

**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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Mines Other Than Anti-Personnel Mines (MOTAPM)

Working Group on Mines Other Than Anti-Personnel Mines

**PROPOSALS AND IDEAS ON MOTAPM IN THE GROUP OF
GOVERNMENTAL EXPERTS (GGE) WITH THE PURPOSE TO
PROVIDE A BASIS FOR FURTHER WORK**

Prepared by the Coordinator on MOTAPM

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INTRODUCTION

1. The present working paper is submitted under the personal responsibility of the Coordinator on Mines Other Than Anti-Personnel Mines as a follow-up of the papers entitled "Proposals and ideas on MOTAPM in the Group of Governmental Experts (GGE) with the purpose to provide a basis for further work" (documents CCW/GGE/VIII/WG.2/1, dated 11 June 2004, and CCW/GGE/IX/WG.2/1, dated 15 October 2004 and CCW/GGE/X/WG.2/1, dated 1 March 2005) presented by the Coordinator. It attempts to reflect further the progress made and comments expressed, as well as the support expressed for the proposals, both formally and informally, and ideas on MOTAPM put forward since the establishment of the GGE.
2. The main purpose of the present paper is to facilitate the discussion on the issues contained herein by providing a framework for the States Parties to prepare their positions and contributions, as well as to pave the way for a successful outcome of the Group's work at the Eleventh session of the Group.
3. The Coordinator welcomes all comments, either orally or in writing, and looks forward to a fruitful and result-oriented discussion.

I. GENERAL CONSIDERATIONS

4. As a further endeavor to pursue the general objectives of the CCW, and taking into account the current international challenges, this set of recommendations is addressing the humanitarian concerns and the military requirements in order to take all appropriate steps aimed at preventing the unauthorized access to or use of MOTAPM by any individual, group of persons or entity, not acting under the legal authority of a State.

5. This set of recommendations relates to the use on land or transfer of mines other than anti-personnel mines, hereinafter MOTAPM, including mines laid to interdict beaches, waterway crossings or river crossings, but does not apply to the use of anti-ship mines at sea or in inland waterways.

6. This set of recommendations applies to the situations described in CCW Article 1, as amended on 21 December 2001.

II. DETECTABILITY OF MOTAPM

7. All MOTAPM shall be detectable at the time of their emplacement by commonly available technical mine detection equipment, subject to certain exclusions specified below. Even in those cases, the States should endeavour, as a best practice, to ensure that all MOTAPM emplaced in areas that might be subject to humanitarian demining operations are detectable. A detectable MOTAPM is a MOTAPM which, in the form in which it is emplaced, provides a response signal equivalent to a signal from eight grammes or more of iron in a single coherent mass buried five cm beneath the ground.

8. MOTAPM produced after ... and existing stocks which have not been emplaced, shall meet the detectability requirement prior to their use, except in the case referred to in paragraph 9.

9. MOTAPM emplaced after ... can be excluded from the detectability requirement if they are located in a perimeter-marked area, which is:

- recorded;
- monitored by military or other authorized personnel;
- protected by fencing or other means;

to ensure the effective exclusion of civilians from the area.

10. MOTAPM emplaced in minefields before the entry into force of this set of recommendations for a State are excluded from the detectability requirement in this chapter.

11. A State can avail itself of a transition period not exceeding (the time to be decided) to meet the detectability requirement. In the meantime, taking into account the development of alternative methods that provide reliable and effective detection of MOTAPM, it shall minimize the use of MOTAPM that do not so comply.

III. RESTRICTIONS ON THE USE OF MOTAPM

12. All remotely-delivered MOTAPM shall incorporate a self-destructing mechanism, or a mechanism for self-neutralization, with, in either case, a self-deactivation backup (hereinafter referred to as “SD/SDA or SN/SDA”).
13. All MOTAPM located outside a perimeter-marked area, which is:
- recorded;
 - monitored by military or other authorized personnel;
 - protected by fencing or other means;
- to ensure the effective exclusion of civilians from the area, shall incorporate SD/SDA or SN/SDA regardless of whether they are hand-emplaced or remotely delivered.
14. MOTAPM, which are designed to self-destruct or self-neutralize, shall do so within 45 days after arming. Self-deactivation of MOTAPM, which fail to self-destruct, or self-neutralize shall take place within 120 days after arming.¹
15. Each State shall take the measures necessary to ensure that no more than 10 percent (with a 90 percent confidence level) of activated MOTAPM will fail to self-destruct or self neutralize after 45 days.²
16. Each State shall take the measures necessary to ensure that in combination with self-destruction, or self-neutralization mechanisms, no more than one in a thousand of activated MOTAPM will function as a mine after 120 days.
17. Each State undertakes to use MOTAPM fitted with an anti-handling device (AHD) only if:
- (a) It is equipped with SD/SDA or SN/SDA; or
 - (b) When located in a perimeter marked area, which is:
 - recorded;
 - monitored by military or other authorized personnel;
 - protected by fencing or other means;to ensure the effective exclusion of civilians from the area.
18. It is prohibited in all circumstances to use MOTAPM fitted with AHD that is designed in such a manner that the AHD is capable of functioning after the MOTAPM has ceased to be capable of functioning.
19. The use of AHD shall be included in the record of the respective minefield.
20. A State can avail itself of a transition period not exceeding (time to be decided) to meet the requirement of limitation of the active life of MOTAPM.

