

Abstract: “Why we fail to meet the primary goal of the Ottawa Convention”

The primary goal of HMA as expressed in the Ottawa Convention is “to put an end to the suffering and casualties caused by anti-personnel mines”. This is not only to “reduce risk” it is to eliminate risk. Eliminating all risks may be impossible, but it is possible to do everything “reasonable” to make risk “tolerable”. Under the Ottawa Convention, signatories are obliged to make available all information about Mine Action topics to a UN database so that information can be shared and lessons learned. No UN database was ever established and, while some data is shared, two data-streams critical to evaluating the performance of search and clearance efforts have either not been collected at all or not adequately collected and made public. This is data about explosive hazards found after land is released as “clear” and the records of accidents that occur during demining. The failure to gather these datasets is “unreasonable”. As a result, donors are sometimes funding the use of demining equipment and systems that do not leave land safe for the people to use and that cause unnecessary deminer injuries. An argument is presented showing that the need to gather and share this data in a useful manner is both a humanitarian requirement and a means of providing a legal defence against allegations of subjecting persons to unreasonable risk.

Why we fail to meet the primary goal of the Ottawa Conventionⁱ

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The primary goal in the 1997 Ottawa Convention is “to put an end to the suffering and casualties caused by anti-personnel mines...”. This is not only to “reduce risk”, it is to *eliminate* risk. Eliminating risk may not be possible, but it is possible to do everything “reasonable” in pursuit of this, which is the goal expressed in the International Mine Action Standards (IMAS).

The Ottawa Convention does not mention the IMAS because they did not exist in 1997, but the IMAS references the Convention and adopts the “Five pillars of mine action” from it. The stated purpose of the IMAS is “to improve safety, efficiency and effectiveness in mine action”ⁱⁱⁱ. It is relevant to notice the order in which these are listed, with “safety” as an implied priority. Because demining has always involved removing all explosive hazards, clearance is defined in the IMAS as: “... tasks or actions to ensure the removal and/or the destruction of **all mine** and ERW hazards from a specified area to a specified depth.”^{iv} So the IMAS adopts the five pillars of mine action from the Ottawa Convention, defines clearance and prioritises safety.

Under the Ottawa Convention, Article 6 *International Cooperation and assistance*, paragraph 6, it is a requirement that “***Each State Party undertakes to provide information to the database on mine clearance established within the United Nations system....***”.

No appropriate UN database has ever been established so the UN has failed to comply with the Ottawa Convention, but it is not a “states party” so it was not required to do so. However, it did try to make compliance possible. Also in 1997, the UN Mine Action Service (UNMAS) was established and a year later the new UNMAS supported the establishment of GICHD. One of GICHD’s tasks was to develop the Information Management System (IMSMA) and have all IMSMA data added to a hub database in New York, so providing the database mentioned in the Ottawa Convention.

Such a database would have given needs assessments a global perspective, which was understandably rather attractive to those at the hub. However, It was not so attractive to those in the field. The planned central hub database in New York was never developed partly because it would have been very expensive, but also because many MACs were suspicious of sharing data without being able to control how it was used. In my personal experience, most demining organisations were also reluctant to share any data because it could lead to unwelcome comparisons between organisations and unwelcome criticism.

Missing data

To achieve the Ottawa Convention’s primary goal and “put an end to the suffering and casualties” caused by ERW (including deminer casualties) some data sharing is essential.

Two data-streams critical to anyone seeking to evaluate the performance of search and clearance efforts have either not been collected at all or have not been adequately collected, shared and made public.

The missing data-streams are:

- 1) data about explosive hazards found after land is released as “clear”, and
- 2) the detailed records of accidents that occur during demining.

The records made accessible to the broader industry need not include names and identifiers but should include details of the “clearance” procedures and equipment used along with an investigation that determines whether the event was an isolated anomaly or a systemic failure that should be broadly addressed.

Missed hazards

In some countries, hazards discovered after clearance are recorded but they are rarely investigated. Even when they are, there is no central dataset of these records so they are not easy to access. Without the collection and sharing of this data, it is not possible to begin to objectively assess which methods work reliably and which do not. As an example, I have MAC records of many instances^v of submunitions that have been discovered after clearance in Lebanon. The clearance was conducted by a range of demining organisations (INGO and commercial) using varied manual search SOPs. The common feature was the use of a detector that is very cheap but may not have been fit for purpose. There were several severe civilian injuries and fatalities as a consequence – but that detector is still being used.^{vi}

I also have MAC records of mines having been missed by dogs in Afghanistan, Sudan, Kosovo and Lebanon, sometimes with severe consequences for civilians. Common features appear to be inadequate training and the use of a single dog.

