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## Improvised Explosive Devices and the International Mine Action Standards

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The evolving nature of humanitarian mine action—particularly in areas such as Iraq and Syria—has generated debate as to whether new standards on improvised explosive devices (IED) should be included in current International Mine Action Standards (IMAS), or whether such standards specific to IEDs should stand alone. We invited opinion on this subject, encourage conversation and debate, and welcome responses to be published online and/or in print in Issue 22.1.

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# Improvised Explosive Devices and the International Mine Action Standards

by Guy Rhodes, Ph.D. [ Geneva International Centre for Humanitarian Demining ]

Improvised explosive devices (IED) are not new in mine action; they have contributed to explosive ordnance contamination in post-conflict settings since the advent of humanitarian demining almost 30 years ago.<sup>1,2</sup>

What is new is that the systematic deployment of IEDs by armed groups is occurring today on a greater scale. The prevalence of use of these weapons by highly visible groups such as the Islamic State has accentuated the profile of IEDs even further. In addition, a large proportion of the IEDs deployed are victim-operated (VOIED) and contribute to a new landmine emergency characterized by a systematic production, standardization of designs, and the deployment of hundreds of thousands of locally-manufactured landmines. These recent developments have led to debate on how IEDs are defined in relation to key conventions such as the *Anti-Personnel Mine Ban Convention* (APMBC), on the required competency levels needed to engage in IED disposal (IEDD) activities, and on the applicability of the International Mine Action Standards (IMAS) to provide the framework for mine action operations concerning IEDs.

This editorial provides a historic perspective on the extent of IEDD operations conducted by mine action actors, explains the scope and applicability of the IMAS to address all explosive ordnance including improvised devices, and suggests amendments to the IMAS to provide improved guidance to respond to IED contamination in a humanitarian context.<sup>3</sup>

## A Historical Perspective

Since the late 1980s, humanitarian demining in Afghanistan has addressed VOIEDs as an integral part of mine action operations. The HALO Trust, for instance, has cleared over 1,400 IEDs in Afghanistan during this period. In Sri Lanka, the same organization has cleared almost 74,000 locally-manufactured landmines (over one-third of all landmines cleared by the organization in Sri Lanka), and some 1,250 more complex IEDs since 2002. In Colombia, a further 280 locally-manufactured landmines were cleared by The HALO Trust between 2013 and 2016.<sup>4</sup>

In Iraq and Syria, during the course of the last 12 months, MAG (Mines Advisory Group) cleared nearly 16,000 IEDs, mostly locally-manufactured landmines, but also sizeable numbers of radio-controlled, and command-detonated anti-vehicle devices that were abandoned (see Figures 3 and 4).<sup>5</sup>

Elsewhere in the world, improvised devices are addressed within mine action programs from Africa (e.g., Angola), to Europe (e.g., Kosovo), and to Southeast Asia (e.g., Thailand). Few major conflicts have occurred where improvised devices have not contributed to explosive contamination. In all these cases, the survey and clearance of improvised devices by mine action operators were undertaken within the framework of the IMAS. Image 2 presents examples of the wide array of IEDs addressed by mine action operators.

Colombia is a case in point. A large portion of the territory in Colombia is contaminated with IEDs laid by armed groups (see Figure 1). The great majority of the IEDs are victim-operated, locally-manufactured landmines (see Image 1), but other types of devices including timer-initiated and command-initiated IEDs are also present. Among further threats, there are gas cylinders used as projectiles, as well as improvised mortars and rockets, which often use explosives that have been prepared in an artisanal manner. In Colombia, 11,485 victims have been recorded since 1990.<sup>6</sup>

Colombia has been guided by the IMAS in its efforts to address this contamination. It has used them to develop a full set of National Mine Action Standards (NMAS) as a framework to manage the national program of land release.

