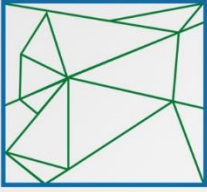




سوريون
من أجل
الحقيقة
والعدالة
Syrians
For Truth
& Justice



24 August 2020



© STJ

*Front Lines Aflame: Crop
Fires Ravage Syria's Jazirah
Region, Scorching Fields
and Destroying Harvests*

Front Lines Aflame: Crop Fires Ravage Syria's Jazirah Region, Scorching Fields and Destroying Harvests

In Collaboration with PAX for Peace, STJ has investigated and analyzed recently occurring crop fires along the front lines the Turkish-backed SNA and the SDF, threatening local agricultural and food security

Executive Summary

Over the last several years, summer crop fires in north east Syria have become a reoccurring issue. Largely commencing in early May, these fires overlap with wheat and barley harvest seasons. These put at risk the crop yields, representing the livelihood of local farmers in addition to the main food staple for the region's populations.

This year, while fires have occurred across the Hasakah governorate, known as Syria's 'breadbasket,' a new pattern of blazes has emerged, noticeably mapping over the front lines between the Turkish-backed Free Syrian Army and the Syrian Democratic Forces. Analysis conducted by Pax for Peace via satellite shows that approximately 43,000 acres of land in this area, between the towns of Ras al-Ain and Tel Tamer, burned between May 15th and July 25th of 2020, representing 10% of total land burned in Hasakah during this time period.

In researching this report, STJ spoke to a number of local farmers, as well as civilian and military officials active on the front lines, particularly in the vicinity of Tel Tamer. These testimonies highlight a number of trends relating to these crop fires.

Witness statements diverge on who or what is responsible for these incidents. These disagreements demonstrate not only the polarized conflict environment where the fires occur but also the difficulty local authorities have had in investigating such fires, and in producing evidence as to the causes. It is likely that these crop fires are started in a number of different ways, included but not limited to accidental causes, controlled burns occasionally set after harvests, blazes set by militant factions in order to clear visibility around front line fortifications, and as a side effect of shelling and small scale clashes occurring in the area. In addition, some testimonies mention threats of arson made to local farmers by militants, particularly from Syrian National Army factions, in efforts to secure rent, or bribes.

What is evident is the lack of resources and ability local emergency response organizations have in fighting these fires. Whether those that cultivate land under Syrian National Army or under Syrian Democratic Forces control, farmers STJ spoke to frequently highlighted the slow response times and inadequate supplies of local fire brigades, allowing small fires to burn entire acres. In fields directly on the front lines, conflict geography acts as yet another impediment to firefighting efforts, as these areas are reportedly made inaccessible by local militants or gunfire of those on the opposing side.

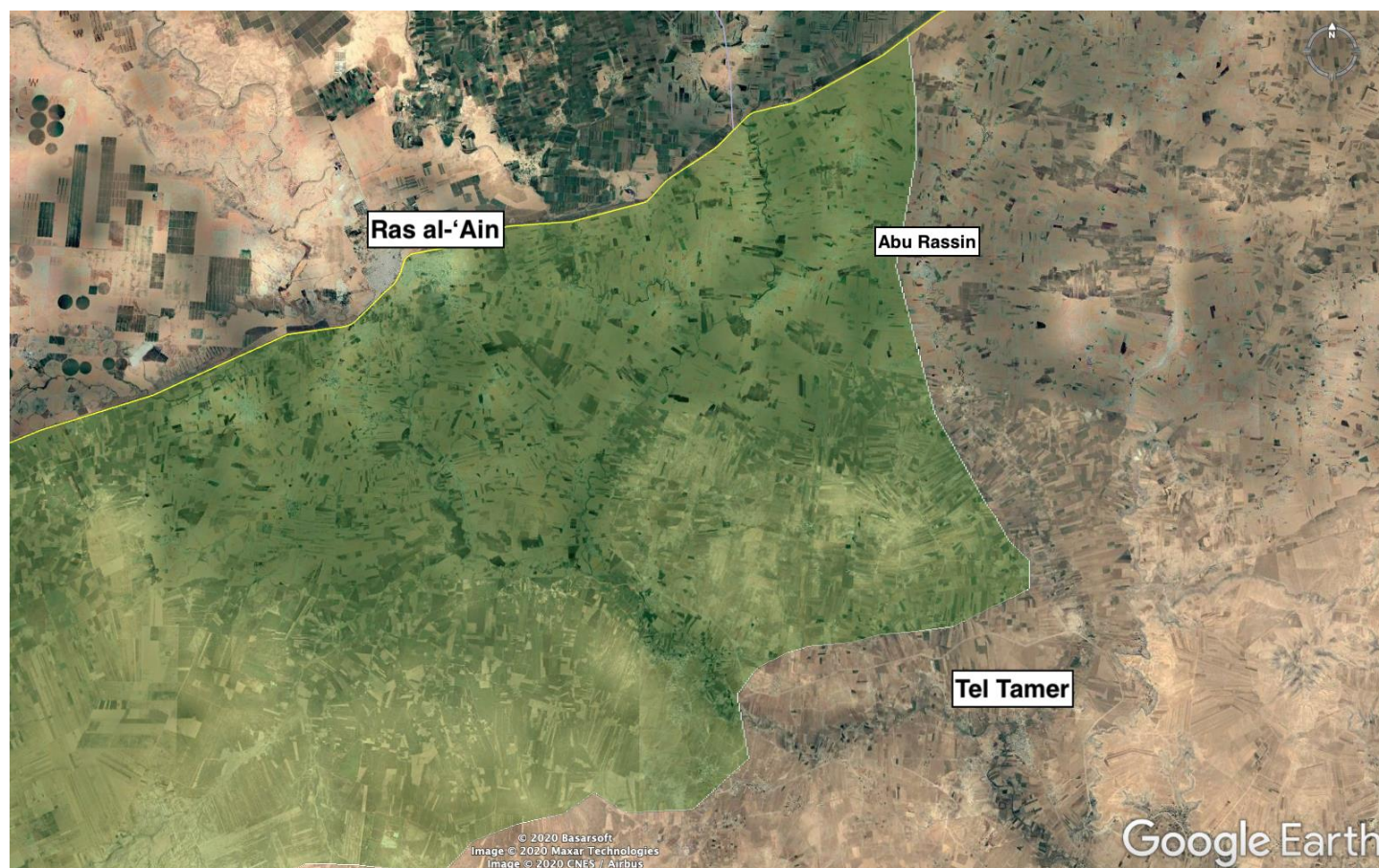
Introduction

Darkening the skies of Syria's fertile northeast, fires repeatedly broke out across crop fields this past May and June. Now a depressing hallmark of the country's harvest season, these flames scorched thousands of acres of crops, threatening the livelihoods of local farmers and putting the sustenance of the region's inhabitants in danger. [Last year](#), the so-called Islamic State was suspected to have perpetrated numerous counts of arson in Syria and neighboring Iraq, devastating large swaths of land and robbing farmers of their income. This year, a similar pattern of scorched-earth incidents have materialized, concentrated in particular along the newly established front lines of Syria's northeast.



1. A fire burns through the cemetery and fields of the village of al-Tawilah, along the Khabour river, June 14th, 2020.

A recent development within Syria's nine year old conflict, these fronts are a product of Operation Peace Spring, the 2019 cross-border invasion conducted by the Turkish military and their local proxy forces, the Syrian National Army (SNA). This offensive targeted the towns of Tel Abyad and Ras al-'Ain/Serêkaniyê, and culminated in the invasion forces capturing these border towns and the surrounding countryside from the US-backed Syrian Democratic Forces (SDF). In response to this situation, the SDF reached a deal leading to the entrance of the Syrian regime and their Russian allies to the region, now manning the new front lines as a potential deterrent of future offensive action carried out by Turkey. Since then, the situation has stabilized geographically though sporadic clashes and shelling continue to occur, particularly in the east on the outskirts of SDF-controlled town Tel Tamer.



2. Map of the northwestern Hasakah countryside, with green demarcating the territory controlled by Turkey and the SNA

Following local reporting on incidents of burned agricultural land, PAX and Syrian for Truth and Justice have collaborated to collect information from areas affected by the recurrence of wildfires and analyze satellite imagery from ESA's Sentinel-2 and Planet Labs in order to assess possible patterns of conflict-related crop and grazing field fires. In this article, we will briefly provide an overview of this troubling situation in Syria's northeast, lay out the direct risks such crop fires represent to peoples' lives and livelihoods, as well as address wider issues regarding food security in a country already suffering from a collapsing economy and shortages of water, fuel and food.



3. Ongoing fires visible along the Khabour river west of Tel Tamer, June 14th, 2020. Image provided to STJ/PAX by Planet Labs.

1. From accident to arson

Attributing the cause of wildfires presents a challenge to researchers, particularly when such occur in conflict areas like northeastern Syria, where third party access is limited. Given that local news outlets and social media accounts are typically polarized along the lines of the conflict, blame is often simultaneously assigned to opposing actors depending on who is reporting. With the front lines studied here consistently being mentioned in reports as the site of small-scale clashes and bouts of shelling rarely captured on film, it is difficult to properly verify whether such events are actually the causes of such fires. Additionally, as addressed in the testimonies of multiple local farmers interviewed for this report, neither the SDF-affiliated Autonomous Administration of North East Syria (AANES) nor the rivaling governance institutions in Turkish-controlled territory appear to be able and/or willing to properly investigate these incidents, instead simply lay blame at the opposing party.



