

REPORT 2021



## No safe recovery:

The impact of Explosive Ordnance contamination on affected populations in Iraq





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## List of Acronyms

<b>AP</b>	Anti-Personnel	<b>Gol</b>	Government of Iraq
<b>DMA</b>	Directorate of Mine Action	<b>KII</b>	Key Informant Interview
<b>EO</b>	Explosive Ordnance	<b>KRG</b>	Kurdistan Regional Government
<b>ERW</b>	Explosive Remnants of War	<b>KRI</b>	Kurdistan Region of Iraq
<b>HI</b>	Handicap International - Humanity & Inclusion	<b>MoD</b>	Ministry of Defence
<b>HMA</b>	Humanitarian Mine Action	<b>MoHE</b>	Ministry of Health and Environment
<b>IDP</b>	Internally Displaced Person	<b>EORE</b>	Explosive Ordnance Risk Education
<b>IEC</b>	Information, Education and Communication	<b>NGO</b>	Non-Governmental Organisation
<b>IED</b>	Improvised Explosive Device	<b>NTS</b>	Non-Technical Survey
<b>IKMAA</b>	Iraqi Kurdistan Mine Action Agency	<b>SDG</b>	Sustainable Development Goal
<b>IQD</b>	Iraqi Dinar	<b>UNMAS</b>	United Nations Mine Action Service
<b>IS</b>	Islamic State	<b>WG</b>	Washington Group on Disability Statistics

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A house in Sinjar city totally destroyed during the fighting in 2017. In some buildings, unexploded rockets and booby-traps remain.  
© F.Vergnes / HI

## Executive Summary

When explosive weapons, including air and artillery strikes, rocket and heavy mortars, are used in populated areas, they kill, injure, traumatise, and displace the population, destroy civilian infrastructure, and impede access to humanitarian aid, both during the conflict and for years or decades to come. As their design and use are inherently inaccurate, many explosive weapons fail to explode upon impact, contaminating the land with Explosive Ordnance (EO). Prohibited weapons, such as landmines, including those of an improvised nature, also contribute to contaminating large swathes of land. The term “Explosive Ordnance” herein, therefore encompasses Mines, Cluster Munitions, Unexploded Ordnance, Abandoned Ordnance, Booby traps, other devices (as defined by CCW APII) and Improvised Explosive Devices.<sup>(1)</sup>

**Weapons that fail to explode when launched or dropped, as well as other unexploded ordnances designed to be activated by victims, remain an ongoing threat to civilians in the long term.** With the potential to cause death, injury or permanent impairment, **EO contamination negatively impacts access to services that civilians depend on, such as health, education, water and sanitation, transportation, and telecommunication. It also restricts the movement and return of the displaced population.** If left unaddressed, the threat of

contamination can persist for generations, hindering peace and development efforts.

Based on desk review and qualitative interviews with land release operators, local and international humanitarian actors, government representatives, community leaders, survivors and members of their families and communities, this report identifies and describes the negative impact of EO contamination on affected communities in the Ninewa governorate, Iraq. **Explosive Ordnance continues to pose a threat to people’s lives, their safety, and their access to land and other resources and services in contaminated areas in Ninewa. It also hampers the efforts of humanitarian and development actors.** Moreover, certain groups, such as women and persons with disabilities are likely to be more vulnerable to the reverberating effects<sup>(2)</sup> of EO contamination.

As urban warfare has become a common pattern of violence in modern conflicts, the example of the Ninewa governorate highlights the **vital importance of ensuring that the future political declaration on explosive weapons includes clear language on the long-term impact of EO contamination and on commitments regarding inclusive and conflict-sensitive land release, EOORE, victim assistance, principled humanitarian access, as well as gender, age and disability disaggregated data, to minimize the impact.**

## The use of Explosive Weapons in Populated Areas generates widespread contamination

Despite a lack of accurate data on EO contamination in the country, Iraq is estimated to be one of the most heavily Explosive Ordnance (EO) contaminated countries in the world. A total of **3,225 km<sup>2</sup> of land is reported to be contaminated, putting 8.5 million people at risk.** Areas within Iraq that were retaken from the Islamic State (IS), including the Ninewa governorate, have particularly high levels of contamination.

In Iraq, EO contamination can be divided into 'legacy' contamination, referring to contamination that occurred before 2014, and 'new' contamination, referring to contamination stemming from the 2014-2017 conflict between the Islamic State (IS) and pro-government forces. **The latter is mainly found in urban and semi-rural areas:** IS manufactured and deployed Improvised Explosive Devices (IED) on an unprecedented quasi-

industrial scale, while pro-government forces used large quantities of explosive weapons, especially those with wide-area effects, including air and artillery strikes, rocket attacks and heavy mortars. The resulting EO has been used and could potentially be re-used in the future by armed groups, including IS, to manufacture more IEDs, perpetuating the threat of contamination.

**Contamination in populated areas is complex in nature and often referred to as “three-dimensional”, meaning that it can be found anywhere:** buried in the ground, attached to refrigerators, doors, windows, concealed inside rubble, children's toys, domestic appliances, etc. This, together with the high levels of destruction, poses serious obstacles to safe access, including for armed violence reduction activities in populated areas.

## Land release in populated areas is a challenging but necessary task to promote peace and sustainable development

**EO land release is among the most time-, effort- and economic resource-consuming pillars of Humanitarian Mine Action (HMA) in Iraq and globally. This holds even more true when land release is conducted in populated areas, where the challenges faced by operators are much greater.** The complexity of the environment in populated areas often requires specific equipment, machinery and expertise, which cannot always be easily procured. Moreover, procedures regarding housing, land and property pose additional obstacles to land release implementation, as the process of identifying property owners is not only complex and time-consuming but also fraught with potential conflict triggers.

However, as well as preventing future EO casualties, **land release, along with EORE, victim assistance and conflict transformation activities, plays a key role within the so-called ‘triple nexus’ that links the humanitarian, peace, and development sectors.** As

such, effective land release is paramount to delivering the United Nations 2030 Agenda.

In Iraq, most mine action operators perceive land release as the core focus of their activities, without necessarily registering the potential of monitoring and evaluating activities to help understand, demonstrate and spread the developmental benefits stemming from mine action by implementing a more comprehensive model that integrates not only land release, EORE and VA, but also conflict transformation. These interventions should be **designed and evaluated to include age, gender and disability-inclusive indicators that measure outcomes, instead of the traditionally used output-based indicators** (i.e. number of devices cleared, and number of square metres cleared), **to effectively measure the impact on affected people's lives, such as the level of income generated, number of meals per day, safe access to water, or whether girls now also attend school, to name just a few.**

“The level of contamination is high in the areas contaminated with explosive ordnance. The contamination is dangerous and deadly and needs to be fully cleared out, in order for people to live peacefully in the area. We cannot access services due to the presence of explosive ordnance.”

Community Member, woman - Mosul

## Explosive Ordnance Risk Education is effective when adapted to risk-taking behaviours in the affected population

The effectiveness of Explosive Ordnance Risk Education (EORE) in Ninewa was found to vary depending on the target group. Generally, **EORE was reported to be effective for those who lack knowledge regarding the existing hazards, including children and recent returnees.**

However, EORE does not appear to provide a solution for those who display **forced risk-taking behaviours driven by a lack of alternative livelihoods or housing**, or those who have been living in a contaminated area for a longer period.

“Yes, I knew that IS had placed mines everywhere, but I am a shepherd and had to take care of my cattle.”

EO Survivor, man - Sinjar

Furthermore, the materials used in EORE activities are sometimes ill-adapted to the local situation in terms of language and contexts (e.g. type of

contamination addressed) and tend not to be accessible to persons with different types of impairments.

## Victim Assistance-related efforts allow individuals and communities affected by EO to enjoy their rights and meet their needs

Victim assistance requires an **integrated approach** involving actions by both the mine action sector, as well as other sectors such as health, social welfare, labour and education, to meet the needs of survivors and their families, the families of those injured and/or killed, and the affected communities and to uphold their rights.

However, **data show that victims lack access to basic services.**<sup>(3)</sup> Ninewa is the most severely affected governorate in terms of damage to the healthcare sector due to the conflict. **Many of the healthcare facilities destroyed have not yet been rebuilt. Where medical facilities have been rehabilitated, contamination prevents people from accessing health services.** Furthermore, the multiple risks of exclusion created by the intersection of disability, gender and age factors

mean that, **access to health services is likely to be more limited for certain groups, including women and persons with disabilities.** Other factors limiting access to healthcare were also identified, including the poor quality of the services and the inability to pay medical costs.

**In Ninewa, access to education has been severely affected as many schools were destroyed during the conflict and some schools, as well as roads to schools, remain contaminated by EO.** This can be a driving factor in school drop-out rates, because parents do not want their children to travel long distances to the nearest operational school, or because they fear that their children may encounter or play with EO on the way to school. For children, this fear leads to reduced willingness and motivation to attend school.

“Since the place became contaminated, we do not allow our children to go to school on their own. This is because we are scared that they may play with explosive ordnance. Moreover, we are also scared that there might be explosive ordnance inside the school.”

Community Member, man – Mosul

**Livelihood opportunities for all members of the community are severely impacted by contamination. Farmers and shepherds, in particular, are often unable to access land due to the presence of EO. This sometimes results in risk-taking behaviours,** as people enter contaminated land pressured by the need

to earn an income. While research has shown that women's access to employment in conflict-affected areas is very limited, men are reportedly more affected by the lack of access to livelihood opportunities as they are generally the main provider for their families.

“The way community members perceive me has changed since the incident. They now perceive me as a person who cannot support his family.”

EO survivor, man - Sinjar

The survivors of EO accidents are amongst those most affected by EO contamination, and they often require specialist services in order to thrive. **Despite the widespread need for services, those available are generally limited in scope and quality. Moreover, they are mostly provided by humanitarian actors and not effectively**

**integrated into broader health, social, education, labour and disability efforts.** The unwillingness of donors to prioritize VA-related efforts and the consequent **lack of funding** are two of the main reasons for the reduced availability and poor, fragmented service provision for victims.

“Prior to the incident, I used to visit my friends, but now I can't because I can't walk or see very well, which makes it difficult for me to visit them. So, I spend most of my time at home.”

Child Victim of EO, girl – Sinjar

**To address the current gaps in victim assistance and target EORE and land release in an inclusive manner, it is important to have accurate and complete information on the availability of quality services, as well as on the number and situation of EO casualties, including data disaggregated by gender, age and disability.**

Although the Government of Iraq has committed to conventions that oblige the government to collect data on casualties, and despite that different data collection mechanisms exist, available data is severely lacking.

## A comprehensive Armed Violence Reduction model is key to enhancing social cohesion in EO-affected communities

EO contamination negatively impacts social cohesion<sup>(4)</sup> and limits the opportunities to positively transform conflict dynamics. Firstly, **contamination was reported to be an important factor preventing displaced populations from returning home.** One in twelve internally displaced persons reports that the presence of EO is a barrier to their return.<sup>(5)</sup> Barred from safe return, households continue to be displaced and communities are unable to reconnect and build their resilience collectively.

**Contamination was also reported to increase tension within families in a variety of ways.** The most obvious impact is that accidents may leave survivors permanently impaired, thereby changing the roles and responsibilities of family members and potentially creating tensions between them. Indirect impacts of contamination on social cohesion, such as limited access to livelihoods and services, can also cause tensions within families. Women are particularly vulnerable in these situations, as tensions may translate into gender-based violence.

“Fear has become a dominant feeling among many of the community members who live in or close to contaminated areas. They always feel insecure; no one feels safe. This obviously affects the population’s psychological well-being.”

Mine Action Operator

**At community level**, EO accidents can result in a particular group being blamed for the contamination. In the most extreme cases, this can lead to acts of retaliation. Moreover, **contamination also increases fear among community members as it reduces their willingness to travel, the availability of public spaces, and increases competition for resources, as the contamination reduces the availability of services and livelihood opportunities.**

To ensure a broader and more sustainable impact, efforts should not only address the immediate effects of armed violence, but also its long-term impacts and root causes. This is even more crucial when conflict dynamics enter a vicious circle where armed violence is both a consequence and a trigger of the recurrence of conflicts. It is imperative that the mine action sector ensures its interventions are conflict sensitive and, where possible, contribute to conflict transformation in order to break these cycles of violence.

## General recommendations to the international community, including the Government of Iraq and other States, donors and Mine Action operators:

- **Recommendation 1:** Support the development of a strong political declaration to avoid the use of explosive weapons with wide-area effect in populated areas, which includes firm commitments on land release, risk education and victim assistance.
- **Recommendation 2:** In line with the Oslo and Lausanne Action Plan, do not use landmines and cluster munitions, clear contaminated areas, deliver EORE, and provide assistance to individuals and affected communities.
- **Recommendation 3:** Recognize that humanitarian mine action is a prerequisite to any immediate or long-term recovery, and continue to stress the humanitarian nature of mine action activities.
- **Recommendation 4:** Commit humanitarian funding to significantly scale up humanitarian mine action activities, in line with International Mine Action Standards and humanitarian principles.
- **Recommendation 5:** Encourage the use of a comprehensive approach to Armed Violence Reduction, including land release, stockpile destruction, EORE, victim assistance, advocacy and conflict transformation which mainstreams a gender, age, and disability perspective in an intersectional manner.