## The Objective and Scope of the IMAS

The IMAS have been developed to provide a safety, quality, and operational framework for mine action and to promote a common and consistent approach to the conduct of mine action operations. The IMAS provide guidance, establish principles, and—in some cases—define international requirements and specifications. They offer a frame of reference, which encourages managers of mine action programs and projects to achieve and demonstrate agreed

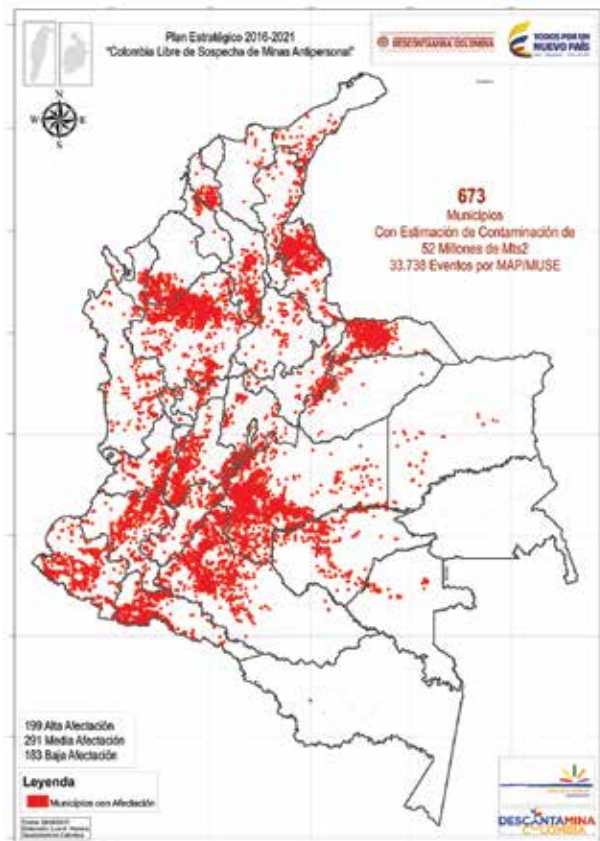


Figure 1. Extent of mine contamination in Colombia (2017).  
Figure courtesy of DAICMA.



Image 1. An example of an improvised landmine found in Colombia.  
Image courtesy of The HALO Trust.

levels of effectiveness and safety. The IMAS provide a common language, and recommends the formats and rules for handling data, which enables the accurate and timely exchange of information.<sup>7</sup>

The IMAS are not themselves standard operating procedures (SOP). They provide a framework for NMAS, local SOPs, rules, instructions, and codes of practice—documents that provide more details on how mine action requirements are to be achieved in a particular context.

Critically, the IMAS are framed by a humanitarian imperative where landmines and explosive remnants of war (ERW) are considered first and foremost a humanitarian concern and should be addressed from a humanitarian perspective (see Figure 2). In this regard, the framing of standards and their application to national mine action programs reflect the fundamental humanitarian principles of neutrality, impartiality, equality, and humanity so that mine action is focused on giving support to those who are most vulnerable.<sup>8</sup>

Mine action operations are therefore not defined by weapon type (i.e., they include improvised devices) but by the objectives they pursue (i.e., humanitarian) and by the context in which they are conducted (i.e., one that permits respect for humanitarian principles).

As mentioned, the engagement of mine action operators in IEDD has, and should continue to follow, the same principles

*What are the limitations for mine action operators to engage with IEDs? Is this different from other explosive devices?*

used for humanitarian demining operations. As such, engagement should continue to be based on a positive response to the following four questions:

- Is the aim of the task humanitarian (as opposed to security or military)?
- Is the environment conducive for safe and secure operations?
- Is humanitarian access possible and the device **out of play and cold**?<sup>9</sup>
- Does the operator have the necessary skills and equipment to undertake the relevant search and disposal operation?

If a threat assessment determines that an IED is still within an **active setting** and no humanitarian access is possible, then it is a matter for relevant security forces to address. Furthermore, if a device is of a complexity that requires a skillset or equipment that is not present, then additional internal competencies must be developed, equipment purchased or specialist assistance requested. Such an approach is not restricted to IEDs but is the same for all explosive ordnance disposal (EOD) operations concerning landmines and ERW.