4. Fields burning along the Khabour river west of Tel Tamer, June 14th, 2020.

Not all fires occurring on farmland are accidental or the product of arson. Some are set by the plot's cultivators themselves in an agricultural technique commonly referred to as 'stubble burning.' In the wake of a grain harvest, some organic materials including stalks and seed pods, collectively known as crop or field residues, are left behind. This vegetation is occasionally burned by farmers in order to dispose of it in a cheap and rapid manner, in turn allowing for a quicker replanting of the plot, and as a way to fertilize the soil. Largely due to its contribution to [air pollution](#), this controversial technique has been [regulated](#) or partially [banned](#) by multiple countries. While none of the farmers we spoke to mentioned stubble burning as a cause of fires occurring this year, this technique is not unknown in the region. Another example of purposeful burning of agricultural land has been witnessed in Iraq, where [incidents](#) of farmers torching their own crops in protest of the low food prices has been reported.

Additionally it must be pointed out that not all fields in these areas are currently used for grain cultivation. Some are used for livestock grazing, while others, particularly near military sites, may not be in use at all.



5. A shepherd and his flock in a field outside the village of al-Kuzliyah, Tel Tamer countryside.

In 2019, following the final territorial defeat of the organization along the northern banks of the Euphrates, the so-called Islamic State claimed responsibility for a number of acts of arson in Syria and Iraq. These were cast by the group as acts of retribution; the local cultivators whose livelihood they wantonly destroyed were deemed 'apostates' or collaborators. Within this context, it was additionally reported that others used the IS claims of responsibility as a cover to settle scores of their own. However, such accusations were levied against an array of actors on all sides of the conflicts in Syria and Iraq, with scant corroborating evidence. Fires have also been pinned on local criminal groups in the process of extorting local farmers in Iraq; activity that could possibly have been at play in Syria as well.

Also of note is the precedent set last year in northwestern Syria, particularly within the governorate of Idlib. This was the site of numerous crop fires, particularly within front line areas, many of which were attributed to bombardment or acts of arson committed by members of the Syrian regime's military.

Estimates for the amount of crop fields lost to fire in 2019 vary dramatically. As quoted by the Food and Agriculture Organization of the United Nations (FAO), the Syrian "*government estimates that 85 000 hectares of crops were burnt.*" These numbers, however, appear quite low when contrasted with remote sensing analysis conducted by REACH that shows over 474.000 acres, roughly 191.000 hectares, to have been burned. Moreover, the FAO report seems to indicate that most fires were accidental, while shelling of farmland in Idlib, Aleppo and intentional torching in Hasakah and Raqqa seem to have most likely been the results of deliberate tactics.

2. Syrians facing food insecurity amidst COVID-19 outbreak and conflict

Known as the Jazirah region, the northeastern governorates of Hasakah and Raqqqa make up a significant part of Syria's agricultural green belt. With extensive rainfed and irrigated crop fields the Jazirah is commonly referred to as the country's 'breadbasket.'



6. Crop fields of the Jazirah, as seen by drone.

Illustrating this is data published by the FAO in [2018](#) and [2019](#), showing that over the previous three years these two provinces have contributed 44.3% of the country's total hectares of wheat harvested in addition to 65.07% of the barley harvest. These figures likely do not portray the complete picture as they stem from the Syrian government's Ministry of Agriculture and Agrarian Reform, rather than from the AANES which currently controls most of Hasakah and Raqqqa. Another factor pointing to these figures being an underrepresentation of the real agricultural importance of the Jazirah is the poor harvest of 2018, "the worst in living memory," (FAO, 2019) which affected the wheat yield of al-Hasakah in particular. Overall, the Jazirah has been heavily impacted by the Syrian conflict, as can be seen in [2017 data](#) by FAO and the World Food Program on affected agricultural areas and crop harvest. Their overall estimate for agricultural loss of damage to the agricultural sector in 2017, already a 3-year old report, was estimated to be over \$15 billion dollar, a number undoubtedly higher today.

KEY FINDINGS



USD 16 billion
financial cost of damage
and loss in the agriculture
sector (2011–2016)



**USD 11–17
billion**
estimated cost of
rebuilding the agriculture
sector over a three-year
period

↑ 75%

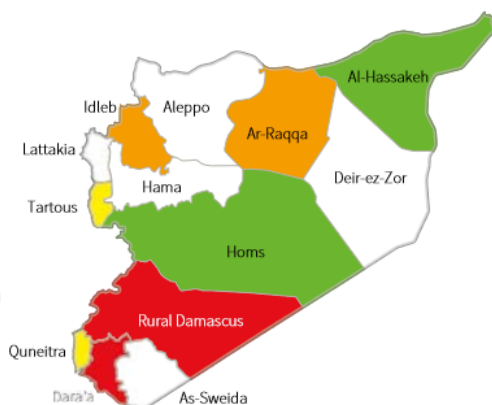
households
still grow food for their
own consumption

94%

communities
felt that increased support
to agriculture would reduce
internal and external migration

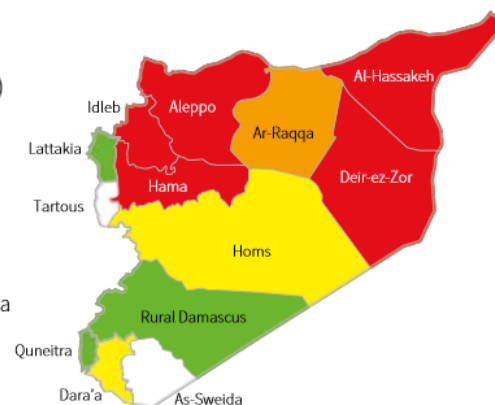
DAMAGE AND LOSS TO PERENNIAL CROPS

Damage and loss
(USD million)



LOSS OF ANNUAL CROPS

Loss (USD million)



Source: Syria Damage and Loss Assessment, FAO 2017

7. Key findings from the FAO's 2017 'Counting the Cost: Agriculture in Syria after six years of crisis' report.

These crop fires are yet another factor threatening food security in northeastern Syria. Studies published by the [UN](#) and aid [organisations](#) in June 2020 on food security and malnutrition indicate that over 9 million Syrian go to sleep hungry each day, while an additional 3 million classified as 'at risk.' These staggering figures stem from a number of factors; not just the interruption in food production and distribution brought about by the conflict, but the extensive nationwide population of Internally Displaced Persons (IDPs), and the recent and ongoing precipitous depreciation of Syria's currency, linked to the Lebanese fiscal crisis as well as international sanctions targeting the Syrian government.

Given the lack of international recognition and the region's current situation largely isolated from the outside world, the economic situation under the AANES and the welfare of its population exist symbiotically with that of Damascus. In addition to the constraints that this represents, the areas under the AANES's control have experienced recent events further affecting food security and local food prices. Turkey's October 2019 Operation Peace Spring not only created a sizable influx of IDPs to other parts of the northeast, but also resulted in the loss of valuable agricultural land as well as a sizable portion of last year's harvest that was being stored in grain silos in the Tel Abyad and Ras al-'Ain areas, captured by Turkish-backed militants. This only makes the danger that crop fires in Hasakah and Raqqah represent all the more threatening to local food security. As was observed with the crop fires of 2019, the effects of such calamities are not only felt during the corresponding harvest season, but during the subsequent year as well, as they rob farmers of seeds required to grow their next yield.

3. Water on the fires, virus in the sky

Extinguishing crop fire primarily requires two elements: proper equipment and water. The Autonomous Administration appears unable to maintain fire brigades with enough properly trained members, nor does it possess a sufficient amount of trucks and equipment. These deficiencies can be noticed in testimonies collected below, which often speak of fire brigades arriving late to the scene, unable to save more than a fraction of farmers' harvests. Additionally, testimonies of farmers living under Turkish and SNA-controlled areas suggests that the Syria Civil Defense, the primary emergency response institution in opposition territory, doesn't maintain a presence in these recently captured areas sufficient to properly address the issue of crop fires.



8. An AANES-affiliated fire brigade responding to a call somewhere in the Jazirah.

Moreover, fighting fires can put stress on resources in water scarce areas. Recently, large parts of AANES administered northern Syria have faced water shortages due to SNA control of the Aluk pumping station, in the Ras al-'Ain countryside. As documented in a previous [report](#) by STJ, water flow from this pumping station has been repeatedly shut off, as a method of applying pressure on AANES by Turkey and its local allies. In addition, local water sources from rivers, lakes and other reserves, used for irrigation and household activities in towns and villages can quickly be drained by the fires. Next to this, water has been quintessential as well in the response to COVID-19, as the need for WASH attributes has high priority in preventing and minimizing the outbreak of the virus in this conflict-affected area.

