

**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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LEGAL ISSUES REGARDING EXPLOSIVE REMNANTS OF WAR

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Independent Legal Analysis of International Humanitarian Law on Explosive Remnants of War

The attached paper has been written by Professor Christopher Greenwood QC who is Professor of international law at the London School of Economics and a Queen's Counsel with a broad international law practice. He is a leading expert on international humanitarian law. Professor Greenwood has written his paper in his capacity as an independent expert.

The paper does not necessarily represent the views of the Government of the United Kingdom, but is intended to aid in the discussions of the Group of Governmental Experts.

The paper is a study of existing law as it applies to explosive remnants of war (ERW) and concentrates on identifying issues that need to be considered. It does not suggest any specific proposals for change, but draws the following conclusions as suggestions for a possible focus for discussion:-

- The term "explosive remnants of war" is used by different commentators to describe different matters. A clearer understanding of what the subject includes would greatly facilitate discussion.
- There are different varieties of ERW and the legal regimes applicable to them, and the nature of the problems they pose, vary.
- It is not possible to speak of a single legal regime applicable to ERW under existing international law.
- Mines - both naval and landmines - are the subject of detailed legal regimes specifically designed to regulate their design, use and clearance.
- By contrast, there are no rules specifically regulating other types of ERW.
- With regard to munitions which fail to explode as intended, existing law does not impose requirements design but general principles of international humanitarian law and, in particular, the principle of proportionality in relation to targeting, may impose some limitation on the use of weapons likely to create ERW.
- The existing law does not impose a liability on the State which creates ERW (other than mines) to clear them after the conflict from the territory it does not control, nor does it require it to pay the cost of doing so. It is, however, arguable that there is a general duty of co-operation, albeit one of uncertain content.
- Existing law says almost nothing about the problems caused by abandoned weapons.

We hope that the questions arising from these points will contribute to developing discussion on this topic in the July meeting of the Group of Governmental Experts.

LEGAL ISSUES REGARDING EXPLOSIVE REMNANTS OF WAR

by

Christopher Greenwood, QC ¹

I. Introduction

1. The purpose of this brief study is to consider the principles of international law applicable to explosive remnants of war ("ERW"). Although the study has been commissioned by the Government of the United Kingdom, I have prepared it in my personal capacity. The views expressed are mine and should not be taken as necessarily representing the views of the Government of the United Kingdom.

2. It is not a technical study. Where it is necessary to refer to technical data on such subjects as the percentage of munitions of any particular category which fail to explode, I have attempted to reflect the various published sources without expressing an opinion on their reliability.

3. At this stage I have confined the study to the existing law and have not attempted an analysis of specific proposals for changes in the legal regime. The object has been to set out the issues which need to be considered.

4. One problem which needs to be identified at the outset is that there is no authoritative definition of ERW and the term is used differently by different commentators. A particular facet of this problem is whether the term ERW should be confined to remnants left in place after a conflict has ended or whether it includes, for example, a bomb which has failed to explode and presents a danger to the civilian population during a conflict. The natural meaning of the words "remnants of war" suggests the former but it must be recognized that discussion of ERW has frequently included both the period of the conflict and the period after hostilities have ended. Since this study is intended as a focus for discussion of a phenomenon, rather than as a prescriptive work, I have not confined discussion to the post-conflict period. I have also attempted to cover all of the main varieties of explosives which remain dangerous after use or

abandonment, including mines and abandoned weapons as well as unexploded bombs, shells and other ordnance. Nevertheless, it is suggested below that there are important differences between these categories which are reflected in the existing law and would almost certainly be reflected in any new law. It would, therefore, assist discussion if the Conference were to identify as precisely as possible what the term ERW was regarded as covering.

5. The study is set out as follows. Part II discusses the different types of ERW and the different problems to which each type gives rise. It suggests that there are three broad categories of ERW. Parts III to V then consider the legal principles applicable to each of the different categories of ERW under the existing law. Part VI sets out some tentative conclusions.

