and systemic contradictions within the international system curtail its practical application.⁷¹ Additionally, enforcement mechanisms remain scant. Internationally-sanctioned investigations such as the 2009 United Nations Fact Finding Mission on the Gaza Conflict, however, in concert with growing interest in the protection of the environment and climate, may prove to be persuasive.⁷² The increasing number of cases before national and regional courts that address environmental issues at the intersections of IHRL and international environmental law (‘IEL’) is also encouraging.⁷³

As with IHL, the application of IHRL in relation to environmental protection and damage remains challenging, with similar difficulties in terms of territorial scope and challenges of establishing causality and requiring proof of direct or indirect harm.⁷⁴ In terms of state responsibility for human rights violations, a

state must exercise jurisdiction over the persons whose rights are affected. In other words, these persons must be in its territory or otherwise under its control. In the case of transboundary effects of armed conflicts, resulting in food insecurity of persons in third states, the persons whose right to food is impacted are likely to be outside the jurisdiction of the state whose military operations caused the impact. Further, where the safeguarding of rights and access to an effective remedy rest with national authorities, implementation in a situation of non-international armed conflict is problematic if the authorities are not in control of (large) parts of the territory. Moreover, it may in fact be the conduct by armed groups that encroaches on the human rights in question, and at present it is not settled whether such entities can be held responsible for human rights abuses.

Insofar as the transboundary effects of conflict-induced environmental damage and food insecurity is concerned, IHRL needs to evolve to address the extraterritorial impact of human rights obligations and at the intersections of IHRL and IEL. This is significant given the (i) high level of food systems' interdependence in a globalized economy; (ii) high dependence of developing states on developed states for adequate food supplies; and (iii) dominance of a handful of transnational corporations. With respect to the latter, legal action may be taken against enterprises in the states where they have their headquarters to ensure compliance with human rights in their operations abroad. Governments are also responsible for complying with international law's 'no harm' principle.⁷⁵ Although situations of disaster or crisis may amount to force majeure, thereby limiting state responsibility for a wrongful act, they do not mitigate the aforementioned obligations. The Security Council can direct efforts to underscore duties and obligations deriving from international case law and instruments — such as the International Covenant on Civil and Political Rights (ICCPR), the International Covenant on Economic, Social and Cultural Rights (ICESCR) and the Maastricht Principles — that in addition to providing for the right to food also provide for the right to non-discrimination extraterritorially, if the required level of control exists for jurisdiction to arise.⁷⁶ Consistently highlighting and demonstrating the close connection between IHRL and IEL can also contribute to norm building — emphasis on the Rio Declaration (1992) and the Stockholm Declaration (1972), for instance.⁷⁷ Drawing attention to and supporting efforts such as the

International Law Commission (ILC)'s Draft Principles on Protection of the Environment in Relation to Armed Conflicts (2022) ('PERAC') will further contribute to norm-building, and guide behavior during armed conflict.

An IHRL approach to the issue would reinforce the state (or de jure/de facto authorities) as the duty-bearer of human rights obligations; taking steps to not only protect its people's right to life, healthy environment, and adequate food, but also to prevent violations. Unlike under the IHL regime, the onus here lies not only with the offending one, but the affected state is still required to adopt diplomatic, judicial, political or administrative measures to ensure respect for human rights; at least, to the extent the affected state is in control of the relevant part of its territory.⁷⁸ Successive Special Rapporteurs on the right to food have emphasized that an important facet to ensuring this right lies in its justiciability. Avenues for accountability and remedial justice need to be made more accessible.⁷⁹ The UN Compensation Commission established following the Iraq-Kuwait war in 1990 is an excellent, albeit standalone, example. The transboundary impact of the war on the environment was acknowledged through the possibility of corporations and international organizations submitting claims for damages. Remedial claims for individuals, however, were limited to those forced to leave Kuwait or Iraq as a result of invasion.⁸⁰ While still territorially limited, the establishment of other tribunals of this nature would contribute to deterrence and may provide a form of justice for victims.

CLOSING THE GAP

In terms of accountability for the transboundary impacts of conflict-induced environmental damage leading to food insecurity, the main challenges in IHRL and IHL concern their scope of application and the limited enforcement mechanisms. The rights contained in the ICESCR such as the right to food are often viewed as 'programmatic' rights, as opposed to the 'enforceable' civil and political rights contained in the ICCPR.⁸¹ The inability to bring action under IHL and IHRL may require regional and/or domestic procedures, or reliance on general international law.⁸² States, for example, can adopt regional and domestic legislation that criminalizes environmental damage. More inclusive interpretation of the prohibition of inhuman and degrading treatment or punishment as enshrined in IHL and IHRL⁸³ may also provide an avenue for accountability, particularly for highly vulnerable populations, e.g. those

entirely reliant on state assistance.⁸⁴ Greater support for efforts towards socio-economic rights and environmental protection, and accountability through the work of international organs and reparations can also serve to address the problem.

