Defining the device:
The need for international humanitarian standards for improvised explosive device disposal

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Executive summary

IEDs are a global problem

Improvised Explosive Devices (IEDs) have become a serious and significant threat in a hostile world. IEDs are now the weapon of choice for non-state armed groups (NSAGs) and are deployed with devastating consequences in about half of the world's countries.[1] Although IEDs are often said to have indiscriminate effects, they have a disproportionate impact on civilians, who account for more than 80 per cent of all IED-related casualties.[2] IEDs also have a significant impact on humanitarian operators and operations. Between 2004 and 2014, 367 humanitarian aid workers were killed by IEDs while on duty, one third of whom were in Afghanistan.[3] As a direct result of increasing IED attacks on humanitarian aid workers, 33 per cent of NGOs operating in Afghanistan ceased their activities in specific areas.[4] The terrible effects of IEDs go beyond the immediacy of the blast, however, to include wider and more intangible social and political effects, such as threatening or undoing fragile peace-building efforts, breaking brittle economic development and deepening insecurities.

IEDs are a genuinely global problem; they have the power to cause immediate devastation and loss of life among civilians and humanitarian aid workers, but they also fracture societies and shatter peace. And yet, despite these devastating consequences, there is still no standardised approach to even define and categorise this threat; nor are there formalised international standards for their disposal and removal in a humanitarian context. Developing internationally recognised standards that clarify definitions and approaches to IED disposal (IEDD), is a crucial next step in addressing the threats posed by IEDs. It will not only mark significant progress towards fully understanding the extent and effects of IEDs, but also provide a framework for approaching IEDs in a humanitarian context, helping to protect civilians and aid workers, and mitigate the broader negative impacts of IEDs on already-vulnerable societies.

Humanitarian IED disposal standards are crucial

While numerous states have committed effort, resources and people in counter-IED policies and action, these are invariably tied to *security* objectives such as tackling the growth of non-state armed groups (NSAGs) like ISIS. As yet, however, IEDs in a *humanitarian* context have not been subject to international standards that could help mitigate the threat they pose. Although counter-IED policies and actions in the military context are very important in their own right, they do not necessarily apply to or address the humanitarian context. Moreover, the existing International Mine Action Standards (IMAS) framework, which applies to the humanitarian context, does not provide a comprehensive and coherent response that covers the myriad uses of IEDs in complex situations.

And yet this is precisely where they are needed if we are to better protect civilians and deliver humanitarian assistance in some of the most challenging regions in the world. Having international humanitarian standards for IEDD will create a framework for humanitarian workers to operate more effectively, more safely and more confidently in a number of insecure areas. A sufficiently robust and trusted set of humanitarian standards will help to safeguard both local populations and humanitarian workers in hostile operating environments.

1   United Nations General Assembly, Report of the UN Secretary-General, Countering the threat posed by improvised explosive devices. UN Doc A/71/187, 24 July 2016. [Online] Available from: http://www.un.org/ga/search/view_doc.asp?symbol=A/71/187 (Accessed 4 October 2016).
2   Small Arms Survey (2014) Countering Improvised Explosive Devices. Research Notes No. 46. [Online] Available from: http://www.smallarmssurvey.org/fileadmin/docs/H-Research_Notes/SAS-Research-Note-46.pdf (Accessed 8 November 2016).
3   Bryce, H. and Dodd, H. (2015) The impact of IEDs on the humanitarian space in Afghanistan. London: Chatham House. P. 8.
4   AOAV, The impact of IEDs on humanitarian assistance. Presentation at the UN General Assembly, New York, 9 April 2015. Retrieved from: https://prezi.com/z_v78pwayuaj/ccw-humanitarian-harm-and-ieds/?utm_campaign=share&utm_medium=copy

There is, therefore, a genuine and pressing need for a coherent, international framework that addresses IEDs with a shared set of standards, and with a shared language to refer to the problem. First, the lack of a clear definition prevents operators and policymakers from fully understanding the extent of the problem that needs to be addressed. While there is general agreement on the issue, there is currently inconsistency in how data is collected and presented. This makes the full magnitude of the issue very difficult to understand. Second, at the operational level, IEDs are challenging for the humanitarian sector to address as they are an inherently political weapon, of which the humanitarian sector itself is often a target. Operating in modern conflicts where IEDs are prevalent can risk undermining the humanitarian principles that underpin the modus operandi of those working in the sector.[5] There is a need for a clearer mutual understanding of mandates which seeks to better define humanitarian and military organisations' roles in IED clearance.

About this briefing

This policy briefing focuses specifically on standards to guide IED clearance for humanitarian purposes. Developing an appropriate and flexible set of humanitarian standards will, in turn, enable aid workers to reach conflict-affected areas, distribute aid, and ultimately save lives. It does not explore military standards for IED clearance, as these are aimed principally at allowing military forces to manoeuvre and conduct operations.

In order to explore the challenge of IEDs in a humanitarian context, the Policy Institute at King's College London and Chatham House convened a meeting of key stakeholders from the mine action community. In collaboration, we sought to bring the best available expertise to bear on both the extent of the IED problem, the challenges of IED clearance in hostile environments, and possible recommendations for developing new standards that could help improve clearance activities.

Through this meeting, two significant challenges in tackling the IED problem in a humanitarian context were identified. The first is that, by their very nature, they defy straightforward definition. In part, this is down to the devices themselves, which come in numerous

different forms, often with multiple dimensions to their design, are deployed in different ways and places, and are designed to have different impacts. Without an agreed and accepted definition, developing any kind of international standards is challenging. Second, IEDs are often the preserve of non-state actors. Other explosive weapons such as landmines are traditionally deployed in interstate conflicts, and can therefore be regulated, at least in part, through international agreements between states, and addressed in comparatively safe operating environments once peace treaties and agreements are signed. By contrast, IEDs are most often deployed by non-state actors in hostile situations which increasingly do not resemble warzones in the traditional sense. Formal internationally brokered peace agreements with non-state actors signed in such contexts hold a less successful track record,[6] and appear less likely to bring about a reduction in the prevalence of IEDs.

IEDs, then, present both a definitional and an operational challenge. As a result, the premise of the workshop and of this paper is that approaches which address the devices themselves are instead required. It is clear that standards for their removal and disposal in a humanitarian context are much-needed to allow IED clearance operators to more safely dispose of IEDs and protect lives and livelihoods in fragile states. These standards must be sufficiently broad and flexible to deal with the sheer variety of devices, while also narrow enough to be operationalised on the ground.

Based on this, we present three key recommendations for building a set of humanitarian IEDD standards.

(1) **The need for a clear definition.** The way that IEDs are constructed and deployed produces a vast and complex range of devices. While some of these fall under the existing definition of landmines or unexploded ordnance (UXO) as defined by International Mine Action Standards (IMAS), some fall outside these parameters, and it is for these that there is a need to develop standards to help guide and regulate their clearance. The lack of an agreed understanding on 'what an IED is' has previously hampered policymakers in addressing the threat and determining what a new set of standards would need to cover. The threat

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5   For a more in-depth discussion on the impact of IEDs on the humanitarian sector refer to "The Impacts of IEDs of the Humanitarian Space in Afghanistan", Hannah Bryce and Henry Dodd, Chatham House, April 2015

6   Berdal, M. (2009) 'Chapter One: The Peacebuilding Environment', Adelphi Papers. 49:409. P. 53. [Online] Available from: http://www.tandfonline.com/doi/full/10.1080/19445570903356645?src=recsys (Accessed 12 December 2016)

is, by virtue of its improvised nature, also difficult to categorically define. We advocate a broad definition as a vital and necessary step towards reducing and mitigating the impact of IEDs.

② The need for leadership and strategic direction. Since the Chatham House meeting in 2016, some progress has been made in addressing the problem of IEDD in a humanitarian context. Indeed, we welcome the ongoing efforts, coordinated by UNMAS, of the UN and member states to develop IEDD Standards.[7] These have been much-needed first steps, and the efforts are laudable, but we see their real impact as a springboard for further development in this area.

While there appears to be agreement on the need for IEDD action, ultimately, what is needed in this context is greater coordination, leadership and strategic direction. If there is to be significant forward progress on this pressing issue, we see a real need for institutionalised leadership at the strategic level which can provide oversight of all international standards concerning IEDs, landmines and other explosive weapons. One way to achieve this would be to establish a new UN body to coordinate the various efforts underway to address the range of explosive hazards. However, this is likely to require a time-consuming overhaul of major international architecture and may even end up delaying progress. Instead, we advocate

a more straightforward approach which focuses on reinforcing and expanding the leadership role already played by existing structures. A compelling choice for this role would be UNMAS, as they already hold a coordination mandate through chairing the Inter-Agency Coordination Group on Mine Action. We recommend that this role is strengthened and broadened to include coordination of the whole host of efforts underway to address the full litany of explosive hazards.