In Sinjar, Mosque destroyed and booby-trapped by ISIS. © F.Vergnes / HI

# 1. Introduction

## 1.1 The context in Iraq

Iraq is one of the most heavily Explosive Ordnance (EO) contaminated countries in the world. EO covers a broadly defined category, encompassing landmines, cluster munitions, explosive remnants of war (ERW), booby traps, Improvised Explosive Devices (IEDs), as well as other explosive devices.<sup>(6)</sup>

While the full extent of EO contamination in Iraq is unknown due to a lack of available data, it is estimated that 3,225 km<sup>2</sup> of land is contaminated and an estimated 8.5 million people are at risk due to the contamination.<sup>(7)(8)</sup> In terms of cluster munitions contamination, Iraq is considered the fourth most contaminated country, with at least 178 km<sup>2</sup> affected in Federal Iraq alone.<sup>(9)(10)(11)</sup> Finally, mine contamination, comprising both ‘legacy’ contamination and ‘new’ contamination (including IEDs) is estimated to cover a total of 1,866 km<sup>2</sup> of land.<sup>(12)(13)(14)(15)</sup>

‘Legacy’ contamination refers to contamination that occurred before 2014, including contamination stemming from the 1980-1988 war with Iran, clashes between Kurdish armed groups and Saddam Hussein’s regime, as well as the First and Second Gulf Wars in 1991 and 2003, respectively. This type of contamination is mainly found in

remote areas near Iraq’s border with Iran, Kuwait, and Saudi Arabia.<sup>(16)</sup> ‘New’ contamination, on the other hand, refers to contamination stemming from the 2014-2017 conflict between the Islamic State (IS) and pro-government forces<sup>(17)</sup> aiming to defeat IS. This type of contamination is primarily found in urban and semi-rural areas in Anbar, Ninewa, Salah al-Din, and Kirkuk governorates.<sup>(18)</sup> During the conflict, IS manufactured and deployed IEDs on an unprecedented quasi-industrial scale,<sup>(19)</sup> while pro-government forces used large amounts of explosive weapons, especially those with wide-area effects, including air and artillery strikes, rocket attacks and heavy mortars.<sup>(20)</sup>

### Hazard Area Federal Iraq (m<sup>2</sup>)

Battle area .....	452,204,730
Cluster munitions .....	166,796,170
Explosive remnants of war .....	703,628,281
IEDs .....	605,358,448
Landmines .....	992,139,707

April 2021, IMMAPP

The extensive use of explosive weapons by both IS and pro-government forces between 2014-2017 resulted in a high number of casualties, although the exact numbers differ between sources. This is due to the lack of systematic data collection which, along with the extent of the conflict, has made it very difficult to obtain reliable statistics. Information provided by iMMAP puts the number of explosive hazard incidents<sup>(21)</sup> for the period between 2014-2017 at 43,843, killing a total of 121,593 people and injuring a further 44,629 people.<sup>(22)</sup> Action on Armed Violence reports that the number of accidents due to the use of explosive weapons between 2014 and 2017 was 2,006, killing 39,734 people, of whom 10,492

were civilians. Finally, Iraq Body Count reports 21,011<sup>(23)</sup> civilian casualties caused by explosive weapons during the same period.<sup>(24)</sup>

In December 2017, the Iraqi government declared that its war against IS was over. This triggered a new phase in the humanitarian crisis in Iraq as Internally Displaced Persons (IDPs) started to return to their homes and mine action operators started work to reduce the social, economic and environmental impact of EO contamination. However, contamination has remained a challenge ever since with around one in twelve IDPs reporting that the presence of EO is a barrier to their return.<sup>(25)</sup>

## 1.2 Ninewa Governorate

Ninewa is the second most populated governorate in Iraq, home to around 10% of the overall population.<sup>(26)</sup> The governorate is ethnically and religiously diverse, with large numbers of individuals from minority groups, including Christians, Yazidis, Shabak, and Turkmen.

Since many of the areas that were liberated from IS were located in this governorate, Ninewa was the worst affected governorate in terms of displacement caused by the IS insurgency and the subsequent war. As of 30 April 2020, 1,911,414 of the 2,602,766 IDPs originating from Ninewa have returned to their areas of origin and 678,512

individuals remain displaced.<sup>(27)</sup>

EO contamination in Ninewa has continuously posed a threat to civilians, including host communities, returnees and IDPs. Moreover, in 2019 the Iraqi government re-initiated a plan to close down IDP camps. As a result, three camps were recently closed in Ninewa, forcing a total of 23,677 IDPs to return to largely unsafe areas, potentially contaminated with EO, and with limited access to basic services.<sup>(28)(29)</sup> IDPs unable to return to their homes were left with no choice but to seek shelter in informal settlements, thereby increasing the risk of EO-related accidents.<sup>(30)</sup>

## 1.3 Research Objectives

This study aims to identify and describe the impact of EO contamination, beyond death and injury, on access to services and the socio-economic recovery of affected communities in the Ninewa governorate, Iraq.

Studies on the impact of EO contamination on socioeconomic outcomes in Iraq are practically non-existent. Examining the impact of EO contamination beyond the physical effects on those who have survived an accident is, however, of paramount importance as it provides the data needed to show whether land release, EORE and victim assistance activities can have a significant effect beyond reducing morbidity and mortality. Moreover, this data is vital if mine action operators,

including those engaged in conflict transformation, are to tailor interventions for maximum impact. The overall research objectives are listed below:

- **Research objective 1:** Assess the level of EO contamination, including EO of an improvised nature, in the Ninewa governorate.
- **Research objective 2:** Identify and describe how EO contamination has affected civilians, infrastructure, access to services, and social cohesion.
- **Research objective 3:** Identify actionable recommendations for policy-makers to respond to the long-term impact of EO on affected communities.

A qualitative research approach was used. In total, 69 interviews were conducted with a total of 39 stakeholders and 30 EO affected individuals. Data was collected in person, unless the stakeholder

requested the interview be conducted online or was residing outside of the data collection zone, (Erbil and Ninewa governorates). This report provides an overview of the main findings.

## 2. Methodology

In order to best address the research questions for this study, researchers undertook a thorough desk review of secondary literature and conducted Key Informant Interviews (KIIs) with relevant

stakeholders and individuals from the affected population. The table below provides an overview of the data collected (See: Appendix 1 for a full list of interviewed respondents).

### Type and Number of Respondents Interviewed.

Type of respondent	Number of interviews
Humanitarian actors	2
Mine action operators	27
Government representatives	4 (3 in Mosul, 1 in Sinjar)
Community leaders	3 (1 in Mosul, 2 in Sinjar)
Other stakeholders (RE Volunteers)	3 (3 in Mosul)
Survivors of EO accidents	9 (4 in Mosul, 5 in Sinjar)
Family members of survivors of EO accidents	4 (2 in Mosul, 2 in Sinjar)
Community members living in contaminated areas <sup>(31)</sup>	8 (4 in Mosul, 4 in Sinjar)
Community members living close to contaminated areas <sup>(32)</sup>	8 (4 in Mosul, 4 in Sinjar)

In this study a survivor is defined as a person who has survived a blast wave or fragmentation caused by bombing and shelling, who has suffered

psychological trauma, or a person who has survived an accident involving EO, either left behind as a result of bombing and shelling, or laid as a mine.

### 2.1 Desk Review

A comprehensive desk review of secondary literature was conducted to investigate the level of EO contamination, as well as its impact on civilians, infrastructure, access to services, and social cohesion. The results of the desk review were used to inform the qualitative interview guides and were incorporated into this report.

After completion of the data analysis, the findings from the data were linked with findings from the literature related to best practices in mine

action programming. This information was used to further strengthen the recommendations for future programming. More specifically, this ensured that the recommendations made align with international standards for mine action programming and are able to inform the ongoing negotiations on the political declaration on EWIPA.

## 2.2 Qualitative Interviews

Qualitative interviews were deemed highly appropriate for this study as they were expected to provide a breadth and depth of information, given the context and objectives of this study. They are especially effective in gaining an understanding of the underlying reasons, opinions, and motivations of a group of people with regards to the topic being researched.

Respondents for the study were mainly identified using a snowball approach. For interviews conducted with individuals from the affected population, efforts were made to ensure the sample was inclusive with regards to gender, age, and disability status. While this was not always possible (See: Limitations), the researchers did manage to speak to persons with physical, visual, hearing, voice, and concentration impairments. The interviews in Mosul, Sinjar and Erbil were conducted in person (unless specifically requested in Erbil). The interviews in Baghdad were all conducted online.

## 2.3 Limitations

There are several potential limitations to this study. Firstly, the respondents for the study were identified through a snowball approach. The non-random sampling strategy is likely to have had an impact on the representativeness of the sample, especially for individuals from the affected population. For example, persons with disabilities are often described as a hard-to-reach population who live isolated from their communities. The persons with disabilities included in the study are unlikely to accurately represent this group as they were identified through the snowball approach and are therefore less likely to live isolated from their community.

Secondly, although efforts were made to ensure a gender balance and facilitate the participation of individuals with different impairments, the research team faced difficulties in accessing individuals from certain key groups. As such, a 50-50 gender balance was not always fully achieved and the number of interviewed individuals from a certain group was sometimes different in Mosul compared to Sinjar. Furthermore, although the research team was able to identify individuals with

The qualitative interview guides for this study were developed in collaboration with HI. The KII guides for stakeholders can be divided into four separate parts, namely:

1. Contamination
2. Access to services
3. Social cohesion
4. Mine risk education

In addition, the KII guides for individuals of the affected population also covered:

1. Demographics
2. Washington Group (WG) questions

The short set of questions developed by the Washington Group were used to obtain information on the different impairments of persons with disabilities included in the study.<sup>(33)</sup>

physical, visual, hearing, voice, and concentration impairments, it was generally easier to identify persons with physical impairments compared to persons with other types of impairments.

Finally, only qualitative data was collected for this study. As a result, it is not possible to determine the strength of certain findings. For example, while individuals from the affected population reported that their access to services was more limited, it is not possible to accurately determine how their level of access compared to individuals who live in cleared areas. Nonetheless, in order to make optimal use of the data, secondary data were obtained for each of the research questions to triangulate the data. Moreover, where available, these secondary data were also used to determine the strength of certain findings.



A view of the old city of Mosul, destroyed by the fightings. © F.Vergnes / HI

### 3. Iraq's Commitment to International Agreements

**In 2008 Iraq acceded to the Anti-Personnel (AP) Mine Ban Convention with the commitment to stop the use, stockpile, and transfer of AP mines, to destroy all remaining AP mines by 2018, and to provide assistance to victims, including EO survivors, the family members of those injured and/or killed, mine-affected communities, and persons with disabilities.<sup>(34)</sup> However, IS's emergence in Iraq and the military operations undertaken to regain control over seized territories hampered Iraq's capacity to fulfil the commitments made regarding clearance activities and caused further contamination in different areas of the country. As such, in 2017 Iraq submitted a request to extend its landmine clearance deadline until 2028. The progress made to date, however, suggests that Iraq is unlikely to meet this deadline.<sup>(35)</sup>**

**The Convention on Cluster Munitions addresses the humanitarian consequences and unacceptable harm caused to civilians by cluster munitions, through a categorical prohibition and a framework for action.<sup>(36)</sup> Moreover, state parties to the Convention also commit to providing victim assistance to cluster munition survivors. Iraq signed and ratified the Convention in 2009 and 2013, respectively. As previously mentioned, Iraq has reported the completion of stockpile destruction (Article III), although no details have**

been provided on the date of completion and the types and quantities destroyed.<sup>(37)</sup> As for clearance and destruction of cluster munition remnants (Article IV), progress reports indicate that Iraq is unlikely to meet the deadline set for November 2023.<sup>(38)</sup>

**Moreover, Iraq is also a party to the Convention on Certain Conventional Weapons (CCW).**

This Convention aims to “ban or restrict the use of specific types of weapons that are considered to cause unnecessary or unjustifiable suffering to combatants or to affect civilians indiscriminately”.<sup>(39)</sup> Protocol V is the first multilaterally negotiated instrument to deal with the problem of unexploded and abandoned ordnance. By acceding to the Convention in September 2014, Iraq committed to, among other things, “mark, clear, remove or destroy explosive remnants of war in affected territories under its control”.<sup>(40)</sup>

**Finally, Iraq has been a party to the Convention on the Rights of Persons with Disabilities since 2012.** This has contributed to a shift towards a human rights-based approach that underpins today's victim assistance efforts. However, research suggests that there is still a lot to be done to ensure the rights of survivors and other persons with disabilities in Iraq are upheld.<sup>(41)</sup>

# 4. Ninewa: a heavily contaminated governorate

The Ninewa governorate is primarily affected by 'new' EO contamination stemming from the deployment of explosive weapons, especially those with wide-area effects, including air and artillery strikes, rocket attacks and heavy mortars used by pro-government forces, as well as IEDs including improvised mines.<sup>(42)(43)(44)</sup> IEDs, manufactured and deployed by IS on an

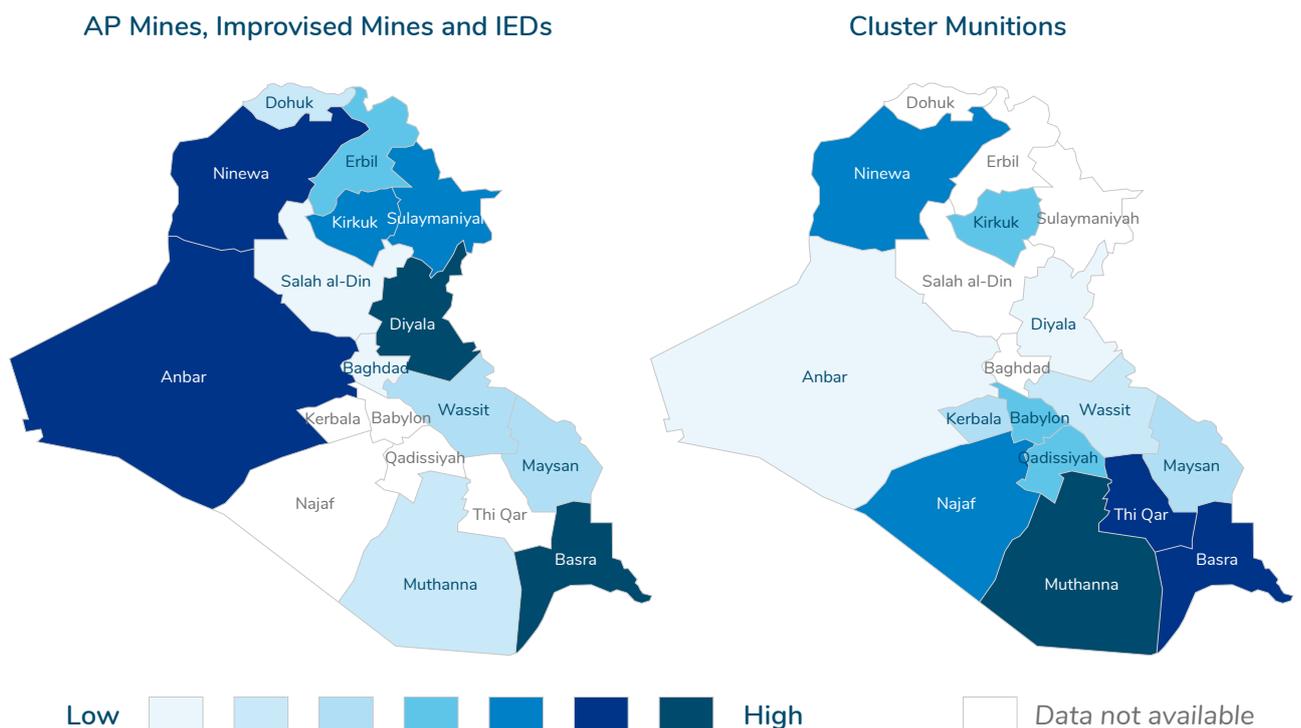
unprecedented quasi-industrial scale, make up the majority of the EO contamination present in Ninewa.<sup>(45)</sup>

According to the stakeholders interviewed, Mosul, Sinjar, and Tel Afar are the most contaminated districts.<sup>(46)(47)(48)</sup> The Ninewa Plains (areas within Al-Hamdaniya, Tel Kaif, and Shekhan districts) are also described as heavily contaminated.<sup>(49)</sup>