At the international level, inclusion of the crime of ecocide into the Rome Statute is considered. On the domestic level, the crime of ecocide already exists. The broad wording of the Ukrainian provision to encompass “actions that may cause an environmental disaster” arguably cover armed conflict situations where environmental damage leads to transboundary food insecurity.⁸⁵ Moreover, while the number of states that have criminalized serious environmental crimes is small,⁸⁶ the list is growing. On 22 February 2024, Belgium incorporated the crime of ecocide in its domestic criminal code.⁸⁷ France recently passed the Climate & Resilience Act (2021) where, in addition to criminalizing serious environmental damage, legislative efforts towards recognition of ecocide at the international criminal level are also in place.⁸⁸ Support for instruments such as the 1998 Council of Europe Convention on the Protection of the Environment through Criminal Law may also promote more balanced accountability.

Compensation schemes and reparation mechanisms through neutral entities can also provide a remedy for violations to the environment as well as the right to food. In this regard, conventional and customary international law can provide the relevant avenues.⁸⁹ States should be encouraged to incorporate the work of the International Law Commission on state responsibility, protection of the environment during armed conflict, and prevention of transboundary harm from hazardous activities.⁹⁰

It is equally important to recognize that the rights contained in these bodies of law are interdependent. Access to one right rarely, if at all, exists in isolation. The ability for populations to enjoy a healthy, sustainable, environment cannot be achieved without access to adequate food, and vice-versa. Just as the globalized food system has shown, interconnected and interwoven issues require interconnected and interwoven solutions; and interpretation and application of the law is no different.

PART 4. WHAT STEPS COULD BE TAKEN TO BETTER APPLY IHL AND IHRL AS RESPONSES TO ENVIRONMENTAL RIGHTS VIOLATIONS THAT CAUSE FOOD INSECURITY, PARTICULARLY AT THE SECURITY COUNCIL AND HUMAN RIGHTS COUNCIL?

The case studies demonstrate that armed conflict can have devastating and widespread impacts on populations far removed from the immediate theater of combat. They also demonstrate the deep interconnectedness of the global food system, and its relational performance to other sectors such as energy and finance. This interconnectedness suggests that addressing environmental rights violations causing food insecurity requires an integrated approach. While some argue that current international law requires amendment,⁹¹ intermediate steps can be taken to give greater effect to current laws. Promoting inclusive narratives that address the intersections of armed conflict, environmental protection and human rights; building and strengthening anticipatory action; and deepening community resilience are some of the measures multilateral forums such as the Security and Human Rights Council can take.

SHIFTING THE NARRATIVE: THE NEED FOR INTEGRATIVE APPROACHES SC

The discourse around armed conflict, the environment, and human rights tends to be segregated into two dominant narratives: (i) the connection between the natural environment and human rights; and (ii) the impact of armed conflicts on the environment.⁹² Food security is often relegated to sub-topic within these themes. Moreover, there is insufficient engagement around the conflict-environment-food security nexus. Even where food security is the main subject of discussion, its connection to the protection of substantive rights such as the right to food and the right to a safe, clean, healthy and sustainable environment within the context of armed conflict, is often lacking.

The linkages between food insecurity and conflict have, however, been increasingly acknowledged at the multilateral level. Successive UN Special Rapporteurs on the Right to Food have underlined the need to better protect food stocks, nutrition and food production systems during armed conflicts.⁹³ In March 2023, Michael Fakhri presented a report on conflict and the right to food to the 52nd session of the UN Human Rights Council, where he

highlighted the relationships of dependence within the global food system, as well as the ways in which armed conflict can violate the right to food. He argued that the current legal regime insufficiently addresses the harm caused to the environment leading to long-term food insecurity, particularly as an effect beyond the theater of combat.⁹⁴ In stressing that accountability for food-related war crimes “should not preclude addressing pressing structural reasons leading to widespread severe violations of the right to food in conflict regions and beyond”, the Special Rapporteur acknowledged the transboundary impact of conflict-induced environmental damage leading to food insecurity.

The Security Council has likewise acknowledged the link between armed conflict and hunger, and its impacts for global peace and security. Resolution 2417 (2018) drew attention to conflict-induced food insecurity and the threat of famine, while resolution 2573 (2021) underscored the need to protect civilian objects indispensable to food production and food systems during armed conflicts. These efforts led to an increasing recognition of the effects of armed conflict on food security, together with the pressing need for more consistent and disaggregated reporting.⁹⁵ Since then, engagement on the topic at the Security Council level has increased. For instance, in April 2022, Ireland convened an Arria-Formula meeting on conflict and hunger in which it highlighted the transboundary impact of armed conflict on food insecurity.⁹⁶ Open debates at the Security Council level were also convened, including in March 2021, May 2022 and August 2023. These efforts have resulted in further commitments, such as the Road Map for Global Food Security Call to Action (May 2022), which has been endorsed by over a hundred Member States. Additionally, for the first time, the Secretary-General in his report on the protection of civilians in armed conflict to the Security Council, included a detailed section on the impact of armed conflict on food security.⁹⁷