③ The importance of discretion. IEDs come in numerous different forms; some follow relatively generic templates, but others are bespoke and unique. Moreover, they also vary in intent, application and context. The decision to remove, destroy or leave an IED therefore requires a certain amount of discretion by the operator assessing the threat. For IEDD standards to be useful they will need to ensure that they are not overly restrictive and narrowly focussed on technical details or management structures, but rather provide guidelines that allow for context-specific decision-making. It is perfectly feasible that the same device will need to be addressed by different standards depending on the context at the time of clearance. For example, a command-operated IED that is no longer a part of active hostilities will be understood and interpreted differently from when it is 'in play'. The decision as to whether that IED is part of active hostilities or not will need to be taken by individual operators on the ground at the time.

Credit: Wikimedia Commons

7   Progress on these efforts has been reported to member states at the CCW in December 2016 and more recently at recent Meeting of Mine Action practitioners in early February 2017. Belgium and China are co-chairing the working group with Australia, Canada, Egypt, France, Ireland, the Netherlands, Russia, Spain and the United States participating as Members. The UK is in the process of confirming its membership of the group, and should it do so, all the P5 council members would have signed up to this goal.

1. The IED problem

The sheer breadth of IED violence is deeply troubling. Over the past five years alone, there has been a total of 105,071 casualties from IEDs, constituting 59 per cent of all casualties from explosive violence.[8] Between just 2011 and 2013, there were more than 4,300 IED events in 66 countries, resulting in an estimated 65,400 casualties.[9]

Civilians often bear the brunt of IED violence. In 2015 alone, civilians constituted 85 per cent of IED casualties.[10] And over the 2011 to 2013 period, civilians made up more than 80 per cent of all casualties in those countries experiencing the highest number of IED casualties: 70 per cent of all deaths and more than 85 per cent of all injuries.[11] In certain conflict zones, the effects of IED violence on civilians is particularly stark, often becoming the greatest threat to life: in Afghanistan, for instance, IEDs killed 10 times more civilians than landmines in 2015,[12] and were the third largest killer of civilians in the first half of 2016.[13]

As well as being a significant threat to life in conflict zones, IEDs also present a wider, global problem. As a report of the UN Secretary-General on countering the threat posed by IEDs highlights, IEDs are deployed with devastating consequences in about half of the world's countries.[14] Moreover, the effects of IEDs go beyond the immediacy of the blast, to wider, more intangible – but no less important – social effects. In Mali, for example, increased attacks on aid workers directly restricted access to people in need on over 60 occasions in 2015, a threefold increase on the previous year.[15] Furthermore, a recent report by the United Nations Institute for Disarmament Research (UNIDIR) documents the repercussions that the use of explosive weapons can have on a community, including 'reduced access to services and infrastructure that are vital to sustain lives and livelihoods'.[16] IEDs are increasingly deployed not only against civilians and military personnel, but also humanitarian aid workers, distorting peace building efforts in fragile countries and severely impacting livelihoods and local economies.[17] The use of IEDs in this way complicates the response to humanitarian crises and often unwillingly draws humanitarian operators into a more politicised role. The lack of international humanitarian IEDD standards further complicates this already complex issue.

As a global problem causing not only immediate devastation and loss of life, but also harming peace-building efforts, the use of IEDs erodes economic growth and undermines development initiatives. As such, they clearly need a strong and unified response from local, regional and international institutions who are focussed on addressing the IED issue. The growing threat of IEDs – both in and beyond conflict zones, with their increasingly widespread supply networks and deleterious effects on victims, communities and societies – warrants an improved approach from international actors. There is a genuine

8   AOAV, Explosive Violence Monitor. [Online] Available from: https://aoav.org.uk/explosiveviolence/

9   UN General Assembly, *Report of the Secretary-General, Small Arms and Light Weapons.* UN Doc S/2015/289. 27 April 2015. P. 6. [Online] Available from: http://www.securitycouncilreport.org/atf/cf/%7B65BFCF9B-6D27-4E9C-8CD3-CF6E4FF96FF9%7D/s_2015_289.pdf (Accessed 8 November 2016).

10 AOAV, Explosive Violence Monitor

11 Small Arms Survey (2014) *Countering Improvised Explosive Devices.* Research Notes No. 46. [Online] Available from: http://www.smallarmssurvey.org/fileadmin/docs/H-Research_Notes/SAS-Research-Note-46.pdf (Accessed 8 November 2016).

12 UN General Assembly, S/2015/289, p. 6.

13 UNAMA, *Afghanistan Mid Year Report on Protection of Civilians in Armed Conflict: 2016.* July 2016. Available from: https://unama.unmissions.org/sites/default/files/protection_of_civilians_in_armed_conflict_midyear_report_2016_final_rev.1-9sept.pdf (Accessed 18 January 2017).

14 United Nations General Assembly, *Report of the UN Secretary-General, Countering the threat posed by improvised explosive devices.* UN Doc A/71/187, 24 July 2016. P. 3. [Online] Available from: http://www.un.org/ga/search/view_doc.asp?symbol=A/71/187 (Accessed 30 November 2016).

15 Guilbert, K 'Attacks on aid groups, rising crime isolate neediest in Mali'. Dakar: Thomson Reuters Foundations. 18 November 2016.

16 UNIDIR, *Understanding the Reverberating Effects of Explosive Weapons: A Way Forward*, 2016. P.5. http://www.unidir.org/files/publications/pdfs/reverberating-effects-research-agenda-en-653.pdf

17 For instance, a report by the UN Secretary General submitted to the UN Security Council in 2015 notes that those countries experiencing sustained levels of armed conflict or violence are also those furthest from reaching the Millennium Development Goal targets. See UN General Assembly, *Report of the Secretary-General, Small Arms and Light Weapons.* UN Doc S/2015/289. 27 April 2015. P. 7. [Online] Available from: http://www.securitycouncilreport.org/atf/cf/%7B65BFCF9B-6D27-4E9C-8CD3-CF6E4FF96FF9%7D/s_2015_289.pdf (Accessed 8 November 2016).

Figure 1: Countries experiencing the highest number of IED casualties, 2011-2013

Country	No. of IED incidents	Total casualties	Civilian deaths	Civilian injuries	Armed state, non-state, and security actor deaths	Armed state, non-state, and security actor injuries
Iraq	1,596	27,782	5,671	18,742	1,455	1,914
Pakistan	568	10,016	2,092	6,190	752	1,126
Afghanistan	932	8,005	1,911	3,540	1,371	1,183
Syria	218	5,586	1,233	3,347	721	285
Nigeria	107	2,101	687	1,182	143	89
Thailand	151	1,548	61	987	99	401
Yemen	70	1,407	140	380	410	477
Lebanon	17	1,330	101	1,198	5	26
Somalia	89	1,298	376	697	151	74
India	110	1,093	113	737	60	183
Total	**3,858**	**60,310**	**12,385**	**37,000**	**5,167**	**5,758**

Source: AOAV (2014)

and pressing need for a coherent, international framework that addresses IEDs using a set of standards which describe the problem in a shared language.

The challenge of IEDs

Yet the problem is that IEDs present a complex, multi-faceted threat that defies a straightforward solution. In part, this is down to the devices themselves. The term IED suggests a rudimentary, simplistic, makeshift device that has been cobbled together with little thought or attention. But the reality can be far different; IEDs are often highly complex weapons with increasingly sophisticated components that are difficult to detect.[18] They come in numerous different forms, often with multiple dimensions to their design, are deployed in different ways and places, and are designed to have different impacts.

While many IEDs currently being found in Iraq and Syria are addressed by the relevant explosive weapons standards, such as IMAS, which essentially sees them as (improvised) landmines, a proportion remain unaddressed. The exact figures, however, are not fully understood, and without some agreed definitions will remain difficult to obtain, since, at present, the definition of an IED can be construed in multiple ways. While only a small number of IEDs that fall beyond these recognised definitions are thought to be in use, they nonetheless have a significant impact and represent a growing problem.[19] The results of this research, however, suggest that until agreed international standards are operationalised it will not be possible to assess and understand the full extent of the IED issue, as the data is at best inconsistent and at worst incomparable across the sector.

This report specifically focuses on why those IEDs that currently fall beyond the scope of existing international standards need a suitable framework within which to be understood and addressed. Figure 2 below outlines the current humanitarian procedures in place to address different types of weapon, and highlights the importance of the IMAS as a guiding mechanism for existing policy on landmines, cluster munitions and explosive remnants of war (ERW).