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II. Different Categories of ERW

6. The scale of the problem posed by ERW and, in particular, the threat which ERW pose to the civilian population (a threat which frequently lingers long after the end of active hostilities), has been the subject of numerous studies.² It is important to bear in mind, however, that there is a wide variety of ERW and that, even though their effects are frequently the same, the law applicable to them may be very different.

7. Three broad categories can be identified –

Category 1: mines (both anti-vehicle and anti-personnel landmines and naval mines) and other weapons designed not to explode until a target comes into contact, or into proximity, with them. In their ordinary use, therefore, these munitions may remain dangerous for long periods of time.

Category 2: munitions which, on use, fail to explode as intended but remain dangerous, for example bombs or shells designed to explode on impact but which fail to detonate when the munitions are delivered. Within this category, attention has tended to focus on cluster weapons (i.e. weapons which contain multiple submunitions often described as “bomblets”). Cluster weapons in common use are described in various publications as having a failure rate of between five and ten percent, so that the use of two such weapons, each containing 150 bomblets would be likely to leave between fifteen and thirty unexploded bomblets in the area of attack. All bombs and shells, however, are capable of failing to detonate, so that an air attack in which a large number of 500 or 1000 pound bombs were dropped would also be likely to leave some unexploded bombs. The problems created by this category are not, therefore, confined to cluster weapons.

Category 3: abandoned weapons. These may range from a few rounds of ammunition or a grenade left with the body of a dead soldier to entire ammunition dumps abandoned (frequently in a great hurry) by a retreating force. A related phenomenon is that of caches of weapons stored in a remote or concealed, unmanned site for future use.

8. In recent discussions, attention has tended to be concentrated on the second category but the term ERW covers all three categories and each requires attention.

9. The differences between these three categories are considerable. In the case of Category 1, the problem of ERW is generally a direct consequence of the normal use of the weapon. Most mines are designed to explode only after they have been deployed and when they come into contact or proximity with a person, vehicle or ship. Accordingly, unless they are removed or

² See, e.g., *Report of the ICRC to the Preparatory Committee of the 2001 Review Conference of the United Nations Convention on Conventional Weapons* (CCW/CONF.II/PC.1/WP.1), pp. 4-14; C. King, *Explosive Remnants of War* (ICRC, August 2000); ICRC, *Explosive Remnants of War: Cluster Bombs and Landmines in Kosovo* (rev ed., June 2001); Landmine Action, *Explosive Remnants of War* (March 2002); Sir Hugh Beach, *Cluster Bombs: A Case for Banning ?* (ISIS Paper No 79; February 2001).

rendered harmless at a later stage, mines will necessarily, and in their normal use, create ERW. The same is true of most booby traps and similar devices.

10. By contrast, in the case of the second category, the ERW result from a failure of the weapon. The failure may be total (as in the case of a thousand pound bomb which fails to explode) or partial (as in the case of a cluster weapon some of whose bomblets do not explode) but in each case ERW are created because the weapon has not behaved as intended. In short, while a mine will constitute dangerous ERW precisely because it is doing what it is designed to do, unexploded ordnance poses a danger because it has failed to perform as intended.

11. Category 3 differs from both of the others in that the weapons here have not been used at all. Nevertheless, it is similar to category 2 in the sense that the creation of ERW is unintended. Moreover, it is, in general, even more difficult to foresee and to guard against than in the case of Category 2.³

12. A further difference between Category 1 and the other categories is that the location of mines should be known at least to the party which placed them. By contrast, the location of unexploded bombs and shells and abandoned weapons will normally be far more difficult to identify with any precision.

III. Mines

13. In view of these differences, it is open to question whether one can realistically speak of a single legal regime for ERW. Certainly, no such single regime exists at present. Mines and other sources of Category 1 ERW are the subject of several specific legal regimes which do not apply to the other two categories. Thus, the use of anti-personnel landmines is prohibited for parties to the Ottawa Convention and, for most other States, is restricted by the provisions of Protocol II (in either its amended or unamended form) to the Conventional Weapons Convention. Naval mines are subject to the regime contained in Hague Convention No. VIII.