The 2015 Sustainable Development Goals (SDG) include eliminating hunger, ensuring healthy lives, and the protection of the environment, among 14 other goals.⁹⁸ While substantial progress has been made in the areas of environmental protection and food security, the SDGs and contingent rights rarely feature in security discourse. Likewise, a general reluctance to ‘securitize’ environmental work prevents a proper integration of the study of peace, conflict and sustainable development:

“[S]ustainable development must address conflict and promote peace” to be effective.⁹⁹

While the UN Environment Assembly has recognized the impacts of conflict pollution, the work of agencies such as the UN Environment Programme needs to be better integrated in discussions and operations at the HRC and SC levels. Again, approaches that perpetuate false silos undermine transboundary solutions to transboundary problems. To this end, authoritative multilateral forums such as the HRC and SC should not only adopt more integrative discussions and mechanisms, but also dedicate resources to better data-gathering, and studies in the field of environmental peacebuilding. The complexity of the conflict-environment-food security nexus requires innovative approaches to contribute to assessments and datasets that can in turn aid accountability efforts.¹⁰⁰ Such work also adopts an intersectional lens that provides more accurate information on the impact of armed conflict, environmental damage, and food insecurity on different groups of people. Present difficulties in accessing accurate, up-to-date, and disaggregated data underscore this need.

DEVELOPMENT AND HUMANITARIAN ACTORS

The multifaceted relationship between food security and conflict also has implications for humanitarian response and development actors. Given the linkages between war-induced environmental damage, food insecurity and conflict recidivism, it is imperative that such assets are prioritized in programming during the immediate aftermath of conflict. Likewise, conflict in one part of the world should act as an early warning signal that food insecurity, hunger and malnutrition could worsen in countries that are food import reliant.

Further, the ability of humanitarian actors to access on-the-ground communities and sites offers the opportunity for developing more capable early warning systems. In line with the ILC’s PERAC, the capacity to access local information and to feed such information to relevant networks can translate into anticipatory actions aimed at cushioning potential impacts of armed conflicts.¹⁰¹ Information- and data-sharing during armed conflict as well as in the post-conflict phase are equally crucial. The adoption of interdisciplinary and intersectional research and data will enable more accurate needs and impact assessments in this regard.¹⁰²

Donors should prioritize grants instead of loans where environmental or climate-financing is concerned. Such grants should not only incorporate a conflict-sensitive and gender-sensitive approach, but should also not be territorially limited in recognizing the transboundary impact of armed conflict, environmental impact and food insecurity.¹⁰³

In summary, efforts need to shift to reflect a transboundary mindset. Normative approaches that are territorially and geographically limited are outdated vis-à-vis a highly globalized and complex food system. This applies not only to interpretations and applications of the law, but also to scholarship and programming. Accessible, accurate, up-to-date and disaggregated data that transcends country-specific case studies is scant, but extremely significant in addressing the needs, impact and root causes of conflict-induced food insecurity. Resources must be channeled to such efforts, integrating understandings of peace, conflict and sustainable development.