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18 Ibid., p. 6.

19 During research for this briefing a number of IED operators were asked to provide data on their IEDD operations. The information requested of the operators was the number of IEDs cleared in Iraq and Syria in the last year that had fallen within the definition of a landmine or UXO as provided by IMAS, and conversely, the number that had fallen outside of the definition provided in these existing standards. While the same data was asked of each operator, the request was interpreted and the data presented in different ways by each.

Figure 2: Overview of explosive weapons and their conventions

Biological	
Formal definition	✅ 'Microbial or other biological agents, or toxins whatever their origin or method of production, of types and in quantities that have no justification for prophylactic, protective or other peaceful purposes; weapons, equipment or means of delivery designed to use such agents or toxins for hostile purposes or in armed conflict.'[20]
Usage: State or Non-state armed groups (NSAGs)	✅ No data recording the use of biological weapons in recent years by states, however, since there is no formal mechanism incorporated into the 1972 Convention that explicitly prohibits states from selling bio-agents to NSAGs.[21]
Monitored by states	✅ States Party to the Convention: 'undertakes to destroy, or to divert to peaceful purposes, as soon as possible but not later than nine months after the entry into force of the Convention, all agents, toxins, weapons, equipment and means of delivery specified in Article I of the Convention, which are in its possession or under its jurisdiction or control. In implementing the provisions of this Article all necessary safety precautions shall be observed to protect populations and the environment.'[22]
Dedicated International Standards	❌ No formal set of standards, although Article V of the 1972 Convention states that, 'The States Parties to this Convention undertake to consult one another and to co-operate in solving any problems which may arise in relation to the objective of, or in the application of the provisions of, the Convention. Consultation and co-operation pursuant to this Article may also be undertaken through appropriate international procedures within the framework of the United Nations and in accordance with its Charter.'
Explicitly addressed by UN convention	✅

Chemical	
Formal definition	✅ 'Toxic chemicals and their precursors, except where intended for purposes not prohibited under this Convention, as long as the types and quantities are consistent with such purposes; Munitions and devices, specifically designed to cause death or other harm through the toxic properties of those toxic chemicals specified in subparagraph (a), which would be released as a result of the employment of such munitions and devices; Any equipment specifically designed for use directly in connection with the employment of munitions and devices specified in subparagraph (b)'[23]
Usage: State or Non-state armed groups (NSAGs)	✅ The Syrian government used chemical weapons in targeted attacks against civilians in 2016.[24] The use of chemical weapons by NSAGs has also been on the rise since 2012.[25]
Monitored by states	✅ Article III submits States Party to the Convention to five declarations that monitor chemical weapons.[26]
Dedicated International Standards	❌ Instead, the 1994 Convention refers to using the national standards of individual States Parties.
Explicitly addressed by UN convention	✅

20 Article I, Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on their Destruction, 1972
21 US State Department
22 Article II, Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on their Destruction, 1972
23 Article 2, Convention on the Prohibition of the Development, Production and Stockpiling and use of Chemical Weapons and on their Destruction, 1994
24 United Nations Security Council, Letter dated 24 August 2016 from the Secretary-General addressed to the President of the Secuirty Council, S/2016/738
25 National Consortium for the Study of Terrorism and Responses to Terrorism, Global Terrorism Database, 2015
26 Convention on the Prohibition of the Development, Production and Stockpiling and use of Chemical Weapons and on their Destruction, 1994

Cluster munition	
Formal definition	✅ 'A conventional munition that is designed to disperse or release explosive submunitions each weighing less than 20 kilograms, and includes those explosive submuntions.'[27]
Usage: State or Non-state armed groups (NSAGs)	✅ At least 23 governments have used cluster munitions in 39 countries and four disputed territories since the end of the Second World War. Despite the adoption of the Convention on Cluster Munitions in May 2008, there have been reports of continued use by states, including by both parties to the Ukraine conflict in 2014 and 2015, the Sudanese air force in 2015, and the armed coalition led by Saudi Arabia in Yemen in 2015 and 2016.[28]
Monitored by states	✅ States Party to Convention on Cluster Munitions 'undertakes never in any circumstances to[29]: (a) Use cluster munitions; (b) Develop, produce, otherwise acquire, stockpile, retain or transfer to anyone, directly or indirectly, cluster munitions'
Dedicated International Standards	❌ Falls under the International Mine Action Standards
Explicitly addressed by UN convention	✅

Conventional ammunition	
Formal definition	✅ 'A complete device, (e.g. missile, shell, mine, demolition store etc.) charged with explosives, propellants, pyrotechnics or initiating composition for use in connection with offence, or defence, or training, or non-operational purposes, including those parts of weapons systems containing explosives. (c.f. munition).'[30]
Usage: State or Non-state armed groups (NSAGs)	❌
Monitored by states	✅ The IATG are being used to support ammunition stockpile management in nearly 90 countries. Additionally, the Arms Trade Treaty states that, 'Each State Party shall establish and maintain a national control system to regulate the export of ammunition/munitions fired, launched or delivered by the conventional arms covered under Article 2 (1=, and shall apply the provisions of Article 6 and Article 7 prior to authorizing the export of such ammunitions/munitions.'[31]
Dedicated International Standards	✅ Falls under the International Ammunition Technical Guidelines (IATG) of 2011 and the Arms Trade Treaty of 2013.
Explicitly addressed by UN convention	✅

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27 Article 2, Convention on Cluster Munitions, 2008
28 Cluster Munition Coalition, 2016
29 Article 1, Convention on Cluster Munitions
30 Article 3.58, International Ammunition Technical Guidelines, 2011
31 Article 3 and 4, Arms Trade Treaty, 2013

Explosive remnants of war (ERW)	
Formal definition	✅ 'Unexploded ordnance and abandoned exploded ordnance. 1. Explosive ordnance means conventional munitions containing explosives, with the exception of mines, booby traps and other devices as defined in Protocol II of this Convention as amended on 3 May 1996; 2. Unexploded ordnance means explosive ordnance that has been primed, fused, armed or otherwise prepared for use and used in armed conflict. It may have been fired, dropped, launched or projected and should have exploded but failed to do so; 3. Abandoned explosive ordnance means explosive ordnance that has not been used during an armed conflict, that has been left behind or dumped by a party to an armed conflict, and which is no longer under control of the party that left it behind or dumped it. Abandoned explosive ordnance may or may not have been primed, fused, armed or otherwise prepared for use.'[32]
Usage: State or Non-state armed groups (NSAGs)	❌
Monitored by states	✅ High Contracting Parties to the Convention on Certain Conventional Weapons: 'In conformity with the Charter of the United Nations and of the rules of the international law of armed conflict applicable to them, High Contracting Parties agree to comply with the obligations specified in this Protocol, both individually and in co-operation with other High Contracting Parties, to minimise the risks and effects of explosive remnants of war in post-conflict situations.' [Article 1, Protocol on Explosive Remnants of War, Convention on Conventional Weapons, 2003]
Dedicated International Standards	Falls under the International Mine Action Standards[33]
Explicitly addressed by UN convention	✅

Improvised explosive devices (IEDs)	
Formal definition	❌ There is no formal and internationally agreed definition of an IED by a UN Convention.[34] However, the UN International Ammunition Technical Guidelines [2011] defines an IED as: 'A device placed or fabricated in an improvised manner incorporating explosive material, destructive, lethal, noxious, incendiary, pyrotechnic materials or chemicals designed to destroy, disfigure, distract or harass. They may incorporate military stores, but are normally devised from non-military components.'[35]
Usage: State or Non-state armed groups (NSAGs)	✅ In 2015, IEDs were used exclusively by NSAGs in 45 countries.[36]
Monitored by states	❌
Dedicated International Standards	❌
Explicitly addressed by UN convention	❌

32 Article 2, Protocol on Explosive Remnants of War, Convention on Conventional Weapons, 2003
33 International Mine Action Standards. Available from https://www.mineactionstandards.org/standards/international-mine-action-standards-imas/imas-in-english/
34 IEDs are not defined within internationally treaty but they are mentioned under the definitions paragraph as "other devices" such that they are viewed as distinct from landmines. For more detail see the UNMAS IED Lexicon available at: http://www.mineaction.org/sites/default/files/publications/UNMAS%20IED%20Lexicon.pdf
35 UN International Ammunition Technical Guidelines 2011
36 Action on Armed Violence, Explosive Violence Monitor 2015

Mines			
Formal definition	✅	'A munition designed to be placed under, on or near the ground or other surface area and to be exploded by the presence, proximity or contact of a person or a vehicle.'[37]	
Usage: State or Non-state armed groups (NSAGs)	✅	According to the most recent available data, government forces of Myanmar, North Korea and Syria used anti-personnel landmines from October 2014 to October 2015.	
		NSAGs used anti-personnel landmines in 10 countries during the same period: Afghanistan, Colombia, Iraq, Libya, Myanmar, Pakistan, Syria, Tunisia, Ukraine and Yemen.[38]	
Monitored by states	✅	States Party to the AP Mine Ban Convention 'undertake to destroy or ensure the destruction of all anti-personnel mines in mined areas under its jurisdiction or control, as soon as possible but not later than ten years after the entry into force of this Convention for that State Party.'[39]	
Dedicated International Standards	✅		
Explicitly addressed by UN convention	✅		

The challenges to creating new standards can be grouped into two categories. The first is definitional, where lack of agreement on what constitutes an IED, and consequently which IEDs fall under existing international standards, has implications for determining what constitutes this subset of IEDs and how these can be addressed. The lack of a clear definition is not merely an abstract or theoretical complication; it has very real practical implications too. The lack of a clear definition, and corresponding standards risks confusing the best response to addressing any given IED, and as a result, could prolong the dangers faced by civilians, military personnel, and humanitarian workers living and working in areas with IED contamination.