This picture shows a tractor that was driven onto an AT mine left behind on land searched using a single dog. The driver was severely injured.



The picture above shows a few of the mines found after the use of flail machines.

Failure to formally gather this data and use it to discover which demining procedures and equipment do not result in land that is safe for civilian use is not only a failure to comply with the requirement of the Ottawa Convention to share data: it is also a failure to do all that is “reasonable” to ensure that we clear land effectively.

Another result of this failing is that donors are sometimes funding the use of demining equipment and systems that do not leave safe land for the people to use. It has not yet been tested whether the donor shares some legal responsibility for the injuries that result when they have not performed “due diligence” checks on the ability of the systems it is funding to safely produce the required goal.

Demining accident records

IMAS 10.60 states that “all organisations should report any unplanned detonation of a mine, ERW or explosives... irrespective of the cause or outcome. The accident report **shall** be made available to other demining organisations operating in the country, and to other NMAA through UNMAS”. Many organisations do not do this, so do not work fully to IMAS. Ironically, this is partly the fault of UNMAS which has delegated responsibility for accident gathering to GICHD, and GICHD has decided that simplified spreadsheet data is sufficient.

The incomplete accident data that we have is kept in two accident datasets. The DDAS^{vii}, first published and distributed in 1999, and the RAPID^{viii} spreadsheet, first published by GICHD in 2012.

RAPID uses summarised accident data to produce a broad-sweep analysis that allows managers and donors to gain a general view of the accident situation. The results are published annually in a brief report of a few pages.

Rapid data entry can only be “rapid” by using drop-down lists of options in a simple spreadsheet. These are selected in an office by someone who may not know which answer is most appropriate and, because the actual accident report is not submitted, there is no potential to check whether their summary is at all accurate, so there is no Quality Control and no Quality Management.

The summary cannot be accurate because the drop down lists of choices in each of 44 fields are limited and do not appear to have been compiled by anyone who knew demining. For example, excavation and raking are

combined as one choice so it would not be possible to separate raking accidents to assess their safety.

Accident ID	Accident cause	Date of accident	Time of accident	Device type	Device name	Ground composition	Soil compaction
1	Staff negligence, Support failure	May 25, 2000	Afternoon 12 - 18	AP	PMA-3	Muddy	A (soft)

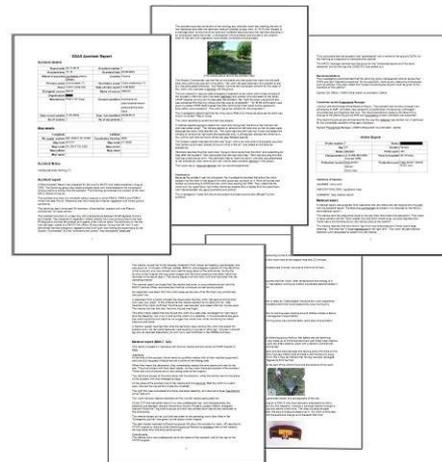
Area type	Mine action activity type	Land classification	Demining asset	Victim ID	PPE issued	PPE worn
Pasture land	Clearance	CHA	Manual excavation/Raking	victim1	Jacket, Half Face Visor	Jacket, Half-Face Visor

This is an example drawn from the GICHD RAPID spreadsheet. Notice the data that is circled.

This RAPID record was derived from a full accident report in the older DDAS. The DDAS is a real database so it has sophisticated search functions and can include the accident report written at the time. All the records in the DDAS have the names and identifiers removed before being published on-line for everyone to use.

This is the accident record in the DDAS from which the RAPID example was derived.

The DDAS report shows that the deminer was not wearing a half-face visor or a PPE jacket. He was wearing a frontal apron and a helmet and visor. It also records that he was excavating a metal-detector reading with a short hand-tool. Other accident records in the DDAS show that he would have been very likely to have avoided injury if he had been excavating the same metal-detector reading using REDs rakes^{ix}.



The RAPID database errors may be unimportant in broad-sweep data analysis but they can be critically misleading when trying to understand what was happening in the field in order to avoid recurrence.

When RAPID started, MACs were told to stop sending full reports to the DDAS despite it having proved its value when determining PPE needs for the IMAS and in identifying inherently dangerous tools and procedures. So today, with UNMAS approval, GICHD is not gathering accident reports and not studying them in order to identify risks that can be avoided or mitigated. The DDAS does continue, but unfunded and with very few accident reports submitted. Currently, the Explosives Knowledge Centre that is part of the ICI in Belgium is seeking the approval of UNMAS and GICHD in order to take over the professional maintenance of the DDAS. This is an initiative which I, as the originator and keeper of the DDAS, would wholeheartedly support.