END NOTES

- 1 Former Special Rapporteur on the Right to Food, Jean Ziegler, has raised the issue of 'profound internal contradictions in the United Nations system', pointing to the application of neoliberal policies that undermine the interests of developing states and its people. See Report by the Special Rapporteur on the right to food, Mr. Jean Ziegler, 10 January 2002, E/CN.4/2002/58.
- 2 <https://www.visionofhumanity.org/maps/ecological-threat-report/#/> See generally, W Zartman, 'Need, Creed and Greed in Intrastate Conflict' in C Arnson and W Zartman (eds), *Rethinking the economics of war: the intersection of need, creed and greed* (2005); J Weinstein, 'Resources and the Information Problem in Rebel Recruitment' *Journal of Conflict Research*, 49 August (2005), 598-624; P Collier and A Hoeffler, *On Economic Causes of Civil War* Oxford Economic Papers (1998); P Collier and A Hoeffler, 'Greed and Grievance in Civil War' *Oxford Economic Papers* 56 (2004); P Regan and D Norton, 'Greed, Grievance, and Mobilization in Civil Wars' *Journal of Conflict Resolution*, 49(3) (2005), 319-336.
- 3 Report of the UN High Commissioner for Human Rights, on Early warning and economic, social and cultural rights, UN Doc. E/2016/58, 13 May 2016, <http://undocs.org/E/2016/58>.
- 4 Report of the UN Special Rapporteur on the fight to food, Hilal Elver, on integrating a gender perspective in the right to food, UN Doc. A/HRC/31/51, 14 December 2015, <http://undocs.org/A/HRC/31/51>.
- 5 Classification according to the World Bank has been adopted here. See Nada Hamadeh et al, 'New World Bank country classifications by income level: 2022-2023,' 1 July 2022, <https://blogs.worldbank.org/opendata/new-world-bank-country-classifications-income-level-2022-2023>.
- 6 FAO, *Ukraine*, <https://www.fao.org/countryprofiles/index/en/?iso3=ukr>.
- 7 Pekka Sutela, 'The Underachiever: Ukraine's Economy Since 1991,' *Carnegie Endowment for International Peace*, 9 March 2012, <https://carnegieendowment.org/2012/03/09/underachiever-ukraine-s-economy-since-1991-pub-47451>.
- 8 Gilles Dryancour, 'Rebuilding Ukraine's Agriculture after the Full-Scale War: A Humanitarian and Economic Imperative,' *CEMA European Agricultural Machinery Industry Association*, Policy paper, August 2023, https://www.cema-agri.org/images/publications/position-papers/CEMA-Rebuilding_Ukraines_Agriculture_after_the_War-Policy_Paper-2023-08.pdf, p. 4.
- 9 Peter Dickinson, 'How Ukraine's Orange Revolution shaped twenty-first century geopolitics,' *Atlantic Council*, 22 November 2020, <https://www.atlanticcouncil.org/blogs/ukrainealert/how-ukraines-orange-revolution-shaped-twenty-first-century-geopolitics/>; Jeffrey Mankoff, 'Russia's War in Ukraine: Identity, History, and Conflict,' *Center for Strategic and International Studies*, 22 April 2022, <https://www.csis.org/analysis/russias-war-ukraine-identity-history-and-conflict>.
- 10 "Feb 24, 2022: The day Russia invaded Ukraine," *The Straits Times*, 24 February 2023, <https://www.straitstimes.com/world/europe/feb-24-2022-the-day-russia-invaded-ukraine>.
- 11 Dmytro Boyarchuk and Marek Dabrowski, 'The Ukrainian War Economy,' Working Paper, Issue 12, *Bruegel*, 11 July 2023, https://www.bruegel.org/sites/default/files/2023-07/WP%2012_0.pdf; Caitlin Welsh et al, 'From the Ground Up: Demining Farmland and Improving Access to Fertilizer to Restore Ukraine's Agricultural Production,' *Center for Strategic and International Studies*, December 2023, p. 3.
- 12 Kyiv School of Economics, *Agricultural War Damages, Losses, and Needs Review*, Issue No. 3, 24 April 2023, <https://kse.ua/wp-content/uploads/2023/05/RDNA2.pdf>.
- 13 International Trade Administration, 'Ukraine - Country Commercial Guide', 1 November 2023, <https://www.trade.gov/country-commercial-guides/ukraine-agribusiness>; European Council, Council of the European Union, 'Infographic - Ukrainian grain exports explained,' <https://www.consilium.europa.eu/en/infographics/ukrainian-grain-exports-explained/>.
- 14 Statista, 'Export value of agricultural products from Ukraine from 2017 to 2022,' 7 August 2023, <https://www.statista.com/statistics/1403371/ukraine-agricultural-exports/>; Interfax, 'Ukraine increases agricultural exports 7% in 2023 - Ministry of Agrarian Policy and Food,' 27 December 2023, <https://interfax.com/newsroom/top-stories/98032/>.
- 15 2022 data reflects import values for wheat and meslin. The same data was unavailable for Nigeria in 2022. However, reports show that Nigerian import of Ukrainian wheat also declined in 2022. See United States Department of Agriculture, Foreign Agricultural Service, Grain and Feed Update: Nigeria, Report No. NI2022-0008, 24 October 2022, https://apps.fas.usda.gov/newgainapi/api/Report/DownloadReportByFileName?fileName=Grain%20and%20Feed%20Update_Lagos_Nigeria_NI2022-0008.pdf.
