

STARVATION

**BUILDING THE CASE FOR PROSECUTING
STARVATION CRIMES IN YEMEN**



**YEMEN
ACCOUNTABILITY
PROJECT**



STARVATION:

BUILDING THE CASE FOR PROSECUTING STARVATION CRIMES IN YEMEN

EDITOR: LAURA K. GRAHAM

ASSOCIATE EDITORS: KRISTEN CONNORS, ALAN DOWLING, SYDNEY WARINNER

ASSISTANT EDITORS: CHRISTINE DISABATO, ALEXA STOVSKY, MEENA HATAB

RESEARCH ASSISTANTS: KAYLA BRISKEY, NATALIE EBERTS, ELIZABETH KATZ, DAVID KRAWIEC, ANONYMOUS

GRAPHIC DESIGN: ALEXA STOVSKY

YEMEN ACCOUNTABILITY PROJECT

PROJECT ADVISOR: James C. Johnson, Adjunct Professor of Law and Director of the Henry King War Crimes Research Office

EXECUTIVE DIRECTOR: Laura K. Graham, Ph.D.

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EXECUTIVE SUMMARY

As Yemen enters its sixth year of protracted armed conflict with no end in sight, the death toll has reached a staggering 100,000 people. Tens of thousands of Yemeni civilians have starved to death due to a shortage of food and clean water, particularly during 2017-2018, when the UN declared Yemen the worst humanitarian crisis in the world.

This white paper focuses on making the case for prosecuting the Saudi-led Coalition and other culpable agents for committing the war crime of starvation and the destruction of civilian objects indispensable to survival. After laying out the context of Yemen's food crisis and the legal standard for charging perpetrators with war crimes or crimes against humanity, this white paper examines the evidence from the period of 2015-2018 that suggests a pattern or policy of widespread or systematic attacks on civilian objects essential for food and water production. In particular, this evidence suggests a pattern of targeting agricultural sites, water supply and treatment facilities, markets, fishing villages, and medical facilities treating cholera and diseases related to unclean water and malnutrition. The evidence further indicates a lack of a legitimate military objective in sites targeted or a military objective so slight that the resulting collateral damage does not meet the proportionality analysis of international humanitarian law.

Based on this evidence, the Yemen Accountability Project concludes that the Saudi-led Coalition and perhaps other actors including the Houthi rebels deliberately targeted civilian objects indispensable to survival, especially food and water objects, in order to deprive the civilian population of adequate sustenance. This constitutes an unlawful use of starvation as a means of warfare in violation of the Geneva Conventions and the Rome Statute which must not go unpunished. The purpose of this white paper is to lay forth the evidence of the crimes and reveal potential avenues of accountability for charging perpetrators.

INTRODUCTION

Yemen has been embroiled in a civil war since March 2015 that has taken tens of thousands of lives. Many of those lives have been lost due to starvation and starvation-related causes, including dying from cholera. This white paper examines the phenomenon of starvation deaths and food insecurity in Yemen and its causes. In particular, this white paper focuses on intentional destruction of objects indispensable to survival (OIS) caused by combatants and the potential for charging perpetrators of starvation crimes for committing war crimes and crimes against humanity for using starvation as a method of warfare. Part I explores the growing food insecurity crisis in Yemen from the outset of the war through 2021. Part II sets forth the legal standard for starvation crimes under the Geneva Conventions and Rome Statute. Part III presents evidence of starvation crimes and intentional destruction of OIS from 2015-2018 and analyzes these crimes. Part IV explores the avenues of accountability for war crimes and crimes against humanity. Finally, Part V reveals a number of recommendations for how stakeholders should address the ongoing threat of starvation and food insecurity in Yemen and contribute to uncovering evidence of starvation crimes for future prosecutions.

I. YEMEN'S FOOD INSECURITY CRISIS

Yemen's ongoing civil war has created the world's worst humanitarian crisis.¹ Since its onset in 2015, the war has caused widespread hunger and disease and thousands of civilian deaths. Currently, over 20 million people suffer from food insecurity and preventable diseases, such as cholera and severe malnutrition.² Since 2017, an estimated 13 million Yemenis have been at risk of starvation,³ and at least 85,000 children have died from starvation and starvation-related diseases.⁴ This section explores the food insecurity crisis in Yemen since 2014 and some of the consequences of residual food insecurity.

A. INDICATORS OF FAMINE

A famine is “a crisis of mass hunger that causes elevated mortality over a specific period of time.”⁵ The various causes of famine include “structural factors that determine vulnerability and the proximate triggers of the crisis.”⁶ Famines can be distinguished by magnitude (the number of casualties) and severity (the level of food insecurity).⁷ The Famine Early Warning System Network (FEWS NET), a division of the United States Agency for International Development (USAID), provides humanitarian relief agencies with objective analyses of the world's food crises.⁸ FEWS NET's Integrated Phase Classification (IPC) stands as the international community's widely accepted scale to determine food insecurity levels based on

¹ António Guterres, U.N. Sec'y-Gen., Remarks to the Pledging Conference on Yemen (Apr. 3, 2018), <https://www.un.org/sg/en/content/sg/statement/2018-04-03/secretary-generals-remarks-pledging-conference-yemen-delivered>; see also Stephen O'Brien (Under Sec'y-Gen. for Humanitarian Affs. & Emergency Relief Coordinator), *Statement to the Security Council on Missions to Yemen, South Sudan, Somalia, and Kenya and an Update on the Oslo Conference on Nigeria and the Lake Chad Region*, 5, U. N. Sec. Council (Mar. 10, 2017), https://www.unocha.org/sites/unocha/files/statement-and-speech/ERC_USG%20Stephen%20OBrien%20Statement%20to%20the%20SecCo%20on%20Missions%20to%20Yemen%20South%20Sudan%20Somalia%20and%20Kenya%20and%20update%20on%20Oslo%20Conference%20-%2010%2003%202017.pdf (“We stand at a critical point in history. Already at the beginning of the year we are facing the largest humanitarian crisis since the creation of the United Nations.”).

² *Humanitarian crisis in Yemen remains the worst in the world, warns UN*, U.N. NEWS (Feb. 14, 2019), <https://news.un.org/en/story/2019/02/1032811>; Doctors Without Borders/Médecins Sans Frontières (MSF) has treated 143,467 cholera and 23,319 malnutrition cases between March 2015 and September 2019. See Médecins Sans Frontières, *Yemen: Crisis Update November 2019*, DRS. WITHOUT BORDERS, (Nov. 19, 2019), <https://www.doctorswithoutborders.org/what-we-do/news-stories/story/yemen-crisis-update-november-2019>.

³ *Yemen could be 'worst famine in 100 years,'* BBC (Oct. 15, 2018), <https://www.bbc.com/news/av/world-middle-east-45857729/yemen-could-be-worst-famine-in-100-years>.

⁴ Bethan McKernan, *Yemen: up to 85,000 young children dead from starvation*, THE GUARDIAN (Nov. 21, 2018), <https://www.theguardian.com/world/2018/nov/21/yemen-young-children-dead-starvation-disease-save-the-children>.

⁵ Alex De Waal, *The end of famine? Prospects for the elimination of mass starvation by political action*, 62 POLITICAL GEOGRAPHY 184, 185 (2018).

⁶ Alex De Waal, *The end of famine? Prospects for the elimination of mass starvation by political action*, 62 POLITICAL GEOGRAPHY 184, 185 (2018).

⁷ Paul Howe & Stephen Deveraux, *Famine Intensity and Magnitude Scales: A proposal for an instrumental definition of famine*, 28 DISASTERS 353, 360-67 (2004); *Integrated Phase Classification*, FEWS NET, <https://fewsn.net/IPC> (last visited Mar. 31, 2021).

⁸ *About Us*, FEWS NET, <https://fewsn.net/about-us> (last visited Aug. 31, 2020).

food consumption, livelihood, malnutrition, and mortality.⁹ The severity of food insecurity consists of five phases: (1) minimal; (2) stressed; (3) crisis; (4) emergency; and (5) famine.¹⁰

While the first two phases – minimal and stressed – require an absence of or limited need for sustainable strategies for acquiring food and other necessities, phase three crisis involves gaps in household food consumption, above-average acute malnutrition, and a strained ability to meet minimal food needs while depleting other livelihood assets.¹¹ Households experiencing large gaps in food consumption, high acute malnutrition, excess mortality, and reliance on emergency livelihood strategies and asset liquidation to manage food consumption gaps signal phase four emergency.¹² Food insecurity’s final and most severe phase is famine, during which “households have an extreme lack of food and/or other basic needs even after full employment of coping strategies. Starvation, death, destitution, and extremely critical acute malnutrition levels are evident.”¹³

Although UN reports rarely reference famine or its indicators, they frequently discuss severe food insecurity, hunger, malnourishment, and other conditions comparable to those characterizing famine on the Food Insecurity Experience Scale (FIES). For instance, every year, the Food and Agriculture Organization of the United Nations (FAO) publishes *The State of Food Security and Nutrition in the World*, which reports on these conditions for each country. These reports define severe food insecurity as “the level of severity of food insecurity at which people have likely run out of food, experienced hunger, and at the most extreme, gone for days without eating, putting their health and well-being at grave risk.”¹⁴ Hunger, which FAO considers synonymous with chronic undernourishment involves “an uncomfortable or painful physical sensation caused by insufficient consumption of dietary energy.”¹⁵

Finally, FAO defines malnutrition as “an abnormal physiological condition caused by inadequate, unbalanced or excessive consumption of macronutrients and/or micronutrients.”¹⁶ Wasting, also known as acute malnutrition or undernutrition, involves stunting of childhood growth and development and vitamin and mineral deficiencies.¹⁷ According to war historian, Lizzie Collingham:

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A FAMINE IS A CRISIS OF MASS HUNGER THAT CAUSES ELEVATED MORTALITY OVER A SPECIFIC PERIOD OF TIME.

⁹ *Integrated Phase Classification*, FEWS NET, <https://fews.net/IPC> (last visited Aug. 31, 2020).

¹⁰ *Integrated Phase Classification*, FEWS NET, <https://fews.net/IPC> (last visited Aug. 31, 2020).

¹¹ *Integrated Phase Classification*, FEWS NET, <https://fews.net/IPC> (last visited Aug. 31, 2020).

¹² *Integrated Phase Classification*, FEWS NET, <https://fews.net/IPC> (last visited Aug. 31, 2020).

¹³ *Integrated Phase Classification*, FEWS NET, <https://fews.net/IPC> (last visited Aug. 31, 2020).

¹⁴ FAO, IFAD, UNICEF, WFP and WHO, *The State of Food Security and Nutrition in the World 2020* 256 (2020), <http://www.fao.org/documents/card/en/c/ca9692en>.

¹⁵ FAO, IFAD, UNICEF, WFP and WHO, *The State of Food Security and Nutrition in the World 2020* 255 (2020), <http://www.fao.org/documents/card/en/c/ca9692en>.

¹⁶ FAO, IFAD, UNICEF, WFP and WHO, *The State of Food Security and Nutrition in the World 2020* 255 (2020), <http://www.fao.org/documents/card/en/c/ca9692en>.

¹⁷ FAO, IFAD, UNICEF, WFP and WHO, *The State of Food Security and Nutrition in the World 2020* 255 (2020), <http://www.fao.org/documents/card/en/c/ca9692en>.

Victims of starvation die of nutritional dystrophy, a process whereby, once the body has used up all its fat reserves, the muscles are broken down in order to obtain energy. The small intestine atrophies and it becomes increasingly difficult for the victim to absorb nutrients from what little food he or she is able to obtain. As a defence mechanism the body reduces the activity of the vital organs such as the heart and liver and the victim suffers not only from muscular debility but from a more general and overpowering fatigue. . . . The water content of the body reduces at a slower rate than the wasting of the muscles and tissues and the flaccidity of the body increases. Some victims of starvation develop hunger oedema and swell up with excess water. The swelling begins in the abdomen and legs and spreads throughout the body. The skin becomes stretched, shiny and hypersensitive. Blood pressure drops and the victim is plagued by keratitis (redness and soreness of the cornea), sore gums, headaches, pains in the legs, neuralgic pains, tremors and ataxia (a loss of control over the limbs). The symptoms are accompanied by an intensive craving for carbohydrates and salt, and uncontrollable diarrhea. Just before death the victim veers wildly from depression to intense irritation and then a profound torpor. Eventually, the body has no alternative but to sustain itself by taking protein from the vital organs. . . . Most importantly, the heart atrophies. . . . Organ failure is the final cause of death.¹⁸

Starvation is thus a cruel and inhumane form of suffering.

B. PRE-CIVIL WAR FOOD INSECURITY

Yemen has teetered on the brink of famine for nearly a decade. At the war's onset, Yemen was already facing high levels of acute food insecurity wrought by a political shift in 2011-2012 that weakened the economy, increased food prices, decreased labor opportunities, and decreased household purchasing power.¹⁹ As the poorest nation in the Arab region, approximately 44% of Yemenis were undernourished in 2012, with as many as five million people relying on emergency food aid.²⁰ Between 2011-2014, approximately 41% of the population was food insecure, and 19% was severely food insecure.²¹ Water scarcity was so grave that experts predicted that Yemen's water would run out by 2017.²²

By 2015, rising conflict and conflict-related displacement further exacerbated food insecurity by disrupting agricultural production, which accounted for roughly 54% of the population's employment.²³ Yemen's agriculture also accounted for 10% of its staple foods, with the remaining 90% sourced from imports.²⁴

¹⁸ LIZZIE COLLINGHAM, *THE TASTE OF WAR: WORLD WAR II AND THE BATTLE FOR FOOD* 5-6 (2012).

¹⁹ *Special Report: Yemen Food Security Brief*, FEWS NET (Apr. 17, 2015), <https://fews.net/east-africa/yemen/special-report/april-2015>.

²⁰ Joseph Hincks, *What you need to know about the crisis in Yemen*, TIME (Nov. 3, 2016, 2:46 AM EDT), <https://time.com/4552712/yemen-war-humanitarian-crisis-famine/>.

²¹ *Special Report: Yemen Food Security Brief*, FEWS NET (Apr. 17, 2015), <https://fews.net/east-africa/yemen/special-report/april-2015>.

²² Frederika Whitehead, *Water scarcity in Yemen: the country's forgotten conflict*, THE GUARDIAN (Apr. 2, 2015, 5:18 AM), <https://www.theguardian.com/global-development-professionals-network/2015/apr/02/water-scarcity-yemen-conflict>; IRIN in Sana'a, *Time running out for solution to Yemen's water crisis*, THE GUARDIAN (Aug. 27, 2012, 7:30 AM), <https://www.theguardian.com/global-development/2012/aug/27/solution-yemen-water-crisis>.

²³ *Special Report: Yemen Food Security Brief*, FEWS NET (Apr. 17, 2015), <https://fews.net/east-africa/yemen/special-report/april-2015>.

²⁴ Sharif Abdel Kouddous, *Yemen is now the world's worst humanitarian crisis*, THE WORLD (Dec. 22, 2015, 9:30 AM EST), <https://www.pri.org/stories/2015-12-22/yemen-now-world-s-worst-humanitarian-crisis>.

C. FOOD INSECURITY DURING THE WAR

In September 2015, Saudi blockades prevented the import and distribution of food and supplies, leaving about 80% of Yemenis in urgent need of humanitarian aid in order to meet their basic needs.²⁵ Approximately 14 million Yemenis were food insecure and 7 million were severely food insecure.²⁶ Additionally, Gomhouri Hospital in Saada City, one of the few hospitals that remained in operation in northwestern Yemen, reported a 300-400% spike in malnutrition, of which 2 million people, including 1.3 million children, suffered from severe acute malnutrition.²⁷ Just two years later, the UN would declare Yemen in danger of imminent famine.²⁸

By the end of 2015, Yemeni officials considered the country to be “on the brink of famine.”²⁹ Ten of Yemen’s 22 territories were classified within IPC phase four emergency.³⁰ According to FIES data for 2014-2015, an average 43.59% of Yemeni households were moderately or severely food insecure.³¹ From 2014-2016, 28.8% of Yemenis (7.7 million people) were undernourished, and 12.6% (3.4 million people) were severely food insecure.³² The latter statistic marks a 2.62% increase from the FIES data for 2014-2015, which suggests that severe food insecurity rose as the war continued.

Although Yemen’s food crisis did not officially reach the level of famine, these findings contain overwhelming evidence of its indicators: destitution from a lack of labor opportunities, decreased household purchasing power, and absence of food from interruptions to food imports, distribution, and barriers to humanitarian aid. Furthermore, even though the data on malnutrition is limited to a single hospital in the Saada province, a 300-400% increase in malnutrition still suggests a potential trend towards extremely acute malnutrition.³³

²⁵ Sharif Abdel Kouddous, *Yemen is now the world’s worst humanitarian crisis*, THE WORLD (Dec. 22, 2015, 9:30 AM EST), <https://www.pri.org/stories/2015-12-22/yemen-now-world-s-worst-humanitarian-crisis>.

²⁶ Megan O’Toole & Ali Aboluhom, *Starvation in Yemen: ‘We are hoping just to survive’*, AL JAZEERA (Nov. 29, 2015), <https://www.aljazeera.com/news/2015/11/starvation-yemen-hoping-survive-151129070729907.html>.

²⁷ Sharif Abdel Kouddous, *Yemen is now the world’s worst humanitarian crisis*, THE WORLD (Dec. 22, 2015, 9:30 AM EST), <https://www.pri.org/stories/2015-12-22/yemen-now-world-s-worst-humanitarian-crisis>.

²⁸ Stephen O’Brien (Under Sec’y-Gen. for Humanitarian Affs. & Emergency Relief Coordinator), *Statement to the Security Council on Missions to Yemen, South Sudan, Somalia, and Kenya and an Update on the Oslo Conference on Nigeria and the Lake Chad Region*, 5, U. N. Sec. Council (Mar. 10, 2017),

https://www.unocha.org/sites/unocha/files/statement-and-speech/ERC_USG%20Stephen%20OBrien%20Statement%20to%20the%20SecCo%20on%20Missions%20to%20Yemen%20South%20Sudan%20Somalia%20and%20Kenya%20and%20update%20on%20Oslo%20Conference%20-%202010%2003%202017.pdf.

²⁹ Sharif Abdel Kouddous, *Yemen is now the world’s worst humanitarian crisis*, THE WORLD (Dec. 22, 2015, 9:30 AM EST), <https://www.pri.org/stories/2015-12-22/yemen-now-world-s-worst-humanitarian-crisis>.

³⁰ Sharif Abdel Kouddous, *Yemen is now the world’s worst humanitarian crisis*, THE WORLD (Dec. 22, 2015, 9:30 AM EST), <https://www.pri.org/stories/2015-12-22/yemen-now-world-s-worst-humanitarian-crisis>.

³¹ A.L. Pereira, S. Handa, & G. Holmqvist, *Prevalence and Correlates of Food Insecurity Among Children Across the Globe* 31 (UNICEF Office of Research Working Paper No. WP-2017-09, 2017), https://www.unicef-irc.org/publications/pdf/IWP_2017_09.pdf.

³² FAO, IFAD, UNICEF, WFP and WHO, *The State of Food Security and Nutrition in the World 2017* 80, 90 (2017), https://docs.wfp.org/api/documents/WFP-0000022419/download/?_ga=2.23224051.879737629.1597761180-1914903369.1597761180.

³³ Sharif Abdel Kouddous, *Yemen is now the world’s worst humanitarian crisis*, THE WORLD (Dec. 22, 2015, 9:30 AM EST), <https://www.pri.org/stories/2015-12-22/yemen-now-world-s-worst-humanitarian-crisis>.

Reports reveal that between 2015-2017, 34% of Yemenis (9.5 million people) were undernourished,³⁴ and between 2016-2018, that number climbed to 38.9% (11 million people).³⁵ Conversely, the percentage of children wasting stayed relatively stable from 2016-2018 (16.3-16.4%)³⁶ and decreased to 13.3% in 2019.³⁷ It is unclear whether this data underreports Yemen's

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**14 MILLION YEMENIS FACED A
'CLEAR AND PRESENT' DANGER OF
MASS DEATHS FROM STARVATION.**



true malnutrition levels given the FAO's inability to gather much information on Yemen's food insecurity levels and the closure of many Yemeni hospitals,³⁸ which otherwise could have reported reliable data on children wasting.

Perhaps the most notable event in relation to Yemen's food insecurity between 2016-2019 is Yemen's near famine in 2018, which the UN labeled "one of the worst in living memory."³⁹ The Saudi-led Coalition's (SLC) blockade prevented necessary shipments of food and supplies, food prices nearly doubled, and many Yemenis reported going multiple days without eating.⁴⁰ As a result, roughly 14 million

Yemenis faced a 'clear and present' danger of mass deaths from starvation.⁴¹ Yemen managed to temporarily mitigate the threat and lower its food insecurity levels to emergency and critical with the help of comprehensive humanitarian aid.⁴²

³⁴ FAO, IFAD, UNICEF, WFP and WHO, *The State of Food Security and Nutrition in the World 2018* 122, 133 (2018), <https://www.who.int/nutrition/publications/foodsecurity/state-food-security-nutrition-2018-en.pdf>.

³⁵ FAO, IFAD, UNICEF, WFP and WHO, *The State of Food Security and Nutrition in the World 2019*, 128, 141 (2019), https://docs.wfp.org/api/documents/WFP-0000106760/download/?_ga=2.14906495.879737629.1597761180-1914903369.1597761180.

³⁶ *The State of Food Security and Nutrition in the World 2017* 80, 90 (2017), https://docs.wfp.org/api/documents/WFP-0000022419/download/?_ga=2.23224051.879737629.1597761180-1914903369.1597761180; https://docs.wfp.org/api/documents/WFP-0000022419/download/?_ga=2.23224051.879737629.1597761180-1914903369.1597761180; see also *The State of Food Security and Nutrition in the World 2018* 122 (2018), <https://www.who.int/nutrition/publications/foodsecurity/state-food-security-nutrition-2018-en.pdf>.

³⁷ *The State of Food Security and Nutrition in the World 2019*, 128 (2019), https://docs.wfp.org/api/documents/WFP-0000106760/download/?_ga=2.14906495.879737629.1597761180-1914903369.1597761180.

³⁸ Sharif Abdel Kouddous, *Yemen is now the world's worst humanitarian crisis*, THE WORLD (Dec. 22, 2015, 9:30 AM EST), <https://www.pri.org/stories/2015-12-22/yemen-now-world-s-worst-humanitarian-crisis>.

³⁹ Emma Graham-Harrison, *Famine in Yemen could become one of worst in living memory, UN says*, THE GUARDIAN (Oct. 24, 2018, 7:00 EDT), <https://www.theguardian.com/world/2018/oct/25/famine-in-yemen-could-become-one-of-worst-in-living-memory-un-says>.

⁴⁰ Emma Graham-Harrison, *Famine in Yemen could become one of worst in living memory, UN says*, THE GUARDIAN (Oct. 24, 2018, 7:00 EDT), <https://www.theguardian.com/world/2018/oct/25/famine-in-yemen-could-become-one-of-worst-in-living-memory-un-says>.

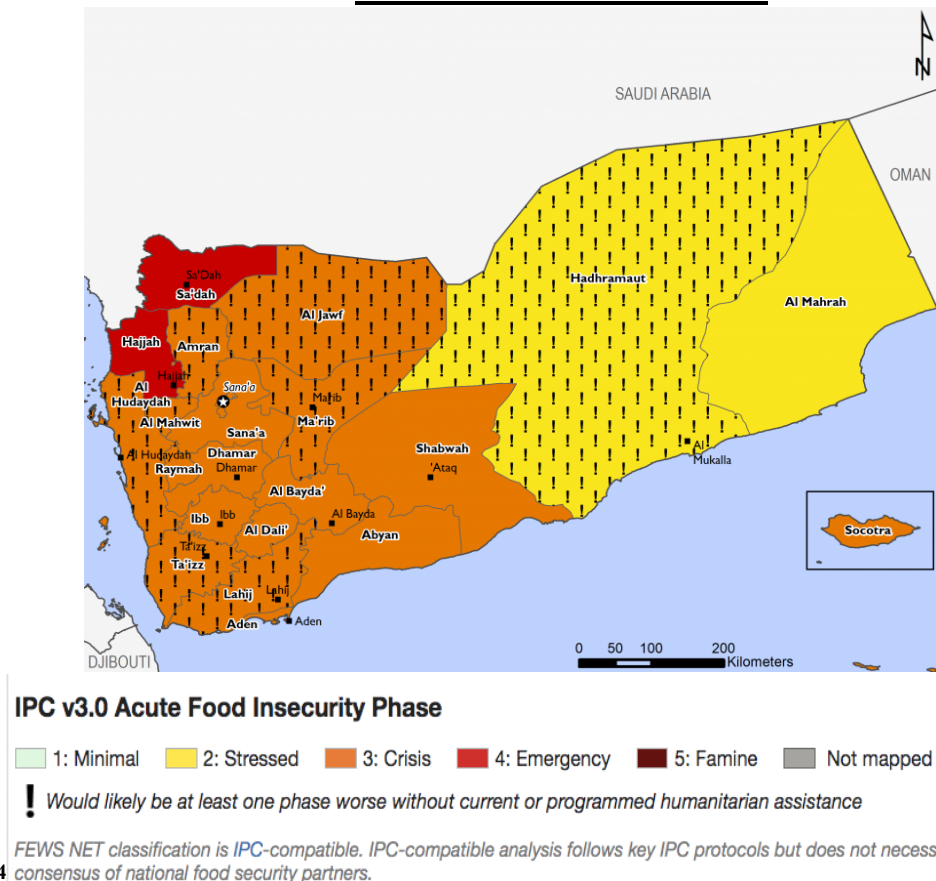
⁴¹ Emma Graham-Harrison, *Famine in Yemen could become one of worst in living memory, UN says*, THE GUARDIAN (Oct. 24, 2018, 7:00 EDT), <https://www.theguardian.com/world/2018/oct/25/famine-in-yemen-could-become-one-of-worst-in-living-memory-un-says>.