Second, at an operational level, these undefined IEDs are challenging to address for the humanitarian sector as IEDs are an inherently political weapon, one which is often targeted at the sector itself. Operating in modern conflicts where IEDs are prevalent can risk undermining the humanitarian principles that often underpin the modus operandi of those working in the sector.[40] Delivery of aid to one area over an another could be perceived as demonstrating partiality in a conflict, for example, and clearance of a seemingly obsolete IED may in fact be construed as assisting other armed groups in the conflict. The principles of impartiality, neutrality, humanity and independence, and the perception of them, can

therefore be challenged in these circumstances, and as such, are not effective safeguards for either local or international staff.

It is clear, then, that a new concerted approach is warranted to specifically address the IEDs that fall beyond the scope of IMAS. As today's conflicts are increasingly between a hybrid mix of actors, often including various non-state actors, the remedies are more complicated. The use of IEDs by such actors who are not bound by state treaties presents a whole new myriad of complications, as agreements and resolutions signed at the supranational level hold no real enforceable power over non-state actors. When these devices are deployed, particularly in areas outside of the formal government's control, which are in many cases also a contested space – such as Libya, which saw three separate transitional governments at one time[41] – there is even less oversight and control in terms of their use and deployment. Having a framework for assessing these devices in a context such as this may help operators more safely understand and address the threat of IEDs.

37 Article 2, Convention on the Prohibition of the Use, Stockpiling, Production and Transfer of Anti-Personnel Mines and on their Destruction, 1997
38 Landmine Monitor, 2015
39 Article 5, AP Mine Ban Convention
40 For a more indepth discussion on the impact of IEDs on the humanitarian sector refer to "The Impacts of IEDs of the Humanitarian Space in Afghanistan", Hannah Bryce and Henry Dodd, Chatham House, April 2015

41 See Jebnoun, N. (2015) 'Beyond the mayhem: Debating key dilemmas in Libya's statebuilding', *The Journal of North African Studies*. 20:5. Pp. 832-864 [Online] Available from: http://www.tandfonline.com/doi/abs/10.1080/1362938 7.2015.1068697 (Accessed 6 December 2016)

2. The definitional challenge

A lack of definitional agreement has significantly contributed to the absence of a coherent and coordinated response by the international community. In addition, the effectively limitless forms that IEDs can take, deriving as they may from such a broad range of sources, has meant that approaches such as prohibitions on specific materials have only served to hinder, but not prevent, IED production.

IEDs: A challenge even by definition

The threat of these devices is not new. Although the term 'IED' was coined by the British Army during the Northern Ireland conflict to refer to booby traps made by the IRA,[42] IEDs have been used in military battles for much longer. Although their first recorded use was as early as 1585 in Antwerp, Belgium, during the Eighty Years' War to end the Spanish occupation of Dutch territories, IEDs have been a consistent feature in warfare since the 20th century, with their use being recorded during both the Second World War and the Vietnam War.[43] From the US perspective, the term 'IED' entered into common usage during the Iraq War, which commenced in 2003.[44] It is in the 21st century, however, that their use has become increasingly prevalent in both conflict zones and in stand-alone attacks. Recent research has shown ISIS producing IEDs on a 'quasi-industrial scale',[45] and in Iraq the number of IED explosions in 2015 increased by 80 per cent from 2014.[46]

Military definitions of the threat differ considerably. NATO defines an IED as 'a type of unconventional explosive weapon that can take any form and be activated in a variety of ways',[47] whereas the US Department of Homeland Security understands an IED attack as 'the use of a 'homemade' bomb and/or destructive device, to destroy, incapacitate, harass or distract'.[48] The most comprehensive definition of the problem, and the definition that has now been used in the Report of the UN Secretary-General on this issue[49] and the recently published IED lexicon,[50] is provided by the United Nations International Ammunition Technical Guidelines (UN IATGs), which states that an IED is:

> A device placed or fabricated in an improvised manner incorporating explosive material, destructive, lethal, noxious, incendiary, pyrotechnic materials or chemicals designed to destroy, disfigure, distract or harass. They may incorporate military stores, but are normally devised from non-military components.[51]

In the academic community, the absence of a comprehensive definition of IEDs stems from disagreement over whether IEDs should be characterised in terms of their components, degree of sophistication, mode of delivery, initiation type, perpetrator identity, or their explosive ingredients.[52]

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42   Defence Industry Reports (2009) *IEDS – Learning from History*. [Online] Available from: http://www.defenceindustryreports.com/ieds_learning_from_history.html (Accessed 8 November 2016).

43   Lucci, E. B. (2006) 'Improvised Explosive Devices', in Ciotonne, G. R. (ed.) Disaster Medicine. 3rd ed. Philadelphia: Mosby Elsevier. P. 434.

44   National Academies & Department for Homeland Security, (n.d.). 'IED Attack: Improvised Explosive Devices', *News & Terrorism: Communicating in a Crisis.* [Online] Available from: https://www.dhs.gov/sites/default/files/publications/prep_ied_fact_sheet.pdf (Accessed 8 August 2016).

45   Conflict Armament Research, *Tracing the supply of components of IEDs used in Islamic State IEDs*. February 2016. P. 6. [Online] Available from: http://www.conflictarm.com/wp-content/uploads/2016/02/Tracing_The_Supply_of_Components_Used_in_Islamic_State_IEDs.pdf (Accessed 9 November 2016).

46   Bhojani, F. 'How ISIS Makes IEDs'. *Foreign Affairs*. 2 March 2016. Available from: https://www.foreignaffairs.com/articles/2016-03-02/how-isis-makes-ieds

47   North Atlantic Treaty Organisation, 'Improvised Explosive Devices'. [Online] Available from: http://www.nato.int/cps/en/natohq/topics_72809.htm (Accessed 8 August 2016).

48   National Academies & Department for Homeland Security (n.d.). 'IED Attack: Improvised Explosive Devices', *News & Terrorism: Communicating in a Crisis.* [Online] https://www.dhs.gov/xlibrary/assets/prep_ied_fact_sheet.pdf (Accessed 8 August 2016).

49   United Nations General Assembly, *Report of the UN Secretary-General, Countering the threat posed by improvised explosive devices*. UN Doc A/71/187, 24 July 2016. [Online] Available from: http://www.un.org/ga/search/view_doc.asp?symbol=A/71/187 (Accessed 30 November 2016).

50   Improvised Explosive Device Lexicon, UN Mine Action Service, 2016.

51   United Nations, (2011). 'International Ammunition Technical Guidelines (IATG)', *Glossary of Terms, Definitions and Abbreviations*, Document 01.40:2011(E).

52   Gill, P., Horgan, J. & Lovelace, J. (2011). 'Improvised Explosive Device: The Problem of Definition', *Studies in Conflict and Terrorism*, 34, p. 733.