- 16 Prices from November 2022 onwards were obtained from Statistica that reflected Egypt's national average retail price of wheat (flour) across urban areas.
- 17 NPR, 'Russia-Ukraine war: What happened today (March 7),' 7 March 2022, <https://www.npr.org/2022/03/07/1084889071/russia-ukraine-war-what-happened-today-march-7>; Manu Raju, 'US House and Senate lawmakers have a deal on outline of bill to punish Russia,' *CNN*, 7 March 2022, <https://edition.cnn.com/europe/live-news/ukraine-russia-putin-news-03-07-22/index.html?tab=Sanctions>.
- 18 Iulia-Sabina Joja, 'Disease, destruction, flooded fields, and hunger: The far-reaching consequence of the Kakhovka dam collapse in Ukraine,' Middle East Institute, 19 June 2023, <https://www.mei.edu/publications/disease-destruction-flooded-fields-and-hunger-far-reaching-consequence-kakhovka-dam>.
- 19 Karin Jacobs, 'Russia's war on Ukraine: Maritime logistics and connectivity,' European Parliamentary Research Service, PE 733.603, July 2022, [https://www.europarl.europa.eu/RegData/etudes/ATAG/2022/733603/EPRS_ATA\(2022\)733603_EN.pdf](https://www.europarl.europa.eu/RegData/etudes/ATAG/2022/733603/EPRS_ATA(2022)733603_EN.pdf); Kaamil Ahmed et al, 'The Black Sea blockade: mapping the impact of war in Ukraine on the world's food supply - interactive,' *The Guardian*, 9 June 2022, <https://www.theguardian.com/global-development/ng-interactive/2022/jun/09/the-black-sea-blockade-mapping-the-impact-of-war-in-ukraine-on-the-worlds-food-supply-interactive>.
- 20 European Council, Council of the European Union, 'Infographic - How the Russian invasion of Ukraine has further aggravated the global food crisis,' <https://www.consilium.europa.eu/en/infographics/how-the-russian-invasion-of-ukraine-has-further-aggravated-the-global-food-crisis/>.
- 21 May Gadallah and Nesma Mamdouh, 'The Socioeconomic Impact of the Russia-Ukraine Crisis on Vulnerable Families and Children in Egypt: Mitigating Food Security and Nutrition Concerns,' Economic Research Forum Policy Research Report, No. 46, June 2023.
- 22 FAOSTAT indicates that prevalence of severe food insecurity for 2019-2021 and 2020-2022 in Indonesia remained below 0.5 percent. This is reflected as 0.5 in Figure 11.
- 23 FAO, Myanmar, <https://www.fao.org/countryprofiles/index/en/?iso3=MMR>.
- 24 Sergiy Zorya, 'Unleashing Myanmar's agricultural potential,' *World Bank Blogs*, 27 May 2016, <https://blogs.worldbank.org/eastasiapacific/unleashing-myanmar-agricultural-potential>.
- 25 Chanyaporn Chanjaroen, 'Myanmar Seeks to Restore Status Among Top Rice Exporters,' *Bloomberg*, 29 October 2012, <https://www.bloomberg.com/news/articles/2012-10-28/myanmar-seeks-to-regain-top-spot-in-rice-exports-southeast-asia>.
- 26 The World Bank, 'The World Bank in Myanmar,' <https://www.worldbank.org/en/country/myanmar/overview>.
- 27 Nehnginpaio Kipgen, 'The 2020 Myanmar Election and the 2021 Coup: Deepening Democracy or Widening Division?' 52(1) *Asian Affairs* (2021), pp. 1-17.
- 28 <https://oec.world/en/profile/country/mmr?yearSelector1=2020>. Belgium imported more rice from Myanmar than Madagascar in 2020. However, as a developed/high income country, it has been excluded here.
- 29 International Food Policy Research Institute Myanmar, Conflict and agricultural productivity: Evidence from Myanmar, Strategy Support Program, Working Paper No. 30 (February 2023).
- 30 Bart Minten et al, 'Agricultural value chains in a fragile state: The case of rice in Myanmar,' 167 *World Development* (July 2023).
- 31 Data for 2022 was derived from the International Trade Center Trade Map, <https://www.trademap.org>; no comprehensive data was found for Madagascar (2021) and Senegal (2022).
- 32 FAOSTAT does not offer statistics for China in this category for the relevant years.
- 33 Anis Zalani, 'Malaysia at risk of short-term food insecurity,' *The Malaysian Reserve*, 22 August 2023, <https://themalaysianreserve.com/2023/08/22/malaysia-at-risk-of-short-term-food-insecurity/>; Xinshen Diao et al, 'Senegal: Impacts of the Ukraine and global crises on poverty and food security,' Country Brief No. 8, International Food Policy Research Institute, <https://ebrary.ifpri.org/utils/getfile/collection/p15738coll2/id/135950/fileName/136161.pdf>.
- 34 FAOSTAT does not offer statistics for China in this category for the relevant years.
- 35 Data for China are listed as <2.5 but re reflected as 2.5 here.

