

### SET TO EXPLODE

IMPACT OF MINES, BOOBY TRAPS AND EXPLOSIVE REMNANTS OF WAR ON CIVILIANS IN NORTHERN SYRIA





1 INTRODUCTION	04	CREDITS
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2 EXPLOSIVE WEAPONS IN URBAN AREAS	08	Cover image © Jamal Bali / MSF Mortar remnants of war amid the rubble, Kobane, January 23, 2017.
		Art Direction & Design: Atomodesign.nl
THE HUMAN COST IN AYN AL ARAB/KOBANE, TAL ABYAD, MANBIJ	12	Médecins Sans Frontières Plantage Middenlaan 14, 1018 DD Amsterdam
4 IMPROVISED CLEARERS OF EXPLOSIVES	22	Tel: + 31 (20) 520 87 00 Fax: +31 (20) 620 51 70 W: www.msf.org
5 LIVING WITH THE MINES	26	www.facebook.com/msf.english https://twitter.com/MSF
6 conclusion	32	MEDECINS SANS FRONTIERES DOCTORS WITHOUT BORDERS

#### INTRODUCTION



The Syrian war enters its seventh year and fighting intensifies for control over the Raqqa city - the Islamic State group's self proclaimed capital. Displaced households assisted by Médecins Sans Frontières (MSF) recount the fear of mines, booby-traps and explosive remnants of war while they flee from active frontlines or return to their homes.

On 25 November 2016, the MSF-supported Kobane hospital received eight people with injuries caused by blasts from explosive devices. All eight were from families displaced from their homes in the northern Raqqa countryside and in the area northeast of Al Bab. This was unfortunately nothing new to the hospital staff. Just over a year ago, as the population returned to their homes in Ayn Al Arab/Kobane¹ district, they found their houses, streets and fields planted with mines and booby traps² and littered with explosive remnants of war. Some months later, in the summer of 2016, a similar situation occurred in the Manbij area, from where hospital staff received, over the course of just four weeks, more than 190 people injured by blasts from explosive devices.

MSF has witnessed the impact of mines, booby traps and explosive remnants of war on the civilian population through its medical activities in northern Syria. Not only the extensive use of explosive weapons during the hostilities, including bombs dropped from aircraft, but the widespread planting of mines, and booby traps including in private homes, fields and civilian infrastructure are having a devastating effect on civilians returning to their homes. Given the limited local capacity to clear these areas and make them safe again, it will also affect their lives and livelihoods in the long term. The situation in Ayn Al Arab/Kobane and Manbij is strikingly

similar to that reported in Palmyra in Syria, Ramadi in Iraq and Sirte in Libya – all scenes of battles against the Islamic State group (IS).

MSF runs six medical facilities across northern Syria and supports more than 150 hospitals and health centres across the country. In northern Syria, MSF teams treat consequences of explosive devices, but remain powerless to address the cause of these injuries and deaths. The personal accounts below are just a few examples of the impact of the thousands of mines, booby traps and unexploded ordnance left behind even after the fighting has moved elsewhere.

Currently battles against IS are being fought in multiple areas, such as Raqqa city, and environments contaminated by mines, booby-traps and other explosive devices will continue to have devastating effects – both in terms of their direct deathly impact on the people living in these areas as well on the ability to provide humanitarian assistance to them. Increased support is urgently needed to ensure prompt humanitarian clearance of mines, booby traps and explosive remnants of war³ in areas where local people are returning to their homes, and to build up the local capacity to undertake clearance activities in the long term. These activities should be an absolute priority in the aftermath of military operations, in order to allow the safe return of displaced civilians and unhindered humanitarian access.

- 1 District and city in northern Syria in Aleppo governorate, officially Ayn Al Arab (in Arabic) but also known by its Kurdish name Kobane.
- 2 For the purposes of this report, "mine" and "booby-trap" refer to the legal definitions included in Art 2.1 and 2.2 of the protocol 2 on prohibitions or restrictions on the use of mines, booby traps and other devices. Geneva, 10 October 1980. "1. "Mine" means any munition placed under, on or near the ground or other surface area and designed to be detonated or exploded by the presence, proximity or contact of a person or vehicle, and "remotely delivered mine" means any mine so defined delivered by artillery, rocket, mortar or similar means or dropped from an aircraft. 2. "Booby trap" means any device or material which is designed, constructed or adapted to kill or injure and which functions unexpectedly when a person disturbs or approaches an apparently harmless object or performs an apparently safe act."

This report is based on what MSF teams have witnessed in the northeast of Aleppo governorate and in the north of Raqqa governorate, with medical data collected in MSF-supported health facilities or shared by other hospitals in the area. Interviews were conducted between October 2016 and February 2017 with patients, medical staff and other people from these areas whose lives have been affected by explosive devices as well as local authorities and international organisations working on mine clearance. The geographical coverage of the research was limited to areas in the two governorates that were accessible to MSF teams and does not claim to be exhaustive.