14. A particular feature of the treaties on mines (leaving aside the complete ban imposed on anti-personnel landmines by the Ottawa Convention) is that they include obligations relating to the design and use of mines and the clearance of mines after the end of the conflict. With regard to design, in the case of naval mines Hague Convention No. VIII, Article 1 provides an early example of requirements that a weapon be so designed as to render themselves harmless in certain circumstances. The Amended Protocol II to the Conventional Weapons Convention also imposes a number of requirements in respect of the design of landmines. All three treaties also impose a number of requirements regarding the deployment and use of the mines to which they apply. Finally, all three contain provisions regarding clearance after the end of the conflict (Amended Protocol II, Articles 3(2) and 10; unamended Protocol II, Article 9; Hague Convention No. VIII, Article 5).

15. The treaties which deal with mines have been the subject of extensive commentary already and I have not discussed them further in this study. Their provisions do not apply to the

³ An exception is the case of caches of stored weapons which are deliberately placed and only become abandoned in exceptional circumstances. Such weapons are, however, likely to have been left in a safer state than those weapons abandoned without notice and will, therefore, generally pose less of a direct threat to civilians.

other categories of ERW and some of them (eg the provisions on the marking and recording of minefields) would be unsuited to the problems raised by those other categories.

IV. Munitions which fail to explode

16. The other categories of ERW are not subject to specific legal regimes comparable to those applicable to mines. It is therefore necessary to consider the application to them of general norms of international humanitarian law. The problem of ERW resulting from the failure of munitions to explode when intended to do so raises questions concerning the design of the munitions concerned, their use and the clearance of the remnants.

17. With regard to design, it is clear that the problems caused by this category of ERW would be eliminated (or at least greatly reduced) if the munitions in question were designed in such a way that either they could be guaranteed to explode on impact (or shortly thereafter) or they could be rendered harmless if they failed to explode on impact.⁴ The extent to which that is, or might become, technically possible is a matter outside the scope of this study. However, even if it were technically possible, that fact would have only a limited bearing on the application of the existing law. While Additional Protocol I, Article 36 imposes obligations on a State with regard to its development of a new weapon, there is as yet no general rule – either of treaty or customary law – which requires a State to replace its existing stocks of weapons with new weapons which offer a higher level of humanitarian protection.⁵ It follows that even if a new generation of munitions has been or will be devised which is more efficient and thus less likely to create ERW than were its predecessors, that fact does not oblige States to replace their existing stocks of munitions with the new variety.

18. With regard to use, the use of all munitions is subject to the general principles of targeting, namely that civilians and civilian objects are not lawful targets, that attacks must not be indiscriminate⁶ and that attacks on military objectives must comply with the principle of proportionality.⁷ All weapons are, of course, capable of being used against civilians or in an indiscriminate or disproportionate manner. Where that is done, the use of the weapon in question is unlawful irrespective of ERW considerations. The question, however, is whether, when a weapon is properly targeted against a military objective, the risk that munitions will fail to explode when intended and thereby create a potential danger to civilians is sufficient to render indiscriminate or disproportionate an attack which would not otherwise be so regarded.

19. Article 51(4) of Additional Protocol I provides that –

Indiscriminate attacks are prohibited. Indiscriminate attacks are:

(a) those which are not directed at a specific military objective;

⁴ The enhanced efficiency of the munitions would, of course, be desirable from a military, as well as a humanitarian, point of view.

⁵ Where a requirement to replace existing weaponry with new weapons does exist, it is the result of specific treaty provisions adopted for that purpose in relation to particular types of weapon (e.g. the provisions of Amended Protocol II to the Conventional Weapons Convention).

⁶ Additional Protocol I to the Geneva Conventions, Articles 48, 51(2) and 52(1).

⁷ Additional Protocol I to the Geneva Conventions, Articles 51(4), 51(5) and 57.

