

# Explosive remnants of war (ERW) and landmines

Syria Needs Analysis Project - August 2014

## Overview

**Definition:** The term "explosive remnants of war" (ERW) has been used in the humanitarian community to describe various explosive munitions that are left in an area after the period of armed conflict has ended. This includes unexploded ordnance (UXO) which has been abandoned or did not detonate as intended, such as cluster munitions which have a high rate of failure. ERW also encompass unexploded artillery and mortar shells, grenades, missiles, rockets, and improvised explosive devices (IEDs). Landmines are defined as an explosive munition designed to be placed under or on the ground and detonated by a person or vehicle. The legal definition of ERW does not include mines because they are covered under different legal definitions and protocols. (IMAS 2013/05, ICRC 2007/08/15)

### Introduction

While the physical and humanitarian impacts of explosive weapons, such as mortars, missiles, barrel bombs and IEDs, have been highly visible and documented throughout the conflict in Syria, the unexploded remnants of these weapons and landmines have received limited attention but will have long-term implications. In the immediate term, people are killed and maimed, with children making up nearly half of the victims globally. Furthermore, survivors require specialised services that are not available or accessible within Syria's public health system, which has been brought to near collapse. Even decades after a conflict has ended, the presence of ERW will negatively affect people's ability to move freely, return and rebuild their homes, resume their livelihoods and begin to recover. The intensive use of explosive munitions on high-density urban areas and information limitations throughout the conflict means that it will take decades of rigorous clearance efforts, as ERW are buried among rubble and debris. Beirut and Sarajevo experienced similar ERW contamination in urban areas; the latter city required 8-9 years of clearance efforts, although explosive weapons were used at relatively lower levels compared to Syrian cities. Over time, ERW and landmines will also migrate due to flooding or erosion, particularly in soft, sandy soil, thereby further spreading the contamination risk. (Landmine Monitor 2013/12, ICRC 2007/08/15)