Some victims made it to a medical facility and survived, but many did not. It was devastating to witness that for people who already lost so much,

3 Humanitarian clearance differs from military clearance as "it aims to clear land so that civilians can return to their homes and their everyday routines without the threat of landmines and explosive remnants of war (ERW), which include unexploded ordnance and abandoned explosive ordnance. This means that all the mines and ERW affecting the places where ordinary people live must be cleared, and their safety in areas that have been cleared must be guaranteed. Mines are cleared and the areas are thoroughly verified so that they can say without a doubt that the land is now safe, and people can use it without worrying about the weapons. The aim of humanitarian demining is to restore peace and security at the community level" (http://www.mineaction.org/issues/clearance).



Set to Explode: Impact of mines, booby traps and explosive remnants of war on civilians in northern Syria 7

# EXPLOSIVE WEAPONS IN URBAN AREAS AND INDISCRIMINATE USE OF MINES, BOOBY TRAPS AND OTHER EXPLOSIVE DEVICES



The incidents documented by MSF in this report are mainly linked to detonations of unexploded ordnance and of victim-operated improvised explosive devices,<sup>4</sup> meaning that they are designed to be detonated by the presence, proximity or contact of a person or vehicle.

According to an explosive ordnance disposal expert who has worked in northern Syria,<sup>5</sup> victim-operated explosive devices have not only been used defensively, to prevent or hinder enemy advances, but also to deliberately target civilians returning to their homes after the end of hostilities. Improvised explosive devices have been found planted around military sites or to protect firing positions. Improvised explosive devices have also been found planted in fields, streets and houses; placed in doorways or under objects likely to attract civilians, such as teddy bears, dolls, fridges and televisions. The impact of this tactic has been devastating. People returning to their homes have been killed or injured as they stepped through their front door, opened the fridge or bent down to pick up a toy from the floor. The improvised explosives appear to have been planted with the aim of inflicting damage indiscriminately on returning civilians.

- 4 Victim-operated improvised explosive devices contain a "type of switch that is activated by the actions of an unsuspecting individual, these devices rely on the target for the device carrying out some form of action that will cause the device to function" (glossary of the International Mine Action Standards, mineactionstandards.org)
- 5 Interviewed by MSF on 10 December 2016

#### IMPROVISED EXPLOSIVE DEVICES AND PROJECTILES

IED hidden in teddy bear



Anti-personnel mine





Anti tank



Improvised mortar





Improvised rocket



**Hell Cannon** 



Fragmentation Mine 70 cm

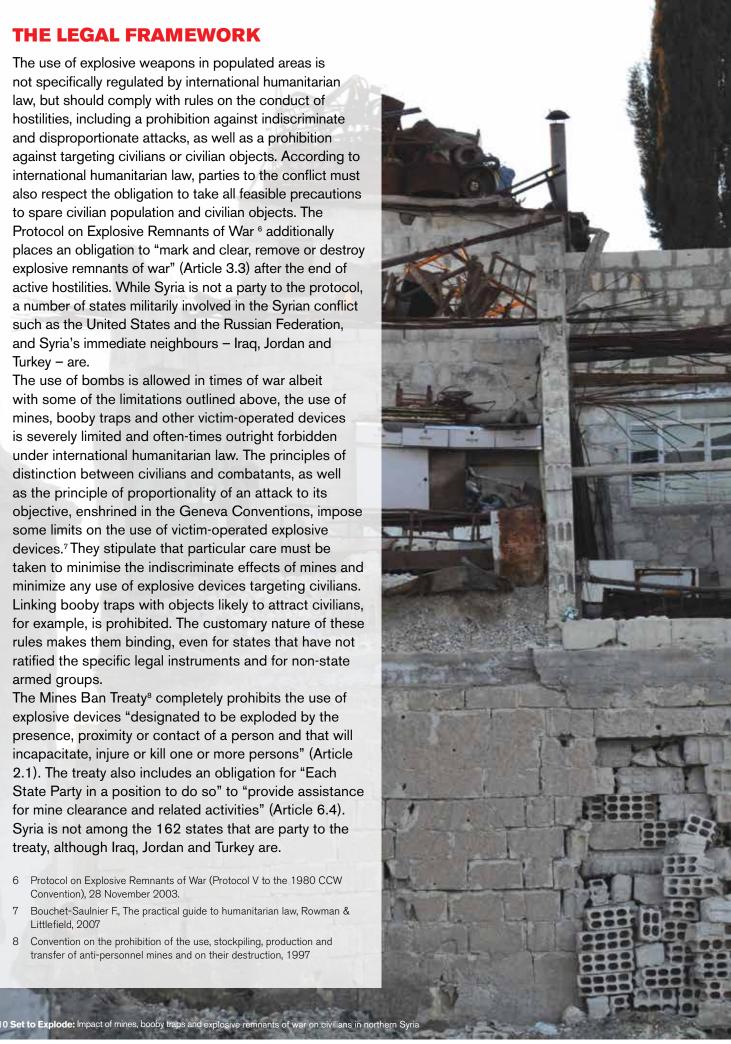
#### THE LEGAL FRAMEWORK

The use of explosive weapons in populated areas is not specifically regulated by international humanitarian law, but should comply with rules on the conduct of hostilities, including a prohibition against indiscriminate and disproportionate attacks, as well as a prohibition against targeting civilians or civilian objects. According to international humanitarian law, parties to the conflict must also respect the obligation to take all feasible precautions to spare civilian population and civilian objects. The Protocol on Explosive Remnants of War 6 additionally places an obligation to "mark and clear, remove or destroy explosive remnants of war" (Article 3.3) after the end of active hostilities. While Syria is not a party to the protocol, a number of states militarily involved in the Syrian conflict such as the United States and the Russian Federation, and Syria's immediate neighbours - Iraq, Jordan and Turkey – are.