4. May-July 2020: Burning Front Lines

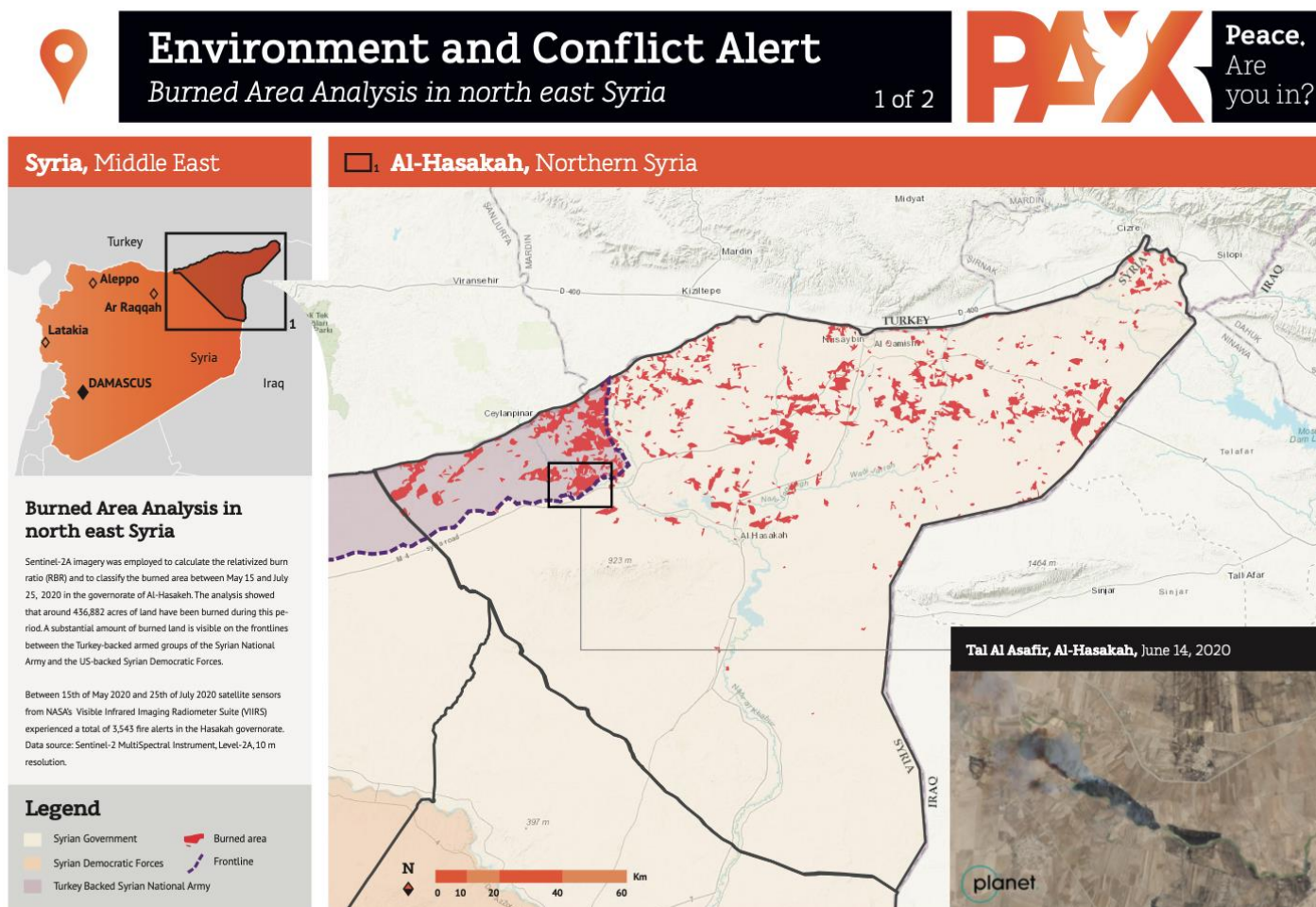
Late spring represents the main harvest season in northeastern Syria. For further information on grain cultivation in Hasakah, STJ spoke to Juwan Mulla Ayoub, the co-chair of the local AANES-affiliated government of Tel Tamer. He explained that:

“Most of the lands in the Tell Tamer area are planted with wheat and barley, fields both rainfed and irrigated. Depending on the land, the wheat and the barley are sown in the tenth, eleventh, and twelfth months, while the barley is harvested in the beginning of the fifth month and the wheat at the beginning of the sixth.”

This happens to correspond almost exactly with the first reports on social media and by local news outlets alleging that deliberate fires were being set targeting cropland around the SDF-SNA front lines. We collected dozens of these reports from May and June, many of which collectively show fires that burned for days at a time, spreading over kilometers of open fields. Using incidents documented with high quality visuals in conjunction with satellite imagery from the time period, we analyzed some of the larger fires that occurred over this time period, several of which we will detail below. This material demonstrates the scope of the fires occurring along the front lines, clearly a pattern rather than isolated occurrences. However, the open sourced materials do not feature clear visual evidence identifying the exact causes of these fires or verifying claims made by witnesses.

For this report, STJ's field researchers conducted a number of interviews with local residents and officials. Altogether, thirteen testimonies were collected; ten from farmers affected by the fires, both within the Tel Tamer area, and elsewhere in the northeast, two from representatives of the Syrian National Army (SNA), and one from the co-chair of the local AANES-affiliated Tel Tamer governance council. Each of these accounts speaks to the widespread fires occurring in the region this year, particularly along the front lines. However, the sources interviewed differ in whom they attribute blame to, with some making clear allegations while others, specifically a number of the local farmers interviewed, lack a strong sense of the perpetrators responsible.

Remote sensing analysis conducted by PAX of the burned land indicated that roughly **436.882 acres** of land were burned in Hasakah governorate between May 15 to July 25, 2020. Approximately 43,000 acres of land located around the front lines between the SDF and the Turkey-backed SNA burned during this period.



9. Map of fires in Hasakah identified by remote sensing analysis (PAX).

While a large part of these fires in Hasakah took places away from the front lines, there were additional reports of deliberate burning of crop lands by unidentified groups or individuals in these other parts of the province. Some [claims](#) have been made that fires were started near Dirbêsiyê at the Saeeda oil terminal, located at [37.10057746332412, 41.60900115966797](#), intended to damage this infrastructure.



10. Fires in the vicinity of the Saeeda oil terminal, northern Hasakah, June 28th, 2020. Images provided to STJ/PAX by Planet Labs.

Other fires could be the result of sparks, broken glass, lit cigarettes, or land set ablaze by farmers utilizing stubble burning. There are secondary risks from incidental burnings, such as in the case fires we identified near oil fields in Rmeilan, notorious for major (flammable) oil spills. In addition, fires in proximity of critical infrastructure such as power lines can potentially impact much needed access to electricity, as occurred in the Hasakah town of Tal Hamis.

5. Open Sourced Analysis

Over the course of May and June, numerous reports were put out by local media in northeastern Syria covering crop fires occurring throughout the region. These reports largely concentrated on areas around the SNA-SDF front lines, particularly near the towns of Ain Issa in northern Raqqa and Tel Tamer in western Hasakah.

This focus can likely be attributed to the frequent occurrence of fires in these areas during this time, as well as the potential such events carry in terms of political propaganda. Below we have analyzed open sourced materials relating to 3 different fires occurring along the front lines to the north and to the west of Tel Tamer.

The village of al-Menakh is located several kilometers north of Tel Tamer and is currently under the control of Turkish-backed forces. A fire starting within the vicinity of the village was captured on footage [published](#) May 16th, 2020 on the Arabic language YouTube channel of state media outlet Russia Today.



11. Screenshot from the May 16th RT video of Menakh village.



12. Location of the May 16th, 2020 footage published by RT (36.725140, 40.373912).

This fire spread east across the front lines, soon reaching positions manned by the SDF and the Syrian regime less than two kilometers away. On the following day, local media organization RojavaTV published a [segment](#) filmed from the village of al-Dardara, southeast of the ongoing fires, showing the same fields ablaze. RojavaTV, an outlet sympathetic to the SDF, unsurprisingly attributed this blaze to Turkish-backed forces.



13. Screenshot from the May 17th RojavaTV video showing the village of Menakh.

Satellite imagery captured on May 17th, visible via Planet Labs Explorer, shows that approximately one and half square kilometers of fields had been burned at this point, running eastward from al-Menakh to the Tel Tamer-Abu Rassin road just behind SDF lines.



14. Fire spreads east across the front lines from Menakh to SDF positions, May 17th, 2020.

Fires continued along this stretch of the Tel Tamer front lines for the next several days. A May 20th, 2020 video [published](#) by Russian state media outlet Sputnik showed fires still raging under a hundred meters away from a Syrian regime checkpoint across the front lines from Menakh.