Failure to gather detailed demining accident data and use it to reduce the risk of severe deminer injury is not only a failure to implement the Ottawa Convention requirement to share data, it is also an obvious failure to do everything “reasonable” to prevent deminer injuries.

UNMAS may not be vulnerable to legal action but it does have an internal UN requirement to protect human rights which it appears that it is failing to uphold. GICHD is not above the law and is demonstrably failing in its declared humanitarian purposes, so could be risking both reputational and financial damage by pretending that a spreadsheet database of accidents is in any way sufficient to use in field risk management.

Legal consequences

In IMAS 01.10 Para 6.5 states that: “Countries which are States Party to one or more of the Anti-Personnel Mine Ban Convention (APMBC, the Amended Protocol II of CCW, Protocol V of CCW and the CCM have.... certain specific obligations regarding the marking and **clearance** of explosive hazards. The provisions of IMAS do not, however, replace the obligations detailed in these conventions.”

Failure to do everything reasonable to safely achieve clearance may be in breach of these conventions, which is obviously undesirable, but they lack any effective means of enforcement so this may not be considered all that important. Similarly, the 193 countries that are members of the UN have signed up to the Universal Declaration of Human Rights, but failure to comply with the spirit of the requirements therein is regrettably widespread without significant consequences.

However, International Human Rights Laws can be applied along with national laws covering employment conditions and Health and Safety. In two cases^x, an international demining organisation has been taken to court for failing to do everything reasonable to prevent deminer injury and the cases were brought to court in another country. The definition of what is “reasonable” and “tolerable” in the country where the case is heard can be used to determine liability and assess compensation. In both cases, original compensation was greatly increased, with one case claiming a multi million dollar settlement. These were cases involving ex-pat deminers but there is a real risk that nationals will soon realise their right to seek redress through legal action in another country.

I have heard anecdotal reports of informal settlements being made but I have not heard of anyone making a legal claim for damages when explosive hazards are discovered on land declared clear. When they do, the only defence will be the same as it is in a demining accident. The organisation must show that they have done everything “reasonable” to achieve a safe outcome. Not having any hard evidence to prove that the methods used were as safe as possible might well be considered “unreasonable” in any court of law.

Without gathering the core “missed hazard” and “demining accident” datasets, the industry is behaving unprofessionally and not providing the required baseline data against which both “success” and new approaches/developments can be judged. UNMAS and GICHD may think that they are protecting demining organisations from criticism but they are actually setting them up for a catastrophic fall. They are also permitting the presence of gross inconsistency within the IMAS.

We fail to meet the primary goal of the Ottawa Convention “to put an end to the suffering and casualties caused by anti-personnel mines...” every time that unsafe land is released and every time that deminers are unnecessarily injured in their work. This is the result of systemic failures that are in direct breach of the IMAS requirement for Quality Management^{xi} (which stresses that QM relies on reliable and detailed data). I submit that it is unreasonable that these obvious shortcomings should have continued for so long without being corrected.

ⁱ The 1997 *Convention on the Prohibition of the Use, Stockpiling, Production and Transfer of Anti-Personnel Mines and on Their Destruction* is often abbreviated to the “Ottawa Convention”.

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ⁱⁱⁱ IMAS 01.10 (Guide for the application of IMAS)

^{iv} IMAS 09.10 (Clearance requirements) and in IMAS 04.10 (Glossary, definitions and abbreviations).

^v Fourteen Lebanon MAC investigations of “missed hazard” records are held in the DDAS: www.ddasonline.com.

^{vi} (In fairness, the Schonstedt stick detector has some uses, but is not suitable for any wide area search.)

^{vii} DDAS – Database of Demining Accidents. On line at <http://www.ddasonline.com>

^{viii} The GICHD RAPID excel spreadsheet is so simple that it uses spreadsheet rather than dedicated database software: see <http://www.mineactionstandards.org/rapid/reporting-to-rapid/>

^{ix} The safe use parameters for REDS can also be determined from a study of the accident database.

^x DDAS accident 592 and DDAS accident 277 at <http://www.ddasonline.com>

^{xi} IMAS_07.12_QM_DRAFT_Ed.1, published on the GICHD website in 2016. <https://www.mineactionstandards.org/standards/international-mine-action-standards-imas/imas-in-english/>