EO Contamination in Ninewa (by Type), in Square Metres<sup>(50)</sup>



Map of EO contamination in Iraq<sup>(51)</sup>



IEDs created and deployed by IS include vehicle-borne IEDs, improvised-rocket launchers, suicide belts, air-dropped munitions, command-initiated devices, etc.<sup>(52)</sup> The components used to produce these IEDs were often cheap commercial goods, including chemical precursors (e.g., aluminium paste, hydrogen peroxide, fertilizers, etc.), detonating cords and detonators, cables and wires, mobile phones, etc.<sup>(53)</sup> Moreover, the failure rate of the EO deployed by IS is estimated to be higher than that of the conventional EO fired by pro-government forces.<sup>(54)</sup>

Another distinctive characteristic of IED contamination is that, despite their high density, the lifespan of IEDs is usually much shorter than that of factory-built AP mines due to their dependency on power sources (batteries), which lose their charge over time. Although some IEDs were reported to remain active for up to three years after being deployed, the impact of this type of contamination is likely to be less durable over time compared to traditional landmine contexts, where hazardous items continue to kill and injure decades after being deployed.<sup>(55)</sup>

Rural and more populated settings present differences in terms of the type of hazard present. In rural areas, IS laid a large amount of landmine-like and anti-lift IEDs.<sup>(56)</sup> **In populated areas, on the other hand, IS deployed a variety of devices which are reported to be much more complex.**<sup>(57)</sup> For instance, one stakeholder reported having found motion detection IEDs that were sometimes attached to more than 20 batteries connected in parallel.<sup>(58)</sup>

As for **conventional EO, despite the lower levels of ERW contamination in Ninewa compared to IED contamination, it should be noted that this type of contamination poses a serious threat, as abandoned and unexploded ordnance that is not removed can potentially be used to manufacture IEDs in the future.**<sup>(59)</sup>

In 2017, AOAV recorded 8,896 casualties from explosive violence in Iraq: 82% of these casualties

were recorded in Mosul, of which 79% were caused by air-launched explosives.<sup>(60)</sup> In 2019, in the city of Mosul, there was an estimated 7.6 million tonnes of debris to sift through. **The contamination includes improvised explosive devices, but the situation is made more complex by the presence of much larger unexploded ordnance dropped by the coalition airstrikes, sometimes buried several metres deep in the ground.**<sup>(61)</sup> In the Mosul district, a large number of stakeholders reported West Mosul city as the most contaminated area.<sup>(62)</sup> One stakeholder explained that the massive use of explosive weapons and the consequent destruction of West Mosul city resulted in several layers of EO contamination buried under the ground.<sup>(63)</sup>

Other areas described as heavily contaminated within the district are its southern and south-eastern areas, including the Qayyarah subdistrict, villages on the outskirts of Mosul city, and the city of Tal Abta (western Mosul).<sup>(64)(65)(66)</sup> In Sinjar, the villages located to the south of the Sinjar Mountains were indicated to be very heavily contaminated.<sup>(67)(68)</sup> Rambosi, Gir Zerk, Dugere, Jazira and Siba Sheikh Khidir are among the villages mentioned by stakeholders interviewed.<sup>(69)</sup> EO contamination in the centre of Sinjar was also described as extremely high.<sup>(70)</sup> As for Tel Afar, contamination was reported to be most severe in Tel Afar town.

Finally, some areas are expected to be highly contaminated, but no data have been collected to confirm this due to security issues. This is the case for the Al-Baa'j and Hatra districts.<sup>(71)</sup> Other areas reported as not having undergone non-technical survey (NTS) are the district of Akre as well as the south-western areas of Mosul district.<sup>(72)</sup>

**Contamination in populated areas in Ninewa is often regarded as “three-dimensional”, as it can be found anywhere: buried in the ground, attached to refrigerators, doors, and windows, as well as concealed inside children’s toys, domestic appliances, etc.**<sup>(73)(74)</sup>

“In Mosul, we would find more items as we dug. This makes clearance difficult, as it is not just surface layer, it is deep underneath.”

Mine Action Operator



A woman deminer, from the NGO Mine Advisory Group (MAG), in a contaminated field in Sinjar. © F.Vergnes / HI

## 5. EO land release: a challenging task but a driver for sustainable development

Humanitarian Mine Action (HMA) activities aim to “reduce the social, economic and environmental impact of mines and Explosive Remnants of War including unexploded submunitions”.<sup>(75)</sup> Mine action consists of five complementary types of activities, often referred to as the five pillars of HMA: Land Release, Explosive Ordnance Risk Education (EORE) and Victim Assistance constitute the first three pillars.

**Land release is among the most time-, effort- and economic resource-consuming pillar of HMA,**

**and is particularly challenging in populated areas.** It includes EO surveying, mapping, marking, clearance and land release.<sup>(76)</sup> Data provided by Mine Action Review suggests that a total of 69km<sup>2</sup> of AP mines including IEDs and 28.5km<sup>2</sup> of cluster munition remnants<sup>(77)</sup> were cleared in Iraq in the period between 2015-2019.<sup>(78)(79)</sup> The progress achieved so far suggests that Iraq is unlikely to meet its international commitments on EO clearance.<sup>(80)(81)</sup>

### 5.1 Challenges to implementing clearance in populated areas

#### 5.1.1 Funding

When asked about the main obstacles that prevent areas in Ninewa from being cleared, most of the stakeholders interviewed for this study cited the lack of available funding.<sup>(82)</sup> This supports information suggesting that the funding required to clear Iraq from EO is estimated to be 170-180 million USD per year, including 50 million a year for Mosul alone.<sup>(83)</sup> The cost of clearance activities in populated areas is particularly high due to the complexity of these interventions.

**Estimates suggest that clearance in populated**

**areas is six times more expensive than clearance in rural areas.**<sup>(84)</sup> This is due to a number of factors. Firstly, **these areas are often densely populated, which poses challenges in terms of civilian safety.**<sup>(85)</sup> Moreover, **the complexity of the EO in terms of both its nature and location constitutes another obstacle. Undertaking clearance procedures, such as the in-situ destruction of EO that is not safe to remove, is not possible in populated areas due to the possible damage for the surrounding buildings.**<sup>(86)</sup> (See: Housing,

Land and Property in Mine Clearance).<sup>(87)</sup> **The procurement of specialised machinery and staff required for clearance in populated areas may pose another challenge.**

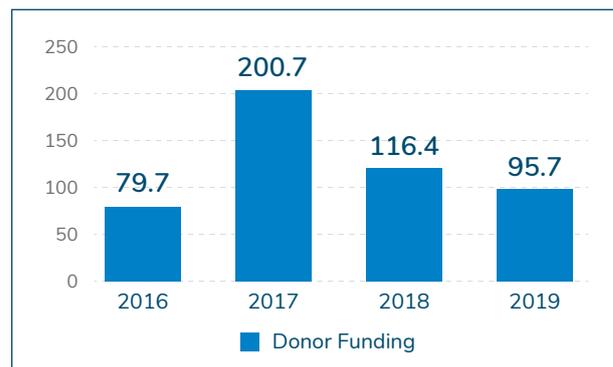
It should be highlighted, however, that Iraq is the biggest recipient of donor funding for mine action, having received 23% of all international support provided in the period between 2016-2019 (See: Figure 6).<sup>(88)(89)(90)(91)</sup> Although there is no publicly accessible data on Iraq's annual expenditure on mine action, information obtained during qualitative interviews suggests that despite Iraq being considered an upper-middle-income country, the Gol's national contribution to clearance, aside from the clearance done by the Ministry of Defence (MoD), has been very limited.<sup>(92)(93)</sup> This was found not to be the case in the Kurdistan Region of Iraq (KRI), where some clearance activities are directly funded by the Iraqi Kurdistan Mine Action Agency (IKMAA).<sup>(94)</sup>

### 5.1.2 Local Capacity

In order to conduct clearance activities, mine action operators need qualified clearance specialists. The importance of this is highlighted by the fact that these specialists constitute a high-risk group. Accidents affecting EO specialists were reported to have been particularly high in the period immediately after the liberation due to the lack of knowledge of the types of EO present, resulting from the lack of reliable strike data and information on the strategies utilised by IS when placing hazard items.<sup>(97)</sup>

**Due to the complex environment in populated areas, the risk of EO being found only after casualties are caused increases significantly. Unearthing larger unexploded ordnance, such as bombs dropped by airstrikes, increases the risks because of their explosive weight and the metal container which can create fragmentation.<sup>(98)</sup> The surface area to search increases as the potentially contaminated areas include all the rubble, building floors, deep wells or drains, and any structure damaged by explosive weapons during the conflict.** When these structures have undergone significant damage, resulting in tons of rubble, specialist engineers and machinery are required, which are costly to purchase and operate.<sup>(99)</sup>

Funding Received by Iraq for Mine Action (x1,000,000).



The Gol's minimal financial contributions to clearance suggest a lack of ownership of the problem. At the same time, various stakeholders reported that donor fatigue is common.<sup>(95)</sup> The COVID-19 pandemic has further contributed to this and mine action operators have already had to disrupt certain activities as a result of donors pulling funding.<sup>(96)</sup>

Difficulties in recruiting deminers were heightened due to the high demand for deminers after the 2014-2017 conflict ended. One stakeholder also reported that, at the time, the high demand for deminers resulted in the recruitment of people who had not received the required training and did not have sufficient expertise. This was partly a result of the high salaries on offer, which caused applicants to present themselves as qualified despite not having received the required training.<sup>(100)</sup> This caused additional accidents, some of which resulted in the deaths of deminers.

**In Ninewa, local capacity to conduct clearance is limited.<sup>(101)</sup>** One stakeholder said that local capacity is more widely available in other areas of Iraq, like Basra and the KRI, due to the presence of legacy contamination.<sup>(102)</sup> In this regard, it should be noted that there are currently no Iraqi institutions delivering demining training in Federal Iraq.<sup>(103)</sup> However, some international mine action operators are currently providing demining training to local organisations as part of their programming.<sup>(104)</sup>

**As such, Ninewa is currently highly dependent on imported expertise for clearance.** This was regarded as a serious shortcoming given the scope of EO contamination.<sup>(105)</sup>

### 5.1.3 Access

Access to clearance sites is another challenge to clearance in Ninewa.<sup>(106)</sup> **Some areas in Ninewa cannot be accessed due to the security situation.** This is, for example, the case in areas where IS sleeper cells are present.<sup>(107)</sup> Another issue concerns the presence of various paramilitary groups. This is especially problematic in Sinjar and often results in delays as clearance operators have to work with the different groups present to ensure safe access.<sup>(108)</sup>

**Bureaucracy was identified as another challenge to ensuring access for clearance interventions.** Stakeholders reported that the procedures for obtaining visas for international staff were time-consuming.<sup>(109)</sup> Obtaining permission to access a task site also often results in delays.<sup>(110)</sup>



A danger warning at the entrance of a contaminated house in Mosul. © F.Vergnes / HI

### 5.1.4 Housing, Land and Property in EO Clearance

**There is a gap in legal clarity regarding liability for mine clearance operations in residential areas and, in particular, the clearance of private properties.**<sup>(111)</sup> As reported by one stakeholder, if private property is damaged during clearance operations, the current legislation in force stipulates that the government must financially compensate the owner of the property for the damage caused.<sup>(112)</sup> In practice, however, access to such

compensation is limited.<sup>(113)</sup> While amendments to address this within Iraq's legislation are under discussion, mine clearance operators are forced to develop their own due diligence mechanisms to fill the existing gaps in legislation. In most cases, clearance operators inform property owners of the risk to their property and ask them to sign a waiver renouncing their right to claim damages in the event of an incident resulting from the clearance.<sup>(114)</sup>

“Clearance in residential areas can be very challenging. For instance, if a property is damaged during mine clearance operations, the property owner must be compensated financially by the government. This is why a lot of residential areas have not yet been cleared.”

Mine Action Operator

Generally speaking, no major problems were reported to have arisen as a result of this practice. However, it leaves mine clearance operators with the task of identifying who owns a given property. This is a complex and time-consuming process, as in many cases the property owners are not present. Mine action operators have different

mechanisms in place to tackle these issues. These mechanisms generally mobilise several means of verification including comparing existing documents and using key informants.<sup>(115)</sup> As a last resort, if the owners of a property are not present, the community leader can sign off the clearance operations.<sup>(116)</sup>

“We show people photographs of what could happen when we use different machines. This is all in the guidance that the community liaison team goes through with the owner. The owners sign off in acceptance of what is planned to take place.”

Mine Action Operator

While determining who owns private houses is already complex, determining who is responsible for authorising clearance for buildings owned by the government was reported to be even more complex.<sup>(117)</sup> In the case of school buildings, Mine

Action Operators need to obtain authorization from the Ministry of Education.<sup>(118)</sup> For other buildings, identifying the point of contact is much more complicated.

## 5.2 Mine Action Task Prioritisation and the impact on people's lives

The magnitude of EO contamination in Iraq coupled with the increasingly limited funding for clearance makes proper task prioritisation key to ensuring that the available technical and financial resources are used in a way that maximises the impact on the lives of people living in affected areas.

The available research suggests that guidance from the Gol and the Directorate of Mine Action (DMA), Federal Iraq's mine action authority, on the prioritisation of areas for clearance could be improved if mine action clearance operators had access to comprehensive information on the areas prioritised for clearance: gender, age and disability disaggregated impact data, including those



A mechanical shovel in the middle of the ruins of an old house in Mosul, contaminated by explosive ordnance. © F.Vergnes / HI

collected through community-based approaches, as well as consistent information on land use and livelihoods covering all areas.<sup>(119)</sup>

“We usually identify areas in need of clearance through risk education and then go to these areas and ask the local authorities if they will allow us to work there. (...) Based on the information we gather; we determine whether the area is clearable and whether we are qualified to conduct the clearance. If this is the case, we draft a report including all the information gathered, and request a permit from the DMA to work there.”

Mine Action Operator

However, mine action operators do also receive task orders from the DMA on where to conduct clearance activities.<sup>(120)</sup> In addition, clearance operators often identify potential areas to implement clearance activities through their own internal prioritisation mechanisms and then request permission from the DMA to conduct clearance in that area.<sup>(121)</sup>

As explained by the government representatives interviewed for this study, the Gol prioritisation system based on a set of criteria focused on the magnitude of the contamination present and the danger it poses for affected populations, in line with the DMA's official strategy.<sup>(122)(123)</sup> However, **stakeholders reported that task orders were also issued for sites that were neither residential**

**areas nor agricultural lands, but rather deserted plots of land located far from populated areas.** Data suggest that in the past, some Mine Action Operators have prioritised highly contaminated uninhabited areas over populated areas or agricultural plots.<sup>(124)</sup> The reasons behind this reportedly relate to the fact that, as mentioned before, performance among clearance operators is still largely determined by the amount of land and the number of hazard items cleared. This indicates that the **humanitarian aspect of mine action is insufficiently integrated into the operators' and the national prioritisation systems.**

Other factors that can impact accountable prioritisation are the influence of local authorities and the availability of resources. Although local

government officials are key partners in the effective identification of priority areas, they may sometimes push for tasks to be completed that do not necessarily prioritise the people most at risk and those left behind.