⁴² AFP, *UN Warns Yemen on Brink of Famine Again*, VOA (Jul. 8, 2020, 8:03 AM), <https://www.voanews.com/middle-east/un-warns-yemen-brink-famine-again#:~:text=Yemen%20is%20already%20gripped%20by,on%20aid%20for%20their%20survival>.

D. CURRENT STATUS OF FOOD INSECURITY

Currently, multiple regions in Yemen are described as being in IPC phase 3 crisis or phase 4 emergency, as indicated on the map below.⁴³ Areas where the conflict is fought – Hudaydah, Sana’a, Taiz, Aden, and the Red Sea Coast villages – experience the worst food insecurity.

OCTOBER 2019 – MAY 2020



Throughout the fall of 2020, Yemen’s currency (the rial) dropped significantly, prompting steep rises in food and gas prices. This sparked “evolution of the hungry” protests in various Yemeni cities in December 2020, which placed blame on the Yemeni government, SLC, and the Houthi rebels for the currency crisis.⁴⁵ Since many Yemenis no longer have a reliable source of income, the rial’s devaluation makes it increasingly difficult for Yemenis to purchase the food and fuel that they depend on for survival.⁴⁶

⁴³ FEWS NETWORK, YEMEN FOOD SECURITY OUTLOOK OCTOBER 2019 TO MAY 2020, <https://fews.net/east-africa/yemen/food-security-outlook/october-2019>.

⁴⁴ Picture provided by FEWS NETWORK, YEMEN FOOD SECURITY OUTLOOK OCTOBER 2019 TO MAY 2020, <https://fews.net/east-africa/yemen/food-security-outlook/october-2019>.

⁴⁵ Mohammad Hatem, *Protests Erupt in Yemen Over Currency Crisis*, BLOOMBERG (Dec. 12, 2020, 7:07 AM EST), <https://www.bloomberg.com/news/articles/2020-12-12/protests-erupt-in-yemeni-city-of-taiz-over-currency-devaluation>.

⁴⁶ AFP, *Currency crisis brings new hardship to war-weary Yemen*, FRANCE 24 (Jan. 28, 2020 1:52PM), <https://www.france24.com/en/20200128-currency-crisis-brings-new-hardship-to-war-weary-yemen>.

FEWS casts grim predictions for Yemen's food insecurity through May 2021. Its most recent report anticipates that 17-19 million Yemenis will likely require humanitarian assistance, and most of the country will likely reach IPC phase three crisis.⁴⁷ Additionally, Amran and Hajjah are likely to deteriorate to IPC phase four emergency by April of 2021.⁴⁸ FEWS predicted that from January to June 2021, approximately 54% of the population will likely face acute levels of food insecurity (IPC phase three or higher), including 47,000 people in famine-like conditions.⁴⁹ One cause of this escalation in food insecurity is the dearth of foreign humanitarian aid to the country,⁵⁰ particularly amidst the current pandemic. The UN has refrained from officially classifying Yemen's food insecurity crisis as a famine,⁵¹ but humanitarian organizations continue to push for official classification in order to secure needed funds before it is too late to save the hundreds of thousands in danger of starvation.⁵²

E. IMPACT OF THE COVID-19 PANDEMIC ON YEMEN'S STARVATION CRISIS

Until recently, humanitarian aid effectively mitigated famine indicators and lowered Yemen's food insecurity to the emergency and critical phases.⁵³ However, Yemen's current crisis could reach an unprecedented severity due to drastic cuts in humanitarian aid response. USAID halted aid to roughly 80% of the Yemeni population in the midst of the COVID-19 outbreak, which impeded access to medical care and other life-saving resources.⁵⁴ Largely due to the pandemic's economic impact, the UN only raised about half of its needed budget for 2020, forcing it to terminate numerous sanitation, healthcare, and food programs.⁵⁵ The UN also ended treatment for 250,000 severely malnourished children and reduced food aid from serving 13 million Yemenis to just about 8.7 million, many of whom only receive about half of their

⁴⁷ FEWS NETWORK, YEMEN FOOD SECURITY OUTLOOK UPDATE DECEMBER 2020, <https://fews.net/east-africa/yemen/food-security-outlook-update/december-2020>.

⁴⁸ FEWS NETWORK, YEMEN FOOD SECURITY OUTLOOK UPDATE DECEMBER 2020, <https://fews.net/east-africa/yemen/food-security-outlook-update/december-2020>.

⁴⁹ *Yemen: Acute Food Insecurity Situation October-December 2020 and Projection for January-June 2021*, INTEGRATED FOOD SECURITY PHASE Classification, <http://www.ipcinfo.org/ipc-country-analysis/details-map/en/c/1152947/?iso3=YEM> (last visited Mar. 31, 2020).

⁵⁰ *Yemen: Acute Food Insecurity Situation October-December 2020 and Projection for January-June 2021*, INTEGRATED FOOD SECURITY PHASE Classification, <http://www.ipcinfo.org/ipc-country-analysis/details-map/en/c/1152947/?iso3=YEM> (last visited Mar. 31, 2020).

⁵¹ *Waiting to declare famine 'will be too late for Yemenis on brink of starvation'*, UN NEWS (Jul. 10, 2020), <https://news.un.org/en/story/2020/07/1068101#:~:text=In%20Yemen%2C%20fears%20of%20famine%20have%20resurfaced%20as,to%20get%20treatment%20and%20aid%20is%20stepped%20up>.

⁵² *Waiting to declare famine 'will be too late for Yemenis on brink of starvation'*, UN NEWS (Jul. 10, 2020), <https://news.un.org/en/story/2020/07/1068101#:~:text=In%20Yemen%2C%20fears%20of%20famine%20have%20resurfaced%20as,to%20get%20treatment%20and%20aid%20is%20stepped%20up>.

⁵³ *UN Warns Yemen on Brink of Famine Again*, VOA (Jul. 8, 2020, 8:03 AM), <https://www.voanews.com/middle-east/un-warns-yemen-brink-famine-again#:~:text=Yemen%20is%20already%20gripped%20by,on%20aid%20for%20their%20survival>.

⁵⁴ Michael LaForgia, *U.S. Cuts Healthcare Aid to Yemen Despite Worries About Coronavirus*, NEW YORK TIMES (Mar. 27, 2020), <https://www.nytimes.com/2020/03/27/world/middleeast/yemen-health-care-aid-coronavirus.html>

⁵⁵ *UN Warns Yemen on Brink of Famine Again*, VOA (Jul. 8, 2020, 8:03 AM), <https://www.voanews.com/middle-east/un-warns-yemen-brink-famine-again#:~:text=Yemen%20is%20already%20gripped%20by,on%20aid%20for%20their%20survival>.

previous rations.⁵⁶ Other aid organizations report similar cuts in aid to Yemen due to COVID-19.⁵⁷ Yemen currently faces nearly the same famine-driving indicators as in 2018,⁵⁸ but this time, humanitarian aid is unlikely to effectively mitigate the crisis.

II. LEGAL STANDARD

Starvation as a method of warfare is prohibited under international humanitarian law. Thus, perpetrators of starvation may be prosecuted for the destruction of objects indispensable to survival under Additional Protocols I⁵⁹ and II⁶⁰ of the Geneva Conventions and Rome Statute Articles 8(2)(b)(xxv) intentional use of starvation as a method of warfare, 7(1)(b) extermination, and 7(1)(k) other inhumane acts.⁶¹ Under Rome Statute Article 8(2)(b)(xxv), starvation may be charged as a war crime if it occurs during an international armed conflict (IAC),⁶² or under a newly adopted amendment to Article 8(2)(e) if the crime occurs during a non-international armed conflict (NIAC).⁶³ Under Rome Statute Articles 7(1)(b) extermination and 7(1)(k) other inhumane acts, perpetrators of starvation may be charged with crimes against humanity (CAH), regardless of whether the acts were committed during an IAC or NIAC.

⁵⁶ *UN Warns Yemen on Brink of Famine Again*, VOA (Jul. 8, 2020, 8:03 AM), <https://www.voanews.com/middle-east/un-warns-yemen-brink-famine-again#:~:text=Yemen%20is%20already%20gripped%20by,on%20aid%20for%20their%20survival>; *see also* Edith M. Lederer, *UN funding crisis cuts aid to Yemen as it slides near famine*, ABC NEWS (Aug. 18, 2020), <https://abcnews.go.com/US/wireStory/funding-crisis-cuts-aid-yemen-slides-famine-72455471>.

⁵⁷ Mohammed Abdi, Norwegian Refugee Council Yemen Country Dir., Statement reacting to Yemen hunger statistics by the U.N. (Dec. 3, 2020), <https://www.nrc.no/news/2020/december/yemen-nrc-reaction-to-hunger-statistics-by-the-un-today/>.

⁵⁸ *UN Warns Yemen on Brink of Famine Again*, VOA (Jul. 8, 2020, 8:03 AM), <https://www.voanews.com/middle-east/un-warns-yemen-brink-famine-again#:~:text=Yemen%20is%20already%20gripped%20by,on%20aid%20for%20their%20survival>.

⁵⁹ Protocol Additional to the Geneva Conventions of 12 August 1949 and Relating to the Protection of Victims of International Armed Conflicts (Protocol I), June 8, 1977, 1125 U.N.T.S. 3, at art. 54(1).

⁶⁰ Protocol Additional to the Geneva Conventions of 12 August 1949, and relating to the Protection of Victims of Non-International Armed Conflict, June 8, 1977, 1125 U.N.T.S. 609, at art. 14. Prior to the adoption of the 1977 Additional Protocols, starvation as a necessary military objective was permitted under international law. *See, e.g.*, General Order No. 100 (April 24, 1863) Lieber Code, Instructions for the Government of Armies of the United States in the Field, Arts. 17-18, https://avalon.law.yale.edu/19th_century/lieber.asp#sec1 (“War is not carried on by arms alone. It is lawful to starve the hostile belligerent, armed or unarmed, so that it leads to the speedier subjection of the enemy. When a commander of a besieged place expels the noncombatants, in order to lessen the number of those who consume his stock of provisions, it is lawful, though an extreme measure, to drive them back, so as to hasten on the surrender.”).

⁶¹ Rome Statute of the International Criminal Court arts. 8(2)(b)(xxv), 7(1)(b) and 7(1)(k), (Jul. 17, 1998).

⁶² In 2018, Switzerland proposed an amendment to the Rome Statute to include starvation as a war crime capable of being committed in a NIAC. It was unanimously adopted in December 2019, which means that the amendment now allows prosecutors to charge perpetrators of starvation in Yemen with war crimes, though only for future crimes of starvation, since the amendment would not apply *ex post facto*. *See Annex IV Non-paper submitted by Switzerland: proposed amendments to article 8 of the Rome Statute on the inclusion of starvation as a war crime in non-international armed conflicts*, ICC-ASP/17/35, 20 September 2018, § 11, https://asp.icc-cpi.int/iccdocs/asp_docs/ASP17/ICC-ASP-17-35-ENG.pdf; INT’L CRIM. CT. ASSEMBLY OF STATES PARTIES, REPORT OF THE WORKING GROUP ON AMENDMENTS, 7-9 (Eighteenth Session, Dec. 2-7. 2019), https://asp.icc-cpi.int/iccdocs/asp_docs/ASP18/ICC-ASP-18-32-ENG.pdf.

⁶³ INT’L CRIM. CT. ASSEMBLY OF STATES PARTIES, REPORT OF THE WORKING GROUP ON AMENDMENTS, 12 (Eighteenth Session, Dec. 2-7. 2019), https://asp.icc-cpi.int/iccdocs/asp_docs/ASP18/ICC-ASP-18-32-ENG.pdf. However, it is important to note that amendments can only be applied prospectively and not to acts that predate an amendment.

A. PROHIBITIONS ON STARVATION AS A METHOD OF WARFARE

International humanitarian law (IHL) governs the laws of war and conduct of parties to an armed conflict.⁶⁴ These rules, which create minimum standards for conduct in armed conflicts,⁶⁵ are enshrined in the 1949 Geneva Conventions, which established international norms for the treatment of combatants, prisoners of war, civilians, and the wounded or sick during armed conflicts.⁶⁶ Collectively ratified by all states, the Geneva Conventions are universally binding and considered customary international law.⁶⁷

Under IHL, starvation is defined as a forbidden method of warfare consisting of deliberately depriving civilians of food.⁶⁸ For example, it is prohibited to attack, destroy, remove, or render useless objects indispensable to the survival of the civilian population, including foodstuffs, agricultural sites, crops, livestock, and drinking water supplies, installations, and irrigation works, etc., with the intent to deny the civilian population or adverse party of sustenance for the targeted purpose of starving civilians, forcing their displacement, or other motives.⁶⁹

The laws of war dictate that parties to an armed conflict must abide by the fundamental principles of (1) distinction,⁷⁰ (2) proportionality⁷¹ and precaution of attacks,⁷² (3) military

⁶⁴ *Legal Consequences of the Construction of a Wall in the Occupied Palestinian Territory* (Advisory Opinion), 2004 I.C.J. 136, ¶¶ 95, 105 (July 9).

⁶⁵ David Marcus, *Famine Crimes in International Law*, 97 AM. J. INT'L L. 265, 270 (2003).

⁶⁶ Int'l Comm. Red Cross, *The Geneva Conventions of 1949 and their Additional Protocols*, <https://www.icrc.org/en/document/geneva-conventions-1949-additional-protocols>.

⁶⁷ Int'l Comm. Red Cross, *The Geneva Conventions of 1949 and their Additional Protocols*, <https://www.icrc.org/en/document/geneva-conventions-1949-additional-protocols>.

⁶⁸ Int'l Comm. Red Cross, *Starvation*, in HOW DOES LAW PROTECT IN WAR?, <https://casebook.icrc.org/glossary/starvation>.

⁶⁹ Int'l Comm. Red Cross, *Starvation*, in HOW DOES LAW PROTECT IN WAR?, <https://casebook.icrc.org/glossary/starvation>.

⁷⁰ Distinction requires that parties to an armed conflict distinguish between civilians and combatants. See Protocol Additional to the Geneva Conventions of 12 August 1949 and Relating to the Protection of Victims of International Armed Conflicts (Protocol I), June 8, 1977, 1125 U.N.T.S. 3, at art. 57(1); Protocol Additional to the Geneva Conventions of 12 August 1949, and relating to the Protection of Victims of Non-International Armed Conflict, June 8, 1977, 1125 U.N.T.S. 609, at art. 13(1)-(2); See also *Legality of the Threat or Use of Nuclear Weapons* (Advisory Opinion), 1996 I.C.J. 226, ¶ 78 (July 8) (declaring the principle of distinction is one of the “cardinal principles contained in the texts constituting the fabric of humanitarian law.”).

⁷¹ An attack is proportional if the incidental loss of civilian life is not excessive in proportion with the anticipated military advantage anticipated. See Protocol Additional to the Geneva Conventions of 12 August 1949 and Relating to the Protection of Victims of International Armed Conflicts (Protocol I), June 8, 1977, 1125 U.N.T.S. 3, at art. 51(5)(b), art. 85(3)(b); Additional Protocol II, Protocol Additional to the Geneva Conventions of 12 August 1949, and relating to the Protection of Victims of Non-International Armed Conflict, June 8, 1977, 1125 U.N.T.S. 609, at art. 26(3)(b), art. 3(3)(c); 1996 Amended Protocol II, art. 3(8)(c).

⁷² Sometimes referred to as the feasibility principle, precaution of attacks requires that parties to an armed conflict take care to not cause or minimize civilian harm. See Protocol Additional to the Geneva Conventions of 12 August 1949 and Relating to the Protection of Victims of International Armed Conflicts (Protocol I), June 8, 1977, 1125 U.N.T.S. 3, at art. 57(1) (“In the conduct of military operations, constant care shall be taken to spare the civilian population, civilians and civilian objects.”); Protocol Additional to the Geneva Conventions of 12 August 1949, and relating to the Protection of Victims of Non-International Armed Conflict, June 8, 1977, 1125 U.N.T.S. 609, at art. 13(1) (“The civilian population and individual civilians shall enjoy general protection against the dangers arising from military operations.”).

necessity,⁷³ (4) prohibition on unnecessary suffering/superfluous injury,⁷⁴ and (5) humanity (Martens clause).⁷⁵ The principle of distinction applies in both IACs and NIACs⁷⁶ and requires that attacks⁷⁷ are only directed at combatants⁷⁸ and that sieges and blockades seek to minimize civilian harm and be necessary to achieve a legitimate military objective, such as cutting off supplies to enemy combatants.⁷⁹ Parties to both IACs and NIACs must take precautions during attacks in order to protect civilians.⁸⁰

The principle of military necessity allows parties to armed conflicts to use force only to the extent necessary to achieve a legitimate military objective.⁸¹ Destruction of life and property is prohibited unless “imperatively demanded by the necessities of war.”⁸² The use of force must

⁷³ Military necessity allows parties to an armed conflict to undertake an attack when it is necessary to accomplish a legitimate military purpose. It must be balanced with the principles of distinction and proportionality to minimize civilian harm. See Protocol Additional to the Geneva Conventions of 12 August 1949 and Relating to the Protection of Victims of International Armed Conflicts (Protocol I), June 8, 1977, 1125 U.N.T.S. 3, at art. 90; *Legal Consequences of the Construction of a Wall in the Occupied Palestinian Territory* (Advisory Opinion), 2004 I.C.J. 136, ¶140, 105 (July 9).

⁷⁴ Parties to an armed conflict are strictly prohibited from using weapons or means of warfare that would cause unnecessary suffering or superfluous injury. See Protocol Additional to the Geneva Conventions of 12 August 1949 and Relating to the Protection of Victims of International Armed Conflicts (Protocol I), June 8, 1977, 1125 U.N.T.S. 3, at art. 35(2); Rome Statute of the International Criminal Court arts. 8(2)(b)(xx), (Jul. 17, 1998); *Legality of the Threat or Use of Nuclear Weapons* (Advisory Opinion), 1996 I.C.J. 226, ¶ 78 (July 8).

⁷⁵ The principle of humanity, sometimes referred to as the Martens clause, protects civilians from violations of IHL not expressly covered by treaties. It was introduced by Fyodor Fyodorovich Martens in the preamble of the 1899 Hague Convention. See Int’l Comm. Red Cross, *Fundamental Principles of IHL*, in HOW DOES LAW PROTECT IN WAR?, <https://casebook.icrc.org/glossary/fundamental-principles-ihl>.

⁷⁶ EMANUELA-CHIARA GILLARD, SIEGES, THE LAW AND PROTECTING CIVILIANS 2-4 (Chatham House: The Royal Institute of International Affairs, Jun. 2019), https://www.chathamhouse.org/sites/default/files/publications/research/2019-06-27-Sieges-Protecting-Civilians_0.pdf.

⁷⁷ A siege is a form of attack. See EMANUELA-CHIARA GILLARD, SIEGES, THE LAW AND PROTECTING CIVILIANS 8 (Chatham House: The Royal Institute of International Affairs, Jun. 2019), https://www.chathamhouse.org/sites/default/files/publications/research/2019-06-27-Sieges-Protecting-Civilians_0.pdf.

⁷⁸ Int’l Comm. Red Cross, *Customary IHL Rule 1*, IHL DATABASE, https://ihl-databases.icrc.org/customary-ihl/eng/docs/v1_rul_rule1.

⁷⁹ EMANUELA-CHIARA GILLARD, SIEGES, THE LAW AND PROTECTING CIVILIANS 2-4 (Chatham House: The Royal Institute of International Affairs, Jun. 2019), https://www.chathamhouse.org/sites/default/files/publications/research/2019-06-27-Sieges-Protecting-Civilians_0.pdf.

⁸⁰ Protocol Additional to the Geneva Conventions of 12 August 1949 and Relating to the Protection of Victims of International Armed Conflicts (Protocol I), June 8, 1977, 1125 U.N.T.S. 3, at art. 57(1) (“In the conduct of military operations, constant care shall be taken to spare the civilian population, civilians and civilian objects.”); Protocol Additional to the Geneva Conventions of 12 August 1949, and relating to the Protection of Victims of Non-International Armed Conflict, June 8, 1977, 1125 U.N.T.S. 609, at art. 13(1) (“The civilian population and individual civilians shall enjoy general protection against the dangers arising from military operations.”).

⁸¹ The Hague Convention (IV) Respecting the Laws and Customs of War on Land and Its Annex: Regulations Concerning the Laws and Customs of War on Land art. 23(g), October 18, 1907, 1 Bevans 577, <http://www.unhcr.org/refworld/docid/4374cae64.html>; see also Rome Statute of the International Criminal Court arts. art. 8(2)(b)(iv) (Jul. 17, 1998); Geneva Convention IV at art. 53.

⁸² The Hague Convention (IV) Respecting the Laws and Customs of War on Land and Its Annex: Regulations Concerning the Laws and Customs of War on Land art. 23(g), October 18, 1907, 1 Bevans 577,

also be proportionate to the expected military advantage.⁸³ IHL prohibits attacks which “may be expected to cause incidental loss of civilian life, injury to civilians, damage to civilian objects, or a combination thereof, which would be excessive in relation to the concrete and direct military advantage anticipated.”⁸⁴

Additional Protocols I and II of the Geneva Conventions prohibit starvation as a method of warfare. Starvation of civilians as a method of warfare is prohibited under Article 54 of Additional Protocol I (API) of the Geneva Conventions:

1. Starvation of civilians as a method of warfare is prohibited.
2. It is prohibited to attack, destroy, remove or render useless objects indispensable to the survival of the civilian population, such as foodstuffs, agricultural areas for the production of foodstuffs, crops, livestock, drinking water installations and supplies and irrigation works, for the specific purpose of denying them for their sustenance value to the civilian population or to the adverse Party, whatever the motive, whether in order to starve out civilians, to cause them to move away, or for any other motive.
3. The prohibitions in paragraph 2 shall not apply to such of the objects covered by it as are used by an adverse Party:
 - (a) as sustenance solely for the members of its armed forces; or
 - (b) if not as sustenance, then in direct support of military action, provided, however, that in no event shall actions against these objects be taken which may be expected to leave the civilian population with such inadequate food or water as to cause its starvation or force its movement.⁸⁵

This Article specifies that “to use [starvation] as a method of warfare would be to provoke it deliberately, causing the population to suffer hunger, particularly by depriving it of its sources of food or of supplies.”⁸⁶ Methods of warfare refer to the way that weapons are used in war,⁸⁷ more specifically, “(i) the way and manner in which the weapons are used; (ii) any

<http://www.unhcr.org/refworld/docid/4374cae64.html>; see also Rome Statute of the International Criminal Court arts. art. 8(2)(b)(iv) (Jul. 17, 1998); Geneva Convention IV at art. 53.

⁸³ *Military and Paramilitary Activities in and against Nicaragua* (Nicaragua v. U.S.), 1984 I.C.J. 392, ¶¶ 176, 194 (Nov. 26); see *Legality of the Threat or Use of Nuclear Weapons* (Advisory Opinion), 1996 I.C.J. 226, ¶¶ 30, 41 (July 8).

⁸⁴ Protocol Additional to the Geneva Conventions of 12 August 1949 and Relating to the Protection of Victims of International Armed Conflicts (Protocol I), June 8, 1977, 1125 U.N.T.S. 3, art. 51(5)(b); see also Rome Statute of the International Criminal Court arts. art. 8(2)(b)(iv) (Jul. 17, 1998).

⁸⁵ Protocol Additional to the Geneva Conventions of 12 August 1949 and Relating to the Protection of Victims of International Armed Conflicts (Protocol I), June 8, 1977, 1125 U.N.T.S. 3, at art. 54(1).

⁸⁶ Int’l Comm. Red Cross, Commentary 2089 to Protocol I at Art 54(2), <https://ihl-databases.icrc.org/applic/ihl/ihl.nsf/1a13044f3bbb5b8ec12563fb0066f226/6377cfd2c9d23f39c12563cd00434c81>; but see EMANUELA-CHIARA GILLARD, SIEGES, THE LAW AND PROTECTING CIVILIANS 10 (Chatham House: The Royal Institute of International Affairs, Jun. 2019), https://www.chathamhouse.org/sites/default/files/publications/research/2019-06-27-Sieges-Protecting-Civilians_0.pdf (arguing “a more complex question is whether the prohibition is limited to situations where a belligerent *deliberately* starves civilians, or whether it also covers situations where, although not intended, the starvation of civilians is the *foreseeable consequence* of a particular course of action.”); Cf. U.S. Department of Defense, *US Department of Defense Law of War Manual*, 5.20.2 (2016) (“Military action intended to starve enemy forces, however, must not be taken where it is expected to result in incidental harm to the civilian population that is excessive in relation to the military advantage anticipated to be gained.”).