None of this is meant to downplay the challenges associated with responses to IEDs. However, it is important to note that adopting a sound, risk-management approach for IEDs is similar to that for the wide spectrum of unexploded ordnance (UXO), which can range from simple items, such as grenades, all the way through to complex items such as surface-to-air missiles with hypergolic, liquid-fueled systems.

#### Factors that Complicate the Debate on IEDs

Current debates on who should be doing what and where with regards to IEDD, particularly in the Middle East, are testament to





Figure 2. A schematic to illustrate the objective and scope of the IMAS. The IMAS provide a framework to guide mine action in pursuit of its humanitarian objectives and in accordance with humanitarian principles.

Figure courtesy of GICHD.

the existence of differing perspectives on IEDs. Military, commercial, and NGO operators all have valid positions but also different objectives and references in their work, as well as different modalities, competencies, and capabilities.

The current debate has some strong parallels with those associated with the early days of mine action when

- Issues of ownership of the topic of demining between NGOs, commercial, and military took place.
- NGO involvement in broader EOD—in addition to demining—was questioned.
- Challenges existed in understanding requirements for a transition from a military context to a humanitarian one.
- There was a need to establish competence requirements for humanitarian operations and associated training responses.

In all these past instances, the conclusions of the debates resulted in the increase of empowerment of mine action actors and ultimately the strengthening of the IMAS to more comprehensively frame operations that support humanitarian objectives.

In the current debate on **ownership** of the IED issue, it is important to safeguard the IMAS as the principle framework for IEDD work that is bounded by the objectives and contexts appropriate for mine action. To optimize the effectiveness of IEDD activities, however, collaboration between military, commercial, and NGO operators is important at a procedural level, including appropriate information exchange.

Current discussions on IEDs from both a political and operational perspective are complicated by the term **IED**, that is not at all specific but used to describe many different devices which may have only one thing in common—the fact that their construction is improvised or that they are locally-manufactured. The many types and classifications of IEDs vary from simple to complex, and have been characterized in a lexicon published by the United Nations Mine Action Service (UNMAS).<sup>10</sup> They include time-delayed IEDs, projected IEDs, and command IEDs, including suicide IEDs in vests and on vehicle-borne platforms.

There is also a supposition that IEDs are all complex devices, whereas, in reality, while they can present considerable additional technical challenges during search and disposal operations, IEDs can also be relatively simple and standardized in design. The vast majority of IEDs addressed to date in Iraq and Syria exist as locally manufactured landmines. They have been produced on a massive scale by the Islamic State and are more readily detected and disposed of than many industrially-manufactured landmines that may, for instance, have a low metal content.

The rising impact of IED **attacks** in public places has been extensively documented by Action On Armed Violence (AOAV).<sup>11</sup> Armed groups play an active and influential role in wars in Afghanistan, Iraq, Libya, Somalia, and Yemen, and pose serious threats to national security in Algeria, Cameroon, Chad, Egypt, India, Indonesia, Kenya, Nigeria, and Pakistan. Such IED attacks

raise the profile of IEDs as an issue of concern, but most incidents relate to car bombs and suicide attacks that fall well outside the parameters of mine action and the IMAS. Such devices and circumstances should be dealt with in separate guides and standards for use by security forces.

Incidents involving IEDs should be unpacked to separate IED **terror attacks** using command detonation from those initiated by victims. IED operations in response to terror attacks fall within the purview of security forces. This is a different context than that where civilians are threatened from enduring contamination from IEDs and that can be addressed during humanitarian operations.