**It was also reported that task orders are sometimes issued depending on where financial resources are available.<sup>(125)</sup> This clearly emphasizes the role donors play in task**

**prioritisation.** Donors tend to focus on particular areas that are not necessarily the only areas affected by high levels of contamination. Ninewa has attracted the largest proportion of the funding allocated to EO clearance in Iraq over the past few years.<sup>(126)</sup> This is partly because the need for clearance in Ninewa remains remarkably high. However, other IS-affected areas in Iraq were reported to be somewhat neglected in terms of funding.<sup>(127)(128)</sup>

“Priority areas for clearance should always include clearance in support of returnees, as well as clearance of infrastructure. Most of our funding is in support of the Humanitarian Response Plan and, as such, most of the work we do is focused on returnees. Clearance of key infrastructure has been quite challenging.”

Mine Action Operator

“We are clearing an area that is located far away from everywhere. At the same time, we have got returnees in other areas who suffer accidents when trying to reach their houses. This is not okay.”

Mine Action Operator

## **Focus: Gender, disability and age and other factors of diversity<sup>(129)</sup> must be mainstreamed in prioritisation tools**

The exposure to, and understanding of possible EO threats may differ among affected individuals and communities. As such, HMA actors who conduct clearance must seek input from community members, including women,<sup>(130)</sup> girls, men and boys, including those with disabilities, in all non-technical survey and impact assessment activities in order to acquire comprehensive data to inform the accurate prioritisation of areas for clearance, ensure effective operations, and to understand the impact of contamination and of clearance activities on all groups.

Recruiting women in the survey and clearance teams is paramount to ensuring the views of women from the community are included in the data collection phase, in order to inform DMA task orders with community-based priority setting that reflects the diversity of the make-up of a given affected population. Nonetheless, qualitative data suggest that in the case of clearance this is not an easy task, as women in Iraq are still predominantly perceived as homemakers.<sup>(131)</sup> One stakeholder

pointed out that despite donors' and operators' efforts to ensure the recruitment of women as deminers, the low representation of women within Iraq's workforce and the fact that clearance has traditionally been a male-dominated profession poses serious obstacles.<sup>(132)</sup> They further explained that women deminers are often stigmatised by their community, which makes them reluctant to openly share information on their job with people outside their immediate family.

**There remains a need to ensure that gender, age, disability and other factors of diversity are taken into consideration when prioritising areas for clearance, although there are tools available for this purpose (e.g. the UNMAS Gender and Diversity Analysis tool).** A standardised prioritisation tool available to actors in the HMA sector would make it possible to more accurately identifying the individuals and communities most in need and prioritizing tasks accordingly.<sup>(133)</sup>

## 5.3 Land release at the core of the ‘Triple Nexus’

Aside from preventing EO casualties, land release activities enable a variety of interventions to take place in EO-affected communities and play a key role within the so-called ‘triple nexus’ that links humanitarian, peace, and development actors.<sup>(134)</sup>

Although many of the effects of land release, both direct and indirect, are not explicitly stated in the United Nations 2030 Agenda, **HMA and, in particular, land release is deemed to be a driver for sustainable development.**<sup>(135)(136)</sup>

### Links Between Land Release and the Sustainable Development Goals.<sup>(137)</sup>



The impact of land release has traditionally been measured using two indicators: the amount of land cleared, and the number of hazard items removed.<sup>(138)</sup> HMA, however, should, by definition, seek to address the impact of EO on civilians and their livelihoods.<sup>(139)</sup> In support of this, the available research suggests that there is a need for “a switch from output-based and weapons-centred indicators to more outcome-

focused, developmental ones” so as to document exactly how mine action is a catalyst for reaching the Sustainable Development Goal (SDG) targets.<sup>(140)</sup> These indicators could include the extent to which released land is put to productive use, the number of people (disaggregated by gender, age and disability) benefitting from released land, etc.<sup>(141)</sup>

“We determine the impact of mine clearance by measuring the number of square metres cleared and the number of items removed. We know we are doing a good job because these figures are high. We do not measure, however, whether the clearance is taking place in the right place and to what extent it is impacting people’s lives.”

Mine Action Operator

Despite the above, and considering that land release is one of the most expensive pillars of HMA, it is unfortunate that there seems to be little to no effort made to determine its impact. Measuring the impact of land release on people’s lives was reportedly not general practice within the HMA sector in Iraq.<sup>(142)</sup> Some of the Mine Action Operators interviewed explained that they had only recently started conducting post-clearance impact surveys.<sup>(143)</sup> However, when these impact assessments were conducted, they were often based on endline data

only, limiting the possibilities for comparing and contrasting data and drawing firm conclusions.<sup>(144)</sup>

Moreover, it would appear that there is an absence or only very limited inclusion of monitoring and evaluation practices in clearance activities.<sup>(145)</sup> This may be due to the fact that demining organisations perceive clearance as their core activity, and are not necessarily aware of the potential for monitoring and evaluation activities to help understand, demonstrate, and spread the developmental benefits of mine action.

It is often assumed that land release will naturally lead to certain impacts (e.g. return, increased livelihood opportunities, access to services, etc.). While this is likely true in some cases, it is certainly

not true in all cases. Since so little data on these subjects are collected in Iraq, determining the precise impact of clearance activities remains challenging.<sup>(146)</sup>

“There was a case of a village that had been cleared, but the people were still not coming back, because of the poor infrastructure. Moreover, the land outside the village was not cleared. Organizations should remain on the ground and listen to the people and identify their concerns. Demining is not always sufficient for return, there are other factors as well.”

Mine Action Operator

This quote highlights the fact that in post-conflict settings, land release is by no means the only factor that influences the expected socio-economic development outcomes.<sup>(147)</sup> In this case the infrastructure surrounding the village remained destroyed and the agricultural plots remained contaminated. Similarly, another stakeholder mentioned villages in Sinjar where clearance took more than one year.<sup>(148)</sup> The lack of access to water and electricity was also reported to have prevented people from returning. In order to avoid these types of situations, some Mine Action Operators who operate in populated areas reported cooperating with other humanitarian actors to restore access to services and facilitate the reconstruction of critical infrastructure within the affected communities.<sup>(149)</sup>

**In order to optimise the impact of clearance, commitments concerning what operators aim**

**to achieve in terms of the number of hazardous items removed and the number of square metres of land cleared could be balanced with a better understanding of how EO puts lives at risks and impedes access to services and socio-economic development, as well as how HMA has contributed to improving humanitarian access and socio-economic development.**<sup>(150)</sup>



A group of women Yezidi deminers, from the NGO Mine Advisory Group (MAG), in a contaminated field in Sinjar. © F.Vergnes / HI

## 5.4 Specific recommendations to donors, the Government of Iraq and Mine Action Actors on Land Release

**Donors should:**

- **Recommendation 1:** Require Mine Action Operators to establish log-frames with clear and measurable indicators at the outcome and impact level, including a strategy on how to measure those outcomes. Preferably, funding for clearance projects should include a budget for a baseline and endline impact assessment.

**The Government of Iraq and Mine Action operators should:**

- **Recommendation 2:** Conduct a full review of the national prioritisation system and implement adjustments to ensure that the prioritisation system includes community-based input and

transparent indicators. The new prioritisation system should be made available to the public to increase understanding of the reasons behind prioritisation.

**The Government of Iraq should:**

- **Recommendation 3:** Establish at least one training institution in Federal Iraq where aspiring deminers from national and international organisations can receive training at different levels on an ongoing basis, placing a particular focus on EO disposal and land release methodologies in populated areas.



HI Volunteers inform young people in their neighborhood about the risks associated with explosive ordnance. Trained by HI, these neighborhood residents set off on a voluntary basis to inform children and adults, distribute flyers etc. © F.Vergnes / HI

## 6. Explosive Ordnance Risk Education is effective when adapted to risk-taking behaviours in the affected population

The available research suggests that the number of casualties of EO accidents (both people killed and injured) in Iraq for the period between 2018-2020 was 669, with boys and working-age men being reported as the most at-risk.<sup>(151)(152)(153)(154)</sup> However, due to under-reporting, the actual number of casualties is believed to be considerably higher. EORE activities are educational activities that seek to reduce the risk of injury from EO by raising awareness and promoting behavioural change, including public information dissemination, education and training, and community mine action liaison.<sup>(155)</sup> Iraq has made serious efforts to integrate EORE into its mine action response. The

authorities have developed national standards to guide EORE activities, and EORE messages and materials have been validated by the DMA and IKMAA.<sup>(156)</sup> The total number of EORE campaigns conducted by the DMA in 2019 was 4,059, targeting 562,335 people (Federal Iraq only).<sup>(157)</sup> In Ninewa, the DMA conducted 1,894 risk education campaigns, targeting 253,442 participants.<sup>(158)</sup> Like EO clearance, **EORE contributes to achieving the UN 2030 Agenda in a number of different ways.** By preventing casualties, for instance, EORE activities directly contribute to enhancing health indicators in the affected communities, as well as to addressing violence.<sup>(159)(160)</sup>



## 6.1 General Attitudes and Risk-Taking Behaviours

To understand the extent to which EORE activities are effective in preventing EO accidents in Ninewa, it is first necessary to look at the risk-taking

behaviours most frequently displayed by the affected population in the governorate.

“Human capital is lost. Every child who misses school is a wasted talent. Every injured child is a wasted resource for the reconstruction of the country. Instead of contributing to the reconstruction of the country, they unfortunately become a burden.”

Mine Action Operator

The data collected suggest that **risk-taking behaviours in individuals within the affected population can generally be divided into two categories**, although the line between the two is often blurred. The first category constitutes **behaviours that stem from a lack of awareness of the hazards present in contaminated areas. This is particularly the case for families displaced to new areas or recently arrived returnees.** Data obtained from interviews with survivors of EO accidents conducted in Sinjar highlight this. In one case, the participant reported that the accident happened when the family attempted to enter their house, which had been booby-trapped by IS.<sup>(162)</sup> In another case, the family of the child interviewed found a missile while cleaning their house. The child and her father tried to dismantle the missile and it exploded.<sup>(163)</sup> These situations are also described

as widespread by the different stakeholders interviewed.<sup>(164)</sup>

While a lack of awareness may be found across all groups within a community, it is a particular issue among **children (predominantly boys)** who, as previously mentioned, are believed to constitute a large percentage of the victims of EO-related accidents in Iraq. The data obtained for this study suggest that EO accidents involving children most frequently occur while playing in contaminated areas, often near rubble or in abandoned buildings.<sup>(165)</sup>

Children are also prone to picking up and playing with EO devices, even when they have some awareness of the risks involved. This was the case of an adolescent survivor of an EO accident

interviewed for this study who explained that he was injured while playing with an EO device that he accidentally dropped.<sup>(166)</sup> The device exploded, causing the child to lose one of his hands, and resulting in further injuries in his legs and other body parts. Similarly, the information provided by family members of child survivors of EO accidents suggests that the accidents happened when the children were outside or because they picked and held an EO device.<sup>(167)(168)</sup> These types of accidents are largely attributed to children's innate curiosity, as well as to boys' desire to show bravery and impress their peers.<sup>(169) (170)</sup>

**The second category of behaviours is characterised by an awareness of the risks involved, but a need to continue the behaviour regardless.** One mine action operator described these behaviours as “calculated risks” that

people feel forced to take due to the lack of alternatives.<sup>(171)</sup> Such behaviours most frequently **related to livelihood activities** and often involved individuals entering contaminated areas to earn a living.<sup>(172)</sup> People who display such behaviours are predominantly men of working age, as they are usually the breadwinners in their families, but sometimes also adolescent sons who engage in livelihood activities alongside their fathers.<sup>(173)</sup> In Ninewa, farming and collecting scrap metal are the two livelihood activities most frequently associated with risk-taking behaviours.<sup>(174)</sup> Furthermore, risk-taking behaviours were also reported for returning families who are aware that their houses are contaminated with EO but have nowhere else to stay. These families feel they have no choice but to take the risk and remove the EO devices from their homes in order to be able to move in.

“It comes down to options and necessity. If people have the option to go somewhere else, they will, of course, do so. If, however, a family has no other option and finds themselves forced to decide whether to stay outside their houses or take the risk, move the explosive items, and start rebuilding, they will naturally choose the latter.”

Mine Action Operator

**When communities live surrounded by hazards over a protracted period, risk-taking behaviours become more prevalent.<sup>(175)</sup> As people's immediate needs become more pressing, they are forced to take up their remaining options, regardless of the risks involved.** One stakeholder explained that a few years after people return to contaminated areas, the surrounding hazards are no longer their main concern.<sup>(176)</sup> Their priority is to meet their everyday needs and get on with their lives. This shows a possible state of

fatigue experienced by people who have lived in or close to contaminated areas for an extended period.<sup>(177)</sup> These situations result in people getting impatient, removing warning signs, and accessing contaminated areas.<sup>(178)</sup> We can therefore conclude that when contamination becomes part of people's everyday lives and starts to be perceived as part of the surrounding environment, people become less alert to risks and more prone to making decisions that could potentially result in accidents.

“Yes, I knew that IS had placed mines everywhere, but I am a shepherd and had to take care of my flock.”

EO Survivor, man – Sinjar

“Before the incident, we knew that there were mines but we had to return to our community and enter our house.”

EO Survivor, man – Sinjar

## 6.2 Implementation of EORE

When asked about the effectiveness of EORE, **operators and community members agree that it is largely effective.** Operators often highlight the fact that pre- and post-EORE testing shows improved awareness of the risks involved. However, post-EORE testing is usually carried out immediately after the EORE session, which limits possibilities for measuring long-term knowledge retention. Nonetheless, the ultimate indicator capable of demonstrating if EORE activities result in safer practices on a broader scale, is the number of EO accidents that happen before and after EORE activities. **As such, the lack of standardised and reliable data on accidents makes measuring the actual impact of EORE difficult.**<sup>(179)</sup>



A man burns the rubble of his house to detonate potential explosive devices inside, in an attempt to recover stones from the building in Sinjar city. © F.Vergnes / HI

“We deliver EORE in areas where other actors have conducted EORE activities in the past. No clearance happens in between the different EORE activities. People say that it is good to receive awareness raising, but they just want their areas to be cleared.”