- (b) those which employ a method or means of combat which cannot be directed at a specific military objective; or
- (c) those which employ a method or means of combat which cannot be limited as required by this Protocol;

and consequently, in each case, are of such a nature to strike military objectives and civilians or civilian objects without distinction.

Article 51(5) provides that –

Among others, the following types of attacks are to be considered as indiscriminate:

- (a) an attack by bombardment by any methods or means which treats as a single military objective a number of clearly separated and distinct military objectives located in a city, town, village or other area containing a similar concentration of civilians or civilian objects; and
- (b) an attack which may be expected to cause incidental loss of civilian life, injury to civilians, damage to civilian objects or a combination thereof, which would be excessive in relation to the concrete and direct military advantage anticipated.

20. I do not think that the risk of munitions failing to explode as intended can reasonably be regarded as rendering the use of those munitions indiscriminate within the meaning of Article 51(4) of Additional Protocol I. Provided that the weapons used were not inherently incapable of being directed against specific military objectives and were in fact so directed (and an attack which did not meet these requirements would be unlawful in any event, irrespective of the effects of ERW), sub-paragraphs 51(4)(a) and (b) would not apply. Nor would there be a violation of Article 51(4)(c). Neither the Protocol nor other rules of international humanitarian law require the effects of a weapon to be limited in such a way that it does not cause civilian casualties at all. What it does require is that the civilian casualties which may be expected should not be disproportionate.

21. The real question, therefore, is whether the risk that some of the munitions used will not explode as intended, thereby creating ERW which may endanger civilians can cause an attack to violate Article 51(5). It is convenient to consider Article 51(5)(b) (which sets out the general principle of proportionality) first. This principle has usually been discussed by reference to the harm caused to civilians by the impact of munitions and the immediate damage and destruction caused by those munitions. The dangers posed by unexploded munitions appears to have been considered rarely if at all.⁸

22. That is not to say that the risks posed by ERW are necessarily irrelevant in the application of the proportionality principle. If there is known to be a serious risk:

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It does not, for example, feature in the ICRC Commentary on Article 51(5).

- (a) that a significant percentage of the munitions or sub-munitions used against a target will not explode and will remain dangerous; and
- (b) those ERW will cause civilian casualties, then the resulting risk to the civilian population is a factor which may have to be taken into account in applying the proportionality test.

23. That is subject, however, to two qualifications. First, it is only the immediate risk from ERW which can be in issue. If, for example, cluster weapons are used against military targets in an area where there are known to be civilians, then the proportionality test may require that account be taken both of the risk to the civilians from sub-munitions exploding during the attack and of the risk from unexploded sub-munitions in the hours immediately after the attack. It is an entirely different matter, however, to require that account be taken of the longer-term risk posed by ERW, particularly of the risk which ERW can pose after a conflict has ended or after civilians have returned to an area from which they had fled. The degree of that risk turns on too many factors which are incapable of assessment at the time of the attack, such as when and whether civilians will be permitted to return to an area, what steps the party controlling that area will have taken to clear unexploded ordnance, what priority that party gives to the protection of civilians and so forth. The proportionality test has to be applied on the basis of information reasonably available at the time of the attack. The risks posed by ERW once the immediate aftermath of an attack has passed are too remote to be capable of assessment at that time.

24. Secondly, in assessing whether a weapon which carries a higher risk of creating ERW (which, according to some commentators is the case with cluster munitions) is one which can be used commensurate with the principle of proportionality,⁹ it is necessary to consider what alternative methods and means of attack are available. If the alternative to an attack by means of cluster munitions is the heavy use of unitary weapons, the damage to the civilian infrastructure and the overall harm to the civilian population might well be increased. What is required, in other words, is to examine the whole picture. By concentrating on the problem of ERW to the exclusion of other effects of particular weapons, it may be that the protection of the civilian population is diminished rather than enhanced. I am not in a position to assess whether that would in fact be the case but the question plainly requires careful examination.