The use of bombs is allowed in times of war albeit with some of the limitations outlined above, the use of mines, booby traps and other victim-operated devices is severely limited and often-times outright forbidden under international humanitarian law. The principles of distinction between civilians and combatants, as well as the principle of proportionality of an attack to its objective, enshrined in the Geneva Conventions, impose some limits on the use of victim-operated explosive devices.7 They stipulate that particular care must be taken to minimise the indiscriminate effects of mines and minimize any use of explosive devices targeting civilians. Linking booby traps with objects likely to attract civilians, for example, is prohibited. The customary nature of these rules makes them binding, even for states that have not ratified the specific legal instruments and for non-state armed groups.

The Mines Ban Treaty<sup>8</sup> completely prohibits the use of explosive devices "designated to be exploded by the presence, proximity or contact of a person and that will incapacitate, injure or kill one or more persons" (Article 2.1). The treaty also includes an obligation for "Each State Party in a position to do so" to "provide assistance for mine clearance and related activities" (Article 6.4). Syria is not among the 162 states that are party to the treaty, although Iraq, Jordan and Turkey are.

- Protocol on Explosive Remnants of War (Protocol V to the 1980 CCW Convention), 28 November 2003.
- Bouchet-Saulnier F., The practical guide to humanitarian law, Rowman & Littlefield, 2007
- Convention on the prohibition of the use, stockpiling, production and transfer of anti-personnel mines and on their destruction, 1997





# THE HUMAN COST: ACCOUNTS FROM ALEPPO AND RAQQA GOVERNORATES



#### AYN AL ARAB/KOBANE AND TAL ABYAD

The districts of Ayn Al Arab/Kobane and Tal Abyad were the scene of battles between IS and the People's Protection Units (YPG) between August 2014 and the summer of 2015.

The majority of the population of Ayn Al Arab/Kobane district – more than 150,000 people – sought refuge in Turkey; others fled to other parts of Syria and to Iraq. When IS forces retreated at the end of January 2015, residents started returning to the area. By the end of February 2015, IS forces were 30-50 km from Ayn Al Arab/Kobane town. In the two months after fighting in Ayn Al Arab/Kobane ended, Turkish authorities reported that some 37,000 people had returned to Syria through the Mürşitpınar/Kobane border crossing. By June 2015, this number had reached 62,500, but figures reported by local authorities were higher given that people were also crossing back into Syria through unofficial routes.

On their return, the population of Ayn Al Arab/Kobane found that their towns, villages and agricultural land were littered with huge numbers of unexploded ordnances, mines and booby traps. Serbest, a mathematics teacher from Jomali, was among the returnees. "When the fighting reached our area in 2014, we escaped to Turkey for seven months. When we came back to our village at the beginning of 2015, the tractor was destroyed and explosive devices had destroyed part of our house. We were hosting some displaced people, and one time we found their children playing with an object that we discovered was an explosive device. We realised that there were mines and other explosive remnants of war everywhere in our village. Luckily, no one in our village was injured or killed – up until yesterday." 11

The extensive use of explosive weapons in urban areas, including 700 airstrikes by coalition forces, left almost 80 percent of Ayn Al Arab/Kobane destroyed and densely contaminated by unexploded ordnances. An international NGO estimated that there were on average ten pieces of munition per square metre. <sup>12</sup> Villages and surrounding fields, as well as urban areas, had also been littered with large numbers of mines and booby traps.

An MSF staff member who was in Ayn Al Arab/Kobane town some weeks after the end of hostilities describes what she saw: "The streets were littered with explosives – people had to watch every step they took. When spring started, more and more families started to return, bringing life back into the streets of Kobane. However, as more families returned to rebuild their lives, reports of incidents involving explosives became a daily occurrence. Some victims made it to a medical facility and survived, but many did not. It was devastating to witness that for people who had already lost so much, there was still more to lose."

<sup>9</sup> UNOCHA, Humanitarian Bulletin Syria: Issue 2, 2 June 2015

<sup>10</sup> UNOCHA, Humanitarian Bulletin: Syria operations from Turkey, Issue 14, 18 Feb – 30 March 2015

<sup>11</sup> Interviewed by MSF on 24 October 2016

<sup>12</sup> Handicap International, Kobani: A city of rubble and unexploded devices, Factsheet, May 2015 [www.handicap-international.org/ wp-content/uploads/2016/09/DOC3\_ENG.pdf]

As the frontlines of the fighting moved east towards Tal Abyad, as well as southwards, they triggered more temporary displacements, with people leaving their homes until hostilities had ceased. The scenes they described on their return were similar to those in Ayn Al Arab/Kobane.