Mine Action Operator

Moreover, while EORE might be effective for those who lack awareness, including children and recent returnees,<sup>(180)</sup> **the effectiveness of EORE activities for those who feel forced to take risks to meet their basic needs is reported to be more limited.**<sup>(181)</sup> **It was suggested that these cases would be better addressed by coupling EORE with risk reduction support measures such as cash-based transfers.**

It is important to highlight that there are a lot of areas where EORE is being delivered, but no clearance is taking place.<sup>(182)</sup> **The effectiveness of EORE activities is limited when clearance does not take place alongside or soon after the EORE activities.**<sup>(183)</sup> This is particularly true in the case of communities where a large proportion of accidents are caused by behaviours associated with a state of fatigue, as further EO-related accidents are likely to occur in such communities.

Lastly, while it is clear that working-age men and children are particularly at risk, EORE activities do not always target these specific groups. Multiple stakeholders report that **there is a need for more targeted EORE activities and comprehensive programming that addresses the relative risk perceptions of the different groups.**<sup>(184)</sup>

Aside from targeting the right area and group, **the effectiveness of EORE activities also depends on the language and accessibility of materials, as well as the methodology used.** During interviews with EORE actors, it became clear that not all of the EORE Information, Education and Communication (IEC) materials used are relevant. One respondent, for example, reported on the use of IEC materials that were not adjusted to the local context of communities in which the sessions took place. Some stakeholders also reported that the IEC materials they use are not always translated into the language spoken in each area, which is not compliant with international standards.<sup>(185)</sup> It is unclear whether adjusted IEC materials are available for persons with different types of impairments, such as persons with visual, hearing and/or cognitive impairments. Moreover, the contents of the materials were said to not be adapted to the type of contamination present in each area.<sup>(186)</sup> This was partly attributed to the fact that obtaining DMA approval for new materials is a lengthy process.<sup>(187)</sup>

## 6.3 Specific recommendations to donors, the Government of Iraq and Mine Action Actors on EORE

### Donors and Mine Action Operators should:

- **Recommendation 1:** Deliver EORE activities to those who are most at risk of becoming the casualties of EO. Preferably, the target groups should be tailored in each area by means of a full risk assessment.
- **Recommendation 2:** Design and implement child peer-to-peer EORE activities to reduce the likelihood of children engaging in risk-taking behaviours.
- **Recommendation 3:** Measure the impact of EORE activities at the outcome level and focus on behavioural changes rather than knowledge retention alone.

### The Government of Iraq and Mine Action Operators should:

- **Recommendation 4:** Establish a committee of Mine Action operators with most EORE knowledge and skills in to develop IEC materials that are relevant to the various local contexts found in Iraq, and that are inclusive and accessible to persons with different types of impairments. These materials, after approval by the DMA, could be used by all actors operating in Iraq and reviewed twice a year. To encourage this process, the DMA should simplify the approval process and reduce the time required for materials to be approved.

- **Recommendation 5:** Analyse and understand risk-taking behaviour and develop additional livelihood projects that help the most at-risk groups to adopt safer behaviour towards the threat of EO.
- **Recommendation 6:** Implement community-wide campaigns to inform community members of contamination within their villages as well as contamination in surrounding villages.



An EORE billboard, from HI, in Mosul. © F.Vergnes / HI



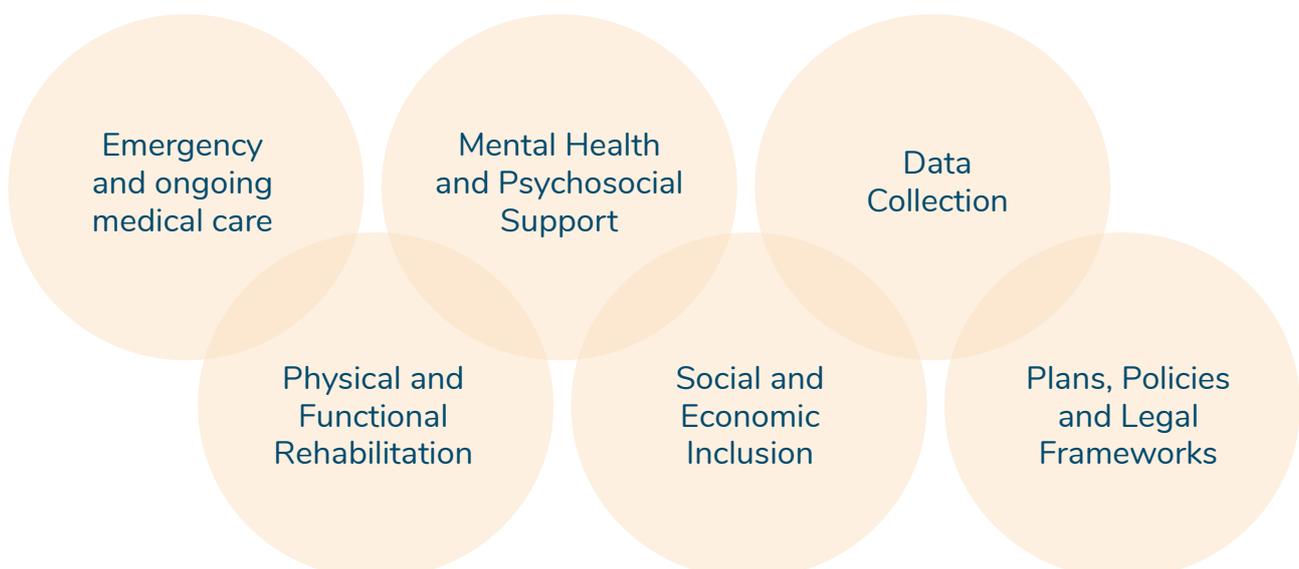
Amira, 16, was injured in 2017 during an airstrike. Her mother Sohad recounts, "I was cooking, then I heard an explosion, the whole house started to shake. I went down to the bedrooms. Everything was dark, there was smoke everywhere. Then I saw my son and my daughter lying in their blood." A neighbor present rushed Amira to the hospital, where Amira's broken leg was treated in poor conditions. A few months later, the leg swelled, Amira could no longer walk. Because of her mobility limitations, she could not attend school for three years. She can no longer register, she tries to learn to read on her own. © F.Vergnes / HI

## 7. People affected by explosive ordnance: supporting the social and economic development of victims

Victim assistance aims to save the lives of people injured by EO and to address the diverse needs of survivors, the family members of people injured

and killed, and EO-affected communities, as well as to facilitate the enjoyment of their rights. Victim assistance comprises of the following components:

### Components of Victim Assistance.



**The mission of victim assistance is the full and effective participation of survivors and indirect victims in society on an equal basis to others.**<sup>(188)</sup>

**Victim assistance should be implemented and coordinated by means of an ‘integrated approach’.**

The dual imperatives of this approach are:

- multi-sector engagement by non-Mine Action Operators that reach the people injured, EO survivors, and people otherwise impacted by EO accidents
- specific VA efforts undertaken by the Mine Action sector such as information management, referring EO victims to the relevant service providers, promoting and monitoring a multi-sector response, and supporting the development of relevant national action plans.<sup>(189)</sup>

By signing the Anti-Personnel Mine Ban Convention, the Convention on Cluster Munitions,

Convention on Certain Conventional Weapons - Protocol V, and the Convention on the Rights of Persons with Disabilities, the Government of Iraq has committed to providing victim assistance to EO victims as well as to persons with disabilities.

**An integrated approach to victim assistance is closely interlinked with the achievement of the 2030 Agenda.** In fact, while the mine action sector can, and should, significantly contribute to VA-specific efforts (as per the IMAS 13.10<sup>(190)</sup>), the ultimate responsibility for reaching the people injured, survivors and people otherwise impacted by EO accidents in their daily tasks, as well as other people with similar needs, rests on states. Thus, states must ensure a response to the needs of victims through broader health, social, economic, education, labour and disability inclusive policies and action plans.<sup>(191)</sup>

## Direct Links Between Victim Assistance and the Sustainable Development Goals.<sup>(192)</sup>

	 Goal 1 No poverty	 Goal 3 Health & Well-Being	 Goal 4 Quality Education	 Goal 8 Work & Growth	 Goal 9 Industry & Innovation	 Goal 10 Reduced Inequalities	 Goal 11 Sustainable Cities	 Goal 16 Peace & Justice
<b>Elements of VA:</b>								
Emergency & ongoing Medical care	-	✓	-	-	-	-	-	-
Physical & Functional Rehabilitation	✓	✓	✓	✓	✓	-	✓	-
Mental Health & Psychosocial Support	-	✓	✓	✓	-	-	-	-
Social & Economic Inclusion	✓	✓	-	✓	✓	-	-	✓
Data Collection	✓	✓	✓	✓	✓	✓	-	✓
Plans, Policies & Legal Frameworks	✓	✓	✓	✓	✓	✓	-	✓

## 7.1 Surviving an EO accident impacts all areas of life for families and communities

Aside from the physical and psychological impact, EO survivors “suffer a number of social consequences, including removal and/or withdrawal from family and community life and reduced options in

terms of marriage, children, and economic self-sufficiency. Amputees are also especially vulnerable to discrimination in many societies, facing social stigmatization, rejection and unemployment.”<sup>(193)</sup>

“Prior to the incident, I used to visit my friends, but now I can’t because I can’t walk or see very well, which makes it difficult for me to visit them. So, I spend most of my time at home.”

Child Survivor of EO, girl – Sinjar

Family members coping with the loss of a loved one also face social consequences. To understand the impact of surviving an EO accident on survivors and their families, several children and adult survivors were interviewed, as well as some of their family members.

In total, four child survivors were interviewed for this study. All four described significant changes in their lives after the accident took place, as

shown in the table below. However, the child survivors also reported that the perception of family members towards them had not changed as a result of the accident.<sup>(194)</sup> At community level, three of the four child survivors stated that nothing had changed in the perception of the community towards them while one said that the community members now more often highlighted “how difficult it is for me physically and how difficult it is for my family financially”.<sup>(195)</sup>

### Life of EO child survivors prior to and after an accident

Life before accident	Life after accident
“My life was excellent, and I was not afraid.”	“My life is somehow okay. However, the incident has affected me psychologically. I often feel worried and afraid, and this has impacted my marks at school. I also do not dare to go anywhere without someone accompanying me.”
“My life was good. When I used to go to school, I was a little bit afraid, but nothing like now.”	“My life is okay. However, I am very fearful that I will get into an accident again. Because of this, I am very afraid to play anywhere outside of the house as there might be explosives.”
“My life was normal, and I was somehow happy”	“My life is very difficult. I suffer a lot and take many pills to sleep because I have sleeping problems. My legs also hurt. I can still go to see friends, but it is not like before.”
“Before the incident, I went to school and spent a lot of time with friends.”	“I go to school, but I cannot see very well because of the accident. I also do not visit my friends like I used to because my legs and eyes are injured.”

Similarly, adult survivors all described **far-reaching changes in their lives as a result of the accident**. Three of the four survivors also reported that the **perception of their family members towards them** had not changed after the accident. However, one survivor stated that his family now perceive him as a person who is unable to work and cannot provide for his family.<sup>(196)</sup> The same survivor also reported a similar change in how community members view him.<sup>(197)</sup>

“The way community members perceive me has changed since the incident. They now perceive me as a person who cannot support his family.”  
EO survivor, man – Sinjar

Overall, both child and adult survivors reported that their families were supportive. One family member of a survivor nonetheless explained that the financial burden on her increased after the accident due to the survivors no longer being able to earn an income.<sup>(198)</sup> This could be explained by the multiple layers of discrimination and barriers to accessing livelihood opportunities experienced by

persons living with a permanent impairment, which can lead to disability and intersect with other factors of exclusion such as age or gender.

At the same time, it should be noted that one community member reported that **families sometimes prevent survivors from accessing rehabilitation services**.<sup>(199)</sup> **The reason given for**

**this was the stigma associated with disabilities.** In support of these findings, the available research suggests that, as family members of persons with disabilities in Iraq often perceive them to be a burden, they may not encourage them to access services.<sup>(200)</sup> The same source suggests that in some cases families even hide their children with disabilities due to fears of public bullying, actively isolating them from their community.

Moreover, **women and girls have even more restricted access to physical rehabilitation services.**<sup>(201)</sup> This supports the available research

which suggests that social customs and gender norms coupled with the stigma and discrimination associated with disability make women and girls particularly vulnerable.<sup>(202)</sup> Women and girls are often isolated at home or have to be accompanied by a family member outside the home due to safety concerns and fears of possible sexual assault. Moreover, their access to health and other services can, in some cases, also be restricted due to social norms regarding interaction between women and men who are not related to them when the staff at a service-providing facility are predominantly male.<sup>(203)</sup>

## 7.2 EO Contamination hinders access to services

### 7.2.1 Access to Healthcare

The use of explosive weapons in populated areas is known to negatively impact the access, availability, and quality of health care in contaminated areas, precisely the places where the health sector has a vitally important role to play and where the services it provides are crucial. The most obvious role is to ensure an adequate healthcare response in line with the relevant pillars of victim assistance, namely emergency and continuing healthcare, physical rehabilitation, psychological and psycho-social support.

During the 2014-2017 conflict in Iraq, the health sector suffered damage estimated at 2.7 trillion IQD (2.3 billion USD), Ninewa was the worst affected governorate in terms of the cost of

damage.<sup>(204)</sup> **Nine out of 13 hospitals in Mosul were damaged, negatively impacting healthcare capacity and reducing the number of hospital beds by 70%. As a result, less than 1,000 hospital beds were available for a population of 1.8 million people.**<sup>(205)</sup> **This represents half the number of hospital beds required to meet the internationally recognized minimum standard in a humanitarian context.**<sup>(206)</sup>

Mine Action Operators and members of the affected population agree that the health sector was severely impacted by the conflict.<sup>(207)</sup> Among the Mine Action Operators, moreover, there were multiple reports that the presence of EO slowed down the reconstruction process.<sup>(208)</sup>

“A lot of areas that were destroyed in the old city in Mosul have not yet been searched. So, reconstruction cannot go ahead. These areas first need to be cleared.”

Mine Action Operator

**Among individuals from the affected population in Mosul and Sinjar, there is general agreement that contamination reduces access to healthcare services.**<sup>(209)</sup> **Others reported that they can no longer access healthcare services because facilities close to their homes have been destroyed and not yet rebuilt.**



A destroyed health center in Mosul. © F.Vergnes / HI

“It is not possible for us to access healthcare services due to contamination in the region. However, access is also reduced due to our inability to pay for doctors or medicine and because the quality of service has also deteriorated.”

Community Member, man – Mosul

“Access to healthcare services has changed since the conflict. We cannot access some of the healthcare services because there are not enough hospitals or doctors. The distance to (an operational) hospital is also a barrier to accessing healthcare services.”