⁸⁷ Int’l Comm. Red Cross, Commentary to Additional Protocols I and II, §§ 1402 and 1957, <https://ihl-databases.icrc.org/applic/ihl/ihl.nsf/1a13044f3bbb5b8ec12563fb0066f226/6377cfd2c9d23f39c12563cd00434c81>.

specific, tactical or strategic, ways of conducting hostilities that are not particularly related to weapons and that are intended to overwhelm and weaken the adversary.”⁸⁸ Although Article 54 strictly prohibits starvation of civilians, paragraph 3 creates a lawful exception that allows starvation of the enemy in a siege or blockade, so long as the attack complies with the principles of military necessity, distinction, and proportionality, and the attack does not deprive civilians of adequate food or water, or force civilian movement.

Similarly, Article 14 of the Additional Protocol II (APII) of the Geneva Conventions prohibits starvation of civilians as a method of combat during NIACs:

Starvation of civilians as a method of combat is prohibited. It is therefore prohibited to attack, destroy, remove or render useless, for that purpose, objects indispensable to the survival of the civilian population, such as foodstuffs, agricultural areas for the production of foodstuffs, crops, livestock, drinking water installations and supplies and irrigation works.⁸⁹

Article 14 prohibits the deliberate subjugation of people to famine and aims to preserve the civilian population’s means of subsistence.⁹⁰ The exceptions allowed under Article 54(3)(a)-(b) do not exist for Article 14; in other words, parties to armed conflicts may use sieges or blockades to gain military advantages against combatants in IACs, but not during NIACs. Finally, while sieges and blockades are considered legitimate methods of warfare, they must be directed at combatants,⁹¹ and the besieging party must allow the free passage of essential supplies and foodstuffs or allow civilian inhabitants of the besieged area to leave.⁹²

To that end, Article 70 of Additional Protocol I requires the uninhibited flow of relief items, such as humanitarian aid, during armed conflicts:

1. If the civilian population of any territory under the control of a Party to the conflict, other than occupied territory, is not adequately provided with the supplies mentioned in Article 69, relief actions which are humanitarian and impartial in character and conducted without any adverse distinction shall be undertaken, subject to the agreement of the Parties concerned in such relief actions. Offers of such relief shall not be regarded as interference in the armed conflict or as unfriendly acts. In the distribution of relief consignments, priority shall be given to those persons, such as children, expectant

⁸⁸ N. MELZER AND G. GAGGLIOLI, *Methods of Warfare*, in OXFORD GUIDE TO INTERNATIONAL HUMANITARIAN LAW (D. AKANDE AND B. SAUL, eds. 2019), citing to Int’l Comm. Red Cross Commentary to Additional Protocol I, § 4799.

⁸⁹ Protocol Additional to the Geneva Conventions of 12 August 1949, and relating to the Protection of Victims of Non-International Armed Conflict, June 8, 1977, 1125 U.N.T.S. 609, at art. 14.

⁹⁰ Int’l Comm. Red Cross, Commentary ¶ 4791, on Protocol Additional to the Geneva Conventions of 12 August 1949, and relating to the Protection of Victims of Non-International Armed Conflict, June 8, 1977, 1125 U.N.T.S. 609, at art. 14, <https://ihl-databases.icrc.org/applic/ihl/WebART/470-750069?OpenDocument.ihl.nsf/Comment.xsp?action=openDocument&documentId=22A3363FA0482A57C12563CD0043AB5D>.

⁹¹ Int’l Comm. Red Cross, Commentary ¶ 4795, on Protocol Additional to the Geneva Conventions of 12 August 1949, and relating to the Protection of Victims of Non-International Armed Conflict, June 8, 1977, 1125 U.N.T.S. 609, at art. 14, <https://ihl-databases.icrc.org/applic/ihl/WebART/470-750069?OpenDocument.ihl.nsf/Comment.xsp?action=openDocument&documentId=22A3363FA0482A57C12563CD0043AB5D>.

⁹² Int’l Comm. Red Cross, *Rule 53: Starvation as a Method of Warfare*, IHL DATABASE, https://ihl-databases.icrc.org/customary-ihl/eng/docs/v1_rul_rule53 (last visited Apr. 1, 2021); Int’l Comm. Red Cross, *Practice Relating to Rule 55: Access for Humanitarian Relief to Civilians in Need*, IHL DATABASE, https://ihl-databases.icrc.org/customary-ihl/eng/docs/v2_rul_rule55 (last visited Apr. 1, 2021); see also S.C. Res. 2417, ¶¶ 6, 10 (May 24, 2018) (emphasizing, “willfully impeding relief supply and access for responses to conflict-induced food insecurity in situations of armed conflict . . . may constitute a violation of international humanitarian law”).

mothers, maternity cases and nursing mothers, who, under the Fourth Convention or under this Protocol, are to be accorded privileged treatment or special protection.

2. The Parties to the conflict and each High Contracting Party shall allow and facilitate rapid and unimpeded passage of all relief consignments, equipment, and personnel provided in accordance with this Section, even if such assistance is destined for the civilian population of the adverse Party.⁹³

Even though sieges and blockades are permitted during armed conflicts, Article 70 preserves the right of passage to humanitarian aid to ensure civilian relief.

B. THE CRIME OF STARVATION

War crimes during armed conflicts can occur against civilians or combatants. Isolated attacks are sufficient to amount to a war crime.⁹⁴ Unlike crimes against humanity, war crimes have no requirement that the attack be widespread or systematic. To charge a perpetrator with a war crime, the conduct must take place in the context of and be associated with an armed conflict, and the perpetrator must be aware of the existence of an armed conflict.⁹⁵

Crimes against humanity (CAH) may occur during armed conflicts of international or non-international character, but only as part of a widespread or systematic attack upon a civilian population.⁹⁶ An attack is considered widespread if it is large scale in nature or number of victims.⁹⁷ An attack is systematic if it forms part of an organized plan or policy, such that its random occurrence is improbable.⁹⁸ The requirement that an attack be widespread *or* systematic comes from decisions at the International Criminal Tribunal for Rwanda (ICTR) and the International Criminal Tribunal for Yugoslavia (ICTY).⁹⁹ The ICTR held that an attack is widespread if it is a “massive, frequent, large scale action, carried out collectively with considerable seriousness and directed against a multiplicity of victims.”¹⁰⁰ An attack is systematic if it “constitutes organized action, following a regular pattern, on the basis of a common policy and involves substantial public or private resources. . . . [T]here must exist some preconceived plan or policy.”¹⁰¹ The ICTY listed four elements of a systematic plan:

⁹³ Protocol Additional to the Geneva Conventions of 12 August 1949 and Relating to the Protection of Victims of International Armed Conflicts (Protocol I), June 8, 1977, 1125 U.N.T.S. 3, at art. 70(1)-(2).

⁹⁴ Prosecutor v. Callixte Mbarushimana, ICC-01/04-01/10, Decision on the Confirmation of Charges, ¶ 94 (Dec. 16, 2011), https://www.icc-cpi.int/CourtRecords/CR2011_22538.PDF.

⁹⁵ Rome Statute of the International Criminal Court arts. art. 8(2)(b)(xxv) (Jul. 17, 1998).

⁹⁶ Rome Statute of the International Criminal Court arts. art. 7 (Jul. 17, 1998).

⁹⁷ David Marcus, *Famine Crimes in International Law*, 97 AM. J. INT’L L. 265, 272 (2003).

⁹⁸ David Marcus, *Famine Crimes in International Law*, 97 AM. J. INT’L L. 265, 272 (2003).

⁹⁹ See, e.g., Prosecutor v. Mile Mrkšić, Miroslav Radić and Veselin Šljivančanin, Case No. IT-95-13/1-T, Judgment, ¶ 437 (Int’l Crim. Trib. for the Former Yugoslavia Sept. 27, 2007) (“[T]he attack must be widespread or systematic, the requirement being disjunctive rather than cumulative.”); Prosecutor v. Clément Kayishema and Obed Ruzindana, Case No. ICTR-95-1-T, Judgment, ¶ 123 (May 21, 1999) (“The attack must contain one of the alternative conditions of being widespread or systematic.”); see also Report of the Ad Hoc Comm. on the Establishment of a Permanent International Criminal Court, Official Records of the General Assembly, Fiftieth Session Int’l Crim. Ct., ¶ 78, Supplement No. 22 (A/50/22), ¶ 78 (1995), <https://www.legal-tools.org/doc/b50da8/pdf/> (“elements that should be reflected in the definition of crimes against humanity included . . . [that] the crimes usually involved a widespread or systematic attack.”).

¹⁰⁰ Prosecutor v. Akayesu, No. ICTR-96-4-T, Judgment, ¶ 580 (Sept. 2, 1998).

¹⁰¹ Prosecutor v. Musema, No. ICTR-96-13-T, Judgment, ¶ 204 (Jan. 27, 2000).

1. The existence of a political objective, a plan pursuant to which the attack is perpetrated or an ideology, in the broad sense of the word, that is, to destroy, persecute or weaken a community;
2. The perpetration of a criminal act on a very large scale against a group of civilians or the repeated and continuous commission of inhumane acts linked to one another;
3. The preparation and use of significant public or private resources, whether military or other;
4. The implication of high-level political and/or military authorities in the definition and establishment of the methodical plan.¹⁰²

The plan of a systematic attack does not require formal articulation, so long as it can be inferred from the circumstances.¹⁰³

Determining whether to charge perpetrators of starvation with war crimes or CAH depends on the following factors: (1) whether the attacks targeted civilians or combatants, (2) whether the starvation occurred during an IAC or NIAC, and (3) whether the starvation was an isolated event or a widespread or systematic one. While Yemen's conflict has characteristics of an IAC insofar as the belligerents to the conflict include the Yemeni government, Yemeni Republican Guard, Iran-backed Houthi rebels, and the SLC, it is largely viewed as a civil war of non-international character, or NIAC.¹⁰⁴

Finally, the Rome Statute exclusively applies to cases over which the International Criminal Court (ICC) has jurisdiction. Neither Yemen nor the other primary actors to the armed conflict are parties to the Rome Statute, so application of the Rome Statute in this case is somewhat hypothetical in nature. Under the principle of complementarity, domestic jurisdictions should have similar statutes prohibiting starvation as the one laid forth here.¹⁰⁵ Domestic statutes also sometimes include universal jurisdiction provisions for certain *jus cogens* violations, as discussed under the avenues of accountability below. Additionally, since prohibition on the use of starvation against civilians as a method of warfare is customary international law, and the Rome Statute is a codification of custom, it is useful to consider regardless of whether the belligerents are charged by the ICC.

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**THE PLAN OF A SYSTEMATIC
ATTACK DOES NOT REQUIRE
FORMAL ARTICULATION, SO
LONG AS IT CAN BE INFERRED
FROM THE CIRCUMSTANCES.**



¹⁰² Prosecutor v. Blaskic, No. IT-95-14, Judgment, ¶ 203 (Int'l Crim. Trib. for the Former Yugoslavia Mar. 3, 2000) (“A crime against humanity is made special by the methods employed in its perpetration (the widespread character) or by the context in which these methods must be framed (the systematic character) as well as by the status of the victims (any civilian population).”).

¹⁰³ Prosecutor v. Blaskic, No. IT-95-14, Judgment, ¶ 204 (Int'l Crim. Trib. for the Former Yugoslavia Mar. 3, 2000).

¹⁰⁴ For further discussion of the two types of armed conflicts, see Int'l Comm. Red Cross, *How is the Term “Armed Conflict” Defined in International Humanitarian Law?*, Opinion Paper (March 2008), <https://www.icrc.org/en/doc/assets/files/other/opinion-paper-armed-conflict.pdf>.

¹⁰⁵ ICC, Informal Expert Paper, *The principle of complementarity in practice*, 3 (2003), <https://www.icc-cpi.int/NR/rdonlyres/20BB4494-70F9-4698-8E30-907F631453ED/281984/complementarity.pdf> (“The principle of complementarity governs the exercise of the Court’s jurisdiction [...] The Statute recognizes that States have the first responsibility and right to prosecute international crimes. The ICC may only exercise jurisdiction where national legal systems fail to do so, including where they purport to act but in reality are unwilling or unable to genuinely carry out proceedings.”).

a. War Crimes

Article 8(2)(b)(xxv) of the Rome Statute criminalizes “[i]ntentionally using starvation as a method of warfare by depriving civilians of objects indispensable to their survival, including willfully impeding relief supplies as provided for under the Geneva Conventions.”¹⁰⁶ Four elements are required to establish the offence of starvation in an IAC:

1. The perpetrator deprived civilians of objects indispensable to their survival.
2. The perpetrator intended to starve civilians as a method of warfare.
3. The conduct took place in the context of and was associated with an international armed conflict.
4. The perpetrator was aware of factual circumstances that established the existence of an armed conflict.

¹⁰⁷

Additionally, as of December 2019, Article 8(2)(e) was amended to include the following language: “[i]ntentionally using starvation of civilians as a method of warfare by depriving them of objects indispensable to their survival, including willfully impeding relief supplies.”¹⁰⁸ Under the 2019 amendment to Article 8(2)(e), elements for the crime of starvation in NIACs include:

1. The perpetrator deprived civilians of objects indispensable to their survival.
2. The perpetrator intended to starve civilians as a method of warfare.
3. The conduct took place in the context of and was associated with an armed conflict *not of an international character*.
4. The perpetrator was aware of factual circumstances that established the existence of an armed conflict.¹⁰⁹

The first element concerns the *actus reus*, or the perpetrator’s conduct of depriving civilians of OIS. However, this does not necessarily require the result of starvation – i.e., that civilians die as a direct result.¹¹⁰ Thus, the prosecutor need only show that the perpetrator attacked a civilian object such as a water source or food supply. The second element establishes the *mens rea* concerning the act of starvation. Elements one and two operate together, such that unintentional or negligent deprivation of OIS is insufficient to prove purposeful starvation of civilians. Rather, the prosecutor must show that the perpetrator acted with intent to attack a civilian object that would, in the normal course of events, lead to starvation of civilians. The

¹⁰⁶ INT’L CRIM. CT., ELEMENTS OF CRIMES, 31 (2001), <https://www.icc-cpi.int/nr/rdonlyres/336923d8-a6ad-40ec-ad7b-45bf9de73d56/0/elementsofcrimeseng.pdf>.

¹⁰⁷ INT’L CRIM. CT., ELEMENTS OF CRIMES, 31 (2001), <https://www.icc-cpi.int/nr/rdonlyres/336923d8-a6ad-40ec-ad7b-45bf9de73d56/0/elementsofcrimeseng.pdf>.

¹⁰⁸ INT’L CRIM. CT. ASSEMBLY OF STATES PARTIES, REPORT OF THE WORKING GROUP ON AMENDMENTS, 12 (Eighteenth Session, Dec. 2-7. 2019), https://asp.icc-cpi.int/iccdocs/asp_docs/ASP18/ICC-ASP-18-32-ENG.pdf [hereinafter Assembly of State Parties]. It is important to note that in accordance with Article 121(5) of the Rome Statute, this amendment only enters into force for those State Parties that have accepted the amendment within one year after the deposit of their instruments of ratification or acceptance of the amendment. However, given that the amendment was adopted unanimously by the Assembly of State Parties, it is unlikely that any State Parties will take a reservation to the amendment, which would lead to fragmentation of the treaty.

¹⁰⁹ INT’L CRIM. CT. ASSEMBLY OF STATES PARTIES, REPORT OF THE WORKING GROUP ON AMENDMENTS, 12 (Eighteenth Session, Dec. 2-7. 2019), https://asp.icc-cpi.int/iccdocs/asp_docs/ASP18/ICC-ASP-18-32-ENG.pdf (emphasis added).

¹¹⁰ WORLD PEACE FOUNDATION, THE CRIME OF STARVATION AND METHODS OF PROSECUTION AND ACCOUNTABILITY 9 (Jun. 18, 2019), <https://starvationaccountability.org/resources/publications/the-crime-of-starvation-and-the-method-of-prosecution-and-accountability-policy-paper>.

third and fourth elements concern the *chapeau* or contextual elements, which must always be present for a war crime to occur – that is, that the attack took place in the context of an armed conflict and the perpetrator was aware of this fact. The only difference between Article 8(2)(b)(xxv) and Article 8(2)(e) is the third element, which distinguishes between crimes taking place during IACs and NIACs.

Since starvation has never been prosecuted as a war crime, some interpretation of “intent” is necessary. Article 30(2) of the Rome Statute establishes that a person has intent where: “(a) In relation to conduct, that person means to engage in the conduct; (b) In relation to a consequence, that person means to cause that consequence or is aware that it will occur in the ordinary course of events.”¹¹¹ It is enough to prove that the perpetrator knew or was aware that the consequence of deprivation of OIS would lead to the result of starvation,¹¹² thus lowering the requisite *mens rea* from knowledge to recklessness.¹¹³ This is implied from Article 30(2)(b) which states that the perpetrator need only be “aware that [starvation] will occur in the ordinary course of events.” Thus, to build a successful case against a perpetrator for the war crime of starvation, the prosecutor need only prove that the actor (1) meant to target OIS, and (2) was aware that in the ordinary course of events starvation was likely to occur as a consequence of targeting OIS.

b. Crimes Against Humanity

As an alternative to charging perpetrators of starvation with war crimes under Rome Statute Article 8, prosecutors could bring related charges of CAH under Article 7(1)(b) extermination or Article 7(1)(k) other inhumane acts.¹¹⁴ CAH may occur in peacetime or during an armed conflict, and, unlike the crime of genocide, CAH need not target a specific group.¹¹⁵ Moreover, prosecutors do not need to prove specific intent for CAH. Simple intent to commit a CAH is sufficient to charge perpetrators under Article 7 if the *chapeau* elements – that the attack is widespread or systematic and that the perpetrator knew that the conduct was intended to be part of a widespread or systematic attack – are also met.¹¹⁶

First, intentional starvation of civilians may be charged under Article 7(1)(b) as extermination, which includes “the intentional infliction of conditions of life, *inter alia* the deprivation of access to food and medicine, calculated to bring about the destruction of part of a population.”¹¹⁷ The elements of extermination under Article 7(1)(b) are:

¹¹¹ Rome Statute of the International Criminal Court arts. art. 30(2)(a)-(b) (Jul. 17, 1998).

¹¹² WORLD PEACE FOUNDATION, THE CRIME OF STARVATION AND METHODS OF PROSECUTION AND ACCOUNTABILITY 12 (Jun. 18, 2019), <https://starvationaccountability.org/resources/publications/the-crime-of-starvation-and-the-method-of-prosecution-and-accountability-policy-paper>.

¹¹³ See e.g., David Marcus, *Famine Crimes in International Law*, 97 AM. J. INT’L L. 265, 275 (2003) (arguing that international criminal law supports the *mens rea* of recklessness for second-degree famine crimes).

¹¹⁴ Indeed, in a private conversation with the author, former Chief Prosecutor of the ICC, Luis Moreno Ocampo, suggested the easiest route would be to charge perpetrators of starvation under Article 7 in order to avoid the challenges associated with the IAC/NIAC distinction of Article 8. Interview with Luis Moreno Ocampo, former Chief Prosecutor, International Criminal Court, in Dublin, Ireland (Oct. 28, 2019).

¹¹⁵ U. N. Off. on Genocide Prevention & Resp. to Protect, *Crimes Against Humanity*, <https://www.un.org/en/genocideprevention/crimes-against-humanity.shtml> (last visited Apr. 1, 2021).

¹¹⁶ U. N. Off. on Genocide Prevention & Resp. to Protect, *Crimes Against Humanity*, <https://www.un.org/en/genocideprevention/crimes-against-humanity.shtml> (last visited Apr. 1, 2021).

¹¹⁷ INT’L CRIM. CT., ELEMENTS OF CRIMES, 6 (2001), <https://www.icc-cpi.int/nr/rdonlyres/336923d8-a6ad-40ec-ad7b-45bf9de73d56/0/elementsofcrimeseng.pdf>.

1. The perpetrator killed one or more persons, including by inflicting conditions of life calculated to bring about the destruction of part of a population.
2. The conduct constituted, or took place as part of, a mass killing of members of a civilian population.
3. The conduct was committed as part of a widespread or systematic attack directed against a civilian population.
4. The perpetrator knew that the conduct was part of or intended the conduct to be part of a widespread or systematic attack directed against a civilian population.¹¹⁸

With respect to the first element, the Rome Statute drafters note that the infliction of such conditions could include the deprivation of access to food and medicine.¹¹⁹ Additionally, the drafters note that “killed” is interchangeable with “caused death,”¹²⁰ and may be direct or indirect.¹²¹ The *mens rea* for extermination is satisfied by showing that the perpetrator intentionally killed or recklessly caused the death of civilians.¹²² Some interpretation on mass killing is necessary to determine how many civilians must be killed to satisfy the second element. The third and fourth elements are the *chapeau* elements.

Prosecutors may also bring charges against perpetrators of starvation under the blanket category of CAH in Article 7(1)(k) of the Rome Statute:

1. The perpetrator inflicted great suffering, or serious injury to body or to mental or physical health, by means of an inhumane act.
2. Such act was of a character similar to any other act referred to in article 7, paragraph 1, of the Statute.
3. The perpetrator was aware of the factual circumstances that established the character of the act.
4. The conduct was committed as part of a widespread or systematic attack directed against a civilian population.
5. The perpetrator knew that the conduct was part of or intended the conduct to be part of a widespread or systematic attack directed against a civilian population.¹²³

Regarding the first element, the prosecutor must show that the perpetrator inflicted great suffering, or serious injury to mental or physical health, through an inhumane act.¹²⁴ The ICTY ruled in the *Krnjelac* case that imposing a severe shortage of food can constitute such infliction of suffering.¹²⁵ The process of waste as described by Collingham in Part I certainly meets the criterion of “great suffering.” The *mens rea* for extermination is satisfied when the perpetrator intentionally kills or recklessly causes the death of civilians.¹²⁶ The remaining elements concern the *chapeau* elements.

¹¹⁸ INT’L CRIM. CT., ELEMENTS OF CRIMES, 6 (2001), <https://www.icc-cpi.int/nr/rdonlyres/336923d8-a6ad-40ec-ad7b-45bf9de73d56/0/elementsofcrimeseng.pdf> [hereinafter ELEMENTS OF CRIMES].

¹¹⁹ INT’L CRIM. CT., ELEMENTS OF CRIMES, n.9 (2001), <https://www.icc-cpi.int/nr/rdonlyres/336923d8-a6ad-40ec-ad7b-45bf9de73d56/0/elementsofcrimeseng.pdf> [hereinafter ELEMENTS OF CRIMES].

¹²⁰ INT’L CRIM. CT., ELEMENTS OF CRIMES, n.7 (2001), <https://www.icc-cpi.int/nr/rdonlyres/336923d8-a6ad-40ec-ad7b-45bf9de73d56/0/elementsofcrimeseng.pdf> [hereinafter ELEMENTS OF CRIMES].

¹²¹ INT’L CRIM. CT., ELEMENTS OF CRIMES, n.8 (2001), <https://www.icc-cpi.int/nr/rdonlyres/336923d8-a6ad-40ec-ad7b-45bf9de73d56/0/elementsofcrimeseng.pdf> [hereinafter ELEMENTS OF CRIMES].

¹²² David Marcus, *Famine Crimes in International Law*, 97 AM. J. INT’L L. 265, 272 (2003); Prosecutor v. Ignace Bagilishema, Case No. ICTR-95-1A-T, Judgment ¶ 93, 94 (Jun. 7, 2001).

¹²³ Rome Statute of the International Criminal Court, art. 7(1)(k) (Jul. 17, 1998).

¹²⁴ INT’L CRIM. CT., ELEMENTS OF CRIMES, 12 (2001), <https://www.icc-cpi.int/nr/rdonlyres/336923d8-a6ad-40ec-ad7b-45bf9de73d56/0/elementsofcrimeseng.pdf>.

¹²⁵ Prosecutor v. Milorad Krnjelac, Case No. IT-97-25-T, Judgment, ¶ 183 (Int’l Crim. Trib. for the Former Yugoslavia, March 15, 2002).

¹²⁶ David Marcus, *Famine Crimes in International Law*, 97 AM. J. INT’L L. 265, 272 (2003); see also Prosecutor v. Ignace Bagilishema, Case No. ICTR-95-1A-T, Judgment ¶ 93, 94 (Jun. 7, 2001).

c. Evidentiary challenges

Charging perpetrators of starvation crimes presents “evidentiary challenges to proving the cause of a death in famine: the causal chain from act to outcome is longer, more complicated, and much more beset by challenges of demonstrating proof beyond doubt, than in the case of . . . violent killing.”¹²⁷ Indeed, “defense counsel could argue that a malnourished individual died on account of an infection not directly associated with forced deprivation, or because of that person’s failure to obtain alternative sources of food.”¹²⁸ For this reason, circumstantial evidence may be required to build an inference of causation between the act (e.g., attacks on water supplies) and the consequence (e.g., death/injury caused by cholera outbreak in water supply).¹²⁹ According to some experts, however, causation does not have to be proven because the sole requirement is that the perpetrator intended to deprive civilians of OIS, knowing or reasonably foreseeing that the consequence (i.e., starvation/injury) would result.¹³⁰ Indeed, the threshold for starvation “implies a high degree of deprivation, more significant than the ‘not adequately provided’ standard that brings into play the rules of IHL regulating humanitarian relief operations. . . . However, it is not necessary for deaths to occur.”¹³¹ Prosecutors would therefore focus on proving the attack on a civilian object occurred, rather than the result of starvation, and make reasonable inferences concerning starvation to prove responsibility for starvation crimes.

d. Modes of liability

Assigning responsibility to an individual actor for starvation crimes depends on that individual’s role in the crimes’ commission. Modes of liability for starvation crimes come in two forms: individual criminal responsibility and command responsibility.