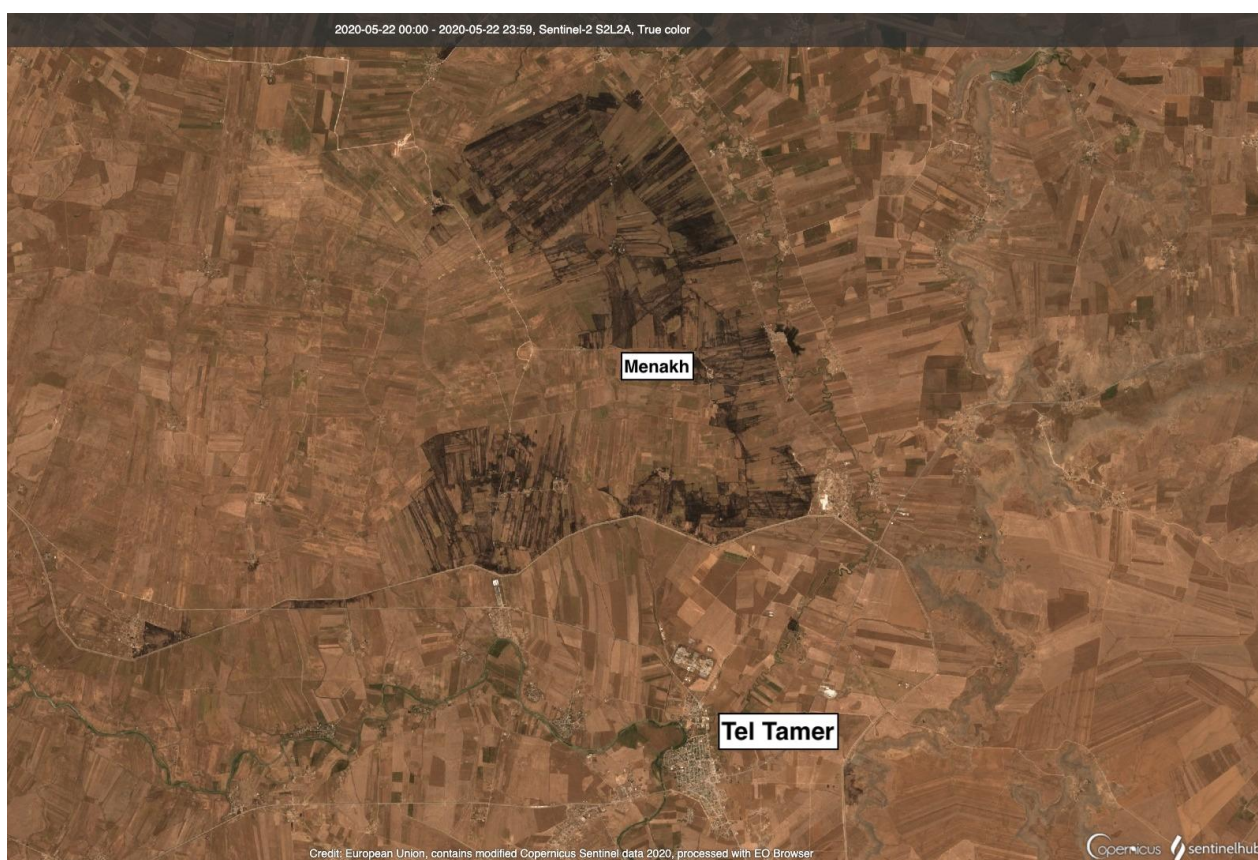


15. Screenshot from the May 20th Sputnik video showing a front line Regime checkpoint.



16. Location of the Syrian regime checkpoint (36.7318121, 40.3864771).

Using satellite imagery, one can observe the extent of land burned over this several day period, north of Tel Tamer, spanning approximately a dozen square kilometers.



17. Burnt fields along the front lines to the north and west of Tel Tamer, May 22nd, 2020.

On May 18th, North Press Agency [interviewed](#) several farmers from the area. Abboud Meizar, who reportedly lost over 12 acres of barley to the fires originating in al-Menakh, told the local news outlet that 'Turkish forces' had prevented him and other from putting out the fires with "bombing and targeting." Muhammed Sheikh Ali, another local who lost his harvest to the fires, said that "the firefighting teams came but they could not reach the crops because they were shot by the FSA."

Another large fire occurred further north along the front lines on May 28th. This blaze torched a wide swath of land, largely under SNA control, extending from the town of Abu Rassin (also known as Zirgan) to the south, north to the Turkish border, over eleven kilometers away. Footage [published](#) by Russian state media outlet Ruptly shows scenes of the aftermath two days later. Different shots in this video were geolocated to two different towns on either end of the border. One scene was filmed from a hilltop just outside of Abu Rassin, facing west over charred front line fields towards SNA territory. In the foreground an Asayish checkpoint can be seen along the road that runs from Tel Tamer to the Turkish border. In this instance the road appears to have acted as a natural barrier to the fire, stopping the flames from crossing further into SDF territory.



18. Screenshot of the May 30th Ruptly video showing burnt fields outside Abu Rassin.



19. Location of the fire aftermath outside the town of Abu Rassin (36.8541451, 40.3260469).

The video also includes interviews with people in the border town of Asadiyyah, and shots of the local aftermath of the fire. At one point, the cameraman looks west across the front lines towards SNA territory where blackened fields can be seen approximately a kilometer away.

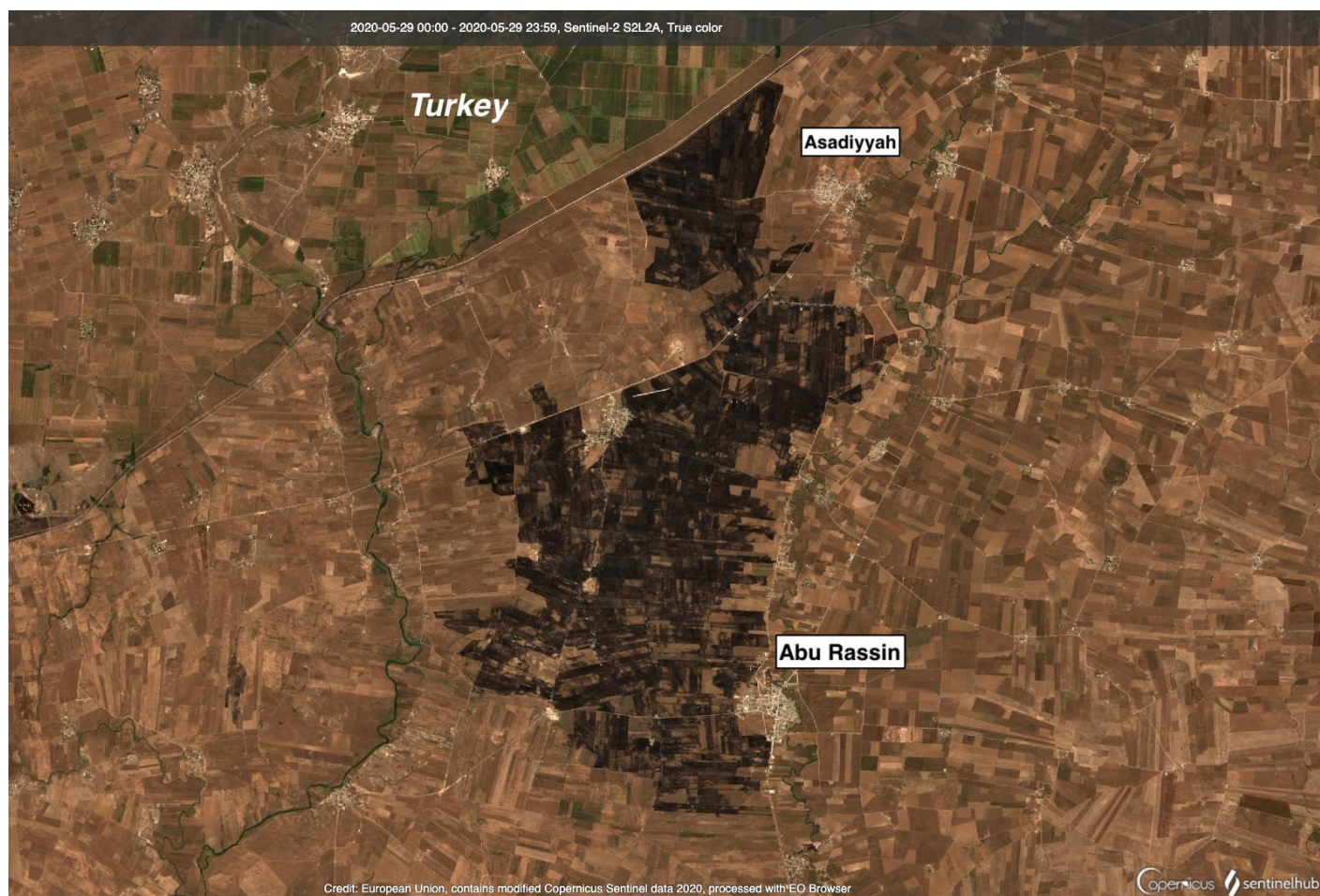


20. Screenshot of the May 30th Ruptly video showing burnt fields outside Asadiyyah.



21. Location of the fire aftermath outside the town of Asadiyyah (36.933222, 40.3356171).

Pro-SDF new outlet ANF claimed the fire was started by shelling from Turkish-controlled territory, and that subsequent attacks prevented local firefighting efforts from stemming the flames. ANF also reported that at least two men were hospitalized in firefighting efforts, with one, a Sagher al-Hajji (Kurdish: *Suxeyer al-Hecî*) succumbing to his wounds and dying in the Abu Rassin hospital.



22. A large area of burned cropland between SDF-controlled Abu Rassin and the Turkish border, May 29th, 2020.

Satellite imagery from May 29th demonstrates the breadth of this fire, extending from Abu Rassin right up to the border wall. It also becomes apparent that the fields affected lie primarily under SNA-control, only touching the SDF and regime manned front line road in some places.

Several days later, on June 2nd, another large fire burned fields west of Tel Tamer, along the M4 international highway, captured on film by a number of local outlets including [North Press Agency](#). This highway essentially demarcates the front lines in this part of Hasakah, with the Turkish military and their local allies manning positions several kilometers to the north, overlooking the road.



23. Screenshot from the June 2nd North Press Agency video showing fires north of the M4 highway.



24. Location of fire footage filmed from the M4 highway, with the town of Gharnatah in the foreground (36.6369502, 40.243392).