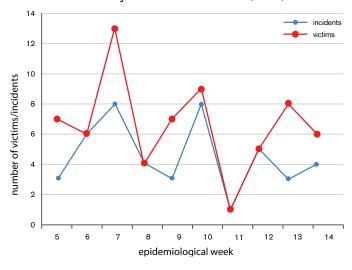
Shiyar B, who runs a diesel station in Jirn, west of Tal Abyad, describes how two of his relatives were killed by detonating mines: "My cousin Ahmed B fled to Iraq during the clashes. In July 2015, he came back alone to check on the situation before allowing his family to join him. When he tried to open the door of his house, the whole house exploded. He died and his family has still not returned. He wasn't the first one: in June 2015, Izaddin B was riding his motorcycle on the road to his home, southwest of the village, when he hit a mine which killed him." <sup>13</sup>

An explosive ordnance disposal expert<sup>14</sup> who worked in the area in 2015 told MSF that it was clear that only a few of the improvised explosive devices were placed for reasons of defence; according to him most were placed to cause maximum damage to civilians returning to their homes. Large numbers of explosive devices were placed in fields, in houses, behind closed doors, in toys and in other objects likely to attract civilians.

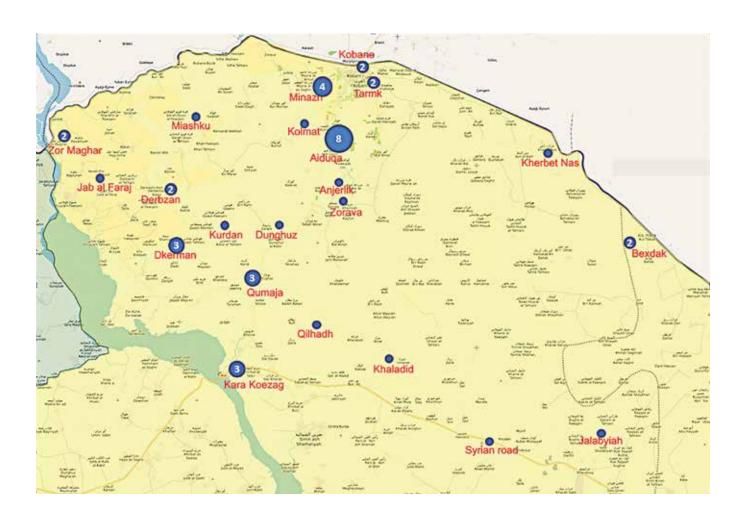
An assessment carried out by an international NGO in April 2015 concluded that booby traps were anti-personnel by nature because they had "either a steel casing that would naturally create shrapnel on exploding, or additional fragmentation". In other words, the devices were specifically designed to incapacitate, injure or kill people. From the western part of Kobane city alone, international NGOs and local security forces stated they removed six tons of the main explosive charges from improvised explosive devices. According to the explosive ordnance disposal expert, apart from the unexploded ordnance, almost all the improvised explosive devices were victim-operated, with very few triggered by remote control or timer.

In the first weeks after clashes ended in Ayn Al Arab/Kobane, MSF collected the details of 67 people killed or injured by blasts from explosive devices in 45 separate incidents from the local military hospital, where most of the patients were treated. The data below provides a snapshot of these 45 incidents, all of which occurred in the period between 27 January and 7 April 2015. However, as not all incidents are reported or systematically registered, these numbers are unlikely to reflect the true scale of incidents.

#### Incidents and victims of blasts from explosive devices in Ayn Al Arab/Kobane area (2015)



- 13 Interviewed by MSF on 16 November 2016
- 14 "Explosive Ordnance Disposal (EOD) is the detection, identification, evaluation, render safe, recovery and disposal of Explosive Ordnance", International Mine Action Standards Glossary
- 15 Handicap International, Kobani: A city of rubble and unexploded devices, Factsheet, May 2015 [www.handicap-international.org/wp-content/ uploads/2016/09/DOC3\_ENG.pdf]



In the 45 incidents shown in the graph on the left, 47 people died and 19 were injured. Medical staff in the hospital reported that 80% of the victims were civilians. The majority (85%) of the victims were male. Over half (53%) of the victims were under or of the age of 30; four were children under 15.

The map above shows the location of the incidents, where it was possible to identify them. While incomplete information prevents us drawing conclusions about which areas were most affected, it still gives an indication of the impact of explosive devices on the region as a whole during the first weeks after people returned to their homes in the Ayn Al Arab/Kobane region.





#### **MANBIJ**

In late May 2016, the Syrian Democratic Forces (SDF) began an offensive on Manbij, a city in the north of Aleppo governorate which had been under IS control since January 2014. Clashes took place first in rural areas around the city, and then progressively in Manbij itself. In mid-August 2016, the SDF announced that they were in full control of the city.

As a result of the fighting, large numbers of people left their homes in both rural and urban areas. This displacement tended to be relatively temporary, with civilians fleeing as the frontline approached, and returning to their houses as soon as the situation stabilised.