Community Member, man – Sinjar

“Many health centres were destroyed as a result of the bombing. Some health centres and hospitals contain a lot of explosive ordnance, which hinders their reconstruction.”

Community Member, woman – Mosul

Individuals from the affected population and stakeholders did not agree on who was most affected by the lack of access to healthcare services. Some report that access is most limited for children,<sup>(210)</sup> women, and persons with disabilities.<sup>(211)</sup> In support of this, the available

research suggests that women, especially those with disabilities, are particularly vulnerable.<sup>(212)</sup> Other participants in qualitative interviews, however, reported that lack of access is the same across all groups.<sup>(213)</sup>

## 7.2.2 Access to Education

The education sector in conflict-affected governorates has suffered serious damage, amounting to 2.8 trillion Iraqi Dinar (IQD) (2.4 billion USD).<sup>(214)</sup> **In the city of Mosul, for example, 169 schools were damaged or destroyed.**<sup>(215)</sup> Aside from school buildings, the sector was also affected due to the large-scale destruction of educational assets and equipment (e.g. school buses, notebooks, chalk, etc.).

According to the stakeholders and individuals from the affected population, many of the schools in Ninewa were destroyed during the conflict and many are still awaiting rehabilitation.<sup>(216)</sup> Moreover, **some schools are still contaminated with EO.**<sup>(217)</sup> **Moreover, the contamination of schools and roads to schools is a critical factor that has slowed down the reconstruction of schools.**<sup>(218)</sup>

“Educational facilities have been severely damaged by the military operations and conflict in the region, in addition the area is contaminated with remnants of war such as mines, unexploded ordnance and hand grenades. This situation generates fear and anxiety.”

Community Member, woman – Mosul

EO contamination limits access to education in different ways. Firstly, parents may need to send their children to schools located further away due to the contamination. Indeed, a woman from Sinjar reported that her children are no longer attending school as the nearest functioning school is too

far away.<sup>(219)</sup> Parents may be unable to pay for their children’s transportation and other school expenses due to the poor economic situation of certain households, resulting from the lack of livelihood opportunities. This was the case for two community members

interviewed for this study.<sup>(220)</sup> In addition, research has shown that when a family's income does not allow for all children to access education, boys tend to be prioritised over girls.<sup>(221)</sup> As for children

with disabilities, while their access to education has traditionally been very limited for a number of reasons,<sup>(222)</sup> the level of destruction of school infrastructure is likely to pose additional challenges.

“In my village, there is no high school. It is difficult for students to travel to other villages, especially when we do not know whether that village is contaminated or not.”

Community Member, woman – Sinjar

Furthermore, even when school buildings are cleared of EO, the same does not always apply to the roads to and from the school. Parents may therefore forbid their children, especially younger children, from going to and from school unaccompanied for fear that they may get involved in an EO-related accident.<sup>(223)</sup>

**Children also experience feelings of fear due to the possibility of encountering EO on the way to or from school. The available research suggests that children in Mosul often also feel unsafe at school.**<sup>(224)</sup> The same source also suggests that most children perceive EO as the main hazard in their environment.<sup>(225)</sup> One woman from Mosul interviewed for this study reported that her children have become less motivated and willing to go to school due to the possible contamination of the roads around schools.<sup>(226)</sup> In this sense, EO contamination does not only impact access to educational services but can also impact the educational experience of a child attending school.



A child plays in an abandoned school in Mosul. © F.Vergnes / HI

“Boys and girls can access educational services that are close to our house, but the younger ones cannot go to school because we fear that they might play with one of the explosive devices.”

Community Member, woman – Mosul

“Since the place became contaminated, we do not allow our children to go to school on their own. This is because we are scared that they may play with explosive ordnance. Moreover, we are also scared that there might be explosive ordnance inside the school.”

Community Member, man – Mosul

Finally, one of the child survivors interviewed was involved in an EO accident while walking to school. The accident impacted her overall feeling of safety

when travelling from one place to another, and she remarks that she now feels especially scared when walking to school.<sup>(227)</sup>

## 7.2.3 Access to Livelihoods

Arable land constitutes about a third of Iraq's territory, and half of it is used for rain-fed agriculture.<sup>(228)</sup> **The damage caused by IS and pro-government forces during the conflict has had devastating effects on crop production.**<sup>(229)</sup> As well as contamination resulting from the fighting, privately owned lands were deliberately contaminated with mines (either improvised or manufactured), consequently preventing those displaced by the conflict from returning to their homes.<sup>(230)</sup> Moreover, animal husbandry has been particularly badly affected and three-quarters of all cattle, sheep, goats, and buffalo are estimated to have been lost.<sup>(231)</sup>

The total damage caused to agriculture is estimated to have reached a total of 2.4 trillion IQD (2.1 billion USD).<sup>(232)</sup> It is important to highlight here that both livelihoods and food security are closely intertwined with the water sector. More specifically, limited access to water for irrigation, caused by the damage inflicted



A boy plays in contaminated rubbles in Mosul. © F.Vergnes / HI

on water infrastructure by the use of explosive weapons and EO contamination, has had a domino effect on agricultural activities and, therefore, on livelihoods and food security.

“There is a lack of employment opportunities. For instance, people living in poverty can often access livelihood opportunities, but only in contaminated and dangerous areas. This affects the poor in particular, as they need to work in order to make a daily living.”

Community Member, man – Mosul

“We used to depend on agriculture, raising cattle, and farming in our villages, but nowadays, we do not have access to our villages, and we cannot take care of the cattle inside Sinjar.”

Community Member, woman – Sinjar

Furthermore, factories and workshops, which were major contributors to the local economy in affected areas before the conflict, were also severely damaged. Whilst some are operational again, most have not been able to return to their former capacity.

In line with the findings above, people from areas affected by the crisis have seen their income drop considerably. In Sinjar, for instance, research has shown that the income of farmers in certain areas has dropped by more than 60%.<sup>(233)</sup> Moreover, as of today, 730,000 people in Iraq are food insecure.<sup>(234)(235)</sup> Of these, 435,000 are in acute need of food. The Ninewa governorate hosts the largest number of both food insecure IDPs and returnees.<sup>(236)</sup>

**Among stakeholders and members of the affected population in Mosul and Sinjar, there is overwhelming agreement that employment**

**opportunities have declined since the conflict.**<sup>(237)</sup>

While the data do not provide information on groups likely to be more affected by this, research has shown that women's access to employment in conflict-affected areas is considerably more limited than that of men, and they are also likely to suffer discrimination in the labour market due to patriarchal customs and gender norms.<sup>(238)</sup> **As for persons with disabilities, their integration into the labour market was already limited before the conflict and the consequent EO contamination. The limited livelihood opportunities in contaminated areas may pose further challenges to their ability to generate income through labour.**

Moreover, some individuals highlighted how the contamination impacted the overall economy, namely by preventing shops and factories from reopening.<sup>(239)</sup>

“The presence of explosive ordnance has greatly affected the economic situation of the city. Many shops cannot be opened or rebuilt due to the presence of explosive ordnance, and most of the businesses have stopped operating because of the contamination.”

Community Member, man – Mosul

“It has changed a lot. Before the conflict, we used to go out with our family, grow crops on the farm and take care of the cattle, but because the areas have been contaminated, the access to livelihood services was affected.”

Community Member, woman – Sinjar

**For several respondents, the contamination has had a direct impact on their access to livelihoods,<sup>(240)</sup> especially for farmers and shepherds who want to access their land.<sup>(241)</sup>**

Among the interviewed EO survivors in Mosul, one reported that he was on the way to a food distribution point when the accident happened.<sup>(242)</sup>

Two of the interviewed survivors in Sinjar, moreover, reported that their accidents happened due to their work as shepherds.<sup>(243)</sup> This provides additional evidence supporting the hypothesis that individuals in contaminated areas have limited access to livelihood activities if they want to stay safe.

## 7.2.4 Infrastructure and housing

Generally, infrastructure is given priority for clearance.<sup>(244)</sup> As such, most infrastructure has already been cleared, especially in the most populated areas. However, not all infrastructure has been cleared and this is a barrier to reconstruction.<sup>(245)</sup>

### 7.2.4.1 Water Infrastructure

Water facilities and related infrastructure are crucial for operating urban services. During the insurgency in Iraq, IS deliberately damaged a large part of the existing water infrastructure in the territory under its control, using dams, hydroelectric power plants and barrages as weapons of war.<sup>(246)</sup> For instance, they flooded areas to stop the movement of government forces, and disrupted water supplies to certain communities.<sup>(247)</sup> When attacking water facilities, they frequently made use of explosive weapons, such as explosive-laden vehicles and boats, or suicide car bombs.<sup>(248)</sup> Available data suggest that



Old apartments and shops destroyed by the intense fighting that took place in Mosul from 2014 to 2017. © F.Vergnes / HI

the overall damage caused to water infrastructure during the conflict amounts to approximately 600 million USD.<sup>(249)</sup>

The majority of respondents indicated that most water infrastructure has been cleared, however **four respondents highlighted that water infrastructure in their areas remains affected by contamination, thereby significantly impacting the local population.**<sup>(250)</sup>

“Contamination impedes the reconstruction of infrastructure, such as destroyed water and electricity stations, and affects people’s access to services. This is particularly the case with IDPs. Explosive ordnance is everywhere and poses a great danger to people’s safety.”

Government Official – Mosul

“Most areas of Mosul are slowly getting back to normal, and most people have access to water and electricity. In Tel Afar, the situation has also improved but there is much more to be done. In Sinjar, the situation is worse. There are three very big villages there where access to water and electricity has still not been restored after clearance concluded. Because of that, nobody has returned there.”

Mine Action Operator

#### 7.2.4.2 Electricity

The damage caused to the electricity sector in Iraq during the last conflict amounts to about 8.2 trillion IQD (7 billion USD), making the electricity sector the most severely affected in terms of incurred cost.<sup>(251)</sup> The worst affected governorates are Salah al-Din, Kirkuk, and Ninewa.<sup>(252)</sup>

**The electricity sector in both occupied areas and territories under the control of Iraq’s government incurred some of the worst damage inflicted by the massive use of explosive weapons.**

As a result, numerous electricity assets and infrastructure were damaged or destroyed, including 17 power plants, 92 distribution substations, 43 transmission substations, six

power generation substations, 186 power towers, etc.<sup>(253)</sup> This severely limited access to electricity in affected communities.

**Based on the reports of stakeholders and individuals from the affected population it would seem that electricity infrastructure has generally been cleared in Ninewa.** Moreover, access to electricity in the towns of Mosul, Sinjar, and Tel Afar has increased significantly. However, four of the stakeholders interviewed highlighted that, in other cases, contamination continues to impact the affected population’s access to electricity.<sup>(254)</sup>

#### 7.2.4.3 Information and Communication Technology

Information and Communication Technology infrastructure has also suffered considerable damage as a result of the 2014-2017 conflict. Research suggests that the total cost of damage to the mobile network in the governorates most severely affected by the conflict is estimated at 83 billion IQD (71 million USD).<sup>(255)</sup> The percentages

of partially or completely destroyed mobile towers, base stations, and shelters are 39% and 8%, respectively.<sup>(256)</sup> Ninewa is by far the worst affected governorate, with 68% of all damage costs incurred in here.<sup>(257)</sup>

#### 7.2.4.4 Transportation Network

**The transport networks in the governorates most severely affected by the conflict have also suffered considerably as a result of IS’s insurgency and military operations to regain occupied areas.** In total, the roads, airports, bridges, and railways in these governorates are estimated to have suffered damage equivalent to 3.3 trillion IQD (2.8 billion USD).<sup>(258)</sup>

Ninewa, again, is the worst affected governorate in terms of damage and destruction. The available data on transport infrastructure in the city of Mosul suggest that three-quarters of all roads in the district and almost all bridges were destroyed.<sup>(259)</sup>



A damaged building contaminated by unexploded rockets serves as makeshift accommodation for its owner. © F.Vergnes / HI

Moreover, the magnitude of damage caused to Mosul airport's runway and service buildings is such that rehabilitation work has been ruled out. The authorities have decided to relocate it instead.<sup>(260)</sup>

### 7.2.4.5 Housing

**The cost of the damage caused to the housing sector in Iraq between 2014 and 2017, resulting from the IS insurgency and military operations by the US-led coalition, is estimated at 20,615 million IQD (17,441 million USD).**<sup>(262)</sup> Ninewa is the worst-affected governorate in this regard, with 43% of the reported damage located in this region.<sup>(263)</sup> **Moreover, 58% of the damage to urban centres was incurred in the cities of Ninewa.** In short, 26,494 km<sup>2</sup> in urban areas (equal to 3,710,644 soccer pitches) incurred damage to housing and 8,863 km<sup>2</sup> in rural areas (equal to

Not all roads have been cleared of EO in Ninewa.<sup>(261)</sup> As a result, this creates access issues for the local population and also creates feelings of fear when travelling from one place to another.

1,241,317 soccer pitches) incurred damage to housing, representing a total cost of 8,001 billion Iraqi Dinar.<sup>(264)</sup> The Mosul district accounted for 73% of the damaged housing.

It appears that residential areas were initially not prioritized for clearance. However, more mine actors appear to now be focusing on clearing residential areas. Despite this, **many houses remain contaminated,<sup>(265)</sup> thereby preventing the local population from returning to their houses.**

## 7.3 Humanitarian Coordination and Information Management

Most of the Mine Action Operators interviewed focus on clearance and do not directly provide health, social and economic services. **There was agreement among actors that such services are limited and often lack quality. Most available services, moreover, are provided by humanitarian actors and not the government, and awareness among the local population of available services is low.**<sup>(266)(267)</sup> **As such, even if services are available in a community, this does not guarantee that the affected population will access them.**

Among the providers of health, social and economic services, **lack of funding** is one of the main challenges that prevents them from

increasing access to services for EO survivors and indirect victims.<sup>(268)</sup> In part, this is because donors do not necessarily consider victim assistance related efforts as life-saving assistance. As such, this type of assistance is often a lower priority for donors.<sup>(269)</sup> Another reason for this relates to the fact that donors tend to provide funding for HMA activities that achieve easy-to-measure inputs and outputs, compromising commitments made within the HMA sector to place people at the centre of HMA efforts. Indeed, in mine-affected countries, survivors and indirect victims of EO are among those left furthest behind, especially in contexts like Iraq, where the number of casualties is high.<sup>(270)</sup>

“For victim assistance, there is no survey to collect information from victims. When you want to help someone, you need to know their needs. You need to know their problem. You need data for this. But no survey has been carried out.”