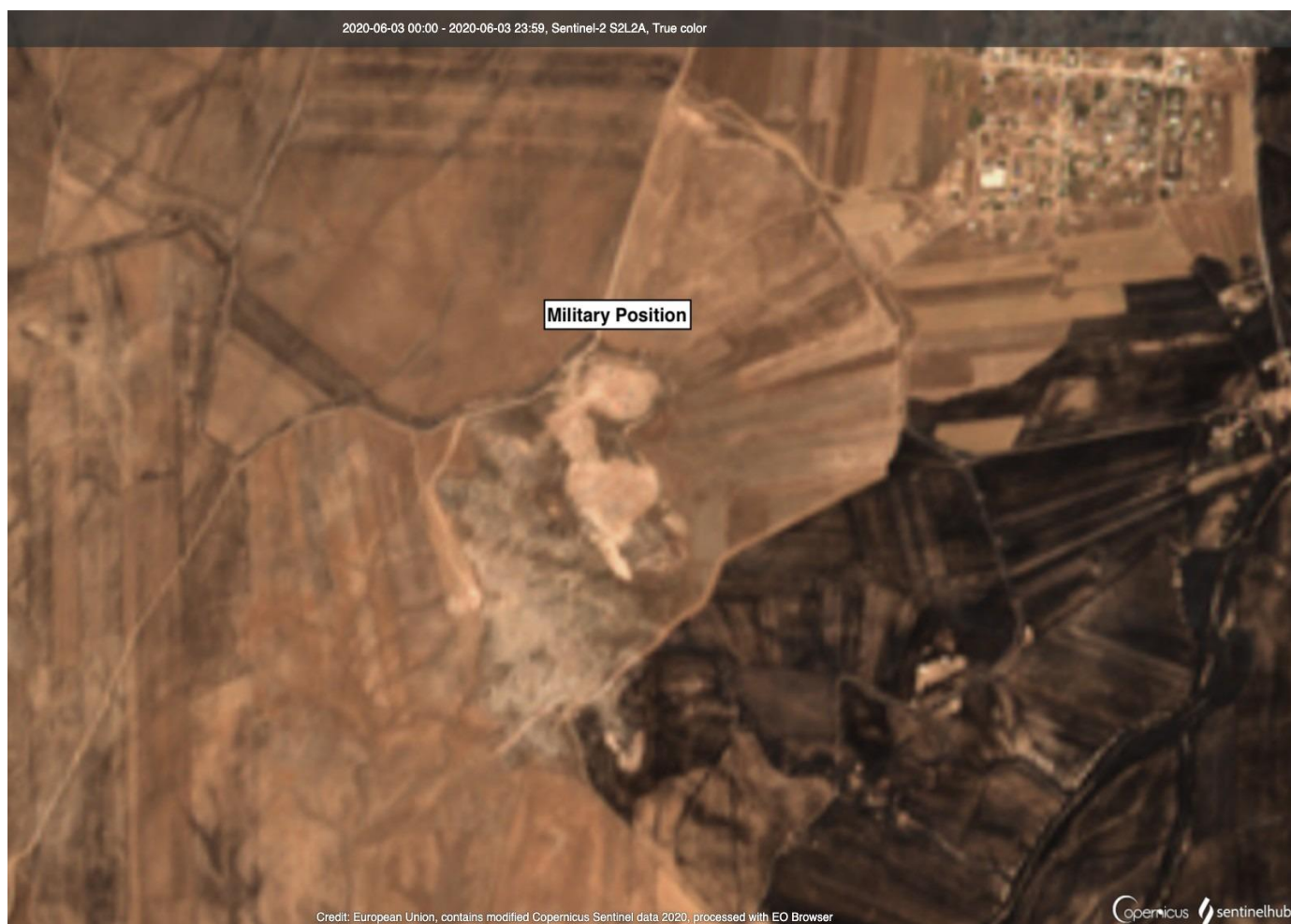
According to locals [interviewed](#) by North Agency Press, the fire started in close proximity to a fortified Turkish military position [located](#) just west of the town of al-'Amiriyah. Several days after the fire, North Press Agency [published](#) footage showing the base and its proximity to the fields burned on June 2nd.



25. Suspected Turkish military position, under two kilometers north of the M4 highway (36.6366403, 40.1999617)

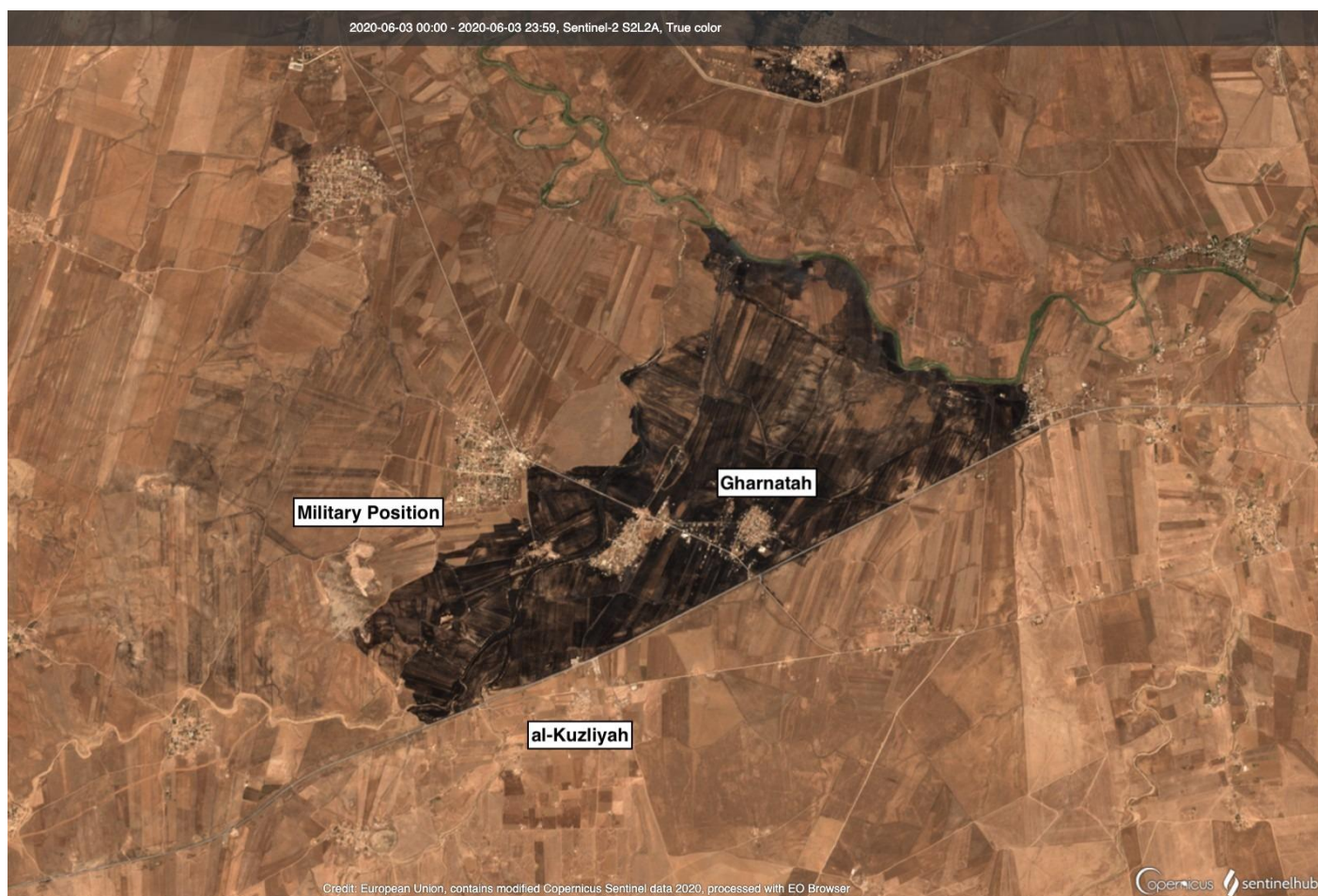


26. Fires burn north of the M4 highway in the vicinity of a military position.



27. Suspected Turkish military position and burnt fields as seen by satellite, June 3rd, 2020.

In comparison to areas north of Tel Tamer, this land to the west along the M4 appears to be more densely populated. It's unclear how many of the surrounding fields were being used to cultivate wheat and barley, and at least one field captured in the video is seen to be used for grazing. This early June fire can be observed burning in and around villages and small clusters of buildings. Ahmed Ibrahim, from the village of al-Kuzliyah just south of the M4 told North Agency Press that "about 20 houses have been burned." Yet again it was alleged in pro-SDF media that efforts to put out the fires were deterred by Turkish or Turkish-backed forces through the targeting of responders with live ammunition. A regime military source told North Agency Press that the fortified position was manned by the Turkish Army rather than the SNA, but this has not been confirmed. If Turkish or Turkish-backed fighters were responsible for this fire occurring adjacent to this military position, it is possible this was done to vacate the area and destroy crops obstructing the line of sight for security reasons.



28. The extent of the June 2nd, 2020 fires west of Tel Tamer, along the M4.

These open sourced materials offer valuable, high quality visualizations of what these fires and their aftermath look like from the ground, while in addition, supplying testimony from local witnesses. Each of these fires appear to have started and primarily spread within territory controlled by Turkey and the SNA, as well as the no man's land located within the front lines.

As previously detailed, remote sensing analysis shows that these fires are part of a distinctive pattern, unseen in previous years and mapping onto the post-Operation Peace Spring front lines. This geography clearly points to these fires being conflict related. However, analysis of these local reports does not illuminate the cause of the fires. The witnesses interviewed by these various outlets, which are either officially or unofficially affiliated with Russia or the SDF, all blame Turkey or its allies for starting the fires and obstructing attempts to put them out. Neither this nor the possibility that clashes or shelling at the time was responsible is corroborated with visual evidence.