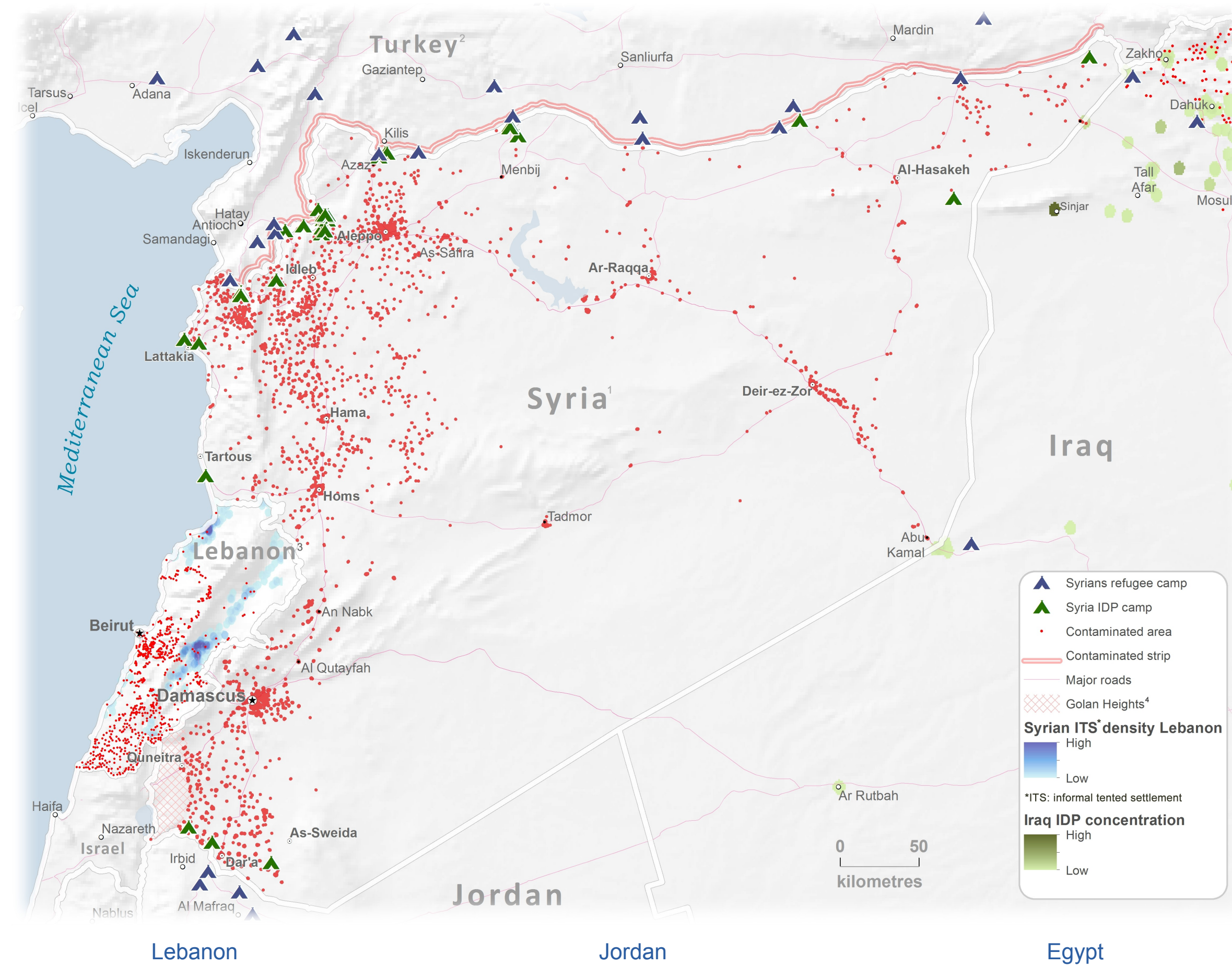
### Recommendations

- Systematic documentation of incidents involving explosive weapons and mines should be strengthened throughout Syria, with increased information sharing with the UN Mine Action Service (UNMAS) by the GoS, opposition groups, aid agencies and other non-traditional aid actors operating in Syria
- In all refugee hosting countries in the region, mine risk education should take place both for refugees from Syria to be aware of the risks in host countries, particularly Iraq, Lebanon and Turkey, as well as risks they would face upon return to Syria.

## Syria

The intensive use of explosive weapons across Syria, particularly in its high population density urban areas, has been documented by human rights groups and the UN since the beginning of the conflict in 2011. Major cities and their suburbs, such as Aleppo, Damascus, Deir-ez-Zor, Homs, Hama and Ar-Raqqa are major hotspots, while rural areas of Dar'a, Idlib and northern Lattakia governorates are also likely to be significantly contaminated. In Idlib governorate, ERW and landmine have reportedly caused casualties in Heish, Janoudiyah, Jisr-Ash-Shugur and Teftnaz sub-districts, and also severely impeded humanitarian access. Some clearance activities have been undertaken by the Syrian Armed Forces and opposition activists but on an extremely limited and ad hoc basis. In 2011, a Syrian government official said that anti-personnel mines were being planted along the Syrian side of the border with Lebanon in order to curb the smuggling of weapons. Mine action experts report that there is a high level of unexploded ordnance being recycled, particularly by opposition groups, which has led to less UXO than expected given the high intensity conflict. The use of landmines was also reported along the border areas with Turkey, particularly in Idlib. Civilians attempting to flee from Syria, particularly in Tal Kalakh and the Qalamoun region in Homs governorate, have been injured and killed from mines. (AP 2011/11/01, Landmine Monitor 2014/09/21, HRW 2012/03/13, AP 2011/11/01, ICRC 2014/07/23, SINA 2013/12/31)

Prior to 2011, Syria experienced some ERW contamination, with high concentration of mines and ERW in the occupied Golan Heights and Quneitra governorate, as well as in other areas due to various conflicts with Israel. Between 2011 and 2012, the number of victims of ERW/mines increased significantly due to significant population movements along the borders. Due to the limited pre-crisis contamination, it is likely that the vast majority of the Syrian population continues to have limited to no awareness of the threat of ERW and is at high risk of being affected. During the crisis, local populations may have gained some experience of the immediate effects of explosive weapons but an assessment of Syrian refugees in Iraq (most of whom originate from Al Hasakeh governorate) has shown a limited understanding of the risks posed by unexploded ordnance. Mine risk education activities have been extremely limited within Syria, with fewer than 300 people reported to have received risk education and victim assistance in the first quarter of 2014. (OCHA 2014/05/14, Landmine Monitor 2014/09/21, MAG 2014/05/05)