Initiation devices for improvised explosive devices found in Helmand Province, Afghanistan (Crown copyright)

Attempts to define the IED problem through legal instruments have also created confusion. The only legal instrument which explicitly mentions IEDs is the Amended Protocol II of the Convention on Certain Conventional Weapons (AP II CCW). Article 2.5 of AP II CCW states that the term 'other devices' refers to:

> … manually-emplaced munitions and devices including improvised explosive devices designed to kill, injure or damage and which are actuated manually, by remote control or automatically after a lapse of time.[53]

Despite the lack of a clear definition of an IED, many IEDs do fall within the definitions provided by IMAS of a landmine or UXO, and therefore come under the remit of IMAS. In IMAS, an anti-personnel landmine is defined as 'a mine designed to be exploded by the presence, proximity or contact of a person and that will incapacitate, injure or kill one or more persons'.[54] A UXO is

defined in IMAS as 'explosive ordnance that has been primed, fused, armed or otherwise prepared for use or used. It may have been fired, dropped, launched or projected yet remains unexploded either through malfunction or design or for any other reason'.[55]

IEDs that fall outside of this description will remain problematic to define, as they can vary extensively in design and methods of deployment. Categorical definition will not therefore be that useful. Rather, new standards will need to employ a broad definition that can encompass a wide range of potential IEDs. They are likely to provide guidelines dependent on *how IEDs are triggered* (eg command-operated, time-operated, victim-operated) and, crucially for humanitarian operators, *the context in which they are being used*.[56]

Limits of licensing

The almost limitless range of materials that can be used to make IEDs makes regulating their components both challenging for policymakers and those operating in the field. IEDs can be detonated as car-bombs, suicide bombs, roadside bombs and as non-specific devices. Action on Armed Violence's Explosive Weapons Monitor has found 58 per cent of IED incidents to be caused by non-specific devices with multiple types of detonation.[57]

This has made the design of effective policies to address the growing IED problem highly complex on various fronts. First, the improvised nature of IEDs renders bans on possible materials ineffective and unrealistic. This is particularly true with regards to dual-use precursor materials – such as ammonium nitrate, which is used in fertilizer – where there are legitimate applications of the materials. When highly sophisticated devices can be created from materials as publicly available as fertilizer, licensing – which has been somewhat effective in regulating and controlling the proliferation of other explosive devices such as cluster munitions – becomes much less effective. Other components, such as aluminium paste and urea, are not subject to transfer controls, meaning that their supply remains largely unregulated and poorly monitored.[58] In the case of ISIS activity

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53 United Nations (1996). 'Protocol on Prohibitions or Restrictions on the Use of Mines, Booby-Traps and Other Devices as Amended on 3 May 1996 (Protocol II as Amended on 3 May 1996) Annexed to the Convention on Certain Conventional Weapons which may be Deemed to be Excessively Injurious or to have Indiscriminate Effects', p.3.
54 IMAS 3.14 http://www.mineactionstandards.org/fileadmin/MAS/documents/imas-international-standards/english/series-04/IMAS-04-10-Ed2-Am3.pdf
55 IMAS 3.273: http://www.mineactionstandards.org/fileadmin/MAS/documents/imas-international-standards/english/series-04/IMAS-04-10-Ed2-Am3.pdf
56 N.B. There are victim operated IEDs that would not be considered a landmine in any sense, such as an IED that detonates when a person opens a door or picks up an item.
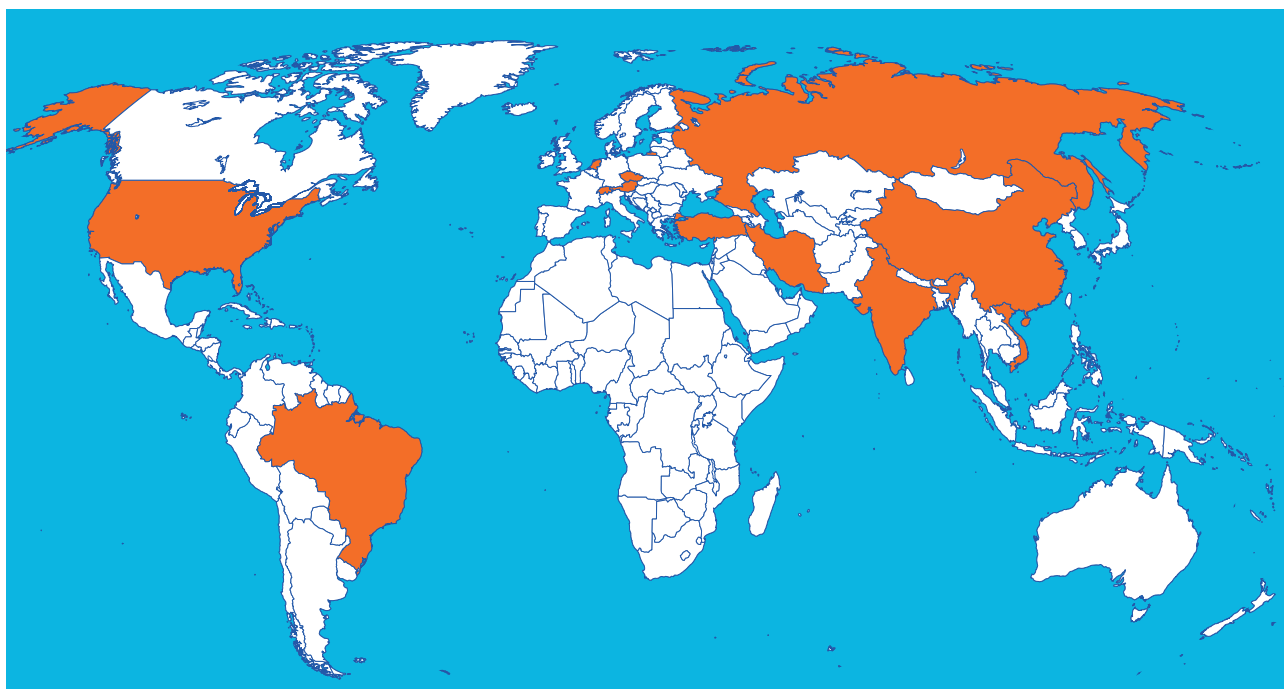57 AOAV Explosive Weapons Monitor 2015, p. 29.
58 Conflict Armament Research (2016) P. 7.

in Iraq and Syria, their proximity to mining and agricultural societies in Iraq and Turkey has facilitated the supply of IED components. A recent study by Conflict Armament Research has found that the supply chain for IEDs used by ISIS in Iraq and Syria spans over 20 countries.[59] This goes some way to explaining the speed at which ISIS is able to produce IEDs.[60]

One component of IEDs that can more easily be tracked is detonators. Detonators are difficult, but not impossible, to improvise. Tracking the use and flow of commercial detonators (which are used by, for example, mining companies) may be advisable since they are one component that, while not ubiquitous in IEDs, is nonetheless widely used. Their limited application also means that monitoring the use is less challenging than, say, that of peroxide, or other dual-use chemicals.[61]

An added complication to licensing is how to enforce it. Licensing is a tool that requires the compliance of states, and enforcement at both the state level and the supranational level would therefore require states to have control over the modes of IED production. However, IEDs are largely produced by non-state actors, meaning they are beyond state control. This makes the enforcement of licensing all but impossible, rendering it only a partial solution.

Figure 3: Countries of origin of identified material from IEDs manufactured by ISIS

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59   Conflict Armament Research, *Tracing the supply of components of IEDs used in Islamic State IEDs.* February 2016. P. 8. [Online] Available from: http://www.conflictarm.com/wp-content/uploads/2016/02/Tracing_The_Supply_of_Components_Used_in_Islamic_State_IEDs.pdf (Accessed 9 November 2016).
60   Conflict Armament Research (2016) p. 7.
61   UNIDIR (2015) Addressing Improvised Explosive Devices: Options and Opportunities to Better Utilize UN Processes and Actors. Pp. 35 [Online] Available from: http://www.unidir.org/files/publications/pdfs/-en-641.pdf (Accessed 7 November 2016).