A large number of displaced people returned to their homes in Manbij in the first three weeks of August, immediately before and after the end of the offensive. The exact number of returns remains difficult to verify. According to Needs and Population Monitoring, from 13 August to 7 September, 13,220 displaced people returned to the city, with a total population of 86,448 in the city in August 2016.

On their return, people found the city had been extensively planted with mines, booby traps and other explosive devices. A doctor who remained in Manbij throughout the fighting told MSF, "During the battle, IS fighters were occupying houses and forcing the families out. They were then planting booby traps when they had to retreat to another house." <sup>16</sup> According to the local humanitarian affairs office, as well as international

NGOs visiting the city in the immediate aftermath of the battle, all public or private spaces were potentially mined, including streets, schools and hospitals. In people's houses, any everyday object – a sofa, a television, a door – could be a deadly trap.<sup>17</sup>

With very limited healthcare services available in Manbij during the month of August, a significant number of the casualties were referred to the MSF-supported Arin hospital<sup>18</sup> in Ayn Al Arab/Kobane. Those in need of surgery were then referred with MSF financial support to Amal hospital (a private facility in Ayn Al Arab/Kobane) or to Qamishli (seven hours' drive from Manbij).

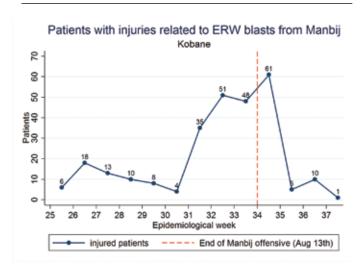
An MSF doctor describes how the team in Arin hospital were confronted with large numbers of wounded:

"In August 2016, enormous numbers of war-wounded civilians started arriving in Kobane to access one of the few functioning health facilities in northern Syria. It was very challenging to cope with this mammoth load of patients, many of them critically injured. As a medic trained to deal with mass casualties, I must say the scenario was poles apart from what we were trained for. It was even more complicated when truckloads of patients injured by mine blasts or improvised explosive devices started arriving at the hospital. To avoid the armed conflict, civilians took the road they considered safe to travel on, but instead ended up in the minefields."

During the last phase of the SDF's offensive on Manbij, and in the weeks immediately after they took control of the city, the only functioning public health facility in the whole area was a health post in Abu Qalqal, in eastern rural Manbij. Any patient in need of hospital care had to be referred to Ayn Al Arab/Kobane.

- 16 Whatsapp interview by MSF on 8 January 2017
- 17 Interviewed by MSF on 20 November 2016
- 18 MSF was supporting Arin hospital with equipment, medical supplies, incentives for staff and technical support provided by MSF staff present in Ayn Al Arab/Kobane. The facility was closed after the opening of Kobane hospital in September 2016 where MSF provides the same level of support.

The data below reflects information on the number of patients with injuries related to blasts from explosive devices received in the 13 weeks from 16 June to 16 September 2016 in Arin hospital and Amal hospital. These figures do not show the full reality, as only a portion of Manbij's war-wounded were received in Ayn Al Arab/Kobane, due both to the distance involved and the existence of alternative health facilities. The medical data does not differentiate between injuries related to unexploded ordnance and injuries related to mines or booby traps. Nevertheless, most witnesses describe a significantly higher number of mines and booby traps, probably related to the relatively short duration of fighting in the city.



Medical data shows a dramatic increase in the number of injuries related to blasts from explosive devices in the last three weeks of the offensive, reaching a peak in the first week after the SDF announced their full control of the city when, very rapidly, a large proportion of displaced people returned to the city from the surrounding countryside.

An MSF nurse in Ayn Al Arab/Kobane describes what happened to one family who fled Manbij during the fighting: "Father, mother, two daughters and two sons. Exhaustion and grief mark their faces. Openly, they share with us what they have been through in recent days. The family lost their three-year-old daughter while they were escaping from Manbij. She was shredded by one of the mines that IS had scattered around the entire city. The oldest daughter was injured and has burns and shrapnel wounds all over her body. Due to the severity of her injuries, the parents had no choice but to go directly to Kobane so she could receive medical care. There was no time to bury or mourn for the little daughter, so she was left behind. Only those surviving counted."

After the peak of cases in mid-August, the number of people with injuries caused by explosive devices dropped significantly. According to local authorities, most people returned to the city in August, and became progressively more aware of the risks posed by unexploded ordnance, mines and other improvised explosive devices. A manager of Kobane hospital said: "Currently we are seeing fewer cases from Manbij, because there are hospitals in the city where people go, and they no longer have to come to Kobane. The population is also more careful and the SDF have cleared the roads. But there are still a lot of mines in the fields." <sup>19</sup>

There are currently no fully-functioning public hospitals in Manbij. The National Hospital of Manbij – the city's main public health facility – is severely damaged and provides only very limited health services. However, five private hospitals have now reopened, allowing some of the injured to receive healthcare in Manbij itself. The closest towns where people can access free hospital treatment are Jarablus, Azaz and Ayn Al Arab/Kobane.