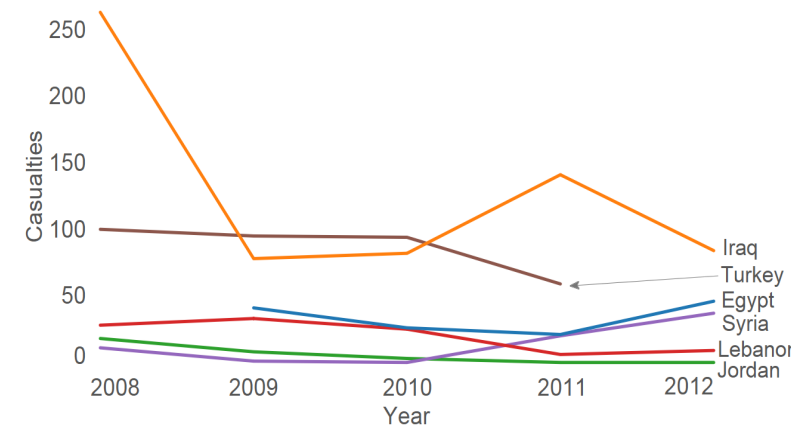


All regions of Lebanon have been significantly affected by ERW due to its various conflicts, including the civil war (1970-1990), 2 Israeli invasions and its 18-year occupation, the US bombing campaign (1983) and Israeli bombardments in 2006. The 2006 conflict, in which Israel bombarded southern Lebanon with 4 million cluster munitions in the space of 2 months resulted in 1/4 of Lebanon's arable land contaminated; up to 1/3 of the Lebanese population were affected; and the economic costs of lost livelihoods, mine action activities and casualties were estimated at between USD 150 and 230 million. (Landmine Monitor 2013/11/15, UNDP 2011/09, Landmine Action 2008/05)

The risk of Syrian refugees in Lebanon being affected by ERW and mines is relatively high among refugee host countries in the region due to the following factors: 1) Syrians have a limited understanding of the general risks of ERW and mines compared to the local population, as well as the specific risks posed in Lebanon; 2) it has been reported that new mines and possibly improvised landmines have been laid on both sides of the Lebanon-Syria border, including near routes which refugees have used to enter the country (AP 2011/11/01, PI 2014/05/12); and 3) compared to other refugee hosting countries in the region, Lebanon is very densely populated and by all measures, hosts the most Syrian refugees. The high density creates increased competition for land and livelihoods and Syrians may be more willing to take higher risks to live, work or travel close to known minefields. (MAG/LMAC 2014/05/31, MAG 2014/05/28)

Jordan experiences limited residual ERW and mine contamination along its border with Syria and in the Jordan Valley. Although the Government of Jordan (GoJ) had undertaken clearance activities of both areas prior to 2012, it has acknowledged that efforts were not thorough and required further verification. The overall risk posed from residual ERW and mines in Jordan is low, with the last reported casualty occurring in 2010. (Landmine Monitor 2011/10/31)

## Casualties 2008-2012



Egypt is contaminated from ERW from World War II along the Mediterranean coast in El Alamein and westwards towards and along the Libyan border, and in the Sinai and Red Sea coast due to the conflict with Israel. A couple dozen casualties are reported from these areas, particularly among males engaged in agriculture and herding activities. Syrian refugees are not at high risk of being affected by ERW as the vast majority are living in urban areas. (Landmine Monitor 2013/11/28)

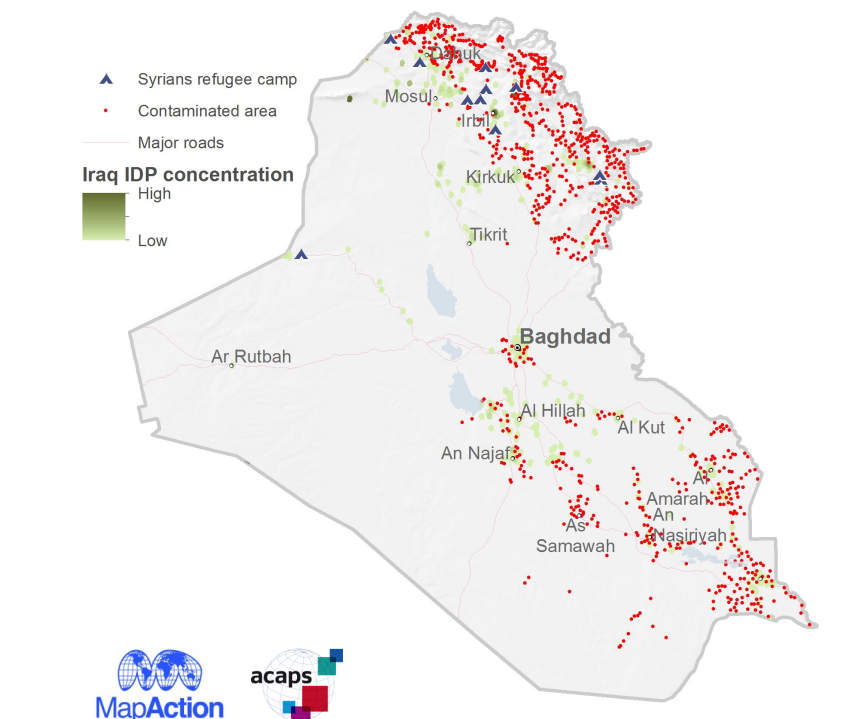
	CCW Protocol II	CCW Protocol V	Mine Ban Treaty	Convention on Cluster Munitions	Convention on Disabilities
Syria					✓
Iraq			✓	✓	✓
Lebanon				✓	✓
Turkey	✓	✓	✓		✓
Jordan	✓		✓		✓
Egypt					✓