Individual criminal responsibility arises when an individual planned, instigated, ordered, committed, or otherwise aided and abetted in the planning, preparation, or execution of a crime.¹³² Forms of individual criminal responsibility also include joint criminal enterprise, co-perpetration (joint perpetration), indirect perpetration, and indirect co-perpetration.¹³³

Article 28 of the Rome Statute outlines command responsibility.¹³⁴ Command responsibility “assigns criminal responsibility to high-ranking members of military as well as

¹²⁷ Alex De Waal, *The end of famine? Prospects for the elimination of mass starvation by political action*, 62 POLITICAL GEOGRAPHY 184, 189 (2018).

¹²⁸ Alex De Waal, *The end of famine? Prospects for the elimination of mass starvation by political action*, 62 POLITICAL GEOGRAPHY 184, 189 (2018).

¹²⁹ The International Court of Justice has allowed for the use of circumstantial evidence when direct evidence is not available or under the exclusive control of one of the parties. *See* The Corfu Channel Case (U.K. v. Alb.) Judgment, 1949 ICJ Rep. 17 (Apr. 9).

¹³⁰ WORLD PEACE FOUNDATION, Policy Paper, THE CRIME OF STARVATION AND METHODS OF PROSECUTION AND ACCOUNTABILITY 13 (Jun. 18, 2019), <https://starvationaccountability.org/resources/publications/the-crime-of-starvation-and-the-method-of-prosecution-and-accountability-policy-paper>.

¹³¹ EMANUELA-CHIARA GILLARD, SIEGES, THE LAW AND PROTECTING CIVILIANS 10 (Chatham House: The Royal Institute of International Affairs, Jun. 2019), https://www.chathamhouse.org/sites/default/files/publications/research/2019-06-27-Sieges-Protecting-Civilians_0.pdf.

¹³² Rome Statute of the International Criminal Court, art 25(3) (Jul. 17, 1998); *see also* Statute for the Int’l Crim. Trib. of the Former Yugoslavia, art. 7(1); Statute for the Int’l Crim. Trib. for Rwanda, art. 6(1).

¹³³ Rome Statute of the International Criminal Court, art 25(3) (Jul. 17, 1998); *see also* Statute for the Int’l Crim. Trib. of the Former Yugoslavia, art. 7(1); Statute for the Int’l Crim. Trib. for Rwanda, art. 6(1).

¹³⁴ Rome Statute of the International Criminal Court, art 28 (Jul. 17, 1998).

militia for the crimes committed by their subordinates.”¹³⁵ It requires that the charged individual holds a “superior subordinate relationship with the direct perpetrators and that they knew or should have known that the crimes were being or had been committed.”¹³⁶ This could be a military commander or civilian commander of militia. Hypothetically, if a subordinate attacks an OIS and the commanding officer knew or could have reasonably foreseen that starvation of civilians would likely result and chose to recklessly disregard that risk, then both the subordinate and the commanding officer would be criminally liable.

C. EVIDENCE OF STARVATION CRIMES IN YEMEN

Starvation of civilians is one of the main atrocities of the war in Yemen.¹³⁷ The primary contributor to mass starvation is the disproportionate destruction of OIS.¹³⁸ Evidence of destruction of OIS is well documented by groups such as the World Peace Foundation,¹³⁹ the Human Rights Council’s Group of Eminent Experts on Yemen,¹⁴⁰ Global Legal Action Network,¹⁴¹ Yemen Data Project,¹⁴² and Yemen’s Ministry of Agriculture and Irrigation.¹⁴³ These groups have documented attacks on critical infrastructure, such as electricity sources, water supplies, irrigation dams, agricultural extension facilities, and health facilities.¹⁴⁴

Here, the evidence associated with starvation crimes and related violations of IHL is examined. The goal is to provide a factual basis to build prosecutions against perpetrators responsible for these atrocities. The documented evidence dates back to 2015 and continues through the critical period of starvation events in 2017-2018.

¹³⁵ CASE MATRIX NETWORK, INTERNATIONAL CRIMINAL LAW GUIDELINES: COMMAND RESPONSIBILITY 16 (Ctr. for Int’l L. Rsch. & Pol’y 2016), <https://www.legal-tools.org/doc/7441a2/pdf/>.

¹³⁶ CASE MATRIX NETWORK, INTERNATIONAL CRIMINAL LAW GUIDELINES: COMMAND RESPONSIBILITY 16 (Ctr. for Int’l L. Rsch. & Pol’y 2016), <https://www.legal-tools.org/doc/7441a2/pdf/>.

¹³⁷ GLOBAL RIGHTS COMPLIANCE & WORLD PEACE FOUND., Policy Brief, ACCOUNTABILITY FOR MASS STARVATION: STARVATION IN YEMEN, 1–2 (Sept. 3, 2019), <https://starvationaccountability.org/wp-content/uploads/2019/09/WPF-GRC-POLICY-BRIEF-Accountability-for-Starvation-Yemen-Sept-2019.pdf>.

¹³⁸ GLOBAL RIGHTS COMPLIANCE & WORLD PEACE FOUND., Policy Brief, ACCOUNTABILITY FOR MASS STARVATION: STARVATION IN YEMEN, 1–2 (Sept. 3, 2019), <https://starvationaccountability.org/wp-content/uploads/2019/09/WPF-GRC-POLICY-BRIEF-Accountability-for-Starvation-Yemen-Sept-2019.pdf>.

¹³⁹ See generally GLOBAL RIGHTS COMPLIANCE & WORLD PEACE FOUND., Policy Brief, ACCOUNTABILITY FOR MASS STARVATION: STARVATION IN YEMEN, 1–2 (Sept. 3, 2019), <https://starvationaccountability.org/wp-content/uploads/2019/09/WPF-GRC-POLICY-BRIEF-Accountability-for-Starvation-Yemen-Sept-2019.pdf>.

¹⁴⁰ See Press Release, Group of International & Regional Eminent Experts on Yemen, Yemen: Collective Failure, Collective Responsibility – U.N. Expert Report (Sept. 3, 2019), <https://www.ohchr.org/en/NewsEvents/Pages/DisplayNews.aspx?NewsID=24937&LangID=E>; see generally Situation of Human Rights in Yemen, Including Violations and Abuses Since September 2014, Rep. Grp. Eminent Int’l & Reg’l Experts on Yemen, U.N. Doc. A/HRC/45/6 (2020), <https://www.ohchr.org/Documents/HRBodies/HRCouncil/GEE-Yemen/2020-09-09-report.pdf>.

¹⁴¹ See generally *Yemen: A Humanitarian Crisis*, GLOB. LEGAL ACTION NETWORK, <https://www.glanlaw.org/yemen> (last visited Apr. 1, 2021).

¹⁴² See generally YEMEN DATA PROJECT, <https://yemendataproject.org/index.html>, (last visited Apr. 1, 2021).

¹⁴³ See generally MINISTRY AGRIC. & IRRIGATION, <http://www.agricultureyemen.com/index.php>; see also *Two Years of Systematic Targeting of the Agricultural Sector in the Circle of Aggression*, Ministry of Agriculture & Irrigation (2017).

¹⁴⁴ GLOBAL RIGHTS COMPLIANCE & WORLD PEACE FOUND., Policy Brief, ACCOUNTABILITY FOR MASS STARVATION: STARVATION IN YEMEN, 1–2 (Sept. 3, 2019), <https://starvationaccountability.org/wp-content/uploads/2019/09/WPF-GRC-POLICY-BRIEF-Accountability-for-Starvation-Yemen-Sept-2019.pdf>.

A. STARVATION CAUSING EVENTS

Before the onset of the war in March 2015, two-thirds of Yemen's population lived in dispersed villages and small towns, and over half of the population relied on agriculture and animal husbandry.¹⁴⁵ Oil shortages and price increases since 2011 have made it nearly impossible for farmers to irrigate their land.¹⁴⁶ Beginning in 2014, civilian objects were repeatedly targeted, leading to the deaths and displacement of many civilians.¹⁴⁷ As a result of ongoing fighting, access to food in markets has been reduced significantly, and the price of food items has increased drastically, making food unaffordable for many.¹⁴⁸ Attacks on civilian objects have been committed by Houthi rebels, SLC, Emirati forces, and Yemeni military forces,¹⁴⁹ though the SLC is identified as the most responsible party for starvation events.

There was a notable shift in August 2015 from military and government targets to civilian and economic targets, including water and transport infrastructure, food production and distribution, roads and transport, schools, cultural monuments, clinics and hospitals, houses, fields and flocks.¹⁵⁰ Agricultural land was targeted frequently alongside all the other components of rural life.¹⁵¹ Since agricultural land covers less than 5% of Yemen's total land surface,¹⁵² targeting agriculture in Yemen requires a certain precision in aiming, making it less likely that these targets were incidental, but rather intentional targets aimed at the destruction of OIS. Further, in the incidents that follow, there was no discernable military objective for targeting OIS.

¹⁴⁵ MARTHA MUNDY, THE STRATEGIES OF THE COALITION IN THE YEMEN WAR: AERIAL BOMBARDMENT AND FOOD War 8 (World Peace Found., 2018), <https://sites.tufts.edu/wpf/files/2018/10/Strategies-of-Coalition-in-Yemen-War-Final-20181005-1.pdf>.

¹⁴⁶ MARTHA MUNDY, THE STRATEGIES OF THE COALITION IN THE YEMEN WAR: AERIAL BOMBARDMENT AND FOOD War 13 (World Peace Found., 2018), <https://sites.tufts.edu/wpf/files/2018/10/Strategies-of-Coalition-in-Yemen-War-Final-20181005-1.pdf>.

¹⁴⁷ GLOBAL RIGHTS COMPLIANCE & WORLD PEACE FOUND., Policy Brief, ACCOUNTABILITY FOR MASS STARVATION: STARVATION IN YEMEN, 6-7 (Sept. 3, 2019), <https://starvationaccountability.org/wp-content/uploads/2019/09/WPF-GRC-POLICY-BRIEF-Accountability-for-Starvation-Yemen-Sept-2019.pdf>.

¹⁴⁸ GLOBAL RIGHTS COMPLIANCE & WORLD PEACE FOUND., Policy Brief, ACCOUNTABILITY FOR MASS STARVATION: STARVATION IN YEMEN, 6-7 (Sept. 3, 2019), <https://starvationaccountability.org/wp-content/uploads/2019/09/WPF-GRC-POLICY-BRIEF-Accountability-for-Starvation-Yemen-Sept-2019.pdf>.

¹⁴⁹ GLOBAL RIGHTS COMPLIANCE & WORLD PEACE FOUND., Policy Brief, ACCOUNTABILITY FOR MASS STARVATION: STARVATION IN YEMEN, 6-7 (Sept. 3, 2019), <https://starvationaccountability.org/wp-content/uploads/2019/09/WPF-GRC-POLICY-BRIEF-Accountability-for-Starvation-Yemen-Sept-2019.pdf>.

¹⁵⁰ MARTHA MUNDY, THE STRATEGIES OF THE COALITION IN THE YEMEN WAR: AERIAL BOMBARDMENT AND FOOD War 7 (World Peace Found., 2018), <https://sites.tufts.edu/wpf/files/2018/10/Strategies-of-Coalition-in-Yemen-War-Final-20181005-1.pdf>.

¹⁵¹ MARTHA MUNDY, THE STRATEGIES OF THE COALITION IN THE YEMEN WAR: AERIAL BOMBARDMENT AND FOOD War 12 (World Peace Found., 2018), <https://sites.tufts.edu/wpf/files/2018/10/Strategies-of-Coalition-in-Yemen-War-Final-20181005-1.pdf>.

¹⁵² *Selected Indicators: Yemen*, FAOSTAT, <http://www.fao.org/faostat/en/?#country/249> (last visited, Apr. 1, 2021).

a. The SLC air war strategy and targets

A growing trend of SLC attacks against civilian OIS began in 2015 and carried through the critical 2017-2018 period.¹⁵³ A complete breakdown of the strikes selected for analysis can be found in Appendix X. Each strike selected for analysis meets the following five criteria, derived from the ICC elements for the war crime of starvation as a method of warfare as outlined in Part II.¹⁵⁴

1. These airstrikes each took place in the broader armed conflict of the SLC air war.
2. Operational planning officers, flight command officers, and pilots were aware of the fact that they were engaging in strikes as part of the SLC air war.
3. In each case, the strikes targeted for destruction of OIS, or objects directly related to obtaining or producing OIS.
4. The intentional targeting of OIS shows that the operational intent of the strikes was to destroy or deny access to OIS.
5. Heads of State, command staff, flight staff, and pilots have ample access to information about the mass-deprivation of food and water in Yemen, and many rights organizations and the UN are making that information publicly available. Nevertheless, parties involved are continuing patterns of attacks on civilian access to OIS, which demonstrates their intent to deprive civilians of OIS as a method of warfare.

For the purpose of understanding the SLC's air campaign strategy of targeting OIS, each type of OIS must be recognized in its own right – for instance, water wells, food supplies, or grocery stores. But each of these types of OIS exist as part of a production process, and their deprivation have secondary effects which must also be considered. For civilians, alleviating a need for fresh water is a process. Groundwater supplies and aquifers must be identified, equipment must be brought to the location of the potential well. Civilian workers need to sink the well using heavy equipment and develop access to the aquifer through the development of infrastructure, however rudimentary. A lack of safe water leads to dehydration and disease, as well as other effects. It may harm irrigation, which may pose knock-on problems for agriculture. Dehydration increases a population's vulnerability to diseases like dysentery and cholera.¹⁵⁵ Because of the nature of the production process, strikes that target production of OIS or efforts to ameliorate civilian populations affected by a paucity of OIS must also be considered as part of a broader method of warfare characterized by three tactics:

1. The direct destruction of OIS (e.g., destroying water supplies or water trucks).
2. The destruction of the capacity to access or produce OIS (e.g., destroying water infrastructure or well-drilling equipment).

¹⁵³ Data on SLC attacks on OIS during 2017-18 comes from the YEMEN DATA PROJECT, PUBLISHED AIR RAID DATABASE FROM 26 MARCH 2015- TO 31 DECEMBER 2020, Yemen Data Project, <https://yemendataproject.org/data.html>.

¹⁵⁴ INT'L CRIM. CT., ELEMENTS OF CRIMES, 31 (2001), <https://www.icc-cpi.int/nr/rdonlyres/336923d8-a6ad-40ec-ad7b-45bf9de73d56/0/elementsofcrimeseng.pdf> [hereinafter ELEMENTS OF CRIMES].

¹⁵⁵ *Health Topics: Cholera*, WORLD HEALTH ORG., https://www.who.int/health-topics/cholera#tab=tab_1 (last visited Apr. 1, 2021); PHOEBE WILLIAMS & JAMES A. BERKELY, DYSENTERY (SHIGELLOSIS): CURRENT WHO GUIDELINES AND WHO ESSENTIAL MEDICINE LIST FOR CHILDREN, (World Health Org. Expert Committee Publications, 2016), https://www.who.int/selection_medicines/committees/expert/21/applications/s6_paed_antibiotics_appendix5_dysentery.pdf.

3. The maximization of harm caused by a paucity of OIS (e.g., destroying medical sites providing cholera treatment).¹⁵⁶

Accordingly, this section analyzes all three of these types of strikes, in the broader context of the SLC air campaign.

Targeting is crucial evidence of intent, especially within the context of the broader air campaign. Striking aircraft may release ordnance that damages or destroys OIS incidentally while targeting legitimate military objects. An individual strike can be analyzed for its military intent by using a series of “aggravating” and “mitigating” factors:

- Technical precision of munitions used;
- Atmospheric conditions: time of day, amount of cloud or dust obstruction, brightness of sunlight (to facilitate or impair the pilot’s aim);
- Confusion of conditions on the ground;
- Intensity of combat in the targeted space;
- Density of obstacles (hitting a target is easier in an open plain than a dense city);
- Size of targeted object;
- Tactical context (for instance the use of “double tap” tactics, or multiple strikes on the same target).¹⁵⁷

The strikes selected for analysis bear multiple indications of aggravating tactics. In urban environments, the targets tended to be large and easy to hit. Most of the strikes used precise munitions, some had follow-up attacks. The SLC targeted one farm in particular, the Naseem farms, with six different strikes over the course of a year. Most missions flew on clear days into calm areas; pilots could see their targets, aim carefully, while not under hostile fire. Most missions against non-military targets flew between mid-morning and mid-afternoon, with the sun high. All of these factors suggest that strike after strike, farm after farm, well after well, bombs and missiles did not repeatedly fall on civilian objects by accident. Mission planners and pilots aimed at these objects, and successfully struck their targets.

The SLC’s policy of targeting OIS as a method of warfare is apparent in targeting patterns. Repeated individual strikes on OIS, and patterns of strikes which target other components in the OIS production pipeline both reveal a policy of targeting OIS as a method of warfare. SLC targeting doctrines and mission orders are not publicly accessible, but when the details of strikes reveal their intended targets as above, patterns of those intentional strikes reveal the policies underpinning the air campaign. Tactical strikes take two general forms. The first is a strike ordered by air command leadership against a specified target. The second is an armed reconnaissance mission flown by armed aircraft which are authorized to strike targets of opportunity within a specific set of parameters.¹⁵⁸ For the first type of strike, leadership selects

¹⁵⁶ Attacks on medical care providers are distinct war crimes, but that fact does not mean that their destruction is not also the deprivation of OIS, especially in conjunction with other attacks against food and water supplies.

¹⁵⁷ A “double tap” strike is a tactic by which the target is destroyed in a way which maximizes harm to the civilians in the area. Either a follow-up strike is launched, or the pilot makes a second pass; either way, the first “tap” strikes the target, and then, when civilians begin towards the strike site to assess damage and rescue wounded individuals, the second strikes hit the responders. Double-tap strikes are almost all war crimes in their own right, but for the purpose of this study, the follow-up strike shows targeting intent.

¹⁵⁸ For example, during the U.S. war in Vietnam, some armed reconnaissance missions sought fresh intelligence about activities on the border between South Vietnam and Laos, but also targeted vehicles on the roads and rivers in those spaces. *See generally* DONALD MROZEK, *AIR POWER AND THE GROUND WAR IN VIETNAM: IDEAS AND ACTIONS*, (U.S.A.F. Air University Press, 1988), https://www.airuniversity.af.edu/Portals/10/AUPress/Books/B_0017_MROZEK_GROUND_WAR_VIETNAM.pdf.

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ALL OF THESE FACTORS SUGGEST THAT STRIKE AFTER STRIKE, FARM AFTER FARM, WELL AFTER WELL, BOMBS AND MISSILES DID NOT REPEATEDLY FALL ON CIVILIAN OBJECTS BY ACCIDENT.

the target and usually live-controls the mission. For the second, leadership provides pilots with authorization to strike specific types of targets. Because those strike missions are not directly targeted by leadership, they place unique requirements on the pilot: the pilot must be able to identify a target, recognize that it falls within the parameters of their authorization, and be able to aim ordnance. Because of these requirements, armed reconnaissance flights reveal targeting as well as deliberately targeted strike missions. Strikes against mobile targets like herds of cattle, fishing boats, and trucks carrying food, water, or other humanitarian aid.

A second indicator of OIS destruction as a method of warfare is a pattern of destroying the means of

producing OIS and exacerbating the harm caused by the destruction of OIS. The strike trends below demonstrate a pattern through which SLC strikes destroyed OIS, the means to produce or acquire OIS, and resources and infrastructure which would ameliorate the harm caused by deprivation to OIS. The SLC repeatedly targeted farms and farm equipment, herds of cattle, and fishing boats, markets and grocery stores, well digging sites, stores of water, water purification facilities, and medical facilities intended to treat cholera. No apparent military objective is discernable from these attacks. Strikes also targeted salt factories and ice factories.¹⁵⁹ Salt and ice are both crucial food preservatives, especially in spaces without electrical refrigeration. Other military action includes strikes against, or blockades of, port facilities through which food and other humanitarian aid arrives in the country.

b. Attacks on civilian objects

Evidence presented in this section comes from the Yemen Data Project, World Peace Foundation, and the Yemen Accountability Project. Much of the evidence from 2015-2017 relies on the World Peace Foundation’s 2018 report *infra*,¹⁶⁰ while our analysis of the evidence from 2017-2018 comes largely from the events in the Yemen Data Project’s vast database, as well as the Yemen Accountability Project’s corroborated Crime Base Matrix. In 2017 and 2018, the Yemen Data Project tracked 8597 coalition airstrikes.¹⁶¹ This number encapsulates all military targeting, throughout all of the fighting in Yemen, not just strikes against civilians or civilian targets. Of those strikes, 568 (about 6.6% of strikes) directly targeted OIS, OIS production, or OIS deprivation amelioration with no apparent military objective. Thousands of additional strikes destroyed OIS or inhibited civilians’ access to OIS, but the trends discussed below for the period of 2017-2018, and delineated in Appendix X, are restricted to the 568 strikes which appear to be intentionally and verifiably directed to the destruction of OIS.

¹⁵⁹ YEMEN DATA PROJECT, PUBLISHED AIR RAID DATABASE FROM 26 MARCH 2015 TO 31 DECEMBER 2020, <https://yemendataproject.org/data.html>, 11033, 12117, 12292, 15966, 18065, 18868.

¹⁶⁰ MARTHA MUNDY, THE STRATEGIES OF THE COALITION IN THE YEMEN WAR: AERIAL BOMBARDMENT AND FOOD WAR (World Peace Found., 2018), <https://sites.tufts.edu/wp/2018/10/Strategies-of-Coalition-in-Yemen-War-Final-20181005-1.pdf>.

¹⁶¹ YEMEN DATA PROJECT, PUBLISHED AIR RAID DATABASE FROM 26 MARCH 2015 TO 31 DECEMBER 2020, <https://yemendataproject.org/data.html>. These strikes are outlined in Appendix X.

1. Farms and agriculture

There were many airstrikes on agricultural targets during the period of March 2015 to August 2016.¹⁶² Attacks on agricultural land are particularly egregious because only 5% of Yemen's land is arable, and prior to the war, only 3% of Yemen's total land surface was used for agriculture.¹⁶³ Dozens of SLC airstrikes on markets, fruit, corn, and dairy farms, a dairy factory, water drilling rigs, and food and water storage facilities and transportation vehicles across western Yemen between 31 March 2015 and 27 November 2016 have worsened Yemen's food insecurity.¹⁶⁴

Sixty eight percent of the 568 SLC strikes in 2017-2018 targeted objects for food production. Most of these strikes destroyed and damaged farms. On several occasions, strikes targeted multiple farms on the same day, or at the same time. Some farms, like those at Al-Naseem, were targeted over a half-dozen times within 2017-2018.¹⁶⁵ Some strikes appear to have been double-tap strikes.¹⁶⁶ In addition to farms, strikes targeted herds of cattle, plant nurseries,¹⁶⁷ agricultural equipment in storage, and in one instance, a fruit cooling facility.¹⁶⁸ Notably, many

¹⁶² MARTHA MUNDY, THE STRATEGIES OF THE COALITION IN THE YEMEN WAR: AERIAL BOMBARDMENT AND FOOD WAR 11 (World Peace Found., 2018), <https://sites.tufts.edu/wp/2018/10/Strategies-of-Coalition-in-Yemen-War-Final-20181005-1.pdf>.

¹⁶³ MARTHA MUNDY, THE STRATEGIES OF THE COALITION IN THE YEMEN WAR: AERIAL BOMBARDMENT AND FOOD WAR 12 (World Peace Found., 2018), <https://sites.tufts.edu/wp/2018/10/Strategies-of-Coalition-in-Yemen-War-Final-20181005-1.pdf>.