3. The operational challenge

There is no doubt that in designing IEDD standards, international agreement will be key to their successful implementation. Yet although there seems to be recognition that something must be done to address IEDs – as demonstrated by the increase in counter-IED guidelines and the number of working papers published[62] – there is very little consensus on what shape this would take. Although AP II of the CCW mentions IEDs (indeed, it is the only legally binding instrument which does so),[63] it is not the most effective forum through which to address the totality of the issues that IEDs present, not least because IEDs are predominantly used by non-state actors who are not signatory parties to legal instruments such as the CCW.[64]

Within the UN, attempts at regulating IEDD standards at a strategic level have so far been limited – at least until the recent process involving 11 member states and NATO, coordinated by UNMAS, to draft humanitarian IEDD standards got underway at the end of 2016. Prior to this, the onus was on various working committees established to address issues such as counter-terrorism measures or denying terrorist organisations weapons of mass destruction. These inevitably touched on IEDs, but clearly they were not their main focus.[65]

Part of the issue is the sheer range of UN actors and agencies, each of which approach IEDs in different ways, depending on whether their interest lies in disrupting the network, preparing peacekeepers or protecting civilians. UNMAS is the predominant agency currently involved in IEDD due to its expertise in mitigating the threat of explosive hazards. UNMAS also provides support to the Office for Military Affairs, tasked with mission-specific matters such as capabilities and IED survibability.[66] The UN Office for Disarmament Affairs (UNODA) developed the International Ammunition Technical Guidelines (IATGs), which recommend an integrated risk and quality management system.[67] On the security operations front, the UN Counter-Terrorism Implementation Task Force established its Counter-Terrorism Centre in 2011.[68] IEDs, however, have a far more tangible impact on the Department of Peacekeeping Operations (DPKO) through the increased targeting of peacekeepers.[69]

The UN is not alone is trying to cope with the IED problem; indeed, there have been some initiatives outside of the UN system that have focussed quite successfully on countering IEDs. An initiative by the World Customs Organisation, INTERPOL and the UN Office on Drugs and Crime (UNODC) has proven successful in improving the monitoring and tracking of illicit materials that can be used in IEDs at the international level. Programme Global Shield (PGS) has resulted in information-sharing on 14 precursor chemicals used in IEDs among over 90 countries. Through the programme's four-pillar approach – namely, information and intelligence,

62 See for example NATO, *Countering Improvised Explosive Devices (C-IEDs)*. http://www.act.nato.int/c-ied; European Defence Agency, *Counter-IED*. 1 June 2015 https://www.eda.europa.eu/what-we-do/activities/activities-search/counter-ied

63 UNIDIR (2015), p. 17.

64 Group of Experts of the States Parties to CCW Amended Protocol II (2016) Food-for-thought-paper. P. 1. [Online] Available from: http://www.unog.ch/80256EDD006B8954/(httpAssets)/B6BCC612CBA1455BC1257F8D004C77B3/$file/CCW+APII+IED+Food-for-thought+Paper+2016.pdf (Accessed 4 November 2016).

65 For an overview see UNIDIR, (2015) *Addressing Improvised Explosive Devices: Options and Opportunities to Better Utilize UN Processes and Actors.* Pp. 20-21 [Online] Available from: http://www.unidir.org/files/publications/pdfs/-en-641.pdf (Accessed 7 November 2016).

66 Marcaillou, A. 'United Nations Overview of the Improvised Explosive Device Situation and Reflections of a Coherent Response', speech delivered at the International Counter Improvised Explosive Device Leaders Forum. Canberra, 3 September 2015.

67 UNIDIR (2015), p. 24.

68 UNIDIR (2015), p. 26.

69 DPKO has been particularly affected because the use of IEDs by NSAGs has at times derailed their efforts, causing alterations in their mission mandates on the ground. For example, following an IED attack at the UN headquarters in Baghdad on 19 August 2003 which killed the UN Special Representative and 21 international and NGO staff, the UN consequently withdrew the majority of its personnel from Iraq, leaving 60 international staff members in the country, and effectively ceased all its operations, including reconstruction and development activities, until Feburary 2005. See Wilkinson, A., Bevan, J. and Biddle, I. (2008) 'Improvised Explosive Devices (IEDs): An Introduction', in Bevan, J. (ed.) Conventional Ammunition in Surplus: A Reference Guide. Geneva: Small Arms Survey, Graduate Institute of International Studies; Sciolino, E. and Hoge, W. 'The stuggle for Iraq: Diplomacy; UN to send exprt teams to help in Iraq, Annan says', *New York Times*. 28 January 2004. http://www.nytimes.com/2004/01/28/world/struggle-for-iraq-diplomacy-un-send-expert-team-help-iraq-annan-says.html?_r=0 (Accessed 12 December 2016).

capacity building, enforcement operations, and evaluation and assessment – it attempts to increase operational capabilities aimed at reducing the IED threat. In 2014 alone, border control agencies acting under the PGS initiative seized 61,880 kilograms of solid precursors and 67,101 litres of liquid precursors. This is in addition to 60 complete IEDs seized, and parts and accessories for IEDs, including 306 sticks of explosives, 46 detonators and 16 batteries for suicide vests.[70] So while not eliminating the flow of materials for IED production, this initiave is reducing the flow of materials.

Nonetheless, the overarching picture is one of multiple agencies and multiple actors, both from within the UN, and beyond it. This makes for a complex picture, underscoring the lack of leadership on the issue of IEDD at a supranational level. In the UN context, while some Member States have begun to take the issue forward, their objectives are not necessarily the same as some of the individual UN agencies. In 2015, however, Afghanistan proposed a UN resolution in the General Assembly, which was unanimously adopted, aimed at addressing the problem.[71] This was followed by a second resolution being adopted in October 2016 which proposes further steps towards addressing the IED issue.[72] This resolution, while successfully highlighting the issues of countering the IED threat, did not go as far as to make specific recommendations with regards to developing and implementing guidelines for IED clearance.

The resolution also raised another key issue around information-sharing. As the resolution notes, a full understanding of the IED threat is a vital tool for combatting IEDs. But it is currently hampered by patchy, incomplete or inconsistent data capture among member states. As an important UNIDIR report points out, one reason for this is that public access to relevant information on individual states' counter-terrorist

activities is often restricted and less transparent.[73] Part of the reason for this is to avoid giving any advantage to those violent NSAGs that states are attempting to combat. But in doing so, states are also simultaneously hampering international cooperation and sharing of best practices in combatting the IED threat. The General Assembly resolution put forward by Afghanistan underlines the necessity of information sharing, yet the extent to which this will be acted upon remains questionable as long as there exists no wider framework for how that data will be utilised. Moreover, until recently, responses to IEDs were often dealt with in the military realm, rather than by the UN and wider international community.[74] A second reason, however, is that member states want to avoid giving any advantage to those violent NSAGs that they are attempting to combat. A third reason is that data is collected differently by different stakeholders. As discussed previously, research for this policy briefing suggests that operators, while all collecting similar and relevant data, record and categorise it differently. Agreeing a basic standard for what data should be collected, and how, in a humanitarian context, would make an important contribution to building a comprehensive picture of what the full threat and impact of IEDs are.[75]

Calls for better information sharing are not new,[76] yet their impact remains limited. This is in part due to the sensitivity of the data, and in part simply because raw data on IEDs is hard to come by – despite a number of organisations currently involved in data collection activities.[77] But in failing to collect and share information, states are also simultaneously hampering international cooperation and learning of best practices in combatting the IED threat. The General Assembly resolution put forward by Afghanistan underlines the necessity of information sharing, yet the extent to which this will be acted upon remains

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70 World Customs Organisation (2015) Illicit Trade Report 2014. Brussels: World Customs Organisation. Pp. 105-106. [Online] Available from: http://www.wcoomd.org/en/topics/enforcement-and-compliance/activities-and-programmes/security-programme/~/~/media/WCO/Public/Global/PDF/Topics/Enforcement%20and%20Compliance/Activities%20and%20Programmes/Illicit%20Trade%20Report%202012/ITR%202014%20EN.ashx (Accessed 8 November 2016).

71 See UN General Assembly 'Countering the threat posed by improvised explosive devices'. UN Doc A/Res/70/46. 11 December 2015.

72 United National General Assembly, *Countering the Threat Posed by Improvised Explosive Devices.* L.68.Rev.1 28 October 2016. [Online] Available from: http://www.un.org/ga/search/view_doc.asp?symbol=A/C.1/71/L.68/Rev.1 (Accessed 27 March 2017).

73 UNIDIR (2015), p. 20.

74 Marcaillou, A. 'United Nations Overview of the Improvised Explosive Device Situation and Reflections of a Coherent Response', speech delivered at the International Counter Improvised Explosive Device Leaders Forum. Canberra, 3 September 2015.

75 For example, in their recent policy brief, the Mines Advisory Group (MAG) suggest a minimum disaggregation of improvised munitions in humanitarian mine action operations into seven categories. Humanitarian Response, Improvised Landmines and IEDs: Policy issues for principled mine action, MAG Policy Brief, November 2016, p12

76 Small Arms Survey (2014) Countering Improvised Explosive Devices. Research Notes No. 46. P. 2. [Online] Available from: http://www.smallarmssurvey.org/fileadmin/docs/H-Research_Notes/SAS-Research-Note-46.pdf (Accessed 8 November 2016).

77 Hunter, J. (2014) Tracking IED Harm: Monitoring improvised explosive devices and why we need the data. London: AOAV. P. 29.

questionable as long as there exists no wider framework for how that data will be utilised. It is for precisely this reason that creating a more comprehensive framework to approaching IEDD needs to include a more standardised approach to data collection. Generating a more complete picture of the IED threat would also help provide evidence for policymakers seeking to leverage change within their own jurisdictions, and in multilateral fora like the UN.