Five months after the end of the battle to control Manbij, some clearance of explosive devices has been carried out in public areas, such as the main streets and schools, by military forces and a unit of the local police, though they have only limited training and equipment. But many areas have not been cleared. A doctor in Manbij we interviewed says: "There are still numerous streets that are not accessible because they haven't been cleared, and many families haven't been able to return to their houses yet because of the presence of explosive devices".

Incidents involving blasts from explosive devices continue to be reported regularly, both in the city and in the surrounding rural areas. Farmers are particularly at risk when they return to their fields, while those who cannot reach their fields are cut off from their main source of income, with an inevitable impact on their livelihood.

Badr, a 27-year-old farmer who grows olives with his family in Nashama, a village near Abu Qalqal, was brought to Kobane hospital on 22 October 2016. His brother describes what happened: "Badr went to the field to collect olives, but he saw a mine on the ground and decided to go back. He then stepped on another mine that he had not seen." Badr survived the blast, but both his legs had to be amputated.

Badr's brother continues: "Before the incidents, we knew that there were mines in some fields, but agriculture is our only source of income. This was the first time we had been back to our fields since the IS group withdrew from the village. The area was a frontline during the battle and IS placed a lot of mines before leaving. The SDF cleared the village, but not the surrounding fields. Without access to our fields, we have no source of income. In our extended family, six people have lost their lives and one has lost a leg because of the mines." <sup>20</sup>

# IMPROVISING TO CLEAR EXPLOSIVES



#### **HUMANITARIAN RESPONSE**

Since the start of its humanitarian response plan for Ayn Al Arab/Kobane, the humanitarian community prioritised "the clearance of explosives during the first phase of the response"<sup>21</sup> In spite of the security and access constraints, humanitarian mine action agencies were able to start training and clearance activities in Ayn Al Arab/Kobane in May 2015.

These initiatives were abruptly interrupted in late June 2015 when IS infiltrated the city, killing more than 200 civilians. Most humanitarian agencies evacuated the city, returning over the following months. Due to access constraints, clearance activities were only briefly resumed in October 2015. According to mine action activity reports, the agencies engaged in clearance were nevertheless able to remove more than 14 tons of explosive devices. Since November 2015 programmes have been limited to educating people in Kobane town about the risk of explosive devices.

In Manbij, too, the humanitarian community identified clearance of explosive devices as a priority to allow the safe return of the population and access for humanitarian assistance. Despite this, the only concrete activities were carried out by local military groups and police forces with limited training and equipment, and humanitarian agencies were limited to providing risk education in Manbij city. However, more recently an international donor has hired a private company to train civilian mine clearance teams and start decontamination activities in the Manbij area.

#### **LOCAL INITIATIVES**

To address the limited response by humanitarian agencies specialised in clearance activities, local authorities and private individuals have begun to clear areas, though with limited training and equipment. According to local authorities, the local police – known as Asayish – set up a unit of five volunteers to work in Ayn Al Arab/Kobane town. The volunteers, who had only limited experience, are now all dead from injuries sustained in blasts of leftover explosive devices. Some individuals have also volunteered to clear houses of mines, either for free or for payment.

Muhammad, from Ayn Al Arab/Kobane, who has no training in mine clearance, tried to clear the village of Jirn, west of Tal Abyad, with his friend Ahmed. He describes what happened: "I had a poor friend called Ahmed, so poor that we used to call him 'Ahmed faqeer<sup>22'</sup>. He had a six-month-old son who had a hernia, but he didn't have the money to take him to the hospital. Ahmed told me that he knew how to clear mines, and was thinking about doing this job in Kobane to earn money. I advised him not to do it, but he convinced me that it was necessary due to the situation after the battle of Kobane. In the end he even convinced me to go with him. We started clearing houses in the village of Jirn and defused around 30-40 improvised explosive devices. IS had even boobytrapped the devices. Ahmed lifted up an explosive device, and I saw another one below, but it was too late. The explosion killed Ahmed and injured me - my leg had to be amputated below the knee. It was 24 July 2015."23

Ahmed was among six people (three civilians and three from the military, according to local villagers) who lost their lives while trying to clear the village of Jirn of mines and other improvised explosive devices.

In December 2016, Asayish announced the establishment of a new unit in Ayn Al Arab/Kobane to clear mines flagged by the local population.

<sup>21</sup> OCHA, Humanitarian Bulletin: Syria operations from Turkey, Issue 14, 18 Feb-30 March 2015

<sup>22</sup> Faqir (رسقف): poor in Arabic

<sup>23</sup> Interviewed by MSF on 15 November 2016





#### LIVING WITH THE MINES



Even in areas which IS left more than a year ago, the threat of improvised explosive devices and unexploded ordnances remain a daily reality for the local population. Incidents of people being killed or injured continue to be reported, even in locations believed to be safe. Meanwhile, the fact that some people still cannot return to their homes or access their fields is having an impact on their livelihoods.

The rural areas east of Tal Abyad are particularly affected. They were the scene of fierce clashes between the YPG in the summer of 2015. After the fighting ended, agricultural land was left contaminated with landmines and unexploded ordnance, and whole villages were booby-trapped. More than a year later, the situation is little different from what people found in 2015 when they first returned to their villages.