6. Local Testimony

Hoping to assemble a more complete picture of these events as experienced by those who bear the brunt of the effects, we contacted a number of farmers from around Tel Tamer and the northeast at large who lost significant portions of their harvests to such fires.

Along with her family, Arifa Walid, born in 1992 in Aleppo city, was affected by the fire that broke out in their fields, 300 dunams of land cultivated with barley, in Tell Nasri village, rural Tel Tamer. The land was the family's only source of income until late April 2020, when the crops burned down. Commenting on the incident, the witness recounted the following to Syrians for Truth and Justice / STJ:

"I was at work. My husband called me around 2:00 pm. He was in a hurry, saying that a fire broke out in the fields. He asked me to call the firefighters to go there and help quench the flames. I called them immediately and explained the situation. I was burning inside, saddened over my husband's plight and his wasted effort. Nevertheless, I calmed myself, saying that God is there for us and what matters now is that my husband is safe. Three hours later, a doctor from the Tel Tamer Hospital called me and told me that my husband is suffering from second-degree-burns, which he sustained while attempting to put the fire down. I could not process the news and left my job for the hospital urgently. There, I saw my husband in pain due to the burns, which he got for the love of his land and crops. Farmers tend to treat their land the way they treat their children."

She added:

"The fire was extinguished after it fed on more than 75% of the harvest. According to information we obtained, the fire started at our neighbor's land and then crept to ours. Our neighbor 'Rabi' H.' told us that the fire was deliberate. Witnesses recounted that a group of people in a closed vehicle parked near his land, but they failed to identify the car. To be honest, the fire brigades were negligent; they were unjustifiably late to show up at the place, not to mention that they had only little amounts of water. The affected farmers were supposed to get compensation from the Agriculture Directorate in keeping with a process of evaluation. However, all these were mere promises and a show for the media put on by the Autonomous Administration."

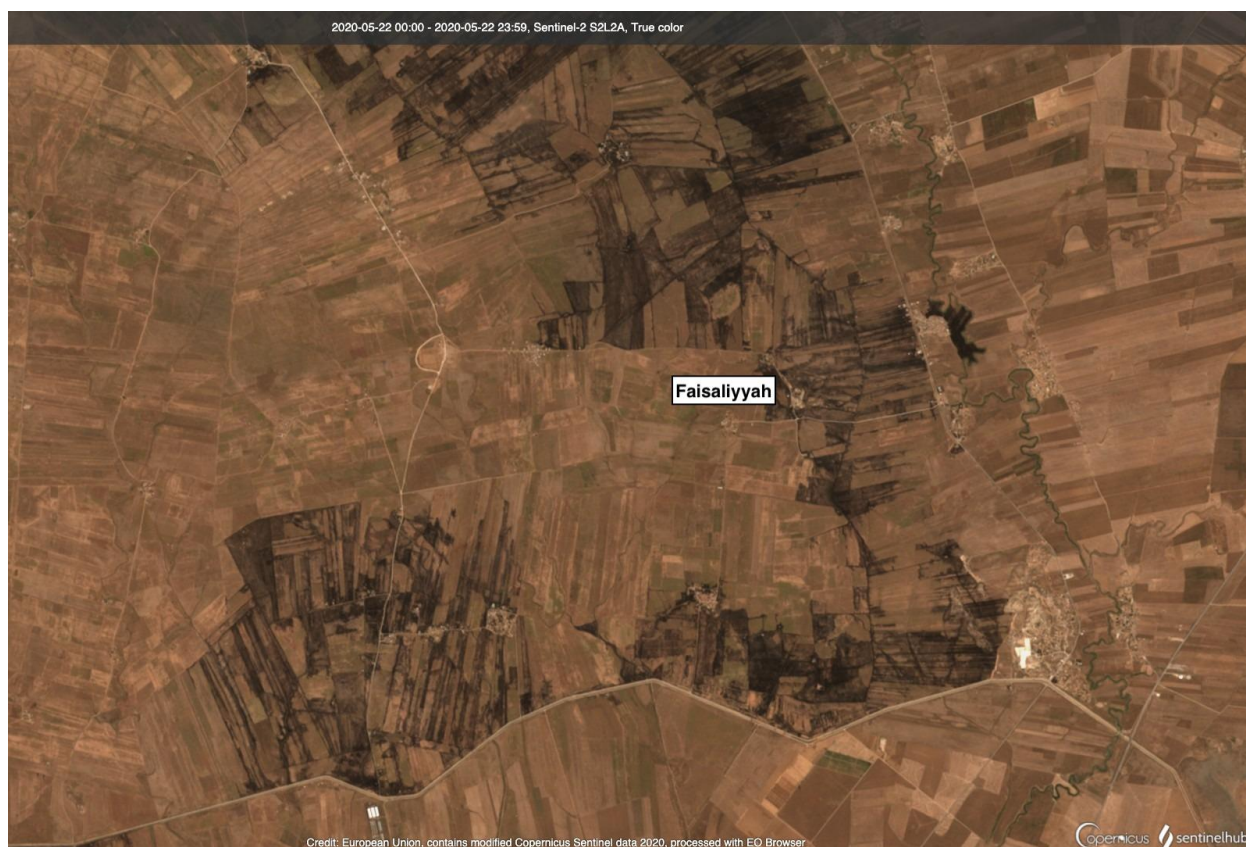
Hussein is a farmer who owns 400 dunams of land in the village of Faisaliyyah, just 7km north of Tel Tamer. These fields, located on the front lines, are cultivated with wheat and barley. Hussein, who now lives outside of SNA-controlled territory, told STJ:

"The armed group present in the area, the Selim 'Issa Battalion of the Sultan Murad [Division], burned it in addition to stealing the contents of and burning the house, on May 24th, 2020... there weren't clashes at this time, rather the fire was set by the groups present in the village. People still living in one of the villages told me by phone that 'your harvest was set on fire by the groups there...' The fires started in the part [controlled by the] National Army and then spread until reaching the part controlled by the [SDF]. The biggest part of the land is under the control of the [National Army] and the other part is located between the two parties where there is no controlling party...the front line... The fires gathered momentum and remained burning for more than three days."

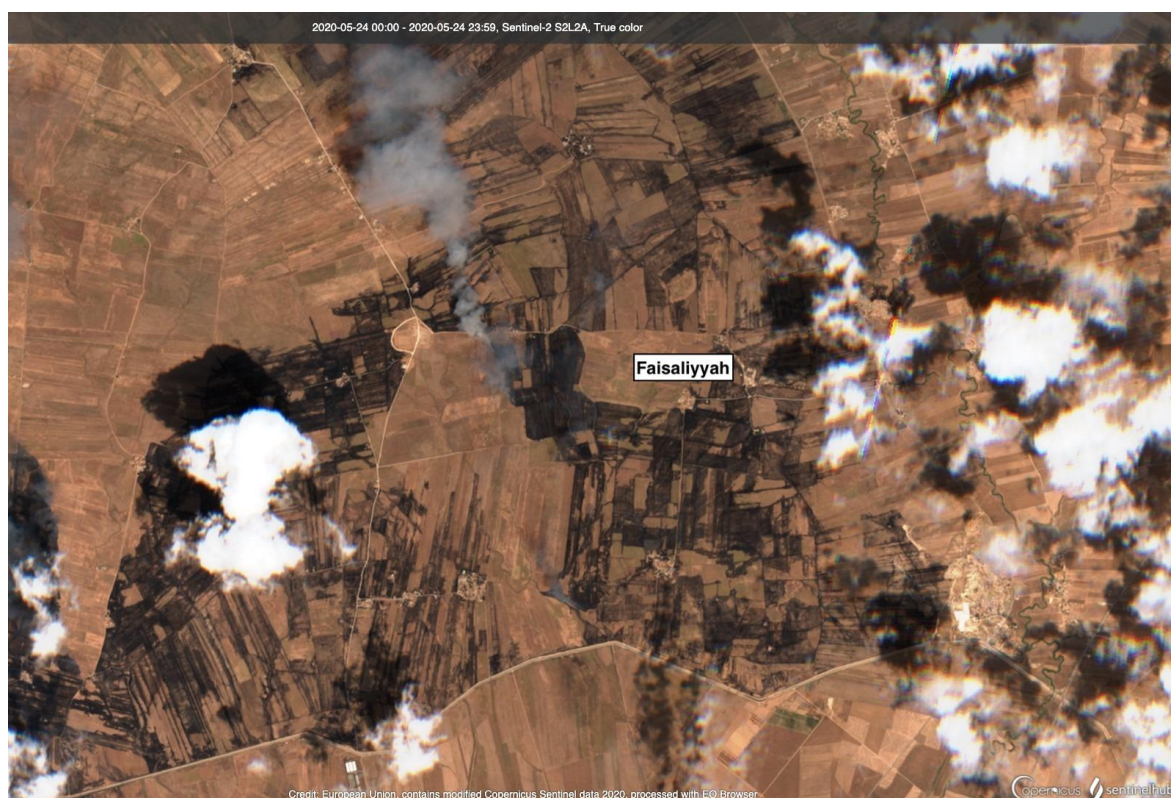
Witnessing this fire around the village of Faisaliyyah was 'Abd al-Hakim, another farmer from this front line territory, still living under SNA rule. 'Abd al-Hakim told STJ that:

"Militants of the Sultan Murad [Division] burned Hussein's harvest in the village of Faisaliyyah. Yes, I saw them with my own eyes. And the reason for the burning of the harvest is the fear of infiltration by the [SDF] and fear of the presence of mines... there weren't any clashes, they intentionally set fire to it with a lighter. More than 13,000 dunams were burned, including the villages of al-Rehaniyyah, al-Munakh and the neighboring villages. 150 dunams of my land were burned as well, in addition to a water engine, diesel fuel tank, and complete agricultural tools."