¹⁶⁴ See generally YEMEN DATA PROJECT, PUBLISHED AIR RAID DATABASE FROM 26 MARCH 2015 TO 31 DECEMBER 2020, <https://yemendataproject.org/data.html>; *What Military Target Was in My Brother's House: Unlawful Coalition Airstrikes in Yemen*, HUM. RTS. WATCH (Nov. 26, 2015), <https://www.hrw.org/report/2015/11/26/what-military-target-was-my-brothers-house/unlawful-coalition-airstrikes-yemen>; Ahmed Al-Haj, *Saudi-led airstrikes, rebel shelling kills 9 in Yemen*, ASSOC. PRESS (Jun. 25, 2015), <https://apnews.com/article/5636fe98eb254264910cf5aa09fc68c0>; *Houthi shells kill 18 in Yemen, dengue fever spreading*, REUTERS (Jul. 1, 2015 10:38 AM), <https://www.reuters.com/article/us-yemen-security/houthi-shells-kill-18-in-yemen-dengue-fever-spreading-idUSKCN0PB54N20150701>; *Saudi-led strikes kill 30 in northern Yemen, Houthis say*, REUTERS (Jul. 5, 2015, 6:48 AM), <https://www.reuters.com/article/us-yemen-security/saudi-led-strikes-kill-30-in-northern-yemen-houthis-say-idUSKCN0PF0CH20150705>; Mohammed Gobari, *Air strikes, ground combat in Yemen killed nearly 200 on Monday*, REUTERS (July 6, 2015 8:16 PM), <https://www.reuters.com/article/uk-yemen-security/air-strikes-ground-combat-in-yemen-killed-nearly-200-on-monday-idUKKCN0PG0FD20150707>; Ayisha Amr, *How al Qaeda Rules in Yemen: Letter from Mukalla*, FOREIGN AFFS. (Oct. 28, 2015), <https://www.foreignaffairs.com/articles/yemen/2015-10-28/how-al-qaeda-rules-yemen>; *Yemen: US-Made Bombs Used in Unlawful Airstrikes: Dozens of Civilian Deaths Underscore Need for Saudi Arms Embargo*, HUM. RTS. WATCH (Dec. 8, 2016 12:00 AM EST), <https://www.hrw.org/news/2016/12/08/yemen-us-made-bombs-used-unlawful-airstrikes>; *Shelling of market in Yemeni city kills more than 20 civilians, MSF says*, THE GUARDIAN (Nov. 18, 2016), <https://www.theguardian.com/world/2016/nov/18/yemen-market-taiz-shelled-civilians-killed-msf>.

¹⁶⁵ YEMEN DATA PROJECT, PUBLISHED AIR RAID DATABASE FROM 26 MARCH 2015 TO 31 DECEMBER 2020, <https://yemendataproject.org/data.html>, 11376, 11390, 11701, 12033, 12445, 13156, 15203.

¹⁶⁶ For example, two strikes against the Al-Jar farms on March 12, 2017; two strikes against the Al-Wirash Farms on July 3, 2017. YEMEN DATA PROJECT, PUBLISHED AIR RAID DATABASE FROM 26 MARCH 2015 TO 31 DECEMBER 2020, <https://yemendataproject.org/data.html>, 11911, 11913.

¹⁶⁷ For example, a triple-tap strike on a nursery complex in Al-Anad on June 3, 2017. YEMEN DATA PROJECT, PUBLISHED AIR RAID DATABASE FROM 26 MARCH 2015 TO 31 DECEMBER 2020, <https://yemendataproject.org/data.html>, 13105, 13106, 13108.

¹⁶⁸ YEMEN DATA PROJECT, PUBLISHED AIR RAID DATABASE FROM 26 MARCH 2015 TO 31 DECEMBER 2020, <https://yemendataproject.org/data.html>, 14726.

strikes against farms in particular occurred during the mid-morning or early afternoon when the largest number of farmers, cattle, and equipment could be destroyed by each strike. Seven strikes

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targeted factories producing materials for preserving food including two salt factories and four ice factories.¹⁶⁹ Strikes targeted the Red Sea Flour Mill facilities in Al-Hali on three occasions in Autumn 2018.¹⁷⁰ Several strikes also targeted trucks carrying food and urban food storage facilities.¹⁷¹ Because of the nature of an airstrike targeting a food truck, those strikes imply that food trucks are an armed reconnaissance target as a matter of policy. As starvation became increasingly pervasive in 2018, strikes began to target food and UN aid distribution facilities,¹⁷² demonstrating a policy or plan to attack humanitarian aid and food production even as Yemen had entered into famine or near-famine conditions in several parts of the country.

2. Water supply and production

Strikes against water targets highlight most effectively the targetable production spectrum of an OIS. The SLC targeted well drilling equipment, areas where wells are to be drilled, active drilling projects, intact wells, water supply development infrastructure, trucks conveying water to water-deprived areas, and desalination plants. Strikes were also directed at water supply or production in order to increase the severity of harm from dehydration on the civilian population. Several targeted water treatment plants and sewage plants. Such strikes contaminate broader water supplies and prevent civilian authorities from purifying water supplies, which exacerbates the spread of disease. Likewise, some strikes target medical centers established to treat cholera, a disease which arises primarily from jeopardized water supplies.¹⁷³

Since the late 1970s, the World Bank has invested in professionally engineered water diversion structures, overseen by the Tihama Development Authority (TDA), used to strengthen

¹⁶⁹ YEMEN DATA PROJECT, PUBLISHED AIR RAID DATABASE FROM 26 MARCH 2015 TO 31 DECEMBER 2020, <https://yemendataproject.org/data.html>.

¹⁷⁰ YEMEN DATA PROJECT, PUBLISHED AIR RAID DATABASE FROM 26 MARCH 2015 TO 31 DECEMBER 2020, <https://yemendataproject.org/data.html>, 18419, 18643, 18791.

¹⁷¹ For example, YEMEN DATA PROJECT, PUBLISHED AIR RAID DATABASE FROM 26 MARCH 2015 TO 31 DECEMBER 2020 <https://yemendataproject.org/data.html>, 15628, (targeting a food storage facility in Al-Hali; YEMEN DATA PROJECT, PUBLISHED AIR RAID DATABASE FROM 26 MARCH 2015 TO 31 DECEMBER 2020, <https://yemendataproject.org/data.html>, 11977, 12432, 12807, 16202, 17041, 18458 (targeting food trucks).

¹⁷² YEMEN DATA PROJECT, PUBLISHED AIR RAID DATABASE FROM 26 MARCH 2015 TO 31 DECEMBER 2020, <https://yemendataproject.org/data.html>, 18095, (targeting a UNICEF warehouse), 18255, 18266 (a double-tap strike targeting a food distribution point).

¹⁷³ YEMEN DATA PROJECT, PUBLISHED AIR RAID DATABASE FROM 26 MARCH 2015 TO 31 DECEMBER 2020, <https://yemendataproject.org/data.html>, 13128, 17648.

water disbursement to farmlands in the region.¹⁷⁴ Twice in August 2015 and again in September, the SLC delivered a total of 15 airstrikes on the TDA's central compound just outside Hudaydah, and a further three airstrikes attacked irrigation structures in wadi Siham in October 2015.¹⁷⁵ On 4 October 2015 irrigation structures in wadi Siham were targeted and on 6 October the TDA compound was targeted.¹⁷⁶

The Yemen Data Project reports two additional attacks on TDA infrastructure in 2016 and another three in early 2017.¹⁷⁷ As a consequence of these attacks, agricultural yields decreased by 24% among farmers in wadi Zabid and 46% in wadi Siham, due primarily to irrigation water shortages.¹⁷⁸ The Tihama region, once considered the breadbasket of Yemen, has decreased land cultivation by 51%, crop yields declined by 20–61% per hectare, there has been a complete annihilation of fruits, vegetables, and livestock population, as well as a population where 43% are food insecure.¹⁷⁹ Forty-three separate targeting events on water supply or production are recorded in Appendix X from January 2017 to November 2018. Additionally, the World Peace Foundation reports that the SLC received target intelligence from American and British military advisors regarding the location of the TDA,¹⁸⁰ which suggests the purposeful targeting of water supply and production facilities.

3. *Fishing*

SLC strikes also targeted elements of the fishing industry. Artisanal fishing has long been a primary source of food production in Yemen.¹⁸¹ Prior to the war in 2015, Yemen's fisheries sector ranked second in terms of exports and constituted 2% of Yemen's GDP.¹⁸² The General Authority of Fishing in the Red Sea has documented damages to fishing from the beginning of the war through December 2017.¹⁸³ The report shows that 146 fishermen have died and 220

¹⁷⁴ MARTHA MUNDY, THE STRATEGIES OF THE COALITION IN THE YEMEN WAR: AERIAL BOMBARDMENT AND FOOD WAR, WORLD PEACE FOUNDATION, 14 (World Peace Found., 2018), <https://sites.tufts.edu/wpf/files/2018/10/Strategies-of-Coalition-in-Yemen-War-Final-20181005-1.pdf>.

¹⁷⁵ MARTHA MUNDY, THE STRATEGIES OF THE COALITION IN THE YEMEN WAR: AERIAL BOMBARDMENT AND FOOD WAR, WORLD PEACE FOUNDATION, 14 (World Peace Found., 2018), <https://sites.tufts.edu/wpf/files/2018/10/Strategies-of-Coalition-in-Yemen-War-Final-20181005-1.pdf>.

¹⁷⁶ YEMEN DATA PROJECT, PUBLISHED AIR RAID DATABASE FROM 26 MARCH 2015 TO 31 DECEMBER 2020, <https://yemendataproject.org/data.html>, 4123, 4170.

¹⁷⁷ MARTHA MUNDY, THE STRATEGIES OF THE COALITION IN THE YEMEN WAR: AERIAL BOMBARDMENT AND FOOD WAR, WORLD PEACE FOUNDATION, 15 (World Peace Found., 2018), <https://sites.tufts.edu/wpf/files/2018/10/Strategies-of-Coalition-in-Yemen-War-Final-20181005-1.pdf>.

¹⁷⁸ MARTHA MUNDY, THE STRATEGIES OF THE COALITION IN THE YEMEN WAR: AERIAL BOMBARDMENT AND FOOD WAR, WORLD PEACE FOUNDATION, 15 (World Peace Found., 2018), <https://sites.tufts.edu/wpf/files/2018/10/Strategies-of-Coalition-in-Yemen-War-Final-20181005-1.pdf>.

¹⁷⁹ *Yemen's Burnt Granary*, Flood-Based Livelihoods Network Foundation, <http://spate-irrigation.org/yemens-burnt-granary/#more-6422>

¹⁸⁰ MARTHA MUNDY, THE STRATEGIES OF THE COALITION IN THE YEMEN WAR: AERIAL BOMBARDMENT AND FOOD WAR, WORLD PEACE FOUNDATION, 15 (World Peace Found., 2018), <https://sites.tufts.edu/wpf/files/2018/10/Strategies-of-Coalition-in-Yemen-War-Final-20181005-1.pdf>.

¹⁸¹ GLOBAL RIGHTS COMPLIANCE & WORLD PEACE FOUND., Policy Brief, ACCOUNTABILITY FOR MASS STARVATION: STARVATION IN YEMEN, 3 (Sept. 3, 2019), <https://starvationaccountability.org/wp-content/uploads/2019/09/WPF-GRC-POLICY-BRIEF-Accountability-for-Starvation-Yemen-Sept-2019.pdf>.

¹⁸² AMMAR AL-FAREH, THE IMPACT OF THE WAR IN YEMEN ON ARTISANAL FISHING OF THE RED SEA, LSE 7 (Middle East Centre Report, 7 (2018), http://eprints.lse.ac.uk/91022/1/Al-Fareh_The-impact-of-war_Author.pdf.

¹⁸³ AMMAR AL-FAREH, THE IMPACT OF THE WAR IN YEMEN ON ARTISANAL FISHING OF THE RED SEA, LSE 21 (Middle East Centre Report, 21 (2018), http://eprints.lse.ac.uk/91022/1/Al-Fareh_The-impact-of-war_Author.pdf.

fishing boats were destroyed due to SLC airstrikes.¹⁸⁴ Since 2018, the SLC has carried out at least five deadly attacks on civilian fishing boats in the Red Sea, killing at least 47 Yemeni fishermen and detaining over 100.¹⁸⁵ The attacks were carried out by warships and helicopters short distances away from the fishing boats, so their civilian nature should have been apparent.¹⁸⁶ Such attacks have caused economic difficulty in Yemeni fishing villages and deterred many from continuing to fish.¹⁸⁷

As fixed structures, fishing facilities were easy targets for directed missions. The majority of the fishing-related strikes, however, targeted fishing boats out of port. These strikes likely occurred on armed reconnaissance-type missions, because specific fishing boats cannot be readily targeted from headquarters, and because the majority of these strikes occurred around specific fishing areas. For example, in the first two weeks of February 2017, five distinct strikes targeted groups of fishing boats off the Hudaydah coastline, more than half of the 2017 strikes targeting fishing boats.¹⁸⁸ Thirteen strikes targeted Yemen port facilities. Several strikes, especially in 2018, specifically targeted fixed structures associated with the fishing industry.¹⁸⁹

4. Markets

As a result of ongoing fighting, access to food in markets has been reduced significantly, and the price of food items has increased drastically, making food unaffordable for many.¹⁹⁰ Food shortages have been exacerbated by attacks on markets. Thirteen percent of SLC strikes in 2017-2018 targeted markets, and a few targeted other food purveyors. These strikes predominantly occurred during the day, when the largest number of civilians were present. Markets targeted ranged from rural to urban, and many strikes targeted large markets many times.¹⁹¹ In December 2017, SLC airstrikes targeted a market in al-Ta'iziyah district, completely destroying the market and leaving 54 civilians dead and a further 32 injured.¹⁹² Further, a blockade of Ta'izz by Houthi and allied forces loyal to Saleh prevented the passage of food, fuel,

¹⁸⁴ MARTHA MUNDY, THE STRATEGIES OF THE COALITION IN THE YEMEN WAR: AERIAL BOMBARDMENT AND FOOD WAR, WORLD PEACE FOUNDATION, 16 (World Peace Found., 2018), <https://sites.tufts.edu/wpf/files/2018/10/Strategies-of-Coalition-in-Yemen-War-Final-20181005-1.pdf>.

¹⁸⁵ *Yemen: Coalition Warships Attack Fishing Boats*, HUM. RTS. WATCH (Aug. 21, 2019, 12:01 AM EDT), <https://www.hrw.org/news/2019/08/21/yemen-coalition-warships-attack-fishing-boats>.

¹⁸⁶ *Yemen: Coalition Warships Attack Fishing Boats*, HUM. RTS. WATCH (Aug. 21, 2019, 12:01 AM EDT), <https://www.hrw.org/news/2019/08/21/yemen-coalition-warships-attack-fishing-boats>.

¹⁸⁷ *Yemen: Coalition Warships Attack Fishing Boats*, HUM. RTS. WATCH (Aug. 21, 2019, 12:01 AM EDT), <https://www.hrw.org/news/2019/08/21/yemen-coalition-warships-attack-fishing-boats>.

¹⁸⁸ YEMEN DATA PROJECT, PUBLISHED AIR RAID DATABASE FROM 26 MARCH 2015 TO 31 DECEMBER 2020, <https://yemendataproject.org/data.html>, 11218, 11262, 11379, 11439, 11978.

¹⁸⁹ YEMEN DATA PROJECT, PUBLISHED AIR RAID DATABASE FROM 26 MARCH 2015 TO 31 DECEMBER 2020, <https://yemendataproject.org/data.html>, 15870, 16236, 17006, 18509, 18629.

¹⁹⁰ GLOBAL RIGHTS COMPLIANCE & WORLD PEACE FOUND., Policy Brief, ACCOUNTABILITY FOR MASS STARVATION: STARVATION IN YEMEN, 6–7 (Sept. 3, 2019), <https://starvationaccountability.org/wp-content/uploads/2019/09/WPF-GRC-POLICY-BRIEF-Accountability-for-Starvation-Yemen-Sept-2019.pdf>.

¹⁹¹ In 2017 alone, strikes targeted Sirwah Market at least ten times. YEMEN DATA PROJECT, PUBLISHED AIR RAID DATABASE FROM 26 MARCH 2015 TO 31 DECEMBER 2020, <https://yemendataproject.org/data.html>, 11292, 11713, 12448, 12994, 13160, 13347, 13365, 13390, 13794, 14818.

¹⁹² GLOBAL RIGHTS COMPLIANCE & WORLD PEACE FOUND., Policy Brief, ACCOUNTABILITY FOR MASS STARVATION: STARVATION IN YEMEN, 7 (Sept. 3, 2019), <https://starvationaccountability.org/wp-content/uploads/2019/09/WPF-GRC-POLICY-BRIEF-Accountability-for-Starvation-Yemen-Sept-2019.pdf>.

and water to those in the surrounding area.¹⁹³ Consequently, 75% of the civilian population in Ta'izz in August 2018 were ranked as food insecure and at least 85% were dependent on humanitarian aid.¹⁹⁴

Strikes targeted other food purveyors as well, including Qat sellers, a bakery, a candy shop (in a marketplace), a grocery store, and a fish market.¹⁹⁵ Strikes against marketplaces tend to be particularly deadly, and destroy food immediately at the point of supply; as such they inflict particularly imminent starvation. These strikes also risk harm to a particularly high number of civilians. For example, in January 2018, a double-tap strike targeted the Al Mifkhadh market and one of the main bridges in the market's vicinity.¹⁹⁶ Many of these attacks resulted in civilian casualties, such as the 5 July airstrike on a market in Sanaa and the 6 July 2015 airstrike on a market in Amran that each killed an estimated 30 civilians.¹⁹⁷ Houthi attacks on markets had similar results; Houthis indiscriminately firing shells at a market in Mansoura, Aden killed 11 civilians and left 30 wounded.¹⁹⁸ Such attacks continued throughout 2019. Most notably, between November and December of 2019, the al-Raqw Market in the northern province of Saada was attacked three times, resulting in 89 casualties.¹⁹⁹ These attacks on markets not only provide evidence of intent to commit starvation crimes, but also unlawful targeting of civilians.

5. Medical facilities

In 2017, an SLC strike targeted a cholera treatment center.²⁰⁰ This is particularly significant given that Yemen's cholera epidemic spiked to over one million cases in 2016 and steadily increased in 2017.²⁰¹ Strikes targeting medical care providers increased sharply in

¹⁹³ Ian Black, *Saudis strike in response to Houthi Scud attack as forgotten war rages on*, THE GUARDIAN (Oct. 15, 2015, 2:55 PM EDT),

<https://www.theguardian.com/world/2015/oct/15/saudi-arabia-strike-response-houthi-scud-attack-forgotten-war>.

¹⁹⁴ GLOBAL RIGHTS COMPLIANCE & WORLD PEACE FOUND., Policy Brief, ACCOUNTABILITY FOR MASS STARVATION: STARVATION IN YEMEN, 7 (Sept. 3, 2019), <https://starvationaccountability.org/wp-content/uploads/2019/09/WPF-GRC-POLICY-BRIEF-Accountability-for-Starvation-Yemen-Sept-2019.pdf>.

¹⁹⁵ YEMEN DATA PROJECT, PUBLISHED AIR RAID DATABASE FROM 26 MARCH 2015 TO 31 DECEMBER 2020, <https://yemendataproject.org/data.html>, 13266, 13167, 11186, 13681, 15546.

YEMEN DATA PROJECT, PUBLISHED AIR RAID DATABASE FROM 26 MARCH 2015 TO 31 DECEMBER 2020, <https://yemendataproject.org/data.html>, 16099, 16100.

¹⁹⁷ *Saudi-led strikes kill 30 in northern Yemen, Houthis say*, REUTERS (Jul. 5, 2015, 6:48 AM), <https://www.reuters.com/article/us-yemen-security/saudi-led-strikes-kill-30-in-northern-yemen-houthis-say-idUSKCN0PF0CH20150705>; Mohammed Gobari, *Air strikes, ground combat in Yemen killed nearly 200 on Monday*, REUTERS (July 6, 2015, 8:16 PM), <https://www.reuters.com/article/uk-yemen-security/air-strikes-ground-combat-in-yemen-killed-nearly-200-on-monday-idUKKCN0PG0FD20150707>.

¹⁹⁸ *Houthi shells kill 18 in Yemen, dengue fever spreading*, REUTERS (July 1, 2015, 10:38 AM), <https://www.reuters.com/article/us-yemen-security/houthi-shells-kill-18-in-yemen-dengue-fever-spreading-idUSKCN0PB54N20150701>.

¹⁹⁹ *UN condemns third attack on Yemen market in a month*, AL JAZEERA (Dec. 26, 2019), <https://www.aljazeera.com/news/2019/12/26/un-condemns-third-attack-on-yemen-market-in-a-month>; AFP, *UN: 17 Civilians Killed in 3rd Attack on Yemen Market*, VOA NEWS (Dec. 26, 2019, 10:12 AM), <https://www.voanews.com/middle-east/un-17-civilians-killed-3rd-attack-yemen-market>.

²⁰⁰ YEMEN DATA PROJECT, PUBLISHED AIR RAID DATABASE FROM 26 MARCH 2015 TO 31 DECEMBER 2020, <https://yemendataproject.org/data.html>, 13128.

²⁰¹ Hesham M. Al-Mekhlafi, *Yemen in a Time of Cholera: Current Situation and Challenges*, 98 Am. J. Tropical Med. & Hygiene 1558, 1558 (2018), <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6086153/>.

2018.²⁰² In 2018, strikes targeted hospitals and clinics,²⁰³ groups of paramedics, ambulances and other vehicles carrying wounded individuals,²⁰⁴ and at least one medical dispensary.²⁰⁵ Targeting medical care providers is a violation of IHL in its own right, under both the Geneva Conventions and Rome Statute. Actors and objects which make medicine or provide medical care are also considered OIS and must be included in the broader analysis of an OIS targeting pattern and policy, particularly given the massive cholera outbreak in 2017-2018 caused by lack of access to clean water.²⁰⁶

c. Blockades

Another cause of starvation in Yemen is the unlawful obstruction and manipulation of humanitarian relief by blockades. Evidence of impending humanitarian supplies and operations has been well-documented. The evidence shows that blockades have halted delivery of humanitarian assistance, as well as causing unreasonable delays in the transport of humanitarian aid to areas affected by the famine.²⁰⁷

Hudaydah, for example, was Yemen's poorest governorate prior to the outbreak of war in 2015.²⁰⁸ Sixty percent of Yemen's malnourished population resided in Hudaydah.²⁰⁹ There are three major ports in the governorate, two of which (Al-Hudaydah and Al-Saleef) receive the majority of Yemen's food imports; the total number of commercial imports has declined significantly since 2014.²¹⁰ There are two other ports in Yemen at Aden and Al-Mukalla, but they lack the infrastructure necessary to receive bulk food shipments.²¹¹ In April 2015, the SLC undertook a blockade of the Red Sea ports in order to inspect commercial ships that could be

²⁰² Of strikes analyzed, one occurred in 2017, fourteen in 2018.

²⁰³ DATA PROJECT, PUBLISHED AIR RAID DATABASE FROM 26 MARCH 2015 TO 31 DECEMBER 2020, <https://yemendataproject.org/data.html>, 16000, 17228, 17688, 18085.

²⁰⁴ YEMEN DATA PROJECT, PUBLISHED AIR RAID DATABASE FROM 26 MARCH 2015 TO 31 DECEMBER 2020, <https://yemendataproject.org/data.html>, 16327, 18119, 19093.

²⁰⁵ YEMEN DATA PROJECT, PUBLISHED AIR RAID DATABASE FROM 26 MARCH 2015 TO 31 DECEMBER 2020, <https://yemendataproject.org/data.html>, 16475.

²⁰⁶ According to Associated Press reporters, the cholera epidemic was worsened by Houthi interference with cholera vaccines reaching intended facilities, further exacerbating the crisis. See Maggie Michael, *In Yemen, Corruption Worsened World's Worst Cholera Outbreak*, ASSOC. PRESS (Apr. 8, 2019), <https://pulitzercenter.org/stories/yemen-corruption-worsened-worlds-worst-cholera-outbreak>.

²⁰⁷ GLOBAL RIGHTS COMPLIANCE & WORLD PEACE FOUND., Policy Brief, ACCOUNTABILITY FOR MASS STARVATION: STARVATION IN YEMEN, 7 (Sept. 3, 2019), <https://starvationaccountability.org/wp-content/uploads/2019/09/WPF-GRC-POLICY-BRIEF-Accountability-for-Starvation-Yemen-Sept-2019.pdf>; see also Maggie Michael, *In Yemen, Corruption Worsened World's Worst Cholera Outbreak*, ASSOC. PRESS (Apr. 8, 2019), <https://pulitzercenter.org/stories/yemen-corruption-worsened-worlds-worst-cholera-outbreak>.

²⁰⁸ GLOBAL RIGHTS COMPLIANCE & WORLD PEACE FOUND., Policy Brief, ACCOUNTABILITY FOR MASS STARVATION: STARVATION IN YEMEN, 7 (Sept. 3, 2019), <https://starvationaccountability.org/wp-content/uploads/2019/09/WPF-GRC-POLICY-BRIEF-Accountability-for-Starvation-Yemen-Sept-2019.pdf>.

²⁰⁹ GLOBAL RIGHTS COMPLIANCE & WORLD PEACE FOUND., Policy Brief, ACCOUNTABILITY FOR MASS STARVATION: STARVATION IN YEMEN, 7 (Sept. 3, 2019), <https://starvationaccountability.org/wp-content/uploads/2019/09/WPF-GRC-POLICY-BRIEF-Accountability-for-Starvation-Yemen-Sept-2019.pdf>.

²¹⁰ GLOBAL RIGHTS COMPLIANCE & WORLD PEACE FOUND., Policy Brief, ACCOUNTABILITY FOR MASS STARVATION: STARVATION IN YEMEN, 7 (Sept. 3, 2019), <https://starvationaccountability.org/wp-content/uploads/2019/09/WPF-GRC-POLICY-BRIEF-Accountability-for-Starvation-Yemen-Sept-2019.pdf>.