### Applicability of the IMAS to Address IEDs Today

The IMAS as they stand already cover explosive ordnance of an improvised nature. IEDs are included in the current nomenclature found in the IMAS and there are at least nine specific references to IEDs within the existing chapters. These references do not limit the scope of coverage of the IMAS to a certain group of IEDs, such as pressure-plate IEDs, but rather are all-encompassing.<sup>12</sup>

Key terms used by the mine action sector, such as explosive ordnance, landmines (in particular anti-personnel landmines), ERW and its components, such as UXO and abandoned explosive ordnance (AXO), include improvised devices within the context of the IMAS glossary.<sup>13,14</sup>

Explicit and implicit references to IEDs in the IMAS have allowed programs to frame operations that concern improvised devices within the existing standards. National programs in Afghanistan, Angola, Sri Lanka, and particularly Colombia are testament to this.

Notwithstanding the framework that the IMAS provide for IEDD activities, there is a significant shortfall in the explicit guidance on IEDs in the IMAS. These deficiencies in the standards have become increasingly apparent as international attention focuses on countries such as Iraq and Syria, where the explosive contamination, particularly in areas formally under the control of the Islamic State, includes unexploded and abandoned IEDs, in urban as well as rural settings. In such theaters, operators have to review skill sets of their field staff, and national authorities are under pressure to scrutinize accreditation procedures of organizations under their responsibility. Furthermore, donors consider value for money from a wide variety of proposals and look to issue grants and contracts with appropriate reference to international norms. All such actors look to the IMAS for guidance on IEDD, currently with only limited success.

A focus on the additional guidance necessary in current contexts, including IEDs in the urban environment, is overdue. IEDs in these contexts increase the need for the IMAS to expand on:

- Sound risk assessment processes.
- Rapid and accurate surveys.
- Safe and efficient processes for removal and/or destruction of explosive ordnance.
- Reaffirmation of humanitarian, rather than military, objectives.



Image 2. A selection of photos of improvised devices taken from archives of humanitarian operators.

Image courtesy of The HALO Trust.

Mine action operators have always carried out risk assessments ahead of operations, however, this process has largely been implicit in SOPs or has relied on the experience from field staff. Given the complexity of some of the devices found in environments such as in Iraq and Syria, there is a real need to carry out more explicit risk assessments.<sup>15</sup> This is reinforced by asymmetry of many conflicts, where large-scale battles cease but armed actors continue to exert influence and make use of explosives to disrupt and destabilize security. There is a requirement to systematize the evaluation of such contexts to ensure that mine action remains focused on humanitarian objectives and aims to uphold humanitarian principles. A more formalized guidance will benefit all mine action operations—whether in settings that exhibit IED contamination or otherwise.

The IMAS place a high priority on the issue of efficiency and the importance of targeting mine action resources appropriately. In rural environments, non-technical survey helps target clearance assets at suspected (SHA) or confirmed hazardous areas (CHA) based on evidence. In addition, specific training to improve evaluation skills and the ability of survey teams to accurately define such areas is elaborated in the IMAS. Similar guidance that targets the urban environment is lacking—including methodology for urban assessments, such as how to assess urban structures, take into account rubble (including rubble contaminated by explosive ordnance), and deal with threats of IEDs hidden in residential, occupational, and community premises.

### Strengthening of the IMAS

The IMAS have been designed as evolving standards that are constantly reviewed and updated to ensure that they stay relevant and applicable to the changing nature of settings where mine action activities are conducted.

The IMAS currently fall short in the necessary guidance to address tasks concerning IEDs. As a consequence, there is mounting consensus from the IMAS Review Board members to suggest that in light of the current political debates and operational demands there is a need to:

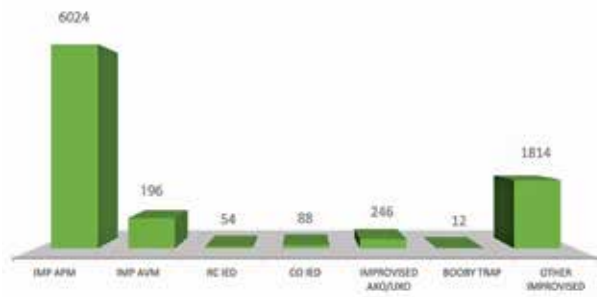


Figure 3. Improvised devices cleared in Iraq by MAG between July 2016 and August 2017 (IMP - Improvised; RC - Radio Controlled; CO - Command Operated).