Jirn is one of many villages west of Tal Abyad where people are still living alongside improvised explosive devices and unexploded ordnances.. The latest incident in Jirn occurred in January 2016, more than five months after the end of offensive, when a blast in the centre of the village injured three of Ahmed faquer's children, six months after their father was killed while trying to clear improvised explosive devices.

Shyiar, a resident of Jirn, says: "There are still mines, booby trapped houses and unexploded ordnance. We can't go to some fields, and villagers are afraid to send their children to the village school."

Shyiar's neighbour, Jasem M, lives with two mines just a few metres from his doorstep. He says: "I can't sleep because I'm always worried that one of my four children, or a dog or a sheep, will step on one of the mines around the house. When an animal approaches the house, we all run away in case it detonates a mine."

According to the villagers, of the population of 500, at least 50 have been unable to return to their homes because of the explosive devices, and remain displaced elsewhere in Syria or in Turkey or Iraq. Jasem M says: "My father's house was destroyed by explosive devices, and now it's too dangerous to rebuild the house with so many mines in the ground."

It is a similar scene in other villages in the area. Half of the village of Sarzouri, some 20 km west of Tal Abyad, is completely deserted because of the explosive devices which litter its streets, wells and fields. Darwish, a farmer from Sarzouri, says: "The village is composed of two parts, one close to the road and the other between 500 m and 1 km from here. The part of the village close to the road, where the school and the health centre are, is completely deserted. You can find explosive devices everywhere: in hen coops, in wells, in the fields, as well as in IS trenches that have not been removed. Around 15 houses are still booby-trapped. To visit a health post or go to school, we have to go to other villages."

Darwish's brother, Sardar, is among those who cannot return to their homes. He says: "I had to leave the village and move to Ras Al Ayn because of the presence of mines. Most of the village's population is now living in Jazeera canton, in Kobane or in Tal Abyad."

According to a former employee of a mine action agency, "the only people left in these highly contaminated villages are those who cannot afford to relocate to other places." <sup>24</sup>

In Bendir Khan, a village 35 km west of Tal Abyad, five people were killed when their houses exploded because of booby traps. Ibrahim, a teacher and farmer from the village, says the latest incident took place in April 2016: "Muhammad went back to his home near the hill in the village, and he triggered an explosion by opening the door. The inhabitants of the village cannot come back because of this problem and many fields cannot be sown."

In Tiri, a village 20 km further west, Mustafa lives alone in his house while his family stays on in Turkey. He says: "My family is in Turkey and I do not want them to come back because I am afraid of exposing them to the risk of mines. The village school, for example, is completely surrounded by mines. There is only one road to reach it that is considered safe, but the children have to walk just a few metres from explosive devices. We know where some mines are, but we do not know how to remove them." <sup>225</sup>

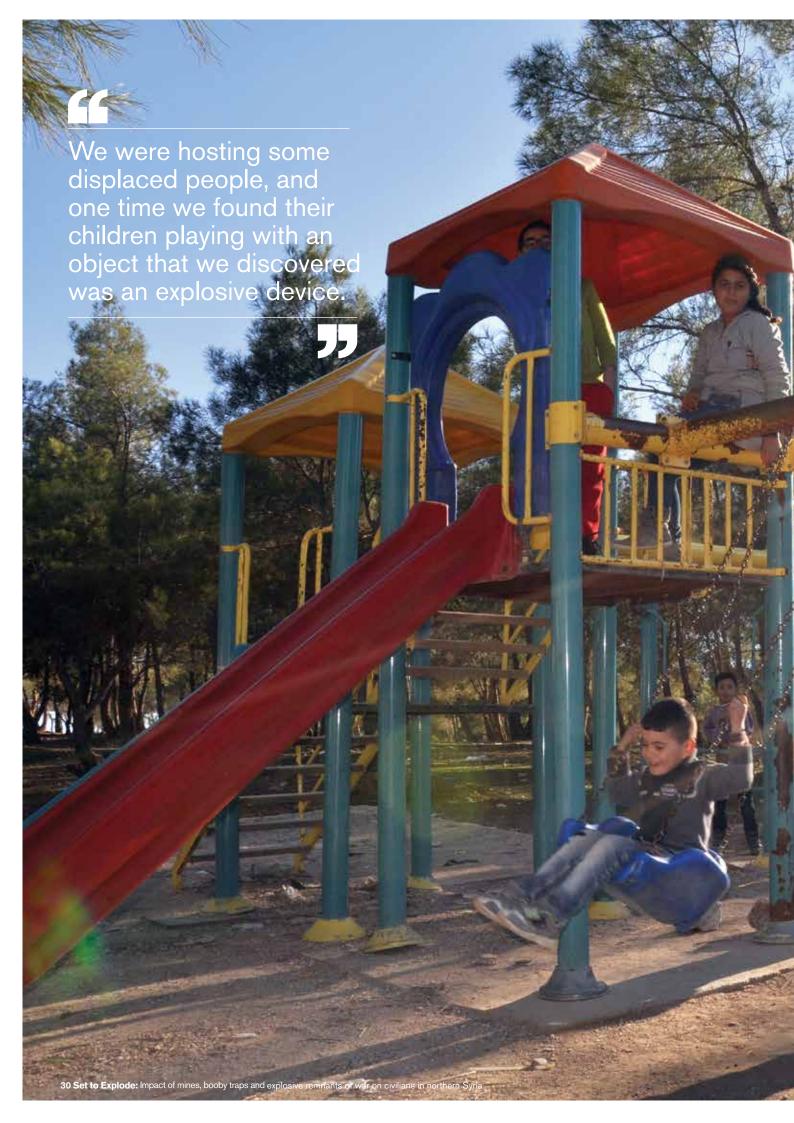
Even in areas thought to be safe, incidents continue to be reported. Serbest, from Jomali, was brought to Kobane hospital on 23 October 2016. His father describes what happened: "The incident happened on a road that we have been using for more than a year – it was considered safe. Serbest was ploughing the field with a tractor and, while doing a U-turn on the road, a mine exploded. It was a big one; it completely destroyed the tractor – some pieces were found 200 m away. We came directly to Kobane hospital by car." <sup>26</sup>