Satellite imagery of the front lines just north of Tel Tamer taken on May 24th shows fires burning around the village of Faisaliyyah, particularly to the south in the direction of SDF-controlled territory.



29. The front line village of Faisaliyyah and surrounding countryside, prior to the fire that burned Hussein's crops, May 22nd, 2020.



30. Fires burn around the front line village of Faisaliyyah, May 24th, 2020.

Khalaf Sami, born in 1982 in rural Ras al-Ayn / Serê Kaniyê, al-Hasaka province, is married and a father of five. He is another affected farmer, for his wheat fields, 100 Dunams, which are located near al-Mansaf village, rural Tel Tamer, also caught fire in late May 2020. He recounted the following to STJ:

"I had a land, 300 Dunams, in the town of Tel Halef, west Ras al-Ayn / Serê Kaniyê city, which I cultivated with wheat and barley every year. Nevertheless, when the Turkey-backed factions of the Syrian National Army took over the area, I had to abandon my land and head towards Tel Tamer, for the factions' fighters kept harassing me. They coerced us into paying a rent for the land that belonged to us. I, accordingly, decided to leave my village and rent a land, 100 Dunams, in the al-Mansaf village, rural Tel Tamer, to support my family. I cultivated it with barley, helped by family members, and I took care of it as if it was one of my children. Early May 2020, we heard from people about the lands burning in rural al-Hasaka and Raqqa. It was then when fear found its way to my heart and to the hearts of the other villagers. We were fretting that the fires might reach our village."

The witness continued, stating that:

"In late May 2020, a neighbor told me that my crops were on fire, along with the adjacent fields in the al-Mansaf village, particularly at 3:00 am. We immediately attempted contacting the fire engines, but no one answered us. I head there, accompanied by a number of the town people, to quench the fire. Troops of an Asayish checkpoint also helped us. We used soil and trucked water, but the wind was so strong that it helped the fire rage further. The fire engines finally arrived, and tried to put the fire down until 8:00 am. More than 500 Dunams burned down as a result — my heart also burned. I lost my sole source of living. Two days later, we went to the Agriculture Committee in Tel Tamer, asking for compensation for the loss and damages we suffered. They accompanied us to the burned lands, evaluated the damage, and did nothing else. They filmed and interviewed us instead, saying that 'Erdogan's mercenaries' are the perpetrators."



31. Image provided by Khalaf Sami of his burnt fields and harvest. ©STJ

Salim Issa, born in rural al-Hasaka in 1980, told STJ that his land, 1200 dunams of barley, located in the Um al-Kaif town, administratively affiliated to Tel Tamer district, was all burnt on June 25th, 2020. He added:

“In the afternoon, the fire started to creep from the villages of al-Qasimiya and al-Raihaniya towards the village of Um al-Kaif. We heard blasts, which back then we attributed to confrontations between the Turkey-backed Syrian National Army and the Syrian Democratic Forces, particularly since Um al-Kaif is a front line, separating the two warring parties from each other, for it is located somewhere between the Te Tamer town and Ras al-Ayn / Serê Kaniyê. Given that the village is a hotspot, every now and then a rocket-propelled grenade, launched by either party, would land in the area. Sometimes the wind pushes those grenades further, as they end up in one of the fields, which urged many of the area’s farmers to harvest their crops before the due date or even to abandon their lands fearing death.”

He further explained:

“Those fires are not strange news anymore; the area’s people are used to them. Everyone knows that the Syrian Democratic Forces have planted mines on the area’s by roads and on the borders between farms and fields. On many occasions, rats would cause the mines to explode. We called the fire brigade, which took too long to quench the fire that already fed on all the barley harvest. The losses were

estimated at one and a half million Syrian pounds, which we are trying to recover through cultivating another land we own with onions and garlic."

Of the five farmers cultivating land around the Tel Tamer front lines, there was no one answer regarding who or what was responsible for the fires. Two that own land in areas controlled by SNA factions, one which was an eyewitness, accused Turkish-backed fighters of intentionally starting the fires. This was allegedly done out of fear of SDF infiltration attempts, as well as of mines planted in front line crop fields. Another heard blasts around the time of the fire, assumedly clashes between the SNA and SDF. The same farmer additionally said that fires are sometimes started by errant rocket propelled grenades landing in crop fields, as well as by rodents tripping mines laid along the front line by the SDF. Two other farmers in the Tel Tamer area that STJ spoke had little idea who or what started the fires, though one said witnesses reported a suspicious group of people in a vehicle near the property at the time of the fire.

In addition to residents of areas around the Tel Tamer front lines, we spoke to others living nearby, in territory controlled by the SNA and Turkey. Maryam Mohammad, 25 years old, is a woman from rural Tell Abyad, Raqqa province, recounted to STJ that another fire broke out about five or six days before the incident reported above. The fire affected the fields of a farmer in the Ali Bajliyah town in southern rural Tell Abyad. She added:

"The fires that broke out in Tell Abyad in 2019 were much larger than the ones the area has been enduring in 2020. At the time, the losses amounted to 12,000 Dunams. The fires mostly took place in the middle of the night or at noon, and we always attributed the fire to a piece of glass that might have reflected the sun's heat, burning the crops down. Even though Turkey and its loyalist factions are in control now, the fires did not stop. According to the statistics of Tell Abyad's Local Council, about 4,500-5000 Dunams, cultivated with wheat and barley, suffered from such fires this year. As usual, the factions of the National Army accused the SDF, without proof or evidence. Furthermore, the Turkey-affiliated local council always said that they would be compensating the farmers whose lands are affected by the fires. However, these promises are all meant for the media only. None of the farmers was compensated. Of the fires that devoured the villagers' fields was the one that broke out in the land of farmer 'Abu al-Walid al-'Eter' in the Ali Bajliyah village, southern rural Tell Abyad. This land caught fire, five to six days before Aurwa's fields were on fire on May 22nd, 2020. Al-'eter's field's area is 400 Dunams, cultivated with wheat. I do remember tha al-'eter had at the time accused a person called 'Abu Hasan Obama,' a fighter of the Ahrar al-Sharqiya / Rebels of the Eastern Area. Abu Hasan had a piece of land adjacent to that of al-'eter and they always disputed over something. Abu Hasan once asked al-'Eter to pay a royalty, which he refused to do. The former, thus, threatened to burn al-'Eter's land. Then, there was a fire, but there is not an evidence. Al-'eter filed a complaint at the Tell Abyad Court of the National Army, asking for an investigation into the incident. However, all his efforts were to no avail."



32. Image provided by STJ's source showing the fire at Abu al-Walid al-'Eter's fields.

Echoing reports from social media and local news outlets, each of the government and military officials STJ talked to blamed the fires on combatants from the other side of the front line. Reminiscent of testimonies given in pro-SDF media, Juwan Mulla Ayoub, the aforementioned AANES official local to Tel Tamer told STJ:

"The [Turkish] occupation set the fires from the areas adjacent to the front lines, deliberately of course, with bullets and shells. In the meantime, in the months of April and May there was mutual fire, attacks, or military operations. On our side there are a lot of forces... Russian, the Syrian Army, the SDF and they repel attacks but don't attack. And on the other side there is the Turkish Army and their mercenaries...The fire brigades were fully prepared but they were not able to approach the [front] lines."

On the other side of the front lines, STJ interviewed 'Abdullah Halawah, a commander for the Hamza Division, a faction within the SNA active on the Tel Tamer front lines. Halawah stated:

"The fires were started by someone. The [SDF] group is paying its agents sums of money in exchange for setting agricultural crops on fire and providing video evidence. Previously, in Olive Branch, we arrested agents and they admitted to committing similar acts. ...No there were no [clashes or] attacks. But the SDF is paying people to work for it. For example, once they used a motorcycle to explode on farmland and burn it..."

Additionally, STJ spoke to SNA spokesman Maj. Younis Hammoud about these fires. Maj. Hammoud said that all fires were caused by the SDF, who continues to attack SNA positions, with wind exacerbating field fires. Additionally Maj. Hammoud claimed that they had collected and published evidence proving the SDF's responsibility for this destruction of the farmers' harvests. However, when asked the SNA could provide this evidence, Maj. Hammoud told STJ:

"I did not keep the evidence with me. If I wanted to send it to you, I would have to ask the [SNA] Media Office and the Moral Guidance Department to see all the documents. They will suffer a little and say that we already sent it to the United Nations and international parties concerned with the matter, so they won't suffer in searching to give it to me so we can send it back to the local media."

Additionally, Maj. Hammoud accused the SDF of setting fire to crop fields across its territory in order to coerce the local youth into signing up to fight on its behalf.

Reading these testimonies together, several common trends can be observed. Most of the farmers we talked to possessed plots of land numbering in the low hundreds of dunams, mostly cultivating wheat and or barley. Once the fire was discovered, locals and occasionally nearby security forces would rush to attempt to put it out, while placing an emergency call to the local fire brigade as well. Farmers from both AANES and SNA-controlled territories complained about the often abysmal response rate of these emergency services, as well as their frequent lack of sufficient water, making the fires all the more damaging. Most that STJ talked to reported losing almost the entirety of their harvests. Local governing bodies also appear to frequently fail in follow-up efforts relating to these fires. Investigations, if they occur at all, are brief and often conclude with blame being assigned to enemy combatants without evidence being provided. Compensation for losses caused by fire, which both the AANES's Agricultural Directorate, and the Turkish-backed Local Councils claim to provide, is typically not received by farmers. One farmer in AANES territory that STJ spoke to said that compensation usually only covers about a quarter of estimated losses, and that the money takes significant time to arrive.