- 36 Carnegie Endowment for International Peace, "Food Insecurity in War-Torn Syria: From Decades of Self-Sufficiency to Food Dependence," 4 June 2015, <https://carnegieendowment.org/2015/06/04/food-insecurity-in-war-torn-syria-from-decades-of-self-sufficiency-to-food-dependence-pub-60320>; Jalal Al-Attar, "Syria's Agricultural Crisis," Carnegie Endowment for International Peace, 2 January 2024, <https://carnegieendowment.org/sada/91286>.
- 37 Al-Attar, "Syria's Agricultural Crisis".
- 38 The World Bank, "The World Bank in Syrian Arab Republic," <https://www.worldbank.org/en/country/syria/overview>.
- 39 Food and Agriculture Organization of the United Nations, *Counting the cost: Agriculture in Syria after six years of crisis* (FAO, 2017); Argus, "Syria oil sector losses top \$100bn since start of war," 6 February 2022, <https://www.argusmedia.com/en/news/2299198-syria-oil-sector-losses-top-100bn-since-start-of-war>.
- 40 Fuad Alhaj Omar, Ibrahim Mahmoud, and Karla G. Cedano, "Energy poverty in the face of armed conflict: The challenge of appropriate assessment in wartime Syria," 95 *Energy Research & Social Science* (January, 2023); Roger Diwan and Daniel Yergin, "Opinion: Why Syria's Oil Matters," *NPR*, 31 October 2019, <https://www.npr.org/2019/10/31/775142854/opinion-syria-s-oil-production-is-low-but-here-s-why-it-matters>.
- 41 Spencer Zifcak, 'The Responsibility to Protect after Lybia and Syria' (2012) 13 *Melbourne Journal of International Law* 59, p.73
- 42 Sergio Peçanha, Sarah Almkhtar and K.K. Rebecca Lai, "Untangling the Overlapping Conflicts in the Syrian War" *The New York Times*, 18 October 2015 <http://www.nytimes.com/interactive/2015/10/16/world/middleeast/untangling-the-overlapping-conflicts-in-the-syrian-war.html>.
- 43 Rule of Law in Armed Conflicts, "Syria," <https://www.rulac.org/browse/countries/syria#collapse1accord>.
- 44 Observatory of Economic Complexity, Syria, <https://oec.world/en/profile/country/syr?yearSelector1=2010&depthSelector1=HS4Depth>.
- 45 Country development classification according to the UN https://www.un.org/en/development/desa/policy/wesp/wesp_current/2014wesp_country_classification.pdf ; C <https://wits.worldbank.org/CountryProfile/en/Country/SYR/Year/2010/TradeFlow/Export/Partner/by-country/Product/Fuels>
- 46 Comprehensive, open-source, data post-2010 are unavailable
- 47 Hadi Fathallah, "Syria and Regional Food Security," Carnegie Endowment for International Peace, 5 February 2019, <https://carnegieendowment.org/sada/78286>.
- 48 The New Humanitarian, "Syria and the regional food chain," 18 October 2012, <https://www.thenewhumanitarian.org/analysis/2012/10/18/syria-and-regional-food-chain>.
- 49 See, for e.g., Mark Zingbagba, Rubens Nunes, Muriel Fadaïro, "The impact of diesel price on upstream and downstream food prices: Evidence from São Paulo," *Energy Economics* 85 (2020); Jing Yi et al, "Post-farmgate food value chains make up most of consumer food expenditures globally," *Nature Food* 2 (2021), pp. 417-425.
- 50 The PROTEUS Index is a measurement of food security by the World Food Programme ranging from 0 and 1. The closer the value is to zero, the greater the food security. See <https://dataviz.vam.wfp.org/version2/reports/global-coverage-proteus-food-security-index-oct-2019>.
- 51 FAOSTAT does not offer data for China.
- 52 See Articles 35 and 55 of Additional Protocol I of the Geneva Conventions; Customary international law as articulated in Rules 44 and 45, Jean-Marie Henckaerts and Louis Doswald-Beck, *Customary International Humanitarian Law* (ICRC and Cambridge University Press: Cambridge, 1995).
- 53 Emphasis added.
- 54 Article 52 of Additional Protocol I states that "[c]ivilian objects shall not be the object of attack or of reprisals. Civilian objects are all objects which are not military objectives". This definition is also reflected in Rule 9 of the ICRC's Customary IHL Study.
- 55 Military objectives are "those objects which by their nature, location, purpose or use make an effective contribution to military action and whose total or partial destruction, capture or neutralization, in the circumstances ruling at the time, offers a definite military advantage". Article 52(2) of Additional Protocol I. This definition is considered to reflect customary IHL: see Rule 8 of the ICRC's Customary IHL Study.
- 56 Article 51(5)(b) of Additional Protocol I; Rule 14 of the Customary IHL Study. For international armed conflicts, violation of the proportionality rule is incorporated as a war crime in the statute of the ICC: Article 8(2)(b)(iv) of the Rome Statute.
- 57 Article 54(2) of Additional Protocol I; Rule 54 of the ICRC's Customary IHL Study.
- 58 ICRC Commentary to the Additional Protocols (1987), para. 2126.
- 59 Article 54 of Additional Protocol I; Article 14 of Additional Protocol II; Rule 53 of the Customary IHL Study. See also Rules 54-56. In addition to food, the legal definition of starvation also includes deprivation of water, shelter and medical care. The Rome Statute of the International Criminal Court criminalises such acts as a war crime. Article 8(2)(b)(xxv) of Rome Statute. A 2019 amendment expanded this doctrine to cover non-international armed conflicts (that is, conflicts between states and organized armed groups, or between organized armed groups) for those State Parties that ratified the amendment adding Article 8(2)(e)(ix).
- 60 ICRC Commentary to the Additional Protocols (1987), para. 2126.
- 61 Chatham House report, 'Proportionality in the Conduct of Hostilities: The Incidental Harm Side of the Assessment' (2018), para. 136.
- 62 See the language of the proportionality rule: Article 51(5)(b) of Additional Protocol I.
- 63 See the text of Article 51(5)(b) of Additional Protocol I.
- 64 At the ICC, this is only possible in the context of international armed conflicts, as there is no non-international armed conflict provision equivalent to Article 8(2)(b)(iv) of the Rome Statute.
- 65 See the commentary to Rule 44 in Jean-Marie Henckaerts and Louis Doswald-Beck, *Customary International Humanitarian Law* (ICRC and Cambridge University Press: Cambridge, 2005)
- 66 While there are those that support a more expansive interpretation of IHL's territorial applicability, the requisite nexus of an armed conflict and the legal, and practical, application of a 'global battlefield' make the possibility of IHL addressing such transboundary spillover effects unlikely. ICRC, "International Humanitarian Law and the Challenges of Contemporary Armed Conflicts," Report, 32nd International Conference of the Red Cross and Red Crescent, 8-10 December 2015, Geneva, No. 32IC/15/11 (ICRC: Geneva, October 2015), pp. 13-16.
- 67 See United Nations Compensation Commission, <https://uncc.ch/state-kuwait.html>.
- 68 International Covenant on Civil and Political Rights (ICCPR); International Covenant on Economic, Social and Cultural Rights (ICESCR); Universal Declaration of Human Rights; Declaration on the Rights of Indigenous Peoples (2007); Stockholm Declaration (1972); Jean Ziegler (E/CN.4/2002/58) and Olivier De Schutter (A/68/288).
- 69 ECtHR, *Sakik and Others v. Turkey*, 1997, para. 39; and ECtHR, *Barseghyan v. Armenia*, 2021, para. 36.
- 70 Report of the Special Rapporteur on the issue of human rights obligations relating to the enjoyment of a safe, clean, healthy and sustainable environment, 24 January 2018, A/HRC/37/59; HRC Res A/HRC/RES/48/13, 18 October 2021
- 71 Former Special Rapporteur on the Right to Food, Jean Ziegler, has raised the issue of 'profound internal contradictions in the United Nations system', pointing to the application of neoliberal policies that undermine the interests of developing states and its people. See Report by the Special Rapporteur on the right to food, Mr. Jean Ziegler, 10 January 2002, E/CN.4/2002/58.
- 72 HRC, The grave violations of human rights in the Occupied Palestinian Territory, particularly due to the recent Israeli military attacks against the occupied Gaza Strip, 12 January 2009, A/HRC/S-9/L.1.
- 73 See, for e.g., AllRise, Communication under Article 15 of the Rome Statute of the International Criminal Court regarding the Commission of Crimes Against Humanity against Environmental Dependents and Defenders in the Brazilian Legal Amazon from