Serbest underwent surgery to his abdomen to remove pieces of shrapnel. He also has a fractured arm and various wounds to his legs and back.



25 Interviewed by MSF on 16 November 2016 26 Interviewed by MSF on 24 October 2016







# LASTING IMPACT AFTER THE FIGHTING



Since 2015 intensive battles have taken place in Northern Syria followed by the withdrawal of IS from several areas. Each time the armed group withdraws from territory it previously held, large numbers of mines and booby traps, are found, leaving a deadly legacy for people returning to their homes.

The intensive use of explosive weapons by parties to the conflict on the ground and from the air adds to the dangers for the returning population. Civilians injured or killed by explosives have been reported in the rural areas north and west of the city of Raqqa as well as between Manbij and Al Bab. Some incidents occur as people try to flee from the fighting; others when they go back to their villages after the frontline has moved further away.

Um Turki came to Kobane hospital with two of her children, aged four and ten, after both were injured by a mine on 25 November 2016 as they fled clashes in the northern countryside of Raqqa governorate: "Our village was between the two parties' frontlines, IS and the SDF. IS expelled us from the village. They came and told us to move towards Raqqa but we decided to flee towards SDF-controlled areas. [As we left] we saw IS planting mines in our village and on the route to SDF areas, to prevent us from going there. We were driving in a convoy of three cars. There were three families in our vehicle and we were in between the two other cars. The first car passed the mine without any harm. My husband also avoided the mine, but then drove over another one which we hadn't seen. Five people were injured and a child died."

When the fighting leaves an area, the unexploded ordnances, mines and booby traps left behind, present a constant threat to the returning civilians. Abu Mohammad, a farmer from Ayn Al Wardah, a village west of the city of Raqqa, explains to MSF that "IS forces started planting mines ten days before the frontline reached their location". He then describes what happened when they returned to their village: "When the clashes approached our village, we decided to head westwards to a safer area. Later the same day, the SDF told us we could go back to our village, and by sunset we were there. They recommended that we stay in one safe house while they cleared the village of mines. The next morning, 2 January 2017, we sent our son Mohammed to buy cigarettes. While he was walking down the street he stepped on a mine. As IS planted the mines, we memorised the locations, but we must have missed some of them."28 Eleven-year-old Mohammed was brought to Kobane hospital for treatment for his injuries.

People fleeing eastwards from the areas between Al Bab and Manbij report similar situations, with roads, fields and whole villages planted with mines and booby traps.

Marouf is from a village 20 km north east of Al Bab, which until recently was under IS control. He decided to go back to his village when the frontline moved further west. His brother recounts what happened: "On 20 November 2016, Marouf drove over a mine on his motorcycle inside the village. IS have planted mines everywhere." Marouf was taken to Amal hospital in Ayn Al Arab/Kobane and then to a private hospital in Qamishli. Unable to afford further private treatment, after undergoing surgery he was brought to Kobane hospital for post-operative care.

These personal accounts are just some examples of a scenario that has been witnessed repeatedly in the Ayn Al Arab/ Kobane and Manbij areas. Civilian casualties as a result of explosive devices seem destined to increase dramatically with the offensives against IS approaching urban centres such as Al Bab and Raqqa.

The aim, identified in 2014, of all states which are party to the Mines Ban Treaty to meet its goals "to the fullest extent possible by 2025",29 3 including "no new mine victims", is looking increasingly unlikely to be met in syria. The widespread use of victim-operated devices deliberately targeting the civilian population contravenes the Geneva Conventions binding on all state and non-state warring parties. The failure of states party to the Mines Ban Treaty and to the Protocol on Explosive Remnants of War to meet their obligations to facilitate the clearance of unexploded ordinances only exacerbates civilian suffering and the deadly impact of this war tactic. Without proper support to the humanitarian clearance of mines, booby traps and explosive remnants of war, and with poor humanitarian access to the affected areas, people displaced from their homes will be unable to return safely, and the dangers posed by such explosives will continue to affect their livelihoods and safety for a long time to come.