Figure courtesy of MAG and GICHD.

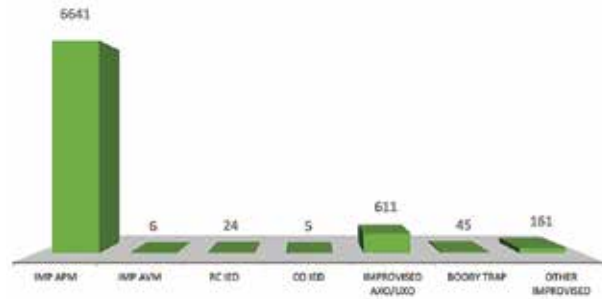


Figure 4. Improvised devices cleared in Syria by MAG between July 2016 and August 2017 (IMP - Improvised; RC - Radio Controlled; CO - Command Operated).

Figure courtesy of MAG and GICHD.

- State more clearly and up front in the IMAS the applicability of the IMAS concerning IEDs. Hence an amendment is needed to IMAS 01.10, Guide for the application of International Mine Action (IMAS).
- Clarify selected terminology (IMAS 04.10, Glossary of mine action terms, definitions and abbreviations) due to inconsistencies with other key sources of terminology (e.g., the major disarmament/arms control conventions, and the UNMAS IED Lexicon).
- Add elements of technical guidance that will assist national authorities and operators to ensure the safety and effectiveness of work.

Other areas being considered and supported by GICHD include:

- A greater emphasis on risk assessments and risk management frameworks.
- A strengthening of competency levels, equipment, and training requirements.
- Further guidance within the IMAS or Technical Notes on Mine Action (TNMA) addressing mine action in an urban environment, especially survey and information management considerations.

It is important to recall, however, that the IMAS remain a global framework and should not dwell on specific and local contexts. There is ample opportunity in the development of NMAS to adapt international standards concerning IEDs to national contexts.

## Summary

The IMAS have an established architecture developed over two decades of work that has legitimacy and standing. They have been developed for the mine action sector for operations performed in pursuit of humanitarian objectives and in accordance with humanitarian principles, and represent the set of standards used to promote and maintain quality during the implementation of mine action activities.

Mine action operations are not defined by weapon type but by the objectives they pursue and the context in which they take place. The IMAS therefore provide the overall framework to address all explosive ordnance, including IEDs within the boundaries of humanitarian action.

The suitability of a mine action operator to engage at a particular location or with a specific explosive device is based, first, on the operator being clear on the humanitarian objective

***Mine action operations are not defined by weapon type, but by the objectives they pursue and the context in which they take place.***

of the undertaking, and on it having access to humanitarian space and, second, on the operator possessing staff with necessary skills and equipment to perform the task.

Although hundreds of thousands of IEDs, including locally-manufactured landmines, have been cleared during mine action operations within the framework of the IMAS, the standards are in need of being strengthened in a number of areas. These include risk management, competency levels, training and equipment requirements, and amendments to IMAS 01.10 and IMAS 04.10 to clarify their application to improvised devices and to address inconsistencies in the glossary of definitions. Further technical guidance including operations in an urban environment should be included in the IMAS or a supporting TNMA.

Matters relating to IEDD operations in military and security contexts should be elaborated outside the IMAS—whether procedures to counter IED attacks particularly concerning vehicle- or person-borne IEDs, or aspects of forensics or intelligence that could be used to bring perpetrators to justice. All of these are incompatible with humanitarian action and principles and do not have space in the scope and remit of the IMAS.

There is a priority, however, to protect the integrity of the IMAS to address all relevant explosive ordnance, including IEDs, as the primary framework to manage operations that are humanitarian in nature.<sup>16</sup> ©

See endnotes page 66

*The views expressed in this article are those of the author and do not necessarily reflect the views of the IMAS Review Board nor of UNMAS, the Board's Chair.*

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