Mine Action Operator

It should also be noted that the **provision of services to victims requires coordination, data collection, analysis and sharing, as well as technical and financial resources to establish a referral system and support basic quality services. The full, equal and meaningful participation of individuals and communities affected by EO is also paramount to ensure informed programming.** Very few actors have

the skills and knowledge required to achieve this. **To address the gaps in the provision of services, it is important to have accurate and complete information on the number and situation of EO casualties, as well as the presence of quality services and of a referral system.** The duty to collect reliable data on casualties is outlined in Action 31 of the Lausanne Action Plan, Action

35 of the Oslo Action Plan, and Article 33 of the Convention on the Rights of Persons with Disabilities. Although the GoI has committed to the aforementioned legal instruments, limited data is available on EO accidents and casualties, despite the different data collection mechanisms in place.

Data on EO accidents and EO casualties have been collected by the DMA in some areas. However, to date a survey covering all areas of Federal Iraq has not been carried out.<sup>(271)</sup> Surveys are also conducted by humanitarian actors. For example, iMMAP has conducted surveys to identify survivors in parts of

Federal Iraq, in collaboration with the DMA.<sup>(272)</sup> Furthermore, a few years ago the Ministry of Health and Environment (MoHE), in collaboration with the World Health Organization, initiated a survey in Ninewa to collect data on persons with disabilities among the population. The questionnaire used for this study included information on the cause of the disability, thus making it possible to disaggregate the data by disability as well.<sup>(273)</sup> Similarly, humanitarian actors will sometimes conduct these types of studies in specific areas.<sup>(274)</sup>

“Victim assistance is related to human rights, health care, social and economic integration, education and work. The social and economic inclusion of survivors is essential to enable survivors to fully exercise their rights on an equal basis with all other members of society.”

Mine Action Operator

Finally, there is a reporting mechanism that should be used by humanitarian actors to report on victims of EO to the DMA. This IMSMA VA Form is validated by the DMA and should be used throughout Federal Iraq. When survivors are identified through this mechanism, they can be referred to the appropriate organizations or hospitals that can provide them with a variety of services, including emergency health and rehabilitation services. In a study conducted in 2019, however, no evidence was found that NGOs are trained on the use of this IMSMA VA form or that the DMA provides feedback on the forms submitted. In other words, “it appears that there

are limited quality control mechanisms in place with regards to this form. Lastly, it is not always clear who should report this data to the DMA.”<sup>(275)</sup>

**Generally speaking, it appears that mine action stakeholders are not fully aware of all the reporting mechanisms** in place. Moreover, there are serious concerns about the quality of the data collected through the different mechanisms. A study conducted in 2019 that described the aforementioned reporting mechanisms came to the following conclusions regarding casualty reporting processes:

“The stakeholders interviewed for this study were only partly aware of existing data collection processes on casualties of explosive hazards. While all stakeholders had knowledge about various existing mine action data collection processes, including casualty reporting, accident reporting and contamination reporting, these data collection processes cannot be used to build a comprehensive, strong and reliable national database that includes casualty information. Moreover, stakeholders were not entirely clear about the mechanisms or actors involved in those processes resulting in concerns about the validity and reliability of the data collected.”<sup>(276)</sup>

## 7.4 Specific recommendations to donors, the Government of Iraq, Humanitarian Actors and Mine Action Actors on Access to Services for Victims

Victims include survivors, families of those killed and injured and affected communities.

### **The Government of Iraq, donors and Mine Action operators should:**

- **Recommendation 1:** Ensure victim assistance efforts are inclusive of all: persons injured, survivors, the families of those killed and/or injured and affected communities considering their gender, age, disability or other diversity factors.
- **Recommendation 2:** Guarantee adequate levels of funding and technical support to victim assistance efforts to ensure that VA is supported by both increased and continued earmarked funding as part of the global mine action budget and, at the same time, by effective integration into broader humanitarian, development and human rights funding envelopes.

### **The Government of Iraq, Mine Action operators and humanitarian actors should:**

- **Recommendation 3:** In accordance with IMAS 13.10, map available services for individuals and communities affected by EO and establish a referral system to increase knowledge of, and access to, available services.

- **Recommendation 4:** Conduct a nationwide survey to collect data on survivors of EO, their needs and available services in the areas they live to inform victim assistance programming, and establish a national victim/casualty information system. The data must be disaggregated by gender, age and disability status, and collected in line with protection/safeguarding principles and according to international standards for effective data collection and sharing.
- **Recommendation 5:** In accordance with IMAS 13.10, recognize the role of the mine action sector in undertaking specific VA efforts, including its role in liaising with non-mine action sectors to effectively integrate VA into broader frameworks, by:
  - For the Gol, drafting and adopting a national standard on victim assistance to answer the needs and promote the rights of EO victims at country level.
  - For the mine action sector, support the Gol as it develops relevant, long-term national systems, procedures and processes required to support EO victims in an age, gender and disability-inclusive manner and include these actions in a broader development and human rights framework.



A young man stands on top of a destroyed tower in front of a neighbourhood damaged by the fighting, in Mosul. © F.Vergnes / HI

## 8. Social Cohesion

### 8.1 Reverberating effects on social dynamics at household and community levels

Despite the lack of available data, **most of the stakeholders interviewed agreed that EO contamination has a negative impact on social cohesion, either directly or indirectly.**<sup>(277)</sup> The following chapter highlights both the direct and indirect impacts based on interviews with stakeholders and individuals from the affected population. According to the OECD, Social Cohesion “works towards the well-being of all its members, fights exclusion and marginalisation, creates a sense of belonging, promotes trust, and offers its members the opportunity of upward social mobility. As such social cohesion is both a desirable end and a means to inclusive development.”

When assessing the impact of EO contamination on social cohesion, it should be noted that relations between different ethnic and religious groups in Ninewa were complex long before the IS conflict. Minority groups, including Yezidis, have faced violence and persecution throughout history.

Due to the ethnically diverse population in Ninewa, the governorate was a prime target for the Baath

regime’s Arabization campaigns. As a result of these campaigns, 800,000 individuals belonging to different ethno-religious groups were replaced with Sunni Arabs.<sup>(278)</sup> Subsequently, the United States’ invasion of Iraq led to a rise in sectarian conflict in Ninewa, especially between Sunni and Shia Arabs.<sup>(279)</sup> Lastly, disputes between the government of Iraq and the Kurdistan Regional Government (KRG) over parts of Ninewa have also contributed to increasing tensions between groups. One of the many examples of this occurred when the KRG incentivized minorities to identify as Kurds in response to Baathist Arabization politics. However, these efforts were perceived by many as demographic engineering and minority groups reported feeling used in the KRG’s efforts to counter the government of Iraq.<sup>(280)</sup>

Then, during the 2014-2017 conflict with IS, large parts of Ninewa governorate were violently taken over by IS. Those who managed to escape the violence became displaced and often could not return to their homes for years, with 678,512 individuals still being displaced as of April 30, 2021.<sup>(281)</sup> Those who remained behind in occupied

areas were exposed to IS's rule of violence, which "seeks to subjugate civilians under its control and dominate every aspect of their lives through terror, indoctrination, and the provision of services to those who obey".<sup>(282)</sup>

The description above is a very succinct overview of some of the factors that impact community relationships, and which impede the development of socially cohesive communities in Ninewa

and by no means intends to provide a complete overview of all the factors of importance. **It is clear that relationships between and within different groups have been negatively impacted by a multitude of factors, some which date back decades. Because of this, determining the exact effect of EO contamination on social cohesion is complex.** To date, it would appear that no studies have been conducted that address this relationship in the context of Iraq.

### 8.1.1 Displacement and Return

"People are slowly returning to their areas of origin. However, when their houses are still contaminated, they will often stay in temporary housing or on the outskirts of cities. Communities are not going to reintegrate unless the issue of contamination is addressed. As such, addressing social cohesion before that has happened is very difficult."

Mine Action Operator

**Different stakeholders report that contamination is an important factor that prevents returnees from going home.**<sup>(283)</sup> This is also confirmed by the findings of the Multi-Cluster Needs Assessment Round VIII completed in October 2020. According to this study, approximately 8% of IDPs in and out of camps report that the presence of EO is a reason for not returning to their area of origin.<sup>(284)</sup> Similar sentiments were expressed by community members living in or close to contaminated areas. Different respondents from Mosul specifically stated that people are not returning due to the fear of EO contamination<sup>(285)</sup>

and the fear that their children will get into accidents.<sup>(286)</sup> **The unwillingness of IDPs to return to their original homes is important as a study focused on social cohesion in Ninewa found that community members reported the return of IDPs as an important prerequisite if social cohesion is to be improved.**<sup>(287)</sup> These findings support the hypothesis that returns are hampered by contamination and that the lack of return negatively impacts social cohesion. This led one of the stakeholders interviewed to conclude that addressing social cohesion in areas that are still contaminated will be very challenging.<sup>(288)</sup>

"The presence of explosive ordnance has a direct and negative impact on social cohesion within communities. Many community members have been injured and some families have lost one of their children due to the contamination. This negatively impacts social cohesion."

Mine Action Operator

### 8.1.2 Family Dynamics

**Contamination was reported to increase tensions within families in a variety of ways, thereby negatively impacting social cohesion at community level as well.**<sup>(289)</sup> The most obvious impact is that accidents due to EO contamination can result in the (permanent) impairment of survivors, which can lead to a disabling situation, thereby changing the roles and responsibilities of family members.<sup>(290)</sup>

For example, when the head of household is involved in an accident, this may result in a significant loss of income and place other family members under increased pressure to earn an income. This was confirmed by one family member of an EO survivor, who reports that "sometimes I am disappointed when we have no money and I realize that I am the only one who is responsible for

my family as well as dealing with the family debt. However, I keep all my sadness within the family and try as far as possible to act like there is nothing wrong when I am outside of the house.”<sup>(291)</sup>

When heads of households are injured in accidents they may feel that they are no longer able to contribute to the household’s needs, which has a

negative impact on their psychological well-being. One EO survivor interviewed explains: “My family perceived me as a man who cannot work and cannot support his family. They help me all the time and this was not the case before the incident. The way they perceive me has changed and is not the same anymore.”<sup>(292)</sup>

“After the incident, I felt hopeless and found it difficult to find a job due to the lack of job opportunities. In addition, the treatment I needed was not available and I had to pay a lot of money to buy medicine. I became desperate after the incident and my psychological well-being was severely reduced. I now suffer from epilepsy, and experience outbursts of anger over very trivial matters. This is all because of the explosive ordnance that was left behind after the war.”

EO survivor, man - Mosul

**Aside from the direct impact of accidents on family dynamics, reports also suggested that contamination indirectly impacts social cohesion within families. Some argued that the reduction in livelihood opportunities due to contamination caused tensions within families.** For example, one stakeholder reported that people used to rely on agriculture to earn a living. However, due to contamination, they can no longer access their farmland and this “causes tensions within families”.<sup>(293)</sup> Moreover, research has shown that in households where women have to take on the role of income providers, men may feel humiliated by not being able to support their family economically and this can trigger gender-based violence.<sup>(294)</sup>

**Furthermore, the presence of EO reduces the well-being of family members.**<sup>(295)</sup> **Living in constant fear for their safety as well as the safety of their children and other family members was reported to cause tensions within families.** One stakeholder even reported that “Contamination leads to fear and anxiety as well as a lack of hope. This has led to many cases of domestic violence”.<sup>(296)</sup>



Sahdun, the father of the family, is Yezidi. When IS arrived in his village of Sinjar in 2014, he fled to Sharya camp. Despite the loss of many relatives in the village, he tried to return in 2019, but turned around because of the contamination of the land by EO. In December 2020, he learned that the streets of the village had been cleared and decided to come back to rebuild his house. “In front of my street, over the 6 meters you see there, they have removed more than 20 mines! » He explains. “If I came back, it was thanks to the work of the deminers. In the camps we have access to water and health, but there is no longer any work as a daily worker, there are too many people. I am a mason, and as people start to come back, I am sure that I will find work to help people rebuild. ” © F.Vergnes / HI

### 8.1.3 Community Dynamics

The 2014-2017 conflict created new and amplified existing tensions between groups, which have largely remained unaddressed since the conflict ended.<sup>(297)</sup> A study conducted in Mosul revealed that minority groups, including Yazidis and Christians, fear the Sunni Arabs living in their communities. This is mostly due to the perceived complicity of Sunni Arabs in the atrocities committed by IS.<sup>(298)</sup> Tensions were also created within groups. For example, members of some Sunni Kurdish, Shia Turkmen, and Sunni Turkmen communities are no longer willing to engage with Sunni Arabs.<sup>(299)(300)</sup>

The generalization that all Sunni Arabs are affiliated with IS, however, completely ignores the fact that various Sunni Arab tribes fought against IS. This assumption, however, results in a situation in which Sunni Arabs are marginalized.<sup>(301)</sup> One study also highlighted that Sunni Arabs are fearful that they will be accused of being affiliated with IS.<sup>(302)</sup> This has intensified feelings of alienation among Sunni Arabs.<sup>(303)</sup>

Individuals from the affected population in Sinjar were generally in agreement that interaction and trust between community members had decreased since the 2014-2017 conflict.<sup>(304)</sup> Many community members also reported that the presence of different armed groups has had a highly negative impact on interaction and trust within the community. In Mosul, on the other hand, individuals

from the affected population also reported that trust has decreased due to the 2014-2017 conflict, especially trust between different ethnic and religious groups.<sup>(305)</sup>

**Regarding the impact of EO contamination on social cohesion within communities, some individuals from the affected population reported that the presence of EO is in itself a cause of reduced social cohesion, as it increases suspicion and tension between groups.**<sup>(306)</sup> For example, when accidents happen, a particular group may be blamed for the accident.<sup>(307)</sup> This may increase tensions between the group perceived as responsible for the accident and other groups in the community and, in the worst case scenario, could result in acts of retaliation.

Furthermore, **contamination results in community members travelling less to avoid encountering dangerous situations. As such, community members are less likely to visit family members or friends.**<sup>(308)</sup>

EO contamination may result in shared spaces, including communal infrastructure, playgrounds or mosques/churches being destroyed or no longer accessible. The destruction (or unavailability) of shared spaces “can negatively impact social cohesion, affect group identities and erode social support networks critical to the economic survival and psychosocial well-being of the civilian population.”<sup>(309)</sup>

“After the conflict, things changed. This is due to poverty and lack of economic opportunities. Also, there are different armed groups in the area. During the conflict, IS took our women and girls as slaves. All these things together have resulted in lower levels of trust.”