January 2019 to present, October 2021, https://climatecasechart.com/wp-content/uploads/non-us-case-documents/2021/20211012_14633_na.pdf.

74 See, e.g., ECtHR *Solyanik v. Russia* (10 May 2022), c.f. *Locascia and Others v. Italy* (19 October 2023).

75 Art 11(2)(b) ICESCR and General Comment 12 ICESCR HRI/GEN/1/Rev.5

76 ICPCR; ICESCR; ICJ, Application of the International Convention on the Elimination of all Forms of Racial Discrimination (*Georgia v. Russian Federation*), Provisional Measures, 2008, No. 35/2008 (15 October 2008)

77 United Nations Conference on Environment and Development: Rio Declaration on Environment and Development, 31 I.L.M. 874 (1992); UN General Assembly, United Nations Conference on the Human Environment, 15 December 1972, A/RES/2994.

78 A state sustaining military operations of another state may not meaningfully be able to contribute to the protection of the human rights of its citizens, See ECtHR, *Shavlokhova and Others v. Georgia*, 2021, paras 32-34; ECtHR, *Bekoyeva and Others v. Georgia*, 2021, paras 37-39.

79 Report of the Special Rapporteur on the right to food, Hilal Elver, Access to Justice and the Right to Food: The way forward, 12 January 2014, HRC A/HRC/28/65.

80 <https://uncc.ch/claims.html>.

81 Article 2(1) ICESCR; Article 2(1) ICCPR; Simone Hutter, 'The Right to Food in Armed Conflict', in *Accountability for Mass Starvation*, Bridget Conley, Alex de Waal, Catriona Murdoch, and Wayne Jordash (eds.) (Oxford University Press, 2022), pp. 132-152.

82 See, for example, the International Court of Justice, *Pulp Mills on the River Uruguay (Argentina v. Uruguay)*, Judgment of 20 April 2010.

83 GC I, Art. 12; GC II, Art. 12; GC III, Arts 13, 17 and 87; GC IV, Arts 27 and 32; GC I-IV common article 3 and arts

50, 51, 130 and 147 respectively; Additional Protocol I of 1977 (Art. 75(2)(a)(ii)); and Additional Protocol II of 1977 (Art. 4(2)(a)); Art 5, UDHR; Art. 7 ICCPR; Art 37(a) Convention on the Rights

of the Child (1989); Convention Against Torture (1984)

84 See, for e.g., M Simpson et al 'Legal protection against destitution in the UK: the case for a right to subsistence minimum' (2023) 86 *Modern Law Review* 307.

