

**GROUP OF GOVERNMENTAL EXPERTS OF
THE STATES PARTIES TO THE CONVENTION
ON PROHIBITIONS OR RESTRICTIONS ON
THE USE OF CERTAIN CONVENTIONAL
WEAPONS WHICH MAY BE DEEMED TO BE
EXCESSIVELY INJURIOUS OR TO
HAVE INDISCRIMINATE EFFECTS**

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Working Group on Mines Other Than Anti-Personnel Mines

**The current detectability status of Mines Other Than Anti-Personnel Mines currently
available to States Parties to the Convention on Certain Conventional Weapons**

Prepared by the Geneva International Centre for Humanitarian Demining (GICHD)
at the request of the Coordinator for Mines Other Than Anti-Personnel Mines

Introduction

1. A number of States Parties to the Convention on Certain Weapons (CCW) have co-sponsored a proposal for further restrictions on the use of Mines Other Than Anti-Personnel Mines (MOTAPM). Part of this proposal includes parameters for the detectability of MOTAPM; that MOTAPM should incorporate some material or device that enables the mine to be detected by commonly-available technical mine detection equipment and provides a response signal equivalent to a signal from 8 grammes, or more, of iron in a single coherent mass.
2. In order to help develop understanding of the implications of this proposal, the GICHD was requested to research the status of detectability in current MOTAPM.

Current Detectability Status of MOTAPM

3. The GICHD used its own internal technical experts as well as external consultants to generate the following tables. The criteria for including a MOTAPM was that its production location must be a State Party to the CCW, signatories were not included. The MOTAPM listed are only those produced by States Parties to the CCW, it does not include those in States Parties inventories that they have bought from other producers.
4. MOTAPM mine types include: anti-helicopter, anti-material fragmentation, anti-amphibious (these are shallow water mines, used on landing beaches and river crossings to target military vehicles such as armoured fighting vehicles), anti-tank blast, anti-tank shaped charge, anti vehicle directional fragmentation, direction fragmentation (often referred to by their generic name of “claymore” – these mines were included because they had sufficient power to endanger vehicles and fall under the definition of MOTAPM), and off-route mines.

5. There are six tables. Table one shows the statistics for all the States Parties. The following five tables show the statistics on MOTAPM by regional area: Africa, The Americas, Asia and the Pacific, Europe, Middle East and the South Asia.

6. Each table shows the following information:

- (a) Number of mine types.
- (b) Mine designs: AHM (anti-helicopter mine), AMF (anti-material fragmentation), anti-amphibious (these are shallow water mines, used on landing beaches and river crossings to target military vehicles such as armoured fighting vehicles), ATB (anti-tank blast), ATSC (anti-tank shaped charge), AVDF (anti vehicle directional fragmentation), DF (direction fragmentation also referred to by their generic name of “claymore”), ORM (off-route mines).
- (c) Detectability, showing number and percentage divided into: Yes (the MOTAPM does conform to the 8 gram proposal), No, (the MOTAPM does not conform to the 8 gram proposal).
- (d) Availability Status: Yes (the MOTAPM is known to be in service), Uncertain (the MOTAPM may be in service, but it has not been possible to confirm or disprove this). Only MOTAPM which could be used in the future are included, old designs currently in minefields, but which are not available for future use are not included.
- (e) Notes (providing clarification of the statistics).

Table 1 - All States Parties to the CCW

Number of mine types	Mine designs	Detectability		Availability Status(2)	
		Yes(1)	No	Yes	Uncertain
173	AHM, AMF, Anti-amphibious, ATB, ATSC, AVDF, DF, ORM	122 (70.52%)	51 (29.50%)	104 (60.00%)	67 (38.70%)

Notes:

(1) Of these 122, the detectability of two of the mines is uncertain, while another eight can be detected depending on: the fuse type; the fitting of a detection ring; or, in two instances, the completion of an upgrade which is in progress.

(2) The total of the Yes and Uncertain categories is 171, two other mines are currently in the prototype stage.

MOTAPM produced by States Parties to the CCW, organised by geographical region

Table 2 - African States Parties to the CCW

Number of mine types	Mine designs	Detectability		Availability Status	
		Yes	No	Yes	Uncertain
2	ATB, DF	1 (50%)	1 (50%)	1 (50%)	1 (50%)

Table 3 - American States Parties to the CCW

Number of mine types	Mine designs	Detectability		Availability Status	
		Yes(1)	No(2)	Yes	Uncertain
19	ATB, ATSC, DF	14 (73.7%)	5 (26.3%)	11 (58%)	8 (42%)

Notes:

(1) One MOTAPM has a detection ring available. One MOTAPM can have the initiator detectability increased.

(2) This number will decrease by one after December 2004 when one State Party completes the withdrawal from service of an ATB mine which is difficult to detect.

Table 4 - Asian and Pacific States Parties to the CCW

Number of mine types	Mine designs	Detectability		Availability Status	
		Yes	No	Yes	Uncertain
13	ATB, ATSC, DF	10 (77%)	3 (23%)	11 (84.6%)	2 (15.4%)

Table 5 - European States Parties to the CCW

Number of mine types	Mine designs	Detectability		Availability Status(2)	
		Yes(1)	No	Yes	Uncertain
132	AHM, AMF, Anti-amphibious, ATB, ATSC, AVDF, DF, ORM	92 (70%)	40 (30%)	75 (57%)	54 (41%)

Notes:

(1) The detectability of four of these mines is dependent on the fuse type.

(2) Two MOTAPM are still at the prototype stage.

Table 6 - Middle Eastern and South Asian States Parties to the CCW

Number of mine types	Mine designs	Detectability		Availability Status	
		Yes(1)	No	Yes	Uncertain
7	ATB, ATSC, DF	5 (71.5%)	2 (28.5%)	6 (86%)	1 (14%)

Notes:

(1) Two of the MOTAPM are being upgraded to meet the detection standard

Comments

7. Of the mine types, all of the anti-tank shaped charge, anti-helicopter and off-route mines are detectable. These MOTAPM are generally the most modern designs.
 8. Out of nineteen scatterable mines, only two systems are not detectable and both these mines ceased production several years ago.
 9. All of the non-detectable mines were of the anti-tank blast type. These mines which are based on older explosive technology, are also the least efficient against modern armoured fighting vehicles.
 10. If the detectability of the mines known to be available is assessed, then 87.38% of MOTAPM that are available can be detected under the proposal.
 11. Of the thirteen mines that are known to be available but are not detectable, the method of emplacement is manual, plus the option of being mechanically emplaced (in seven instances) and/or helicopter delivery (two instances). As a result, depending on the emplacement system used, modification of these mines to meet the detectability proposal is not necessarily technically difficult.
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