Community Member, man - Sinjar

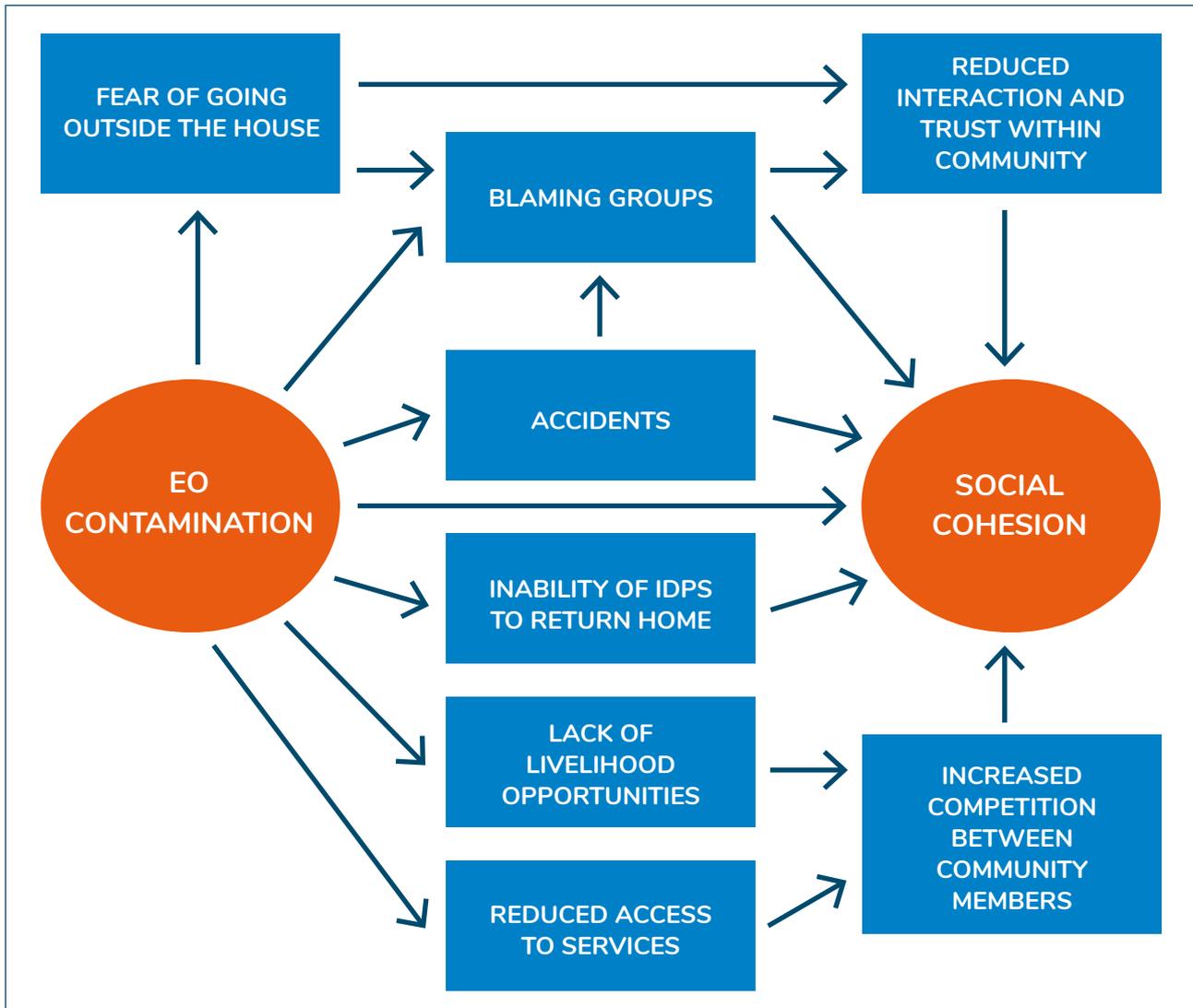
Two government officials, as well as individuals from the affected population from Sinjar and Mosul, explain that **contamination is directly linked to a deterioration in the availability**

**of essential services, as well as livelihood opportunities.**<sup>(310)</sup> Subsequently, this leads to increased competition over resources and increased tensions in communities.

“Fear has become a dominant feeling among many of the community members who live in or close to contaminated areas. They always feel insecure; no one feels safe. This obviously affects the psychological well-being of the population.”

Mine Action Operator

## Impact of EO Contamination on Communities and Social Cohesion.



## 8.2 The impact of Mine Action activities on social cohesion

**Humanitarian mine action activities risk negatively impacting social cohesion<sup>(311)</sup> if not implemented in a conflict-sensitive manner.** This requires Mine Action Operators to understand the nature of the conflict and factors relating to religion and ethnicity in the targeted communities,<sup>(312)</sup> in order to adapt their programming design.

For this reason, Mine Action Operators generally work closely with the communities in which they operate throughout all the project implementation phases.<sup>(313)</sup> By informing and consulting

communities prior to implementation, the Mine Action Operator aims to ensure community support for the activities to be implemented. While this approach is commendable, it should be noted that the data suggest that only the communities in which activities are implemented are informed about the activities that are to take place and not surrounding communities. For example, different mine actors reported that during clearance activities, community members from nearby villages may ask them why they are not clearing their village.<sup>(314)</sup>

“Of course, there can be sensitivities around this and this should be taken into consideration. It is always possible that activities cause tension.”

Mine Action Operator

When community members from surrounding villages do not know or understand why a village was prioritized over their village, this may lead to discontent and worsened conflict dynamics. Moreover, it can lead community members to think of reasons as to why their village has not been prioritised yet. This, again, underscores the need for a transparent prioritisation criteria system and community-based input. One Mine Action Operator reported that community members were under the impression that their village was not being cleared because people perceived to be affiliated to IS live in the village.<sup>(315)</sup> The same actor also reported that in Sinjar, mine actors have faced opposition because they cleared an area that previously belonged to Sunni Arabs and thus was perceived as an IS area.<sup>(316)</sup>

A conflict sensitive approach to humanitarian

mine action will ensure that social cohesion is not negatively impacted. Going one step further, land release, EORE and VA could also be programmed, in combination or not with other activities such as activities against gender-based violence or inclusive governance, to positively transform the conflict and as such, strengthen social cohesion. Conflict transformation is about transforming the very systems, structures and relationships which give rise to violence and injustice.

**HI supports a “whole-system approach”, addressing the structural drivers of conflict, but remains very aware that transforming conflict cannot be a top-down exercise. Conflict transformation requires the involvement of different actors, at different entry points, with different objectives: it is multi-dimensional.**

## 8.3 Specific recommendations to the Government of Iraq, Humanitarian Actors and Mine Action Actors on Social Cohesion

**The Government of Iraq should:**

- **Recommendation 1:** Widely disseminate the priority criteria and make them easily accessible for the local population.

**The Government of Iraq, Mine Action Operators and Humanitarian actors should:**

- **Recommendation 2:** Use a participatory approach with communities to take their needs into account in order to develop empowering mine action activities.

**Mine Action Operators and Humanitarian actors should:**

- **Recommendation 3:** Beyond mine action and land release, recognise that realising any form of transformation, from eradicating poverty to transforming conflict, requires multiple actors engaging at different levels including Mine Action operators.



A munition case left on the ground in a street of Mosul. © F.Vergnes / HI

## 9. Conclusions and Recommendations

The devastating consequences of explosive weapons used in populated areas, including death, injury and massive destruction of the infrastructure on which civilians depend have been documented through a series of studies and reports (see the International Network on Explosive Weapons' website). The present report focuses on the scourge of contamination and, indeed, the situation in Iraq is an appalling example of just how complex and challenging it is to address EO contamination stemming from the use of weapons in urban settings.

As a humanitarian and mine action operator, HI has observed in a variety of conflict and post-conflict contexts (Syria, Afghanistan, Ukraine, Yemen etc) how EO contamination impacts the lives of affected populations for years, sometimes generations. This report gives a more detailed picture of the extent to which EO contamination continues to pose a threat to people's lives and safety, and how it impedes return and access to services in

contaminated areas in Ninewa. The scope of this contamination is clearly hampering the efforts of communities and humanitarian and development actors in the region towards recovery, peace and sustainable development. Women and persons with disabilities are likely to be more vulnerable to these reverberating effects of EO contamination. Where it exists, in Iraq and elsewhere, EO contamination constitutes a major obstacle to safe recovery for the affected populations.

As the global momentum to address the use of explosive weapons in populated areas will soon result in the adoption of a political declaration to prevent the harm caused by explosive weapons, the international community has the responsibility and opportunity to address not only the immediate effects of EWIPA, but also its reverberating effects including the long-term impact of EO contamination on affected communities worldwide.

Based on the findings of this study and in addition to the context- and sector- specific recommendations developed throughout the report, Humanity & Inclusion has developed the following actionable general recommendations:

**We call the international community, including the Government of Iraq and other States, donors and Mine Action operators to:**

- **Recommendation 1:** Support the development of a strong political declaration to avoid the use of explosive weapons with wide-area effect in populated areas, which includes firm commitments on land release, risk education and victim assistance.
- **Recommendation 2:** In line with the Oslo and Lausanne Action Plan, do not use landmines and cluster munitions, clear contaminated areas, deliver EORE, and provide assistance to individuals and affected communities.
- **Recommendation 3:** Recognize that humanitarian mine action is a prerequisite to any immediate or long-term recovery, and continue to stress the humanitarian nature of mine action activities.
- **Recommendation 4:** Commit humanitarian funding to significantly scale up humanitarian mine action activities, in line with International Mine Action Standards and humanitarian principles.
- **Recommendation 5:** Encourage the use of a comprehensive approach to Armed Violence Reduction, including land release, stockpile destruction, EORE, victim assistance, advocacy and conflict transformation which mainstreams a gender, age, and disability perspective in an intersectional manner.

## Appendix I: list of interview respondents

29 actors working for different humanitarian and mine action organizations were interviewed, namely HI, UNMAS, International Committee of the Red Cross, Mines Advisory Group, Swiss Foundation for Mine Action, Danish Demining Group, HALO Trust, iMMAP, Danish Refugee Council, Norwegian People's Aid, Danish Church Aid, Al-Ghad, IHESCO, Shareteah Humanitarian Organization, International

Organization for Migration, and Cordaid. It should be noted, however, that none of the interviewed individuals was asked to speak on behalf of the organization for which they work. Instead, they were asked for their perception regarding the topics under discussion. Information on the humanitarian and mine action operators interviewed for this study can be found below.

### List of Key Informant Interview Respondents (Mine Action and Humanitarian Actors).

Case Code	Stakeholder Type	Name of Participant <sup>(317)</sup>
HA1001	International Humanitarian Actor	Dr. Ammar Qassar
HA1002	International Humanitarian Actor	N/A
MAA1003	International Mine Action Operator	N/A
MAA1004	International Mine Action Operator	N/A
MAA1005	International Mine Action Operator	N/A
MAA1006	International Mine Action Operator	Andrea Trevisan
MAA1007	International Mine Action Operator	Fiona Crook
MAA1008	International Mine Action Operator	N/A
MAA1009	International Mine Action Operator	Héloïse Pihery
MAA1010	International Mine Action Operator	Essraa Ghassan
MAA1011	International Mine Action Operator	Isam Ghareeb
MAA1012	International Mine Action Operator	N/A
MAA1013	International Mine Action Operator	N/A
MAA1013	International Mine Action Operator	N/A
MAA1015	International Mine Action Operator	N/A
MAA1016	International Mine Action Operator	N/A
MAA1017	International Mine Action Operator	Peter Smethers
MAA1018	International Mine Action Operator	Roberta Sarzano
MAA1019	International Mine Action Operator	Alexandra Letcher
MAA1020	International Mine Action Operator	N/A
MAA1021	International Mine Action Operator	Jonathon Richard Guthrie
MAA1022	International Mine Action Operator	N/A
MAA1023	International Mine Action Operator	N/A
MAA1024	Local Mine Action Operator	N/A
MAA1025	Local Mine Action Operator	N/A
MAA1026	Local Mine Action Operator	N/A
MAA1027	Local Mine Action Operator	N/A
MAA1028	Local Mine Action Operator	N/A
MAA1029	Local Mine Action Operator	N/A

29 individuals from the affected population were interviewed. Information on these individuals can be found in the table below.

### List of Key Informant Interview Respondents (Affected Population).

Case Code	District	Participant	Gender	Physical Disability <sup>(318)</sup>
<b>Survivors of EO Accidents</b>				
SAC4001ML	Mosul	Adolescent Child	Woman	No
SAC4002ML	Mosul	Adolescent Child	Man	No
SA4003ML	Mosul	Adult	Woman	No
SA4004ML	Mosul	Adult	Man	No
SAC4005SR	Sinjar	Adolescent Child	Man	Yes
SAC4006SR	Sinjar	Adolescent Child	Woman	Yes
SA4007SR	Sinjar	Adult	Man	Yes
SA4008SR	Sinjar	Adult	Man	Yes
SA4009SR	Sinjar	Adult	Man	Yes
<b>Family Members of Survivors of EO Accidents</b>				
FMS5001ML	Mosul	Parent of survivor	Woman	Yes
FMS5002ML	Mosul	Parent of survivor	Man	Unknown
FMS5003SR	Sinjar	Spouse of survivor	Woman	Yes
FMS5004SR	Sinjar	Parent of survivor	Woman	Yes
<b>Community Members Living in Contaminated Areas</b>				
CA6001ML	Mosul	Adult	Woman	Yes
CA6002ML	Mosul	Adult	Man	No
CA6003ML	Mosul	Adult	Man	Yes
CA6004ML	Mosul	Adult	Woman	No
CA6005SR	Sinjar	Adult	Man	No
CA6006SR	Sinjar	Adult	Woman	No
CA6007SR	Sinjar	Adult	Man	No
CA6008SR	Sinjar	Adult	Woman	No
<b>Community Members Living Close to Contaminated Areas</b>				
CCA6001ML	Mosul	Adult	Woman	Yes
CCA6002ML	Mosul	Adult	Man	No
CCA6003ML	Mosul	Adult	Man	No
CCA6004ML	Mosul	Adult	Woman	No
CCA6005SR	Sinjar	Adult	Woman	No
CCA6006SR	Sinjar	Adult	Woman	No
CCA6007SR	Sinjar	Adult	Man	No
CCA6008SR	Sinjar	Adult	Woman	No

Four government officials, three community leaders and four other stakeholders were interviewed. The other stakeholders all had experience in delivering EORE. Information related to these stakeholders can be found in the table below.

### List of Key Informant Interview Respondents (Other Stakeholders).

Case Code	Stakeholder Type	Gender
<b>Government Representatives</b>		
GR2001ML	Government Representative (Mosul)	Man
GR2002ML	Government Representative (Mosul)	Man
GR2003ML	Government Representative (Mosul)	Man
GR2004SR	Government Representative (Sinjar)	Man
<b>Community Leaders and Other Actors</b>		
OA3001ML	Other Actor – RE Volunteer (Mosul)	Woman
OA3002ML	Other Actor – RE Volunteer (Mosul)	Woman
OA3003ML	Other Actor – RE Volunteer (Mosul)	Man
CL3004ML	Community Leader (Mosul)	Man
CL3005SR	Community Leader (Sinjar)	Man
CL3006SR	Community Leader (Sinjar)	Man

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