In addition to multiple actors and an incomplete information picture of the IED threat, there is the problem of mandates. IEDs impact the humanitarian sector in general, but humanitarian mine action organisations in particular. It is these organisations which often have to physically address the threat of IEDs, complicating their relationship with stakeholders on the ground. Beyond supranational approaches, there are therefore various dimensions to tackling IEDs in the field. There is the difference between humanitarian action aimed at saving lives in the immediate term, and military action aimed at stabilising the security situation. This issue is further complicated in the mine action sector, where the mandate of the activity is less clear-cut. Mine action work can be undertaken in order to fulfil either a military or a humanitarian mandate, or at times both. There is a risk, therefore, of the two sectors being confused and conflated by parties to a conflict. This has had severe, and occasionally deadly, consequences, with a rise in attacks on humanitarian aid workers as a result of blurred lines between military and humanitarian operations.[78]

Military involvement in demining activities has benefits in that demining is traditionally a military task, and so military actors bring a wealth of expertise with regards to clearance and disposal activities, including IEDD.[79] Yet clearance is merely one of the pillars of humanitarian mine action; military involvement in other pillars such as risk education is more contested, and a role perhaps better suited for those NGOs specialising in humanitarian mine action. UN guidelines on military involvement in humanitarian mine action, which have been approved by the Inter-Agency Coordination Group on Mine Action during a meeting chaired by the Under-Secretary-General for Peacekeeping Operations, state that:

'Unless provided in peace treaties, arrangements with militaries should be restricted to circumstances where the militaries are not party to any conflict, open or latent, local or regional, and they do not have the potential to become party to such conflicts'.[80]

In addition to their clearance role, military personnel are also often the targets of IEDs. Casualties recorded a peak of coalition forces fatalities in Afghanistan in 2009, where deaths caused by IEDs accounted for nearly 61 per cent of all coalition fatalities.[81] Here, there is a clear parallel with humanitarian actors involved in IEDD activities. Aid workers, too, are increasingly targeted: in 2013, there was a recorded 66 per cent increase in their being victims of deliberate violence compared to the previous year.[82] A study by the Peace Research Institute Oslo found that the presence of large UN peacekeeping forces with traditional mandates to police a buffer zone or assist in the negotiation of a peace agreement was correlated with increased attacks on aid workers.[83]

If the target of the IED is humanitarian operators, it may lead to the unintended situation where humanitarian organisations are inadvertently engaging, or perceived to be engaging, in a counter-terrorism operation – creating an even more challenging operating environment and potentially contradicting organisational mandates and values. Hence there is a need for a clearer mutual understanding of mandates which seeks to better define HMA organisations' and the military's role in IED clearance. Without an improved division of labour, both military personnel and humanitarian aid workers are likely to continue to be put at risk. This risk also has a multiplier effect, whereby following a deliberate or even non-targeted IED attack, aid agencies revise their mandates, which can have consequences such as the relocation of their programmes and services, meaning they do not reach those most affected. This operational dimension therefore has a very real impact on the ground beyond the immediate

78 Bryce and Dodd, p. 6.
79 GICHD (2003) The role of the military in Mine Action. Geneva: Geneva International Centre for Humanitarian Demining. P. 18.
80 Taken from GICHD (2003) *The role of the military in Mine Action.* Geneva: Geneva International Centre for Humanitarian Demining. P. 11.
81 iCasualties, 'IED Fatalities'. [Online] Available from: http://icasualties.org/OEF/Index.aspx (Accessed 9 November 2016).
82 Humanitarian Outcomes (2014) Unsafe passage: Road attacks and their impact on humanitarian operations. Aid Worker Security Report. P. 3. [Online] Available from: https://aidworkersecurity.org/sites/default/files/Aid%%20Worker%%20Security%%20Report%%202014.pdf (Accessed 9 November 2016).
83 Hoelscher, K., Milklian, J., Mokleiv Nygård, H. (2015) *Understanding attacks on humanitarian aid workers*. Conflict Trends No. 6. Olso: Peace Research Institute Oslo. P. 3.

blast of the IED. Humanitarian IEDD standards would, in part, provide this division of labour by professionalising the sector and thereby delineating a clearer course of action.

The limited progress on IEDD, then, is partly a consequence of three issues: first, the sheer range of stakeholders, actors and agencies; second, the lack of a clear understanding of the IED threat and third, a difficulty in formally demarcating mandates for different stakeholders. However, in our view, despite these issues, there are UN actors and processes with the potential to more effectively address IEDs, but if they are to do so, greater coordination of the myriad players will be needed, and this in turn will require greater leadership and strategic direction. Ultimately, as we argue below, it is precisely the question of leadership that needs to be solved in order to make progress towards developing humanitarian IEDD standards.

4. Moving forward: Developing IEDD standards

Military approaches to combatting IEDs have tended to treat them as a part of an ongoing conflict, rather than as drivers of instability and facilitators of humanitarian crises. The US army field manual, for example, understands the IED as 'merely the end product of a complex set of enemy activities'.[84] While this is a valid military assessment, it stops short of conveying the increasing ubiquity of IEDs, particularly in conflicts with non-state actors, and of defining the complex conditions their use and deployment causes to the humanitarian sector. IEDD standards for humanitarian contexts must therefore be developed with this broader context in mind.

There are a number of questions, then, to consider when developing IEDD standards, including what process should be used to develop and implement them, and what are the implications of their use for humanitarian IEDD operators in certain insecure contexts, as well as a recognition that, as a result, IEDD activities by humanitarian operators will need to be undertaken at the discretion of the operators, depending on the context.

IEDD standards' predecessor: IMAS

The development of IEDD standards is not a novel approach to addressing the explosive threat IEDs pose to humanitarian operations; rather, it is simply a logical starting point. UNMAS currently provides IEDD support through mine action programmes, and has already cleared over 590 remnant IEDs.[85] Moreover, IEDD guidelines are already embedded within some national-level mine action standards, such as Azerbaijan's, which outline important functions of IEDD, including

methods of clearance, disposal in situ, pulling, safety, and the reporting of IED incidents.[86]

Currently, the majority of IEDs being recorded and addressed by humanitarian operators fall under the definitions provided by IMAS[87] and therefore within the remit of the UN agency concerned with mine action, UNMAS. IMAS have provided guidance to an international mine action community which has led to the disposal of over 1.48 million anti-personnel and 82,000 anti-vehicle mines in the past five years alone.[88] Such strides in countering this threat, which has resulted in 96,592 casualties since 1999,[89] is commendable, and an excellent example of success that can guide the approach for future IEDD solutions. Although IMAS are not solely responsible for these developments, as rapid advances in technology, generous national and international donations, and effective training have all made significant contributions, the international coordination and cohesion consolidated through the application of these standards has represented an important platform from which to address explosive threats.

Given that the consultative process used to develop IMAS has proven highly successful, as evidenced by the professionalisation of the sector and the high levels of clearance achieved by mine action operators, the development of IEDD standards could usefully mimic that of IMAS. The consultation and continuous review of these standards has allowed for the necessary flexibility and adaptability of the standards as the scope of mine action has changed since 1997, when the groundwork for IMAS was laid. This inclusive and agile approach would be beneficial in the development of IEDD standards, helping to

84   United States, Department of the Army (2005) 'Improvised explosive device defeat'. FMI 3-34.119/MCIP 3-17.01. P. 1. [Online] Available from: https://fas.org/irp/doddir/army/fmi3-34-119-excerpt.pdf (Accessed 9 November 2016).

85   UNMAS, UN Mine Action Gateway, 'Improvised Explosive Devices', (Accessed: 26/07/16: http://www.mineaction.org/issues/improvised-explosive-devices)

86   Government of Azerbaijan, '16. Improvised Explosive Device Disposal (IEDD)', Azerbaijan Mine Action Standards, p. 55.

87   This is supported by information gathered privately in interviews with MAG, HALO and Optima, and also from discussions from a roundtable held in Chatham House on 28th October 2016.

88   International Campaign to Ban Landmines, (2015). 'Landmine Monitor 2015', p. 2.

89   Data sourced from Landmine Monitor reports, 1999-2014. Available from: http://www.the-monitor.org/en-gb/our-research/landmine-monitor.aspx (Accessed 15 July 2016)

ensure that a comprehensive understanding of their application is developed and consolidated during their development. This is both in terms of how the standards apply to those devices currently not covered by IMAS, and the context and constantly changing operating environments in which they can be found. IMAS was developed gradually through a consultative process with a range of stakeholders and actors, and has been successful in large part precisely because of this balanced process. IMAS has gradually become broader, expanding its scope to include risk education and stockpile management, in addition to humanitarian mine action and clearance.[90] With the successful adoption of IEDD standards, IMAS could be revised such that explosive hazards – be they landmines, UXO or IEDs – clearly fall within the remit of one set of standards or the other.