²¹¹ GLOBAL RIGHTS COMPLIANCE & WORLD PEACE FOUND., Policy Brief, ACCOUNTABILITY FOR MASS STARVATION: STARVATION IN YEMEN, 7-8 (Sept. 3, 2019), <https://starvationaccountability.org/wp-content/uploads/2019/09/WPF-GRC-POLICY-BRIEF-Accountability-for-Starvation-Yemen-Sept-2019.pdf>.

carrying prohibited weapons to the Houthis.²¹² The consequence of the blockade, however, which lasted 16 months, was to effectively limit the flow of food, fuel and medicine to civilians.²¹³ On 6 November 2017, the SLC retaliated against the Houthi missile attack on Riyadh by imposing a sixteen-day total air, sea, and land blockade of Yemen, which blocked all food and fuel coming into the country.²¹⁴

Blockades and attacks near other port cities have similarly affected civilians' access to vital food and supplies. For instance, by 31 May 2015, the SLC's blockade of Yemeni ports near Sanaa has caused food and fuel shortages for roughly 25 million people.²¹⁵ Additionally, towards the end of May 2015, Houthi militants fired at a UN-chartered ship carrying humanitarian relief supplies, preventing it from docking in Aden City.²¹⁶

B. LEGAL ANALYSIS OF EVIDENCE

While there is ample evidence to show that the civilian population in Yemen is suffering from starvation and starvation-related diseases, prosecutors must determine what charges are appropriate. Article 8 of the Rome Statute requires that perpetrators intentionally use starvation as a method of warfare by depriving OIS. The language of the Additional Protocols to the Geneva Conventions is broader, stating that it is prohibited to attack, destroy, remove, or render useless OIS.²¹⁷

Deliberate destruction of OIS, such as attacks on farms and fishing villages, water supplies and production facilities, markets, and medical facilities is a violation of IHL under API of the Geneva Conventions and Article 8 of the Rome Statute. Yemen and Saudi Arabia are signatories to the 1977 Protocol I, but not to the Rome Statute. The attacks on agricultural sites and equipment in Tihama, the destruction of fishing boats and skilled fishermen along the Red Sea coastline, and destruction of the food markets in Ta'izz demonstrate the SLC's deliberate efforts to starve the population into submission. To that end, sources have reported that a senior Saudi diplomat stated off-record, "Once we control them, we will feed them."²¹⁸ This is probably

²¹² GLOBAL RIGHTS COMPLIANCE & WORLD PEACE FOUND., Policy Brief, ACCOUNTABILITY FOR MASS STARVATION: STARVATION IN YEMEN, 8 (Sept. 3, 2019), <https://starvationaccountability.org/wp-content/uploads/2019/09/WPF-GRC-POLICY-BRIEF-Accountability-for-Starvation-Yemen-Sept-2019.pdf>.

²¹³ GLOBAL RIGHTS COMPLIANCE & WORLD PEACE FOUND., Policy Brief, ACCOUNTABILITY FOR MASS STARVATION: STARVATION IN YEMEN, 8 (Sept. 3, 2019), <https://starvationaccountability.org/wp-content/uploads/2019/09/WPF-GRC-POLICY-BRIEF-Accountability-for-Starvation-Yemen-Sept-2019.pdf>.

²¹⁴ *Yemen: Houthi Landmines Kill Civilians, Block Aid: Cease Use of Banned Weapons; Expand and Improve Demining*, HUM. RTS. WATCH (Apr. 22, 2019, 12:01 AM EDT), <https://www.hrw.org/news/2019/04/22/yemen-houthi-landmines-kill-civilians-block-aid>.

²¹⁵ Mohammed Ghobari, *U.N. diplomat pushes to hold Yemen talks, Arab air strikes pound Houthis*, REUTERS (Jun. 1, 2015, 2:38 AM), <https://www.reuters.com/article/us-yemen-security/u-n-diplomat-pushes-to-hold-yemen-talks-arab-air-strikes-pound-houthis-idUSKBN0OH1HZ20150601>.

²¹⁶ Daniel O'Keefe, *Yemen Situation Report*, CRITICAL THREATS (Jun. 1, 2015), <https://www.criticalthreats.org/briefs/yemen-situation-report/2015-yemen-crisis-situation-report-june-1>.

²¹⁷ Protocol Additional to the Geneva Conventions of 12 August 1949 and Relating to the Protection of Victims of International Armed Conflicts (Protocol I), June 8, 1977, 1125 U.N.T.S. 3, at art. 54(1); Protocol Additional to the Geneva Conventions of 12 August 1949, and relating to the Protection of Victims of Non-International Armed Conflict, June 8, 1977, 1125 U.N.T.S. 609, at art. 14.

²¹⁸ MARTHA MUNDY, THE STRATEGIES OF THE COALITION IN THE YEMEN WAR: AERIAL BOMBARDMENT AND FOOD WAR 7 (World Peace Found., 2018), <https://sites.tufts.edu/wpf/files/2018/10/Strategies-of-Coalition-in-Yemen-War->

the strongest proof of intent regarding the SLC's policy to use starvation as a weapon of war that could lead to charges of war crimes under Article 8(2)(b)(xxv), Article 8(2)(e) of the Rome Statute, or complementary domestic statutes.

However, even without official documents or statements demonstrating a policy to use starvation as a method of warfare, prosecutors can point to the patterns of attacks on agriculture, water supply and production, fishing industry, markets and food production or storage facilities, and medical facilities as evidence to prove that the SLC had a systematic policy or plan to destroy OIS with the intent to cause starvation of civilians, or with the knowledge that starvation (and related diseases leading to death or serious injury and suffering) would occur in the ordinary course of events. Further, attacks on these targets were widespread both in terms of the number of attacks on particular targets and in terms of geographic spread, covering large parts of Yemen's cities and rural areas. Moreover, the patterns suggest that the attacks could not have been incidental to other lawful military objectives. Civilian markets, food and water producing facilities, rural fishing villages, and medical care facilities are not legitimate military targets, and no evidence suggests that these sites were targeted because they were being used for military purposes, such as housing of munitions. Thus, the evidence points strongly towards a policy or plan to attack civilian objections for the purpose of causing starvation or with the knowledge that starvation would occur. This could lead to charges of crimes against humanity for extermination or cruel and inhumane treatment.

The only question is why. What military objective was served by destroying civilian objects and causing starvation? One answer might be found in the senior Saudi diplomat's statement above that starving the population leads to control. In other words, by inflicting conditions calculated to bring about severe civilian suffering, the enemy is more likely to capitulate quickly and bring an end to the war. But even if this had happened and the war had ended sooner, the irreparable harm to the civilian population constitutes a gross violation of the Geneva Conventions for which perpetrators must be held to account.

A key challenge for the prosecution will be demonstrating that the perpetrators of starvation knew or should have known that the sites they attacked were not military targets, as well as whether they knew or should have known that the consequence of attacking those targets would lead to destruction of OIS and starvation of civilians. To that end, it is unlikely that American and British military advisors who gave target intelligence to the SLC in Tihama did not know the location and/or purpose of the TDA in providing critical irrigation infrastructure to farms in the region.²¹⁹ Likewise, the perpetrators of attacks on the food markets and fishing villages should have known that by targeting those sites, the civilian population would likely starve. Thus, determining which actors are responsible for starvation crimes is a key consideration for future investigations.

A significant challenge in this analysis is determining whether the starvation of civilians would have occurred but-for the attacks on OIS. In other words, given that Yemen was already on the brink of famine prior to the start of the war, are perpetrators of these attacks still culpable

Final-20181005-1.pdf; see also *Bin Salman threatens to target women and children in Yemen despite international criticism*, MIDDLE EAST MONITOR (Aug. 27, 2018, 10:39 AM), <https://www.middleeastmonitor.com/20180827-bin-salman-threatens-to-target-women-and-children-in-yemen-despite-international-criticism/>.

²¹⁹ MARTHA MUNDY, *THE STRATEGIES OF THE COALITION IN THE YEMEN WAR: AERIAL BOMBARDMENT AND FOOD WAR 15* (World Peace Found., 2018), <https://sites.tufts.edu/wp/f/files/2018/10/Strategies-of-Coalition-in-Yemen-War-Final-20181005-1.pdf>.

for causing civilian casualties? Moreover, are the deaths caused by diseases such as cholera and malnutrition too attenuated to be linked to attacks on OIS? Do multiple intervening causes break the link of causation, such as when multiple actors have targeted the same sites? All of these questions need to be addressed before charges can be brought against perpetrators of starvation. But given that the crime of starvation hinges upon the intent of the perpetrator to attack OIS or starve civilians, and not on the outcome, successful prosecutions need to focus on evidence of intent, such as the statement made by the Saudi diplomat, to build their case.

Additionally, while the blockade of Hudaydah was deployed for a legitimate military purpose – to stop the flow of prohibited weapons to the Houthis under UN Security Council Resolution 2216²²⁰ – the blocking of essential items needed by the civilian population may constitute a war crime because under IHL, blockades must allow for humanitarian aid to reach the civilian population.²²¹ Inferring criminal intent in blockades is particularly challenging when a legitimate military purpose is claimed. But just because a legitimate military aim is articulated does not mean the blockade complies with the principles of IHL. Prosecutors must look to the overall lawfulness of the blockade to determine whether there was an intent to starve the population, and if so, whether and when it developed during the course of the blockade. Such evidence might include whether those in control of the blockade made good faith efforts to allow humanitarian aid to be delivered to civilians in a timely manner, or whether commanding officers consciously disregarded the risk of starvation to civilians.

If prosecutors are unable to prove the requisite criminal intent to charge perpetrators with the war crime of starvation by attacking OIS or employing blockades, they may bring charges of CAH under Article 7(1)(b) extermination or Article 7(1)(k) other inhumane acts. These provisions allow charges against perpetrators for killing or inflicting great suffering or serious bodily injury to civilians without the need to prove that the perpetrator intended the consequence to occur. To do so, they must show that the perpetrator committed the act (destruction of OIS /blockade) and the consequence (starvation) occurred because of that act. Thus, bringing charges under Article 7 of the Rome Statute may offer a better solution for prosecutors.

IV. AVENUES OF ACCOUNTABILITY

A. INTERNATIONAL CRIMINAL COURT

The ICC has jurisdiction over State Parties to the Rome Statute.²²² Additionally, the State Party must be unwilling or unable to prosecute individuals for the enumerated crimes under the Rome Statute.²²³ Yemen is not a State Party to the Rome Statute.²²⁴ Neither is Saudi Arabia, any of its Coalition partners, nor Iran which reportedly provides material support to Houthi rebels.²²⁵

²²⁰ S.C. Res. 2216 (Apr. 14, 2015).

²²¹ Protocol Additional to the Geneva Conventions of 12 August 1949 and Relating to the Protection of Victims of International Armed Conflicts (Protocol I), June 8, 1977, 1125 U.N.T.S. 3, at art. 70.

²²² Rome Statute of the International Criminal Court, art. 13 (Jul. 17, 1998).

²²³ See Rome Statute of the International Criminal Court, art. 1 (Jul. 17, 1998).

²²⁴ The States Parties to the Rome Statute, INT'L CRIM. CT., https://asp.icc-cpi.int/en_menus/asp/states%20parties/pages/the%20states%20parties%20to%20the%20rome%20statute.aspx (last visited Apr. 5, 2021).

The States Parties to the Rome Statute, INT'L CRIM. CT., https://asp.icc-cpi.int/en_menus/asp/states%20parties/pages/the%20states%20parties%20to%20the%20rome%20statute.aspx (last visited Apr. 5, 2021).

Therefore, the ICC's personal jurisdiction over war crimes and CAH committed in Yemen's civil war is unlikely to be seized.

The United Nations Security Council may also refer cases to the ICC prosecutor under Rome Statute Article 13(b).²²⁶ The Security Council has referred the situations in Darfur and Libya to the ICC, so this option is not impossible,²²⁷ but it does require the permanent members of the Security Council to cooperate by not casting a veto.²²⁸ Because of the political gridlock in the Security Council, and because several countries that hold veto power on the Security Council provided weapons and military assistance to the SLC,²²⁹ the prospects for a Security Council referral are slim to none.²³⁰

B. OTHER TRIBUNALS

If not the ICC, then the Security Council could, as it did with the ICTY and ICTR,²³¹ establish a UN-sanctioned tribunal with its own statute and mandate to try perpetrators of war crimes and CAH in Yemen's war. Such a mandate could be limited to the crime of starvation in order to garner the greatest level of political support among members of the Security Council. Hybrid courts, such as the Extraordinary Chambers in the Courts of Cambodia and the Special Court for Sierra Leone offer another means of accountability that balance international and domestic criminal law.²³² However, the prospect of getting the Security Council to establish an ad-hoc tribunal is limited because of deadlock at the Security Council.²³³ Thus, alternative avenues of accountability may be more viable for prosecuting perpetrators of starvation crimes in Yemen.

²²⁶ Rome Statute of the International Criminal Court, art. 13(b); (Jul. 17, 1998).; *see also* Michael P. Scharf and Laura K. Graham, *Bridging the Divide Between the ICC and UN Security Council*, 52 GEORGETOWN J. OF INT'L L. (forthcoming 2021).

²²⁷ S.C. Res. 1593 (Mar. 31, 2005),

<https://digitallibrary.un.org/record/544817?ln=en><https://digitallibrary.un.org/record/544817?ln=en> (Resolution referring the situation in Darfur to the ICC); S.C. Res.1970 (Feb. 26, 2011),

[https://www.undocs.org/S/RES/1970%20\(2011\)](https://www.undocs.org/S/RES/1970%20(2011))[https://www.undocs.org/S/RES/1970%20\(2011\)](https://www.undocs.org/S/RES/1970%20(2011)) (Resolution referring the situation in Libya to the ICC).

²²⁸ Michael P. Scharf and Laura K. Graham, *Bridging the Divide Between the ICC and UN Security Council*, 52 GEORGETOWN J. OF INT'L L. (forthcoming 2021).

²²⁹ YEMEN ACCOUNTABILITY PROJECT, AIDING AND ABETTING: HOLDING STATES, CORPORATIONS AND INDIVIDUALS RESPONSIBLE FOR WAR CRIMES IN YEMEN, 38-39 (2020), <https://case.edu/law/sites/case.edu.law/files/2020-10/FINAL%20YAP%20AIDING%20ABETTING%20WHITE%20PAPER%20%20%282%29.pdf>.

²³⁰ Michael P. Scharf and Laura K. Graham, *Bridging the Divide Between the ICC and UN Security Council*, 52 GEORGETOWN J. OF INT'L L. (forthcoming 2021).

²³¹ United Nations International Tribunal for the Prosecution of Persons Responsible for Serious Violations of International Humanitarian Law Committed in the Territory of the Former Yugoslavia since 1991, G.A.S.C. Res. 827 (May 25, 1993); United Nations International Tribunal for Rwanda, G.A.S.C. Res. 955 (Nov. 8, 1994).

²³² Agreement between the United Nations and the Royal Government of Cambodia Concerning the Prosecution under Cambodian Law of Crimes Committed During the Period of Democratic Kampuchea, G.A. Res. 57/228 (Dec. 18, 2002); Special Court for Sierra Leone, G.A. Res. 135 (Aug. 14, 2000).

²³³ *See generally*, Michael P. Scharf and Laura K. Graham, *Bridging the Divide Between the ICC and UN Security Council*, 52 GEORGETOWN J. OF INT'L L. (forthcoming 2021).

C. UNIVERSAL JURISDICTION

States with statutes that allow for universal jurisdiction over crimes against humanity or war crimes, such as Germany, France, or Spain, could invoke universal jurisdiction over individual perpetrators that travel to those states.²³⁴ Under universal jurisdiction principles, domestic courts may prosecute individuals for committing war crimes, CAH, genocide, or torture even when the alleged perpetrator or victims are not nationals of that country, and even if the crimes were not committed in that State's territory.²³⁵ According to Amnesty International, approximately 147 of the 193 United Nations member states have some sort of universal jurisdiction statute for one or more of these crimes.²³⁶ In 2019, the number of countries investigating crimes under universal jurisdiction statutes has grown exponentially, with 16 countries involved in ongoing investigations and prosecutions.²³⁷ TRIAL International reports that some countries, such as France, Germany, and The Netherlands, are actively using universal jurisdiction to seek out and prosecute international crimes, including those committed in the Syrian civil war.²³⁸

D. INVESTIGATIVE MECHANISM

On December 21, 2016, the United Nations General Assembly adopted resolution 71/248, establishing the International, Impartial and Independent Mechanism (IIIM) to assist in the investigation and prosecution of persons responsible for the most serious crimes committed in the Syrian Arab Republic since March 2011. The Mechanism's mandate, as stated in paragraph 4 of the resolution, is to:

collect, consolidate, preserve and analyse evidence of violations of international humanitarian law and human rights violations and abuses and to prepare files in order to facilitate and expedite fair and independent criminal proceedings, in accordance with international law standards, in national, regional or international courts or tribunals that have or may in the future have jurisdiction over these crimes, in accordance with international law.²³⁹

The IIIM is neither a prosecutor nor a court, but the IIIM does collect information and evidence to assist in criminal proceedings. This quasi-prosecutorial role seeks to support accountability processes aimed at bringing justice for victims of serious international crimes committed in Syria since March 2011.

²³⁴ Angela Mudukuti, *Universal Jurisdiction – Opportunities and Hurdles*, OPINIOJURIS, (Sept. 4, 2019) <http://opiniojuris.org/2019/04/09/universal-jurisdiction-opportunities-and-hurdles/>.

²³⁵ See *Universal Jurisdiction*, INT'L JUST. RES. CTR., <https://ijrcenter.org/cases-before-national-courts/domestic-exercise-of-universal-jurisdiction/>; see also Rick Gladstone, *An Old Legal Doctrine that Puts War Criminals in the Reach of Justice*, NEW YORK TIMES (Feb. 28, 2021), <https://www.nytimes.com/2021/02/28/world/europe/universal-jurisdiction-war-crimes.html>.

²³⁶ AMNESTY INT'L, UNIVERSAL JURISDICTION: A PRELIMINARY SURVEY OF LEGISLATION AROUND THE WORLD-2012, <https://www.amnesty.org/en/documents/ior53/019/2012/en/>.

²³⁷ TRIAL INT'L, UNIVERSAL JURISDICTION ANNUAL REVIEW 2020 13 (2020), <https://trialinternational.org/latest-post/universal-jurisdiction-annual-review-2020-atrocities-must-be-prosecuted-soundly-and-rigorously>.

²³⁸ TRIAL Int'l, *Prosecuting International Crimes: A Matter of Willingness*, TRIAL INT'L (May 5, 2020), <https://trialinternational.org/latest-post/prosecuting-international-crimes-a-matter-of-willingness>.

²³⁹ G.A. Res. 71/248 ¶ 4 (Dec. 21, 2016).

Similarly, in September 2018, the Human Rights Council established the Independent Investigative Mechanism for Myanmar (IIMM) through resolution 39/2.²⁴⁰ This mandate operated nearly identically to the IIIM, collecting evidence of the most serious international crimes and violations as it related to Myanmar. This mechanism was also not a prosecutor or a court, but prepared files and evidence to hand over to another party (i.e., the Independent International Fact-Finding Mission on Myanmar).²⁴¹

A similar mechanism could be created for Yemen. Similar to the IIIM and the IIMM, this body would be used to collect evidence of the more serious international crimes and violations that would be handed over to a prosecuting body. While the mechanism would not be a prosecutor or a court, its role is still instrumental in providing accountability to bring justice for victims of the conflict.

It should be noted that the creation of these mechanisms is no easy feat. The structure of these bodies has to be carefully crafted in order to ensure that the evidence collected can be effectively used for future prosecutions. Drafters of the mandate, among other things, would have to carefully craft collection methods, methods to preserve evidence, standards and procedural requirements, State cooperation, methods in which they will share information with courts and tribunals, relationships with fact finding bodies, overall structure and composition, reporting methods, and funding. Although the IIIM and the IIMM have demonstrated that these institutions can be established by the UN despite paralysis in the Security Council, they cannot come about overnight.

Additionally, if a similar structure is to be implemented in Yemen, there is a need to balance between international and domestic structures and laws. Specifically, drafters would have to wrestle between the differences in how each jurisdiction looks at causal linkage, liabilities, intent, and unintended error. Structures like the IIIM have to “systematically record and preserve all information, documentation and evidence... in accordance with international criminal law standards” so it can share that information with courts that may want to conduct “fair and independent criminal proceedings, in accordance with international law standards.”²⁴²

Regardless of how the mechanism is set up, how it gets funding, how prosecutorial differences are handled, or how fair trial rights are ensured, it should be noted that as long as these mechanisms are allowed to complete their mandate, it will likely be a success. Some form of justice, even if flawed, for victims of these crimes is better than no justice at all.

V. RECOMMENDATIONS

The Yemen Accountability Project recommends the following actions for bringing accountability to perpetrators of starvation crimes and alleviating the humanitarian crisis:

²⁴⁰ Hum. Rts. Council Res. 39/2 (Sep. 27, 2018).

²⁴¹ Indep. Investigative Mechanism for Myan., *Mandate and Establishment*, UNITED NATIONS, <https://iimm.un.org/mandate-and-establishment/>.

²⁴² U.N. Secretary-General, *Implementation of the Resolution Establishing the International, Impartial and Independent Mechanism to Assist in the Investigation and Prosecution of Persons Responsible for the Most Serious Crimes Under International Law Committed in the Syrian Arab Republic since March 2011*, ¶ 17, U.N. Doc. A/71/755 (Jan. 19, 2017).

Investigations

- Criminal investigators and groups like YAP, YDP, and ACLED continue to document and investigate evidence of starvation crimes and destruction of OIS, making their open-source databases widely available to relevant stakeholders;
- These groups and YAP should continue to present their collected evidence and databases to stakeholders at the ICC, UN Security Council, UN Human Rights Council, US Department of State War Crimes Office, and others;
- Groups documenting evidence of war crimes and CAH should share their investigative strategies and best practices with each other and develop working partnerships to build capacity for larger and more thorough investigations in Yemen.

Accountability Mechanism

- Diplomats at the UN should engage in advocacy with members of the Security Council to support an accountability mechanism and build consensus among permanent members to prevent them from blocking an accountability measure through veto.
- If action in the Security Council is blocked by veto, then the General Assembly should establish an accountability mechanism like the IIIM/IIMM to collect and archive evidence before it is lost and to share it with States pursuing national prosecutions using universal jurisdiction.

Review Targeted Sanctions Regime

- Targeted sanctions are problematic because effectiveness is low and they can worsen a humanitarian crisis. Therefore, the UN and countries should reexamine their targeted sanctions programs to ensure that measures are placing pressure on the Saudi and Iranian governments and not straining or worsening the humanitarian crisis in Yemen.

Naming and Shaming

- More naming and shaming from powerful States and regional and international bodies would help build the support for an end to the war and an accountability mechanism or mechanism for investigating atrocities;
- In the US, the Biden Administration has taken a first step at naming and shaming Houthis by declaring them a terrorist organization and calling out Crown Prince Mohammed Bin Salman over the murder of Jamal Kashoggi, but more must be done to put pressure on the coalition of States responsible for starvation crimes in Yemen.

Supporting and Engaging Civil Society Actors

- States and international groups need to assist in developing capacities for Yemen's local civil society to address hunger and to collect evidence of and document starvation crimes;
- Engaging global civil society – including World Food Programme, UNICEF, and other INGOs to assist in combating hunger and collecting evidence of and document starvation crimes.

Transitional Justice

- Transitional justice processes such as truth commissions, memorialization initiatives, and community restoration projects should be explored as avenues of restorative justice.

VI. CONCLUSION

The past century has witnessed a substantial increase in armed conflicts where civilians bear the brunt of hostilities. In Yemen, a clear pattern of targeting civilians and civilian objects has emerged as a preferred method of warfare. This white paper has shown that starvation is being used as a weapon of war in Yemen and that the perpetrators of starvation crimes will continue to do so with impunity until the international community decides to take action to stop it. Given that Yemen was already on the brink of famine before the war broke out, one is left to wonder why combatants have chosen starvation as a weapon of war? The answer, as laid forth in this white paper, is that starvation is being used as a cruel and inhumane tactic to cause the enemy to capitulate. The time for action to end the war and the world's worst humanitarian crisis has come. To wait any longer would only contribute to impunity and prolong the suffering of the Yemeni people. The Yemen Accountability Project therefore calls on the international community to take a stand and advocate for accountability for starvation crimes in Yemen.