85 Article 441, Ukraine Criminal Code

86 E.g., Ecuador, Vietnam, Uzbekistan, Russia, Kazakhstan, Ukraine, Armenia, and Georgia.

87 <https://www.lachambre.be/kvvcr/showpage.cfm?section=/flwb&language=fr&cfm=/site/wwwcfm/flwb/flwbn.cfm?lang=F&legislat=55&dossierID=3518>.

88 Article 296, <https://ecocidela.com/existing-ecocide-laws/>

89 See W. Michael Reisman, "Compensating Collateral Damage in Elective International Conflict", *Intercultural Human rights Law Review*, Vol. 8 (2013), pp. 1-18.

90 ILC sources

91 Marco Roscini, "Protection of Natural Environment in Time of Armed Conflict," in L. Doswald-Beck, A.R. Chowdhury and J.H. Bhuiyan (eds.), *International Humanitarian Law – An Anthology*, (Nagpur: LexisNexis Butterworths, 2009), pp. 155-179.

92 See The Geneva Centre for Human Rights Advancement and Global Dialogue, *Armed Conflicts, Environment and Human Rights* (Geneva: The Geneva Centre for Human Rights Advancement and Global Dialogue, 2022), https://gchragd.org/wp-content/uploads/2022/10/Armed-Conflicts-Environment-and-Human-Rights_.pdf.

93 Report of the UN Special Rapporteur on the right to food, Michael Fakhri, on the vision of the Special Rapporteur on the right to food, UN Doc. A/HRC/46/33, 24 December 2020, <https://undocs.org/A/HRC/46/33>; Report of the UN Special Rapporteur on the Right to Food, Hilal Elver, on the right to food and armed conflict, UN Doc. A/72/188, 21 July 2017, <http://undocs.org/A/72/188>; Report of the UN Special Rapporteur on the Right to Food, Jean Ziegler, on his mission to Lebanon, UN Doc. A/HRC/2/8, 29 September 2006, <http://undocs.org/A/HRC/2/8>; Report of the UN Special Rapporteur on the Right to Food, Jean Ziegler, on his mission to the Occupied Palestinian Territories, UN Doc. E/CN.4/2004/10/Add.2, 13 October 2003, <http://undocs.org/E/CN.4/2004/10/Add.2>; Report of the UN Special Rapporteur on the Right to Food, Jean Ziegler, on the right to food and international humanitarian law, UN Doc. E/CN.4/2002/58, 10 January 2002, <http://undocs.org/E/CN.4/2002/58>. See also Ziegler, J., C. Golay, C. Mahon, S.-A. Way, *The Fight for the Right to Food. Lessons Learned*, London, Palgrave Macmillan, 2011; OHCHR, *Protection of Economic, Social and Cultural Rights in Conflicts*, Geneva, OHCHR, 2015, <https://www.ohchr.org/sites/default/files/Documents/Issues/ESCR/E-2015-59.pdf>.

94 Report of the UN Special Rapporteur on the right to food, Michael Fakhri, on conflict and the right to food, UN Doc. A/HRC/52/40, 29 December 2022, <https://undocs.org/A/HRC/52/40>.

95 Statement by the President of the Security Council, UN Doc. S/PRST/2023/4, 3 August 2023, <http://undocs.org/S/PRST/2023/4>.

96 At this occasion, the UN Special Rapporteur on the right to food underlined that increased hunger leads to armed conflicts, and that in turn armed conflicts increase hunger and therefore should be addressed in terms of peace and security; Permanent Mission of Ireland to the United Nations, New York, "Statement at the Arria-formula Meeting on Conflict and Hunger," 21 April 2022, <https://www.ireland.ie/en/un/newyork/news-and-speeches/security-council-statements/statement-at-the-arria-formula-meeting-on-conflict-and-hunger/>.

97 Report of the Secretary-General, on protection of civilians in armed conflict, UN Doc. S/2023/345, 12 May 2023, <https://undocs.org/S/2023/345>.

98 <https://www.un.org/sustainabledevelopment/sustainable-development-goals/>.

99 Carl Bruch, 'Integrating Security into Sustainable Development to Build More Peaceful Societies,' UN Chronicle, 6 November 2021, <https://www.un.org/en/integrating-security-sustainable-development-build-more-peaceful-societies>.

100 See, for e.g., Carl Bruch et al, *Primer on Monitoring and Evaluation of Environmental Peacebuilding* (Environmental Law Institute, June 2023); Carl Bruch and Amanda Woomer, *Toolkit on Monitoring and Evaluation of Environmental Peacebuilding*, (Environmental Law Institute, June 2023).

101 Principle 23

102 For instance, environmental assessments rarely merge with health assessments. These sorts of information and studies would enable more comprehensive understandings of both impact and need.

103 The Geneva Centre for Human Rights Advancement and Global Dialogue, *Armed Conflicts, Environment and Human Rights* (Geneva: The Geneva Centre for Human Rights Advancement and Global Dialogue, 2022), p. 44, https://gchragd.org/wp-content/uploads/2022/10/Armed-Conflicts-Environment-and-Human-Rights_.pdf

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