7. The laws of armed conflict and attacks on agricultural areas

Attacks that result in the burning of large swaths of agricultural and grazing areas, necessary for the survival of the population, are a clear violation of the Geneva Conventions. Holding those responsible accountable for their actions is essential in addressing the devastation brought upon the Syrian people. There are a number of established international treaties and legal principles enshrined in international humanitarian law relating to protection of the environment in times of armed conflict that are applicable to

the deliberate burning of crops and grazing lands in Syria by the Turkey-backed militias. In 1994, the ICRC published its [Guidelines for Military Manuals and Instructions on the Protection of the Environment in Times of Armed Conflict](#) that spurred initial discussion of the conduct of hostilities in the aftermath of the 1991 Gulf War oil fires. Since then, the impact of conflicts on the environment and civilian population depending on it gained more traction and urgency, and it is expected that the ICRC will publish its updates of these guidelines in late 2020. With regard to the current issues in northeastern Syria, we aimed to identify the most relevant legal references to this particular issue:

- Damaging the natural environment as a way of reprisal is prohibited by [Article 55\(2\)](#) of Additional Protocol I of the Geneva Conventions. However, this is only in the case of an international armed conflict, which isn't the case as both the SDF and the SNA are non-state armed groups involved in an intra-state conflict, albeit with the SNA getting proxy support from Turkey. It further remains a [question](#) if agricultural land is part of the natural environment, though there is a case to make based on the [definition](#) used by the ICRC that agricultural lands are. This legal ambiguity however complicates the questions around legality in complex conflicts with various armed groups and proxies. In general, destruction of the natural environment is only allowed when this is a legitimate military objective, or if it serves a military advantage, both elements that cannot be substantiated by the course of action of the belligerent parties in this case (either the SNA or the SDF). This is also further explained in [Rule 43 Application of General Principles on the Conduct of Hostilities to the Natural Environment](#) by the ICRC.
- The **principle of precaution**, as articulated in [Rule 44 'Due Regard for the Natural Environment in Military Operations'](#), further outlines several obligations for belligerent parties to take feasible precaution must be taken to avoid, and in any event to minimize, incidental damage to the environment. It can be reasonably expected that firing grenades, mortars or other weapons that can ignite fires during a hot period in a dry area full of wheat, in a civilian area, can result in large scale fires and destruction of harvest. As there wasn't any direct fighting going on over territory after the cease-fire in October 2019, this seems to at least raise the suggestion that use of such weapons could have been a deliberate attempt to start the fires.
- The **principle of distinction**, articulated in [Article 48](#) and [52 \(2\)](#) further provides guidelines for military action as part of a norm in customary international law and requires belligerents to carry out their military operations in such a way that it makes a distinction between civilian objects and military objectives. Again, this only applies in international armed conflicts. But Additional Protocol 2, Article 14, that relates to non-international armed conflicts provides helpful guidance, as this forbids attacks against **objects indispensable to the survival of the civilian population**, stating that "*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." In the case of NE Syria, this means that deliberate attacks against crop and grazing land could be a violation of this convention, as there is a case to be made that the current economic collapse, combined with sanctions, COVID-19 restriction and the blockade is putting limitations on access to and import of food.

- Today's armed conflicts are marked by complexity as they are often fought internally between states and non-state actors alike, making application of existing legal principles on **protection of the environment in relation to armed conflict** (PERAC) difficult, as those were drafted based on assumption that its mostly state actors fighting. Since 2013, the International Law Commission has been working to update existing legal principles, and in 2019 published their 28 [Draft Principles on PERAC](#) to improve such protection mechanisms. An important notion put forward is in Draft Principle 13 stating that the natural environment is a civilian object, unless it becomes a military objective, which is important in relation to the notation that this also applies to non-international armed conflicts. As noted earlier, in general PERAC mostly applies to international armed conflicts and states, while Draft Principle 13 seems to broaden this. Furthermore, in the case of northeastern Syria, application of the Draft Principles would mean that in particular Principle 20 with regard to "*General obligations of an Occupying Power*" are applicable, as the area retaken from the SDF is de facto under control of the Turkish State through its SNA proxy groups, could apply in this case. This would entail respecting and protecting the environment and preventing harm to the environment that could result in people's health and well-being affected by military activities. Similar problems also arise for the SDF in the areas under their control, as a non-state armed group, supported by the US-led Coalition.

In sum, while there is a growing amount of legal processes conducted on protection of the environment in armed conflicts, the situation in northeastern Syria shows some large gaps when it comes to accountability of non-state armed groups. The pattern of attacks by both the non-state actors that have resulted in large swaths of agricultural land going up in flames along the front lines without any direct military advantage could amount to violations of Additional Protocol II of the Geneva Conventions. There are also remaining questions over the accountability of Turkey as an occupying power in this area, and the liability of the US-led coalition that provides military support to the SDF.

8. Conclusion

Over the course of this year's late spring and early summer months, northeastern Syria has witnessed countless fires, devastating livelihoods of the region's farmers and their wheat and barley harvests. Working together in a joint effort, STJ and PAX have investigated these incidents, with a specific focus on the new pattern of fires occurring along the Hasakah front lines between territory controlled by Turkey and the SNA and that governed by the AANES, with SDF, Russian and Syrian regime military presence. These front line crop fires are well documented through open sourced materials, such as reports from local media and satellite imagery, and attested to in the interviews we conducted with farmers and officials from the area. However, with this information we were not able to establish a pattern in how such fires started, nor verify one party principally responsible for such.



33. A crop fire burning fields of the Jazirah as seen by drone.

While some we talked to appear to have no idea as to what caused these crops fires, others highlight a number of potential sources, of both accidental and malicious varieties. Given the lack of hard evidence we are unable to give a definitive answer as to what is the reason behind this pattern of front line crops fires, but it stands to reason that the causes are multiple, and originate from or are exacerbated the conflict setting. Fires appear to be started due to clashes and shelling, for military reasons - ie. creating greater visibility around a front line position, by mines laid by combatants and accidentally triggered, the actions of

militia members seeking to extort local farmers for rent, or more mundane causes, such as broken glass or discarded cigarettes. In addition, crop fires often seem to draw reports mentioning suspicious individuals sighted in the area beforehand, accounts typically impossible to verify. While these fires might initially be contained to smaller areas, certain factors specific to the local actors and the front line conditions have likely allowed for these fires to spread unabated. Primarily, these are the lack of resources available to local fire brigades, constraining their ability to respond in a timely fashion and to effectively fight fires, as well as the limited access both local civilians and emergency responders might have to front lines areas, due to military concerns.



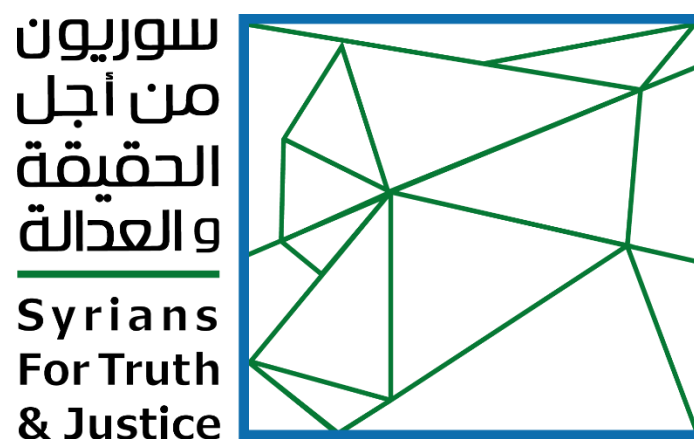
34. A crop fire burning fields of the Jazirah as seen by drone.

STJ and PAX recommend a number of steps that can be taken in assisting local governance bodies with addressing these crop fires and the effects they have on the livelihood of farmers of the area and the local food security situation. Additional material support and training supplied to fire brigades and other emergency response units will give such organizations greater ability in tackling these issues in more timely and effective manners, preventing large scale devastation to farmers' harvests. Another step that can be taken would be to augment compensation provided to local farmers who have lost their crop yield to fires, stabilizing both the local economy and food security. While likely admittedly more complicated than these aforementioned efforts, various forms of assistance in the investigative process conducted by local authorities related to fires and potential cases of arson would allow for greater accountability when it comes to the actions of armed groups and others in the area.

[PAX for Peace](#) and [Syrians for Truth and Justice](#) would like to thank Carl Bruch, the Director of the International Programs of the Environmental Law Institute, for his for his constructive feedback, Yifang Shi, PhD, GIS analyst at PAX, [Wim Zwijnenburg](#), the Policy Advisor of Disarmament and Security Works at PAX (NGO) and [Alexander McKeever](#), New York-based independent researcher and part time STJ contributor.



PAX means peace. PAX brings together people who have the courage to stand for peace. Together with people in conflict areas and concerned citizens worldwide, PAX works to build just and peaceful societies across the globe.



Convinced that the diversity that has historically defined Syria is a wealth, our team of researchers and volunteers works with dedication at uncovering human rights violations committed in Syria, in order to promote inclusiveness and ensure that all Syrians are represented, and their rights fulfilled.