APPENDIX X - TARGETED STRIKES AGAINST OBJECTS INDISPENSABLE TO SURVIVAL, 2017 - 2018

Farms, Agricultural Equipment, Food Production (373)

1. 1/13/2017, Hudaydah, Al-Dhuha, Al-Kamb, targeting an agricultural equipment shop (10821)
2. 1/15/2017, Hudaydah, Bajil, targeting a farm (10855)
3. 1/17/2017, Hajja, Abs, Al-Jar, targeting farms (10892)
4. 1/17/2017, Taiz, Mawza, Al-Had village, targeting farms (10908)
5. 1/30/2017, Saada, Sa'ada, Al-Abdain, targeting farms (11185)
6. 1/31/2017, Taiz, Al-Mukha Junction, targeting a chicken farm (11205)
7. 2/4/2017, Marib, Sirwah, Al-Mahjazah, Al-Mukhaddarah, and Habab valley, targeting farms (11290)
8. 2/5/2017, Dhamar, Dhahran Ans, Qa'a Al-Haql, targeting farms (11300)
9. 2/5/2017, Hudaydah, Al-Tuhayat, targeting a farm (11303)
10. 2/6/2017, Hudaydah, Bait Al-Faqih, Nafahan, targeting a chicken storage facility (11329)
11. 2/6/2017, Jawf, Al-Maslub, Sidah, Al-Qatfah, Al-Sallan, and Al-Zorqah, targeting farms (11330)
12. 2/8/2017, Hajja, Midi, targeting Al-Naseem farms (11376)
13. 2/9/2017, Hajja, Midi, targeting Al-Naseem farms (11390)
14. 2/10/2017, Marib, Sirwah, Al-Mukhaddarah and Al-Rabi'ah, targeting farms (11410)
15. 2/12/2017, Marib, Sirwah, targeting farms (11448)
16. 2/14/2017, Hajja, Abs, Al-Jar, targeting farms (11474)
17. 2/18/2017, Saada, Kitaf Wa Al-Goge'e, Al-Atfain and Al-Aqeeq, targeting farms (11511)
18. 2/19/2017, Sanaa, Nihm, Al-Oshrah, targeting farms (11520)
19. 2/20/2017, Sanaa, Nihm, Al-Ma'ainha, Al-Najd, and Al-Akhdhar, all targeting farms (11529)
20. 2/25/2017, Marib, Sirwah, targeting farms (11623)
21. 2/26/2017, Taiz, Al-Mukha, Al-Mahbash, targeting a farm (11631)
22. 2/26/2017, Sana'a, Nihm, Al-Hawl, targeting farms (11637)
23. 2/28/2017, Marib, Sirwah, Al-Mahjazah, targeting a farm (11686)
24. 3/1/2017, Hajja, Midi, targeting Al-Naseem farms (11701)
25. 3/7/2017, Sanaa, Nihm, Al-Shabbanah, targeting farms (11820)
26. 3/10/2017, Sana'am Nihm, Mahali, targeting farms (11873)
27. 3/12/2017, Hajja, Abs, Al-Jar, targeting farms; two distinct strikes. (11911, 11913)
28. 3/12/2017, Saada, Baqim, Al-Maghram, targeting a farm (11923)
29. 3/15/2017, Sanaa, Nihm, Al-Hawl, targeting farms (11964)
30. 3/15/2017, Saada, Baqim, Al-Maghram, targeting a farm (11967)
31. 3/19/2017, Hajja, Midi, targeting Al-Naseem farms (12033)
32. 3/19/2017, Saada, Baqim, Al-Aslan, targeting a farm (12040)
33. 3/25/2017, Sanaa, Al-Haymah Al Kharijiyah, Qawan, targeting farms (12123)
34. 3/30/2017, Jawf, Al-Matmmah, Al-Kharid valley, targeting farms (12186)
35. 4/1/2017, Sanaa, Hamdan, Al-Jaif, targeting farms (12205)
36. 4/2/2017, Sanaa, Hamdan, Al-Urah, targeting farms (12226)
37. 4/3/2017, Capital, Bani Al-Harith, Bair Zahir, targeting farms (12245)
38. 4/3/2017, Saada, Baqim, Al-Alzammah, targeting a farm (12253)
39. 4/5/2017, Capital, Bani Al-Harith, Beer Zahir, targeting farms (12286)
40. 4/5/2017, Sanaa, Nihm, Qatbain, targeting farms (12288)
41. 4/6/2017, Hajja, Hayran, Al-Khawbah, targeting farms (12314)
42. 4/10/2017, Hudaydah, Hays, targeting a farm (12386)
43. 4/13/2017, Hajja, Midi, targeting farms (12431)
44. 4/14/2017, Hajja, Midi, targeting Al-Naseem farms (12445)

45. 4/14/2017, Marib, Sirwah, two distinct strikes targeting farms (12447, 12449)
46. 4/17/2017, Saada, Baqim, Al-Tho'ban, targeting farms (12497)
47. 4/19/2017, Saada, Baqim, A'l-Al Zimah, targeting a farm (12524)
48. 4/22/2017, Hajja, Abs, Al-Jar, targeting farms (12558)
49. 4/23/2017, Sanaa, Sanhan, targeting farms (12570)
50. 4/24/2017, Dhamar, Dhahran Ans, Qa'a Al-Haql, targeting farms (12580)
51. 4/29/2017, Taiz, Al-Mukha, targeting Sabihah farm (12676)
52. 4/30/2017, Marib, Harib Al-Garamish, targeting a herd of camels (12682)
53. 5/1/2017, Hajja, Abs, Al-Jar, targeting a farm (12691)
54. 5/2/2017, Hajja, Abs, Al-Jar, targeting a farm (12708)
55. 5/2/2017, Saada, Baqim, Mihdaydah, targeting a farm (12720)
56. 5/3/2017, Hajja, Abs, Al-Jar, targeting a farm (12731)
57. 5/7/2017, Marib, Sirwah, targeting farms (12777)
58. 5/8/2017, Sanaa, Bani Matar, Al-Shailiyah, targeting farms (12786)
59. 5/14/2017, Saada, Baqim, Al-Sabhan, targeting farms (12860)
60. 5/16/2017, Hajja, Abs, Al-Shaqab village, targeting a farm (12871)
61. 5/19/2017, Hajja, Abs, Al-Jar, targeting a farm (12911)
62. 5/21/2017, Saada, Majz, Al-Ja'malah, targeting a farm (12950)
63. 5/24/2017, Sanaa, Hamdan, Al-Mahjar, targeting farms (12969)
64. 5/26/2017, Dhamar, Dhawran Ans, Bani Sweed, targeting farms (13006)
65. 5/29/2017, Marib, Harib Al-Garamish, targeting farms (13054)
66. 5/31/2017, Hajja, Hayran, targeting Al-Zindani farm (13072)
67. 6/3/2017, Saada, Sihar, Al-Anad, three distinct strikes, all targeting plant nurseries (13105, 13106, 13108)
68. 6/4/2017, Hajja, Abs, Al-Jar, targeting farms (13124)
69. 6/4/2017, Saada, Sihar, Al-Anad, targeting a plant nursery (13125)
70. 6/6/2017, Hajja, Midi, targeting Al-Naseem farms (13156)
71. 6/11/2017, Hajja, Mustaba, Khadlan valley, targeting a herd of cattle (13231)
72. 6/17/2017, Sanaa, Nihm, Al-Madfon, targeting farms (13314)
73. 6/29/2017, Sanaa, Nihm, Bani Bariq, targeting farms (13450)
74. 7/2/2017, Jawf, Al-Maton, Bait Al-Wirash, two distinct strikes, targeting the Al-Wirash farms (13489, 13490)
75. 7/3/2017, Sanaa, Nihm, Bani Bariq, targeting farms (13500)
76. 7/3/2017, Hajja, Abs, targeting the Al-Raymi farm (13505)
77. 7/3/2017, Jawf, Al-Maton, Bait Al-Wirash, targeting Al-Wirash farms (13508)
78. 7/4/2017, Hajja, Abs, Al-Jar, targeting farms (13514)
79. 7/5/2017, Sanaa, Al Haymah Al Khariyyah, two distinct strikes, both targeting farms (13532, 13533)
80. 7/7/2017, Hudaydah, Al-Tuhayat, targeting a chicken farm (13560)
81. 7/13/2017, Saada, Kitaf Wa Al-Boge'e, targeting farms (13622)
82. 7/14/2017, Sanaa, Nihm, targeting farms (13628)
83. 7/15/2017, Sanaa, Nihm, targeting farms (13639)
84. 7/17/2017, Taiz, Mawza, Sabihah, targeting Sabihah farms (13668)
85. 7/23/2017, Saada, Sihar, Al-Anad, targeting an agricultural nursery (13732)
86. 7/24/2017, Hajja, Abs, Al-Jar, targeting farms (13752)
87. 7/27/2017, Hajja, Hayran, targeting Al-Zindani and Al-Kadas farms (13786)
88. 7/30/2017, Sanaa, Nihm, Al-Madfon, targeting farms (13848)
89. 7/30/2017, Marib, Sirwah, Al-Hajlan, targeting farms (13851)
90. 7/31/2017, Marib, Sirwah, Al-Mukhaddarah, Al-Rabi'ah, targeting farms (13862)
91. 8/4/2017, Sanaa, Sanhan, Al-Mahaqirah, targeting farms (13898)
92. 8/5/2017, Sanaa, Sanhan, Al-Mahaqirah, targeting farms (13918)

93. 8/10/2017, Saada, Al-Daher, targeting farms (13971)
94. 8/18/2017, Marib, Harib Al-Garamish, Al-Hazm, targeting Al-Alsakkaf farms (14032)
95. 8/21/2017, Sanaa, Nihm, Harib Nihm, targeting farms (14069)
96. 9/23/2017, Marib, Harib Al-Garamish, targeting farms (14453)
97. 9/24/2017, Saada, Sihar, Al-Mahadhir, targeting a chicken farm (14464)
98. 9/28/2017, Hajja, Abs, Al-Jar, targeting farms (14493)
99. 10/1/2017, Saada, Baqim, Al-Maghram, targeting farms (14531)
100. 10/3/2017, Jawf, Al-Maslub, targeting farms (14548)
101. 10/4/2017, Saada, Baqim, Al Alzammah, targeting a farm (14562)
102. 10/5/2017, Saadah, Baqim, Al-Jadhwah, Al-Maghram, targeting a farm (14574)
103. 10/5/2017, Saada, Baqim, Al-Aslan, targeting a farm (14576)
104. 10/6/2017, Hajja, Abs, Al-Jar, targeting farms (14583)
105. 10/7/2017, Saada, Baqim, targeting farms (14660)
106. 10/11/2017, Saada, Baqim, Al-Aslan, targeting farms (14653)
107. 10/14/2017, Hajja, Abs, Al-Jar, targeting a farm (14687)
108. 10/17/2017, Saada, Majz, Al-Ja'malah, targeting fruit cooling storage facility (14726)
109. 10/20/2017, Hajja, Abs, Al-Jar, targeting farms (14757)
110. 10/23/2017, Hajja, Abs, Al-Jar, targeting farms (14791)
111. 10/24/2017, Shabwa, Usaylan, targeting farms near Shumais mountain (14810)
112. 10/25/2017, Saada, Baqim, Al-Alhamaqi, targeting farms (14820)
113. 10/26/2017, Marib, Sirwah, targeting farms (14833)
114. 10/29/2017, Sanaa, Al-Haymah Al-Kharikiyah, targeting farms (14871)
115. 10/29/2017, Hudaydah, Bajil, targeting a farm (14882)
116. 10/29/2017, Marib, Sirwah, targeting farms (14884)
117. 10/31/2017, Saada, Monabbih, Al-Qahrah, targeting farms (14916)
118. 11/1/2017, Marib, Sirwah, targeting farms (14925)
119. 11/3/2017, Saada, Haydan, Dhuwayb as Sufla, targeting a farm (14949)
120. 11/8/2017, Marib, Sirwah, targeting farms (15018)
121. 11/27/2017, Hajja, Midi, targeting Al-Naseem Farms (15203)
122. 11/27/2017, Hajja, Midi, targeting Al Khadhra Farms (15204)
123. 11/30/2017, Hudaydah, Al-Tuhayat, targeting a farm (15235)
124. 12/1/2017, Amran, Huth, targeting a chicken farm (15244)
125. 12/9/2017, Hudaydah, Al-Tuhayat, targeting a farm (15392)
126. 12/11/2017, Saada, Razih, targeting a farm (15421)
127. 12/11/2017, Sihar, Bani Muadh, targeting farms (15426)
128. 12/13/2017, Hudaydah, Al-Jirahi, targeting farms (15478)
129. 12/16/2017, Marib, Sirwah, targeting farms (15523)
130. 12/19/2017, Hudaydah, Al-Jirahi, targeting farms (15583)
131. 12/20/2017, Hudaydah, Bait Al-Faqih, Al Hussainiyah, targeting a farm (15613)
132. 12/25/2017, Hudaydah, Al-Khawkhah, Al Qutabah, targeting farms (15693)
133. 12/26/2017, Hudaydah, Al-Tuhayat, targeting a farm (15708)
134. 12/27/2017, Dhalie, Damt, Al Irfaf, targeting a farm (15715)
135. 12/30/2017, Hudaydah, Al-Khawkhah, Qutabah, targeting a farm (15756)
136. 12/30/2017, Hudaydah, Al-Jirahi, targeting a farm (15760)
137. 12/31/2017, Hudaydah, Al-Tuhayat, targeting a farm (15774)
138. 12/31/2017, Saada, Sihar, At Talh, targeting a farm (15776)
139. 1/01/2018, Sanaa, Nihm, targeting farms (15789)
140. 1/01/2018, Sanaa, Nihm, targeting farms (15790)
141. 1/01/2018, Sanaa, Nihm, targeting farms (15791)
142. 1/03/2018, Sanaa, Nihm, targeting farms (15814)
143. 1/04/2018, Khab Wa Al-Sha'af, Al Mahashimah, targeting farms (15826)

144. 1/04/2018, Khab Wa Al-Sha'af, Al Yatamah, targeting farms (15827)
145. 1/07/2018, Al-Safra'a, Dammaj, targeting a chicken farm (15856)
146. 1/07/2018, Kahlan Al-Sharaf, Afsar, targeting farms (15858)
147. 1/10/2018, Hudaydah, Al-Tuhayat, targeting a farm (15884)
148. 1/15/2018, Al-Jirahi, At Tafshah, targeting a farm (15927)
149. 1/15/2018, Sihar, Ahma, targeting farms (15929)
150. 1/15/2018, Hudaydah, Al-Khawkhah, targeting farms (15938)
151. 1/16/2018, Nihm, Al Huqqah, targeting a farm (15953)
152. 1/17/2018, Baqim, Al Alzammah, targeting a farm (15954)
153. 2/01/2018, Al-Silw, targeting a chicken farm (16114)
154. 2/14/2018, Baqim, Mandabah, targeting farms (16279)
155. 2/16/2018, Hays, located between Hays and Al Garrahi districts, targeting a farm (16312)
156. 2/18/2018, A-Tuhayat, targeting a farm (16333)
157. 2/19/2018, Sirwah, targeting farms (16353)
158. 2/24/2018, Al-Jirahi, The east of Al-Jarrahi, targeting farms (16408)
159. 2/26/2018, al-Maton, targeting farms (16418)
160. 2/27/2018, Sihar Al Anad, targeting an agricultural nursery (16424)
161. 2/27/2018, Al-Tuhayat, Al Fazah, targeting a farm (16425)
162. 2/27/2018, Al-Jirahi, targeting a farm (16430)
163. 2/28/2018, Hays, Al Sadd, targeting a farm (16439)
164. 3/03/2018, Sirwah, targeting farms (16470)
165. 3/03/2018, Baqim, targeting a farm (16478)
166. 3/06/2018, Haydan, targeting farms (16507)
167. 3/06/2018, Al-Tuhayat, targeting farms (16509)
168. 3/06/2018, Al-Jirahi, targeting farms (16511)
169. 3/06/2018, Nihm, targeting farms (16516)
170. 3/08/2018, Zabid, targeting chicken farm (16543)
171. 3/08/2018, Al-Jirahi, targeting chicken farm (16544)
172. 3/08/2018, Hayran, targeting chicken farm (16545)
173. 3/08/2018, Zabid, targeting farms (16550)
174. 3/08/2018, Al-Jirahi, targeting chicken farm (16565)
175. 3/09/2018, Al-Tuhayat, targeting farms (16566)
176. 3/09/2018, Sirwah, Al Hajlan, targeting farm (16569)
177. 3/10/2018, Al-Jirahi, targeting farm (16589)
178. 3/11/2018, Al-Jirahi, targeting farm (16599)
179. 3/11/2018, Zabid, targeting farm (16600)
180. 3/11/2018, Al-Tuhayat, targeting farms (16603)
181. 3/11/2018, Sirwah, targeting farms (16608)
182. 3/11/2018, Zabid, targeting farm (16616)
183. 3/14/2018, Baqim, Sha-eer mountain, targeting farms (16653)
184. 3/15/2018, Sirwah, Al Hajlan, targeting farms (16656)
185. 3/15/2018, Bajil, Wadi Siham, targeting farms (16657)
186. 3/15/2018, Baqim, Al Sabhan, targeting farms (16669)
187. 3/16/2018, Bait Al-Faqih, Al Ghawader, targeting farms (16679)
188. 3/16/2018, Al-Jirahi, unknown, targeting two farms (16680)
189. 3/17/2018, Bait Al-Faqih, Al Hussayniyah, targeting a farm (16688)
190. 3/17/2018, Bajil, Wadi Siham, targeting a farm (16689)
191. 3/18/2018, Sirwah, unknown, targeting farms (16699)
192. 3/21/2018, Al-Tuhayat, unknown, targeting farms (16729)
193. 3/21/2018, Al-Jirahi, unknown, targeting farms (16730)
194. 3/22/2018, Sirwah, unknown, targeting farms (16741)

195. 3/22/2018, Razih, Ghumar, targeting a farm (16743)
196. 3/24/2018, Bait Al Faqih, Al Husayniyah, targeting farms (16767)
197. 3/26/2018, Harf Sufyan, Al Amashiyah, targeting farms (16785)
198. 3/26/2018, Zabid, unknown, targeting civilians' farms (16788)
199. 3/26/2018, Bait Al-Faqih, Al Husayniyah, targeting farms (16789)
200. 3/26/2018, Al-Dhaheer, Ghafirah, targeting a farm (16800)
201. 3/26/2018, Al-Safra'a, Al Ammar, targeting farms (16801)
202. 3/27/2018, Zabid, unknown, targeting a farm (16804)
203. 3/27/2018, Al-Tuhayat, unknown, targeting farm (16805)
204. 3/28/2018, Sirwah, unknown, targeting farm (16818)
205. 3/29/2018, Sirwah, unknown, targeting farms (16835)
206. 3/30/2018, Bani Qais Al-Toor, targeting farms (16844)
207. 3/30/2018, Al-Jirahi, targeting farms (16848)
208. 3/30/2018, Al-Tuhayat, targeting farms (16851)
209. 3/31/2018, Abs, Al Jar, targeting farms (16863)
210. 3/31/2018, Abs, Al Jar, targeting farms (16865)
211. 3/31/2018, Al-Tuhayat, targeting a farm (16867)
212. 4/04/2018, Hudaydah, Al-Tuhayat, targeting a farm (16908)
213. 4/06/2018, Al-Tuhayat, Al Swayq, targeting a farm (16927)
214. 4/07/2018, Zabid, Wadi Zabid, targeting a farm (16933)
215. 4/08/2018, Hudaydah, Al-Jirahi, targeting a farm (16947)
216. 4/08/2018, Khadir, Al Mahawil, targeting a farm (16951)
217. 4/11/2018, Al-Jirahi, As Sa'eidah, targeting a farm (16992)
218. 4/12/2018, Hudaydah, Bajil, targeting a farm (16992)
219. 4/12/2018, Abs, Al Jar, targeting farms (16996)
220. 4/12/2018, Saada, Baqim, targeting a farm (17000)
221. 4/13/2018, Abs, Al Jar, targeting a farm (17009)
222. 4/13/2018, Hudaydah, Al-Luhayyah, targeting a farm (17010)
223. 4/16/2018, Sanaa, Safan, targeting a farm (17071)
224. 4/16/2018, Abs, Al Jar, targeting a farm (17085)
225. 4/17/2018, Bait Al-Faqih, Al Husainiyah, targeting a farm (17088)
226. 4/18/2018, Al-Qabbaytah, Al Shurayjah, targeting a chicken farm (17108)
227. 4/20/2018, Bakil Al-Mir, Al Fas, targeting a farm (17130)
228. 4/22/2018, Abs, Al Jar, targeting a farm (17153)
229. 4/22/2018, Al-Sabrah, Qa' Al Jamie, targeting farms (17160)
230. 4/24/2018, Abs, Al Jar, targeting farms (17186)
231. 4/26/2018, Abs, Al Jar, targeting farms (17220)
232. 4/28/2018, Capital region, Al-Sab'ein, targeting farms (17237)
233. 4/28/2018, Abs, Al Jar, targeting farms (17240)
234. 5/05/2018, Al-Jirahi, Al Jirbah, targeting a farm (17302)
235. 5/06/2018, Hudaydah, Al-Jirahi, targeting a farm (17313)
236. 5/08/2018, Marib, Sirwah, targeting farms (17346)
237. 5/09/2018, Jabal Ras, Al Marir, targeting a farm (17365)
238. 5/10/2018, Nihm, Ieyal Mohammed, targeting a farm (17370)
239. 5/12/2018, Hudaydah, Al-Jirahi, targeting a farm (17401)
240. 5/13/2018, Marib, Sirwah, targeting farms (17417)
241. 5/15/2018, Marion, Sirwah, targeting farms (17430)
242. 5/16/2018, Bajil, Al Urj, targeting farms (17436)
243. 5/17/2018, Hudaydah, Al-Tuhayat, targeting a farm (17440)
244. 5/21/2018, Saada, Baqim, targeting a farm (17472)
245. 5/23/2018, Bait Al-Faqih, Al Mayh, targeting a farm (17480)

246. 5/25/2018, Saada, Baqim, targeting a farm (17503)
247. 5/29/2018, Hudaydah, Zabid, targeting a farm (17550)
248. 5/31/2018, Saada, Baqim, targeting a farm (17567)
249. 6/06/2018, Hudaydah, Al-Marawi'ah targeting a farm (17604)
250. 6/06/2018, Al-Durayhimi, Al Jirbah Al Ulya village, targeting a farm (17605)
251. 6/06/2018, Hudaydah, Al-Durayhimi, targeting farms, (17606)
252. 6/08/18, Hudaydah, Al-Tuhayat, targeting farms (17612)
253. 6/09/18, Jawf, Al-Maton, targeting farms (17620)
254. 6/09/18, Hudaydah, Al-Tuhayat, targeting farms (17627)
255. 6/09/18, Hudaydah, Al-Durayhimi, targeting farms (17628)
256. 6/09/18, Hudaydah, Bait Al-Faqih, targeting farms (17629)
257. 6/12/18, Hudaydah, Al-Jirahi, targeting a farm (17656)
258. 6/13/2018, Al-Durayhimi, Al Manqam, targeting farms (17668)
259. 6/14/2018, Al-Durayhimi, targeting a farm (17679)
260. 6/15/2018, Al-Tuhayat, Al-Modmin, targeting a farm (17680)
261. 6/21/2018, Al-Tuhayat, Al Sawaiq, targeting a farm (17733)
262. 6/21/2018, Al-Tuhayat, Al-Suwayq, targeting a farm (17736)
263. 6/24/2018, Razih, Al Ali, targeting a farm (17754)
264. 6/28/2018, Hudaydah, Al-Jirahi, targeting a farm (17802)
265. 6/29/2018, Sihar, targeting farms (17821)
266. 6/30/2018, Hudaydah, Bait Al-Faqih, targeting a farm (17823)
267. 7/06/2018, Hudaydah, Zabid, targeting a farm (17876)
268. 7/07/2018, Hudaydah, Al-Halj, targeting a farm (17881)
269. 7/07/2018, Khadir, Sha'ab Al Dakhil, targeting a farm (17882)
270. 7/07/2018, Saada, Basqim, targeting a farm (17885)
271. 7/09/2018, Hudaydah, Al-Tuhayat, targeting farms (17893)
272. 7/11/2018, Al-Durayhimi, Al Jirbah, targeting a farm (17910)
273. 7/12/2018, Al-Durayhimi, Al Shajan, targeting farms (17916)
274. 7/12/2018, Al-Durayhimi, Al Manqam, targeting farms (17917)
275. 7/12/2018, Hudaydah, Al-Halj, targeting farms (17918)
276. 7/12/2018, Hudaydah, Zabid, targeting farms (17919)
277. 7/13/2018, Milhan, Khasa'ah, targeting farms (17921)
278. 7/15/2018, Bajil, Al Urj, targeting farms (17942)
279. 7/15/2018, Al-Marawi'ah, near the Kamaran Factory, targeting a farm (17947)
280. 7/16/2018, Hudaydah, Al-Marawi'ah, targeting a farm (17967)
281. 7/17/2018, Hudaydah, Al-Hali, targeting a farm (17970)
282. 7/25/2018, Hudaydah, Zabid, targeting a chicken farm (18020)
283. 7/25/2018, Hudaydah, Al-Durayhimi, targeting a farm (18021)
284. 7/27/2018, Hudaydah, Bajil, targeting a farm (18037)
285. 7/27/2018, Hudaydah, Al-Durayhimi, targeting a farm (18038)
286. 7/27/2018, Jawf, Al-Maslub, targeting a herd of livestock (18039)
287. 7/28/2018, Hudaydah, Zabid, targeting a poultry farm (18063)
288. 7/29/2018, Nihm, Al Hanashat, targeting farms (18072)
289. 7/30/2018, Hudaydah, Al-Durayhimi, targeting an agricultural extension facility (18085)
290. 7/31/2018, Hudaydah, Al-Durayhimi, targeting an agricultural extension facility (18097)
291. 7/31/2018, Marib, Sirwah, targeting farms (18100)
292. 8/06/2018, Al-Dhuha, targeting a farm (18153)
293. 8/06/2018, Sanhan, Sha'san, targeting a farm (18154)
294. 8/07/2018, Al-Durayhimi, Al Jirbah, targeting a farm (18161)
295. 8/07/2018, Sihar, Qahrah Al Nos, targeting a farm (18163)
296. 8/08/2018, Abs, Al Jar, targeting a farm, (18170)