## Turkey

Since the 1950s, the Syria-Turkey border has been mined by the Government of Turkey (GoT). Turkey's borders with Bulgaria, Georgia and Greece have also been mined, although the GoT has reported that these borders have been cleared of mines. In addition, during the 1980s and 1990s conflict, both the GoT and the Kurdistan Workers' Party (KPP) laid mines in southeastern Turkey. In March 2013, the GoT had identified over 3,500 contaminated areas, with about 20% of the areas located near military infrastructure, and a further 350 areas suspected to be contaminated. 90% of the identified contamination is located along the Syrian border. In 2003, the governments of Syria and Turkey reportedly agreed to demine the border between the 2 countries and in 2009, the GoT passed a law to demine its side of the border. Since the conflict erupted in Syria, these demining efforts have been halted. Turkey is also affected by ERW, particularly due to fighting near the Syria-Turkey border and in the southeast as a result of the conflict with the PKK. As of late 2013, the GoT had not identified contaminated areas. (Landmine Monitor 2013/11/26)

## Iraq

Iraq is one of the most landmine and ERW contaminated regions in the world, with an estimated 18 million mines laid during the Iran-Iraq war and an additional 1 million planted prior to the US-led invasions in 1991 and 2003. These US-led invasions also utilised cluster bombs and other weapons which dispersed an estimated 52 million submunitions primarily across southern Iraq, but also some in Kuwait and in the Kurdistan Region of Iraq (KR-I). According to the Iraqi government, the primary risks are posed to the development of Iraq's oil fields, tourism and agricultural sectors, however, casualties from ERW and landmines are likely underreported. The KR-I is also contaminated due to various conflicts and regional clashes. Several of the Syrian refugee camps, such as Domiz and Gawilan, were established on or near former military installations that were at risk of UXO contamination, before risk assessments had been conducted. Mine action groups cleared and destroyed about 60 UXO from Domiz camp and 1,200 UXO from the Bajet Kandela transit camp site, which receives all Syrian refugees permitted to enter the KR-I. Due to ongoing contamination around the camps and the limited awareness among Syrians, refugees are at high risk of being affected by ERW and landmines. The latest conflict driven by the Islamic State and other Iraqi opposition groups in Anbar and northern Iraq are also leaving UXO threats, according to trusted sources. (Landmine Monitor 2013/11/07, PI 2014/05/12, MAG 2014/05)



**Purpose** - This thematic report shows suspected contamination of ERW and landmines. The Syria Needs Analysis Project welcomes all information that could complement this report. For additional information, comments or questions please email [SNAP@ACAPS.org](mailto:SNAP@ACAPS.org)

**Disclaimer** - Information provided is provisional as it has not been possible to independently verify field reports. This report covers a highly dynamic subject and the information is as up to date as possible, given the information limitations.

**Sources** - <sup>1</sup> Syria: UNMAS, June 2014. UNMAS has maintained the most comprehensive database of clash incidents in Syria since December 2012; the suspected contaminated areas have experienced heavy weapon fire.

<sup>2</sup> Turkey: Turkish Ministry of Defense, 2011. There is also contamination along the Iraq-Turkey border and in southeast Turkey, however, there was no data on these areas available to SNAP.

<sup>3</sup> Lebanon: Lebanon Mine Action Centre, 2011.

<sup>4</sup> Golan Heights: No data was publically available on contamination in the Golan Heights, which falls under the mandate of the United Nations Disengagement Observer Force (UNDOF), however, significant areas have been contaminated by landmines prior to the current conflict in Syria.

<sup>5</sup> Iraq: Iraqi Kurdistan Mine Action Agency, 2008.

SNAP would like to thank all organizations who have provided input to this report. The information is compiled from organizations, key informants, reports and media sources.