Leadership and strategic direction

As this policy briefing has demonstrated, there currently exists a lack of leadership and strategic coordination with regards to IEDD efforts in a humanitarian context. If the mine action community, and more importantly, the international community, is serious about addressing this growing and pressing problem, leadership to drive forward progress at the strategic level is simply essential. Without this, making progress towards humanitarian IEDD standards risks being pushed down policymakers' agendas by other issues.

There are numerous options that could facilitate better coordination, strategic direction and institutionalised leadership. One way to achieve this would be to establish a new UN body or role to coordinate the various efforts underway to address the range of explosive hazards. However, this is likely to be onerous and require a time-consuming recalibration of major international architecture that may end up delaying progress. Instead, a more straightforward approach may be to focus on bolstering and reinforcing the leadership role already played through existing structures. A compelling choice for this role would likely be UNMAS, as they already perform a coordination function through chairing the Inter-Agency Coordination Group on Mine Action. It would be possible to strengthen and broaden this role to include coordination of the whole host of

efforts underway to address the litany of explosive hazards.

As part of this leadership role, UNMAS could provide oversight of all international standards concerning IEDs, landmines and other explosive weapons. By cross-collating all applicable explosive weapons standards (IMAS, IEDD, and relevant others) with the five cornerstones of mine action – namely, advocacy, risk education, victim assistance, stockpile destruction and clearance – this would enable better coverage of possible situations and contexts. It would also help illustrate where the gaps in standards lie, provide a space to address these where necessary, and allow for better-informed leadership in this area. The precedent set by UNMAS with landmines provides an example of a model in which this has worked well.

Whether achieved through a new overarching body or through UNMAS, we see three benefits to this approach. First, it would act as a place for these international humanitarian IEDD standards to live. Second, by acting as the leading agency on IEDD, it would fill the leadership gap mentioned. This, in turn, would be a way of enabling future work on IEDD, thus professionalising the sector. Finally, it would allow for expertise to be shared in a secure environment, thereby circumventing current fears about sensitive information falling into the wrong hands. Focussing on humanitarian disposal purposes rather than military ones, the agency would in essence become the central coordinating body for policy issues and regulation relating to explosive weapons, as well as determinative action. As such, this would allow best practice in explosive weapon disposal to be shared across the complex range of devices and their diverse uses. Our hope, therefore, would be that international humanitarian IEDD standards generate progress in the form of enhanced data-gathering, better information-sharing, and improved sharing of counter-IED resources, culminating in fewer civilians and humanitarian workers being maimed or killed by IEDs in hostile operating enviroments.

IEDD standards: The need for discretion

Humanitarian aid workers in hostile environments are inevitably less well protected against IED threats than their military counterparts. A report by Humanitarian Outcomes, however, demonstrates that roadside attacks on aid workers are on the rise, but measures to combat direct

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90   GICHD (2010) *A guide to International Mine Action Standards.* Geneva: Geneva International Centre for Humanitarian Demining. P. 11.

attacks are limited for NGOs either by their mandate or by budgetary constraints.[91] The increase in attacks on aid workers has forced humanitarian organisations to face a tough dilemma, as while building up security around humanitarian envoys may safeguard aid workers more, it also runs the risk of further militarising aid work and separating humanitarian organisations from local populations, which in turn increases the likelihood of being targeted.[92] Guaranteeing humanitarian principles and ensuring the integrity of both military and non-military actors calls for a separate set of IEDD standards for, on the one hand, those working in the humanitarian sector and, on the other, for those working in a military capacity and therefore linked to political and security operations. The danger, however, is that this distinction between mandates is not clear to parties to the conflict who are deploying the IEDs.

A key question, therefore, is the extent to which humanitarian organisations, including those currently engaged in mine action, should be involved in IEDD. As Keeley notes, it is notably more challenging for humanitarian organisations to abide by their principles of neutrality and impartiality when they are dealing with active IEDs in hostile environments.[93] The neutrality of humanitarian organisations – particularly those operating in the field specifically to undertake IEDD activities, but UN organisations too – may be compromised when having to cooperate with military actors who are partial in a conflict. Where aid becomes tied to political and security objectives, there are significant impacts on the way aid workers are perceived by the host nation, their mandates, and their risk assessments. Pierre Krähenbühl, in an article written when he was ICRC Director of Operations, draws a link between the militarisation of aid and the witnessed increase in attacks on aid workers.[94]

As such, the recommendation for discretion will be key to the utility of IEDD standards.

The exent to which the standards are useful will depend heavily on how much they are grounded in the daily reality faced by humanitarian staff. The standards must therefore avoid being too restricitive on the operational level, or else they risk being futile in the field. This means that the guidelines must allow for context-specific decision-making, to permit humanitarian organisations the necessary level of discretion regarding implementing IEDD operations.

The terminology used in formulating standards is important too. In international relations, perhaps more so than in other disciplines, language matters. The use of particular words or phrases has direct implications for the legitmate use and non-use of action and particular types of force – the labelling of groups as 'terrorists', for example, has practical implications such as the freezing of assets.

In relation to IEDs, the continued use of terminology such as 'pre-conflict', 'conflict' and 'post-conflict' risks being outdated and inaccurate, hindering both progress towards international humanitarian IEDD standards, as well as a real-world understanding of the complex operating environments experienced by military and non-military personnel. With the increased fluidity of interstate conflicts, applying those terms has immediate implications for the kinds of actions that can be undertaken. When it comes to IEDD standards, the operating language must reflect today's challenges. Afghanistan is the prime example of a country which in traditional terms is 'post-conflict', yet, in reality, remains a highly challenging and dangerous operating environment – or, in other words, hostile. Indeed, the use of 'hostile' terminology is a more fitting description of events.

The issue of IEDs is complex and political – that is why IEDD standards require scope for specific contextual understanding and analysis. Experiences of encounters with IEDs can vary vastly according to region, timing and contestation of territory. Each of these individual factors has the capacity to completely alter the outcome of clearance and the way the act of clearance is perceived according to who conducts the clearing.

91 Humanitarian Outcomes (2014) *Unsafe passage: Road attacks and their impact on humanitarian operations.* Aid Worker Security Report. P. 9. [Online] Available from: https://aidworkersecurity.org/sites/default/files/Aid%20Worker%20Security%20Report%202014.pdf (Accessed 9 November 2016).

92 Bryce, H. and Dodd, H. (2015) *The impact of IEDs on the humanitarian space in Afghanistan.* London: Chatham House. P. 9.

93 Keeley, R. (2016) 'Improvised Explosive Devices (IEDs): A Humanitarian Mine Action Perspective'. *Counter-IED Report*. London: Delta Business Media Limited. P. 44.

94 Krähenbühl, P. 'The militarisation of aid and its perils'. Geneva: International Committee of the Red Cross. 22 Feburary 2011. [Online] Available from: https://www.icrc.org/eng/resources/documents/article/editorial/humanitarians-danger-article-2011-02-01.htm (Accessed 8 November 2016).

5. Conclusions

The development and implementation of IEDD standards in the humanitarian context is a tangible step towards combatting IEDs. It is not in and of itself a solution, but rather a component of what must be a multi-faceted approach to the broader and more complex counter-IED effort.

The problem of IEDs is growing, and rapidly, too. Advances made towards addressing the issue will greatly benefit from, and be facilitated by, an internationally agreed definition of IEDs. Additionally, there is a need for political leadership and the will to drive forward approaches that challenge and address the current widespread use and deployment of IEDs. In our view, there is a compelling case to be made for UNMAS to adopt precisely this role, as the organisation already holds the kind of coordinating mandate that will enable it to bring together the multitude of different stakeholders, actors and agencies working on the growing IED threat.

IEDs present a problem for both operators in the field and for policymakers. Any attempts to address the issue must, therefore, be informed by the realities faced by those encountering IEDs. The issue is a vexing one which needs to take account of a wide range of devices, users, and contexts. Where measures are too restrictive, they will render themselves futile.

With impacts reaching beyond the physical and lethal impacts of the direct blast to the longer-term disposal of infrastructure, threatening of livelihoods, and the impeding of humanitarian reponses, any measure that can make a practical contribution to reducing the threat of IEDs should be embraced as but one part of a cohesive, concerted framework to address the IED issue. It is the role and responsibility of the international community to seek solutions to an issue which has such a disproportionate impact on civilians.

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