25. Finally, there is the question of the removal or neutralization of this type of ERW after the conflict. In contrast to the detailed provisions regarding mines (briefly considered in Part III), there are no specific provisions regarding the clearance of unexploded ordnance. In practice, this task is carried out (where it is done at all) by the State which controls the territory in question or by NGOs acting with its consent.

26. It has sometimes been suggested that the State which was responsible for using the munitions in question should bear responsibility for their removal. That would, however, be impossible where that State did not control the territory in question after the conflict had ended or could not secure the approval of the State which did. A possible substitute is, of course, that the State which used the munitions should bear the cost of any cleaning up of those munitions.

⁹ A question which those who plan or decide upon an attack are required by Additional Protocol I, Article 57(2)(b) to ask.

27. Whatever the attractions of such a proposal, I do not think it represents the current law. No such duty can be extracted from the principles of international humanitarian law. Even the detailed regime on landmines does not impose such an absolute requirement. Nor does such a duty follow from the general principles of State responsibility identified by the International Law Commission.¹⁰ Those principles apply only where the use of the munitions was itself an unlawful act. It has also been suggested that an analogy might be drawn with the “polluter pays” principle in international environmental law. That analogy, however, is open to a number of objections, not least that in the context of warfare it might conflict with the well established principle that the aggressor bears responsibility for the damage directly resulting from the aggression and that this includes damage resulting from action lawfully taken against the aggressor (either by way of self-defence or under the authority of the Security Council).¹¹ In addition, a practical obstacle is that the origin of individual items of unexploded ordnance is frequently difficult to determine.

28. In my opinion, the most that might be found in the existing law is a general duty of co-operation in the removal and clearance of unexploded ordnance but the content of that duty is not easy to determine and there is little State practice to support even its existence.

V. Abandoned Weapons

29. In the case of Category 3 (abandoned weapons), there is very little to say. The abandonment of weapons is not a premeditated act. It will usually be attributable primarily to enemy action and in some cases (eg the weapons left on the body of a dead soldier) will frequently be attributable entirely to the action of the enemy. International law does not (and could not) prohibit a State from abandoning weapons when its forces are overpowered or forced to retreat. It is therefore difficult to identify any existing legal principles which are relevant here, except that it might be possible to identify a general customary law obligation on the parties to a conflict to co-operate in making safe and clearing such weapons after a conflict has ended.

VI. Conclusions

30. In the light of the above, I suggest the following points as a possible focus for discussion –

- (1) The term “explosive remnants of war” is used by different commentators to describe different matters. A clearer understanding of what the subject includes would greatly facilitate discussion.
- (2) There are different varieties of ERW and the legal regimes applicable to them, and the nature of the problems they pose, vary.
- (3) It is not possible to speak of a single legal regime applicable to ERW under existing international law.

¹⁰ See J. Crawford, *The International Law Commission Articles on State Responsibility* (Cambridge, 2002).

¹¹ See, e.g., Security Council Resolution 687 (1991), para. 16, regarding the liability of Iraq for losses resulting directly from the invasion of Kuwait. See also Decision No.15 of the Governing Council of the United Nations Compensation Commission and the Report in the *Well Blowout Claim*, 109 ILR 479, both of which recognize that Iraq is responsible for damage caused by coalition military action.

- (4) Mines – both naval and landmines – are the subject of detailed legal regimes specifically designed to regulate their design, use and clearance.
- (5) By contrast, there are no rules specifically regulating other types of ERW.
- (6) With regard to munitions which fail to explode as intended, existing law does not impose requirements regarding design but the general principles of international humanitarian law and, in particular, the principle of proportionality in relation to targeting, may impose some limitation on the use of weapons likely to create ERW.
- (7) The existing law does not impose a liability on the State which creates ERW (other than mines) to clear them after the conflict from territory it does not control, nor does it require it to pay the cost of doing so. It is, however, arguable that there is a general duty of co-operation, albeit one of uncertain content.
- (8) Existing law says almost nothing about the problems caused by abandoned weapons.