¹ Possibility to have paragraphs 14-16 in the Technical Annex.

² The assessment of the reliability rate of the SD/SDA or SN/SDA is left to the discretion of each State.

IV. MEASURES TO PREVENT UNAUTHORIZED USE OF MOTAPM

21. States shall take all appropriate steps aimed at preventing the access to or use of MOTAPM by any individual, group of persons or entity, not acting under the legal authority of a State, including *inter alia*:

- (a) Establishment of adequate systems of the documentation concerning marking and tracing the future production of MOTAPM;
- (b) Strengthened export control measures;
- (c) Adequate security of stockpiles and transport of MOTAPM;
- (d) Penalization of the unauthorized manufacturing, trafficking, possession and use of MOTAPM by any individual, group of persons or entity, not acting under the legal authority of a State, or of the transfer of MOTAPM to such individuals, groups of persons or entities; other appropriate legislative or other measures, including the establishment of an appropriate prosecution or extradition regime;
- (e) Enhanced cooperation among the States on sharing information on the trafficking of and the use of MOTAPM by any individual, group of persons or entity, not acting under the legal authority of a State;
- (f) Other appropriate steps.

V. FUZE DESIGN AND SENSORS OF MOTAPM

22. States should, to the extent feasible, follow the best practice on fuze design as stipulated in Annex I.

VI. PROTECTION OF CIVILIANS, WARNING AND MINE RISK EDUCATION

23. States shall take all feasible precautions to protect civilian population, individual civilians and civilian objects from the risks and effects posed by MOTAPM. Feasible precautions are those precautions, which are practicable or practicably possible, circumstances ruling at the time, including humanitarian and military considerations. These precautions may include:

- (a) the short- and long-term effect of MOTAPM upon the local civilian population for the duration of the MOTAPM minefield;
- (b) possible measures to protect civilians, for example fencing, signs, warning and monitoring;
- (c) the availability and feasibility of using alternatives; and
- (d) the short- and long-term military requirements for a MOTAPM minefield

24. Effective advance warning shall be given, to the extent possible, of any emplacement of MOTAPM, which may affect the civilian population unless circumstances do not permit.

25. After the cessation of active hostilities, all minefields and mined areas of MOTAPM and mines other than anti-personnel mines shall, in close cooperation with the parties concerned, be cleared, removed, destroyed or maintained without delay.

VII. TRANSFERS

26. In order to promote the purposes of this set of recommendations, each State:
- (a) undertakes not to transfer MOTAPM to any recipient other than a State or State agency authorized to receive such transfers;
 - (b) undertakes not to transfer non-detectable MOTAPM nor MOTAPM equipped with Category One fuzes as stipulated in Annex I of this set of recommendations, except for the purpose of destruction or for development of and training in mine detection, mine clearance, or mine destruction techniques;
 - (c) undertakes to exercise restraint on transfer of MOTAPM the use of which is restricted, except for the purpose of destruction or for development of and training in mine detection, mine clearance, or mine destruction techniques;
 - (d) undertakes not to transfer any MOTAPM to States, which have not accepted the provisions and restrictions contained in the present paper after they become effective, unless the recipient formally agrees to apply by the applicable provisions.
27. In order to promote the purposes of this set of recommendations, each State shall, require an end-user certificate from the recipient State.
28. Pending the ... of the set of recommendations, States will refrain from any actions, which would be inconsistent with Article 26.
29. In the case when a State declares that it will avail itself with a transition period, transfers should nevertheless be prohibited as application of the respective provisions for that State.

VIII. TRANSPARENCY AND OTHER CONFIDENCE-BUILDING MEASURES

30. States shall establish a system of transparency measures on the implementation of the adopted prohibitions, restrictions and regulations. Such a system should include the following elements:

- (a) an initial report on the implementation of the adopted provisions;
- (b) periodical updating of the report;
- (c) The report should include, *inter alia*:
 - (i) Dissemination of information on the adopted provisions on MOTAPM to their armed forces and to the civilian population;
 - (ii) Mine clearance and rehabilitation programmes;
 - (iii) Steps taken to meet technical requirements of the adopted provisions and any other relevant information pertaining thereto, other than weapons technology related;
 - (iv) Legislative and other measures taken for the implementation of the adopted provisions;
 - (v) Measures taken on cooperation and assistance provided;
 - (vi) Information on the transfers of MOTAPM;
 - (vii) Other relevant matters.