297. 8/09/2018, Zabid, Al Shadhliyah, targeting a farm (18182)
298. 8/13/2018, Al-Tuhayat, targeting a farm (18220)
299. 8/17/2018, Al-Tuhayat, Al Jabaliyah, targeting a farm (18233)
300. 8/18/2018, Baqim, targeting farms (18238)
301. 8/19/2018, Al-Safra'a, Kina, targeting a chicken farm (18261)
302. 8/21/2018, Baqim, targeting farms (18271)
303. 8/22/2018, Baqim, targeting farms (18279)
304. 8/24/2018, Al-Durayhimi, targeting a farm (18295)
305. 8/27/2018, Baqim, targeting a farm (18325)
306. 8/29/2018, Al-Dhaher, targeting farms (18338)
307. 8/31/2018, Bajil, targeting a farm (18352)
308. 8/31/2018, Baqim, targeting farms (18355)
309. 8/31/2018, Al-Tuhayat, As Swaiq, targeting farms (18358)
310. 9/01/2018, Baqim, targeting farms (18363)
311. 9/02/2018, Kitaf Wa Al-Boqe'e, Wadi Al Bo Jabarah, targeting farms (18367)
312. 9/02/2018, Baqim, targeting farms (18369)
313. 9/03/2018, Nihm, Al Hanashat, targeting a farm (18771)
314. 9/03/2018, Bani Matar, Jabal Dhufar, targeting a farm (18772)
315. 9/03/2018, Baqim, targeting farms (18381)
316. 9/04/2018, Baqim, targeting farms (18393)
317. 9/06/2018, Al-Tuhayat, As Swaiq, targeting a farm (18400)
318. 9/07/2018, Al-Hali, Ash Sharaf village, targeting a farm (18406)
319. 9/08/2018, Al-Hali, Kilo 16, targeting Red Sea Flour Mill (18419)
320. 9/08/2018, Al-Durayhimi, targeting farms (18421)
321. 9/09/2018, Al-Hali, targeting a farm (18429)
322. 9/10/2018, Baqim, targeting farms (18440)
323. 9/12/2018, Al-Hali, Kilo 16, targeting a drinks factory (18456)
324. 9/15/2018, Baqim, targeting a farm (18486)
325. 9/16/2018, Haydan, targeting a farm (18491)
326. 9/17/2018, Baqim, targeting farms (18495)
327. 9/19/2018, Al-Matmmah, targeting farms (18505)
328. 9/21/2018, Baqim, targeting a farm (18519)
329. 9/22/2018, Baqim, targeting farms (18530)
330. 9/24/2018, Baqim, Al Alzammah, targeting a farm (18538)
331. 9/24/2018, Zabid, targeting a poultry farm (18540)
332. 9/25/2018, Baqim, targeting farms (18550)
333. 10/01/2018, Al Dhaher, Bani Dhahl, targeting farms (18593)
334. 10/04/2018, Sanhan, targeting farms (18611)
335. 10/07/2018, Al-Hali, Al Jabbanah, targeting honey farms (18627)
336. 10/07/2018, Al Marawi'ah, An Nashiri, targeting honey farms (18628)
337. 10/07/2018, Al-Tuhayat, targeting farms (18630)
338. 10/07/2018, Al-Tuhayat, targeting farms (18631)
339. 10/09/2018, Al-Hali, unknown, targeting Red Sea flour mills (18643)
340. 10/23/2018, Kitaf Wa Al-Boqe'e, Wadi Al Abu Jabarah, targeting farms (18700)
341. 10/24/2018, Bait Al-Faqih, Al Masoudi, targeting vegetable washing and packing facility (18707)
342. 10/27/2018, Hamdan, Ash Shiaab, targeting farms (18720)
343. 10/29/2018, Al-Marawi'ah, An Nashiri, targeting farms (18724)
344. 10/31/2018, Al-Dhuha, unknown, targeting farms (18735)
345. 10/31/2018, Bani Sa'ad, targeting farms (18736)
346. 11/06/2018, Hudaydah, Al-Hali, targeting Red Sea Flour Mills (18791)

347. 11/06/2018, Saada, Al-Dhaher, targeting farms (18797)
348. 11/09/2018, Hudaydah, Al-Hali, targeting the Tamani Dairy Factory (18815)
349. 11/09/2018, Saada, Al-Dhaher, targeting farms (18816)
350. 11/10/2018, Bait Al-Faqih, Al Jaroubah, targeting a farm (18820)
351. 11/11/2018, Al-Hali, Al Halaqah, targeting farms (18834)
352. 11/13/2018, Saada, Sihar, targeting an agricultural nursery (18844)
353. 11/15/2018, Hudaydah, Al-Tuhayat, targeting a farm (18863)
354. 11/19/2018, Sihar, Bani Muadh, targeting a farm (18884)
355. 11/24/2018, Al-Durayhimi, Az Zafaran, targeting a farm (18916)
356. 11/28/2018, Hudaydah, Al-Tuhayat, targeting a farm (18948)
357. 11/29/2018, Saada, Baqim, targeting farms (18959)
358. 12/02/2018, Hudaydah, Hays, targeting farms (18983)
359. 12/05/2018, Bait Al-Faqih, Al Husayniyah, targeting farms (19006)
360. 12/06/2018, Saada, Baqim, targeting farms (19011)
361. 12/07/2018, Hudaydah, Bait Al-Faqih, targeting farms (19015)
362. 12/09/2018, Al-Tuhayat, Al Maghras, targeting a farm (19024)
363. 12/11/2018, Al-Tuhayat, Hussen Village, targeting farms (19032)
364. 12/12/2018, Al-Haymah Al-Kharijiyah, Wadi Siham targeting farms (19038)
365. 12/13/2018, Hudaydah, Al-Dhuha, targeting a farm (19039)
366. 12/14/2018, Al-Haymah Al-Kharijiyah, Wadi Siham targeting a farm (19041)
367. 12/14/2018, Hudaydah, Al-Tuhayat, targeting a farm (19043)
368. 12/14/2018, Hudaydah, Bait Al-Faqih, targeting farms (19046)
369. 12/15/2018, Al-Khabt, Ash Shaafel As Sufla, targeting a farm (19060)
370. 12/22/2018, Saada, Al-Dhaher, targeting a farm (19103)
371. 12/24/2018, Saada, Baqim, targeting farms (19114)
372. 12/26/2018, Nihm, Mahalli, targeting farms (19121)
373. 12/28/2018, Hamdan, Al Hatab, targeting a farm (19134)

Food Preservation (7)

1. 1/23/2017, Hudaydah, Al-Salif, Ras Eisa, targeting a salt factory (11033)
2. 3/24/2017, Taiz, Al-Mukha Junction, targeting Sabihah Ice Factory (12117)
3. 4/5/2017, Hudaydah, Bajil, targeting a salt factory (12292)
4. 1/18/2018, Hajja, Hayran, targeting an ice factory (15966)
5. 7/28/2018, Hudaydah, Zabid, targeting an ice factory (18065)
6. 9/22/2018, Al-Hali, targeting a refrigeration facility (18528)
7. 11/16/2018, Hudaydah, Al-Tuhayat, targeting an ice factory (18868)

Fishing (32)

1. 1/09/2017, Taiz, Dhubab, Al-Jadeed coast targeting a fishing boat (10759)
2. 2/1/2017, Hudaydah, Al-Khawkah coastline, targeting fishing boats (11218)
3. 2/3/2017, Hudaydah, Al-Tarfah Island, targeting fishing boats (11262)
4. 2/8/2017, Hudaydah, Al-Khawkhah, targeting fishing boats (11379)
5. 2/11/2017, Hudaydah, Al-Luhaiyah City, targeting fish storage facility (11423)
6. 2/12/2017, Hudaydah, Al-Luhaiyah coastline, targeting fishing boats (11439)
7. 2/12/2017, Hudaydah, Al-Durayhimi, Al-Nakhilah coastline, targeting fish storage facility (11444)

8. 3/16/2017, Hudaydah, Al-Durayhimi, targeting fishing boats (11978)
9. 4/4/2017, Hudaydah, Al-Taif coastline and Al-Tarfah island, targeting fishing boats (12271, 12273)
10. 7/21/2017, Hudaydah, Al-Khawkhah coastline, targeting a fishing boat (13700)
11. 11/10/2017, Hudaydah, Al-Luhaiyah, Al-Bawadi island, targeting fishing boats (15040)
12. 11/17/2017, Hudaydah, Al-Khawkhah, Al Wa'arah, targeting a fishing hub (15104)
13. 1/08/2018, Al-Luhaiyah, Al Khawbah Port, targeting a Ministry of Fisheries building (15870)
14. 2/11/2018, Al-Luhaiyah, targeting a storage unit belonging to the minister of fisheries (16236)
15. 4/13/2018, Hudaydah, Al-Luhaiyah, targeting the Muslim Fish Company (17006)
16. 5/13/2018, Al-Tuhayat, Al Haymah Port, targeting a fishing boat (17413)
17. 5/21/2018, Hudaydah coastline, Al Tarfah Island, targeting a fishing boat (17466)
18. 5/21/2018, Hudaydah coastline, Al Tarfah Island, targeting a fishing boat (17467)
19. 5/26/2018, Hudaydah, Bajil, targeting a fishing industry facility (18509)
20. 7/24/2018, Saada, Al-Safra'a, targeting a fishing boat (18016)
21. 7/24/2018, Saada, Razih, targeting a fishing boat (18017)
22. 7/26/2018, Hudaydah, Al-Hawak, targeting a fishing boat (18024)
23. 7/26/2018, Hudaydah, As Sawabie Island, targeting a fishing boat (18025)
24. 7/27/2018, Hudaydah, Al-Hawak, targeting fishing docks (18036)
25. 8/01/2018, Katamah, targeting fisherman (18112)
26. 8/02/2018, Al-Hawak, targeting a fish market (18118)
27. 8/18/2018, Hudaydah, targeting a fishing boat (18250)
28. 8/19/2018, Hudaydah, Al Sawabie island, targeting two boats (18257)
29. 8/26/2018, Hudaydah, targeting a fishing boat (18314)
30. 8/30/2018, Kamaran, Aqaban island, targeting fishing boats (18347)
31. 9/18/2018, Al Hawak, targeting a fishing port (18504)
32. 10/07/2018, Kamaran, Mukarram village, targeting fishing huts (18629)

Markets and Food Shops (75)

1. 1/10/2017, Sanaa, Taiz, Nihm, Bani Mi'sar targeting a marketplace (10768)
2. 1/17/2017, Saada, Haydan, Marran, targeting a marketplace (10901)
3. 1/23/2017, Saada, Kitaf Wa Al-Boge'e. Al-Aqeeq, targeting a marketplace (11037)
4. 1/30/2017, Taiz, Al-Mukha, targeting the city's central market. (11186)
5. 2/4/2017, Marib, Sirwah, targeting Siwah marketplace (11292)
6. 2/7/2017, Taiz, Al-Mukha, targeting the city's center market (11367)
7. 2/26/2017, Taiz, Al-Mukha Junction, targeting the Al-Khadhir market (11652)
8. 3/1/2017, Marib, Sirwah, targeting Siwah marketplace (11713)
9. 3/8/2017, Sanaa, Nihm, Maswarah, targeting Maswarah market (11841)
10. 3/13/2017, Sanaa, Nihm, Mahali, targeting a marketplace (11932)
11. 3/24/2017, Saada, Sa'ada City, targeting a marketplace (12114)
12. 4/14/2017, Marib, Sirwah, targeting Sirwah marketplace (12448)
13. 4/28/2017, Taiz, Maqbanah, Al-Barah, targeting a marketplace (12662)
14. 5/3/2017, Saada, Al-Daher, Al-Malaheet, targeting a marketplace (12737)
15. 5/20/2017, Taiz, Maqbanah, Al-Barah, targeting a market (12933)
16. 5/25/2017, Marib, Sirwah, targeting Sirwah marketplace (12994)
17. 6/6/2017, Hajja, Harad, targeting the Harad market (13158)
18. 6/6/2017, Marib, Sirwah, targeting Sirwah marketplace (13160)
19. 6/6/2017, Taiz, Salah, Al-Houban road, targeting a bakery (13167)
20. 6/13/2017, Hajja, Harad, targeting people selling Qat (13266)

21. 6/13/2017, Hajja, Harad, targeting Harad market (13267)
22. 6/17/2017, Saada, Shada'a, Al-Mashnaq, targeting a marketplace (13328)
23. 6/19/2017, Hajja, Mustaba, targeting Al-Khamis market (13345)
24. 6/19/2017, Marib, Sirwah, targeting Sirwah marketplace (13347)
25. 6/21/2017, Marib, Sirwah, targeting Sirwah marketplace (13365)
26. 6/23/2017, Marib, Sirwah, targeting Sirwah marketplace (13390)
27. 6/23/2017, Saada, Shada'a, Al-Mashnaq, targeting a marketplace (13395)
28. 6/24/2017, Marib, Sirwah, targeting Sirwah marketplace (13401)
29. 7/2/2017, Marib, Sirwah, targeting Sirwah marketplace (13365)
30. 7/6/2017, Taiz, Maqbanah, Al-Barah, targeting a marketplace (13554)
31. 7/18/2017, Taiz, Mawza, Al Hamli village, targeting a grocery store (13681)
32. 7/27/2017, Marib, Sirwah, targeting Sirwah market (13794)
33. 8/28/2017, Saada, Kitaf Wa Al-Boge'e, targeting Al Boge'e market (14165)
34. 9/10/2017, Hajja, Hayran, targeting a marketplace (14315)
35. 9/18/2017, Sanaa, Nihm, Maswarah, targeting a marketplace (14400)
36. 9/28/2017, Hajja, Bakil Al-Mir, targeting Khadhadh market (14494)
37. 10/9/2017, Saada, Shad'a, Al-Mashnaq, targeting a marketplace (14632)
38. 10/16/2017, Hajja, Harad, targeting the central marketplace (14712)
39. 10/25/2017, Marib, Sirwah, targeting Sirwah market (14818)
40. 10/29/2017, Sanaa, Al-Haymah Al-Kharikiyah, Bani Mansour, targeting a marketplace (14878)
41. 11/17/2017, Hajja, Abs, Al Jar, targeting market stalls (15099)
42. 12/4/2017, Sanaa, Sanhan, targeting Nadh market (15306)
43. 12/9/2017, Sanaa, Nihm, targeting Khalqah market (15383)
44. 12/15/2017, Saada, Monabbih, Al Al Sheikh, targeting a market (15506)
45. 12/15/2017, Taiz, Mawza, Al Hamili, targeting a market (15508)
46. 12/16/2017, Hudaydah, Hays, targeting Hays market (15522)
47. 12/17/2017, Hudaydah, Al-Tuhayat, Al Mafazah, targeting a fish market (15546)
48. 12/26/2017, Taiz, Al-Taizyah, Al Haymah, targeting Sharah market (15695)
49. 12/30/2017, Hudaydah, Al-Jirahi, targeting a market (15772)
50. 1/03/2018, Hudaydah, Zabid, targeting a restaurant (15815)
51. 1/06/2018, Sa'ada, Jayash, targeting Jayash Market (15846)
52. 1/10/2018, Kitaf Wa Al-Boqe'e, Wadi Al Abu Jbarah, targeting a market (15881)
53. 1/25/2018, Sirwah, Suq Sirwah, targeting Sirwah Market (16047)
54. 1/31/2018, Qaflah Odhr, Al Mifkhadh market, targeting a bridge in the market (16099)
55. 1/31/2018, Qaflah Odhr, Al Mifkhadh market, targeting the market itself (16100)
56. 2/02/2018, Sihar, Al Sirbi market, targeting Al-Sirbi market (16123)
57. 2/02/2018, Sihar, Al Mahader market, targeting Al-Mahader market (16124)
58. 2/13/2018, Bakil Al-Mir, Hadhadh, targeting Hadhadh market (16258)
59. 3/03/2018, Salah, Al Qasr, targeting a bakery (16465)
60. 3/10/2018, Baqim, targeting market (16583)
61. 3/29/2018, Saada, unknown, targeting agricultural market (16837)
62. 4/03/2018, Hudaydah, Jabal Ras, targeting Al Mubariz market (16902)
63. 4/21/2018, Maqbanah, Al Barah, targeting Al Barah Market (17144)
64. 4/29/2018, Harad, Al Mazraq, targeting Al Mazraq Market (17254)
65. 6/06/2018, Maqbanah Ozlah Al Akhloud, targeting Al Ahad market (17603)
66. 6/07/2018, Hudaydah, Bara'a, targeting a market (17611)
67. 7/02/2018, Hudaydah, Zabid, targeting a restaurant (17844)
68. 7/04/2018, Hudaydah, Zabid, targeting a market (17964)
69. 8/09/2018, Majz, Dhahyan market, targeting Dhahyan market (18181)
70. 9/10/2018, Bait Al-Faqih, Al Jah Al A'la, targeting a market (18445)
71. 9/28/2018, Hayran, targeting Hayran Market (18567)

72. 9/30/2018, Mustaba, targeting Al Khamees Market (18586)
73. 10/08/2018, Mustaba, Al-Khameis market, targeting a market (18634)
74. 10/12/2018, Al-Dhaher, Al Malaheet, targeting a market (18659)
75. 11/06/2018, Razih, Al Ali, targeting a market (18794)

Medical Targets (15)

1. 6/4/2017, Saada, Sa'ada, Qazah, targeting a medical center for treating Cholera (13128)
2. 1/22/2018, Siyar, Al Masa'ibah, targeting a medical clinic (16000)
3. 2/17/2018, Kitaf Wa Al-Boqe'e, Al Aqeeq, targeting paramedics (16327)
4. 3/03/2018, Mawza, the north of Al-Areesh, targeting a medical dispensary (16475)
5. 4/27/2018, Capital region, Al-Sab'ain, targeting the Al Sab'ain hospital (17228)
6. 6/11/18, Hajja, Abs, targeting a MSF cholera treatment center (17648)
7. 6/16/2018, Hudaydah, Al-Hawak, targeting the operation room of Al-Thawrah hospital (17688)
8. 6/16/2018, Al-Hawak, targeting Al-Thawrah hospital (17693)
9. 7/30/2018, Hudaydah, Al-Durayhimi, targeting a hospital facility (18085)
10. 8/02/2018, Al-Hawak, targeting Al Thawrah hospital (18117)
11. 8/02/2018, Al-Marawi'ah, targeting a vehicle carrying wounded people (18119)
12. 10/11/2018, Al-Durayhimi, targeting a maternity and childhood hospital (18656)
13. 11/08/2018, Hudaydah, Al-Hali, targeting a hospital (18811)
14. 12/21/2018, Jawf, Khab Wa Al-Sha'af, targeting an ambulance (19093)
15. 12/21/2018, Barat Al-Anan, Ad Dhuhrah, targeting an ambulance (19094)

Miscellaneous Food Targets (10)

1. 3/16/2017, Hudaydah, Bait Al-Faqih, the road between Al-Jah and Al-Khawkhah, targeting a truck carrying vegetables (11977)
2. 4/13/2017, Hudaydah, Hays, targeting a truck carrying food (12432)
3. 5/9/2017, Taiz, Mawza, Al-Hamili main road, targeting a truck carrying food (12807)
4. 12/22/2017, Hudaydah, Al-Hali, targeting a food storage facility (15628)
5. 2/08/2018, Al-Jirahi, Al Garrahi-Zabid road, targeting a truck carrying chicken (16202)
6. 4/14/2018, Maqbanah, Al Kamp, targeting a civilian vehicle carrying vegetables (17041)
7. 7/30/2018, Hudaydah, Al-Mansoriyah, targeting a UNICEF warehouse (18095)
8. 8/13/2018, Al-Durayhimi, targeting a food distribution point (18225)
9. 8/13/2018, Al-Durayhimi, targeting a food distribution point (18226)
10. 9/12/2018, Hudaydah, targeting a vegetable truck (18458)

Port Facilities (13)

1. 2/4/2017, Taiz, Al-Mukha, targeting the Al-Mukha port (11294)
2. 2/5/2017, Taiz, Al-Mukha, targeting the Al-Mukha port (11317)
3. 2/6/2017, Hudaydah, Al-Mina, targeting the Al-Hudaydah port (11322)
4. 2/8/2017, Hudaydah, Al-Mina, targeting the Al-Hudaydah port (11377)
5. 2/10/2017, Hudaydah, Al-Mina, targeting the Al-Hudaydah port (11407)
6. 2/13/2017, Hudaydah, Al-Mina, targeting the Al-Hudaydah port. Two distinct strikes here today. (11458, 11459).
7. 2/26/2017, Hudaydah, Al-Kawkhah, targeting the Al-Haymah port (11644)

8. 7/17/2017, Hudaydah, Al-Khawkhah, targeting the Al-Khawkhah port (13659)
9. 8/10/2017, Hudaydah, Al-Khawkhah, targeting Al-Haymah port (13967)
10. 12/21/2017, Hudaydah, Al-Tuhayat, Al Haymah, targeting the Al-Haymah port (15618)
11. 5/27/2018, Hudaydah, Al-Mina, targeting Al-Hudaydah port infrastructure (17527)
12. 11/12/2018, Al-Mina, Al Hudaydah City, targeting port facilities (18837)
13. 12/03/2018, Hudaydah, Al-Mina, targeting port facilities (18988)

Water (43)

1. 1/08/2017, Taiz, Al-Mukha, targeting a water well (10736)
2. 1/08/2017, Taiz, Al-Mukha, targeting a desalination plant (10737)
3. 1/17/2017, Hudaydah, Al-Khawkhah, targeting a water truck (10894)
4. 2/1/2017, Hudaydah, Bajil, targeting a water and sewage plant (11231)
5. 2/2/2017, Hudaydah, Al-Hawak, targeting a water/sewage plant (11241)
6. 4/4/2017, Hudaydah, Bajil agricultural street, targeting a water corporation's storage facilities (12268)
7. 4/7/2017, Taiz, Maqbanah, Al-Bahrah, targeting the Al-Naysani well (12340)
8. 4/10/2017, Sanaa, Hamdan, Anjar, targeting a water development project site (12385)
9. 4/19/2017, Hajja, near Hayran marketplace, targeting a truck carrying water (12519)
10. 4/27/2017, Dhamar, Jahran, Tafadhol village, targeting well drilling equipment (12635)
11. 6/3/2017, Saada, Sihar, Al-Hamazat, targeting a water development project (13109)
12. 7/2/2017, Hudaydah, Kamaran Island, targeting water desalination plant (13488)
13. 7/27/2017, Amran, Harf Sufyan, targeting a truck carrying water (13783)
14. 9/23/2017, Saada, Sihar. Walad Masaud, targeting a water development project (14455)
15. 9/24/2017, Saada, Sihar, Al-Mahadhir, targeting well drilling equipment (14458)
16. 9/29/2017, Saada, Sihar, Al-Azqoul, targeting a water development project (14513)
17. 10/31/2017, Sanaa, Hamdan, Bait Naam, targeting a water development project (14911)
18. 12/21/2017, Saada, Sihar, Al Azqoul, targeting a truck carrying water (15624)
19. 12/29/2017, Saada, Al-Safra'a, Al Ammar, targeting well drilling equipment (15750)
20. 1/05/2018, Sihar, Walad Masaud, targeting a well drill (15840)
21. 1/25/2018, Sihar, Al Hamazat, targeting a water development project (16037)
22. 2/04/2018, Hays, Al Khawkhah junction, targeting a water desalination plant (16153)
23. 2/12/2018, Al-Silw, targeting a well (16257)
24. 2/14/2018, Hays, targeting a well (16288)
25. 2/23/2018, Sihar, Al Mahadher, targeting a water driller (16397)
26. 2/28/2018, Haydan, Dhwaib, targeting a water fountain (16441)
27. 3/29/2018, Sihar, Al Azqoul, targeting a water pump (16841)
28. 4/09/2018, Baqim, Al Aslan, targeting a well drill (16962)
29. 4/13/2018, Sihar, Al Hamazat, targeting a water development project (17025)
30. 4/15/2018, Haydan, Tallan, targeting a water storage tank (17066)
31. 4/24/2018, Majz, Al Jamalalah, targeting a well drill (17181)
32. 6/02/18, Nihm, Ghul Ali, targeting a water truck (17572)
33. 6/04/18, Al-Safra'a, Al Ammar, targeting a well driller (17587)
34. 6/29/2018, Sihar, Farwah, targeting a water driller (17810)
35. 7/22/2018, Al-Safra'a, Noshouz, targeting a water development project (17998)
36. 7/27/2018, Hudaydah, Hudaydah City, targeting a well development project (18035)
37. 7/27/2018, Hudaydah, Zabid, targeting a water sanitation facility (18051)
38. 8/04/2018, Al-Durayhimi, targeting a water tank (18137)
39. 8/30/2018, Kamaran, Kamaran island, targeting water wells (18345)

40. 10/10/2018, Bait Al Faqih, Al Jah, targeting a water well (18650)
41. 10/12/2018, Kamaran, targeting a water tank (18662)
42. 11/20/2018, Al-Sawadiyah, Al Wahbiyah, targeting a water dam (18886)
43. 11/29/2018, Hudaydah, Al-Dhuha, targeting well drilling equipment (18956)