IX. COOPERATION AND ASSISTANCE

31. Each State in a position to do so, shall enhance cooperation and assistance at bilateral, regional and international levels aimed at assisting the States in the fulfillment of their obligations in respect to MOTAPM. Cooperation and assistance should include the following:

- (a) Technical and financial assistance, including exchange of experience, technology, other than weapons technology, and information, to facilitate the implementation of necessary modifications to improve the reliability of and minimize the humanitarian risks of existing and future MOTAPM;
- (b) Cooperation and assistance in the destruction of stockpiles of MOTAPM that do not meet and cannot be modified to meet the humanitarian and military norms on MOTAPM;
- (c) Cooperation and technical, material and human assistance for the rapid and effective clearance, removal or destruction of MOTAPM;
- (d) The timely provision of geographic and technical information on MOTAPM to relevant humanitarian missions and to the database on mine action maintained within the UN system;
- (e) Cooperation and assistance on the provision of risk education for civilian populations;
- (f) Cooperation and assistance for the care and rehabilitation and the social and economic reintegration of victims of MOTAPM;
- (g) Cooperation and assistance in the implementation of the regulations and restrictions relating to MOTAPM;

Annex I

FUZE DESIGN AND SENSORS OF MOTAPM

1. Based on information and data provided by States the following broadly available fuzes and sensors should be considered as relevant: acoustic sensors; break wires; fiber-optic wires; infra-red-sensors; magnetic sensors; pressure sensors; roller arms; scratch wire sensors; seismic/vibration sensors; tilt rods; trip wires.^a

2. The aforementioned broadly available fuzes and sensors should be graded into the following categories:

Category One: *Fuzing systems that cannot be designed not to be excessively sensitive, i.e. break wires, tilt rods, and trip wires.*⁽ⁱ⁾

(i) Break wires, tilt rods, and trip wires do not appear to be a recommended method of activation, as it does not seem possible to design them in such a way that an individual cannot, within reason, initiate the mine.

Category Two: *Fuzing systems that can be designed not to be excessively sensitive, but are best used in conjunction with other sensors, i.e. acoustic sensors,⁽ⁱ⁾ infrared-sensors,⁽ⁱⁱ⁾ and seismic/vibration sensors.*⁽ⁱⁱⁱ⁾

(i) Acoustically activated fuzes use electronic sensors to react to acoustic pressure and recognize the acoustic signature. Use in conjunction with other sensors is preferable.

(ii) Infrared activated fuzes should be designed so as not to be activated in the presence of a person. The sensor should be able to match detected heat signatures to the intended target preferably in conjunction with other sensors.

(iii) Seismic/Vibration sensors cannot currently locate their targets precisely; their use in conjunction with other sensors appears therefore to be indispensable. The sensor should be capable to match a seismic signature to the intended target.

Category Three: *Fuzing systems that can be designed not to be excessively sensitive and can be designed to operate satisfactorily on their own, i.e. fiber-optic wires,⁽ⁱ⁾ magnetic sensors,⁽ⁱⁱ⁾ pressure sensors,⁽ⁱⁱⁱ⁾ roller arms,^(iv) and scratch wire sensors.*^(v)

(i) The pressure required to break the fiber-optic signal should be appropriate for the intended target.

(ii) To enhance military utility, magnetically activated mines should be capable of matching a magnetic signature to the intended target.

^a The sequence of the fuzes and sensors is strictly alphabetical and does not entail an assessment on their availability, distribution or use.

- (iii) Pressure sensors should, where possible, be subject to a minimum pressure force appropriate for the intended target. Pressure should preferably be exerted over a significant area (equal to that of a vehicle) rather than a single point.
- (iv) The number of turns required to initiate the roller arm fuze should be matched to the intended target.
- (v) The scratch wire sensor should be designed for specific targets by optimizing the scratch time, frequency and amplitude required to initiate the sensor by the intended target.
3. All MOTAPM should incorporate in future production, to the extent feasible, multi-sensor fuzes technology in order to reduce the possibility of inadvertent or accidental activation taking into account operational, life cycle, environmental and climate factors.
4. The use of MOTAPM fitted with a single fuze or sensor, which fulfills the best practice safety requirements at Annex A, should not be prohibited by this set of recommendations. All other MOTAPM should incorporate a multi-sensor fuze.
5. The influence of environmental factors - particularly *(i)* of weather and climate as well as *(ii)* of storage, handling and other external conditions - should be taken into account when selecting the types of fuzes and determining the sensitivity of fuzes.
6. Considerations and proposals of technical measures should take into account operational, procurement as well as life cycle factors; they should address clearly identified humanitarian issues.

Annex II

SPECIFICATIONS

[To be completed]
