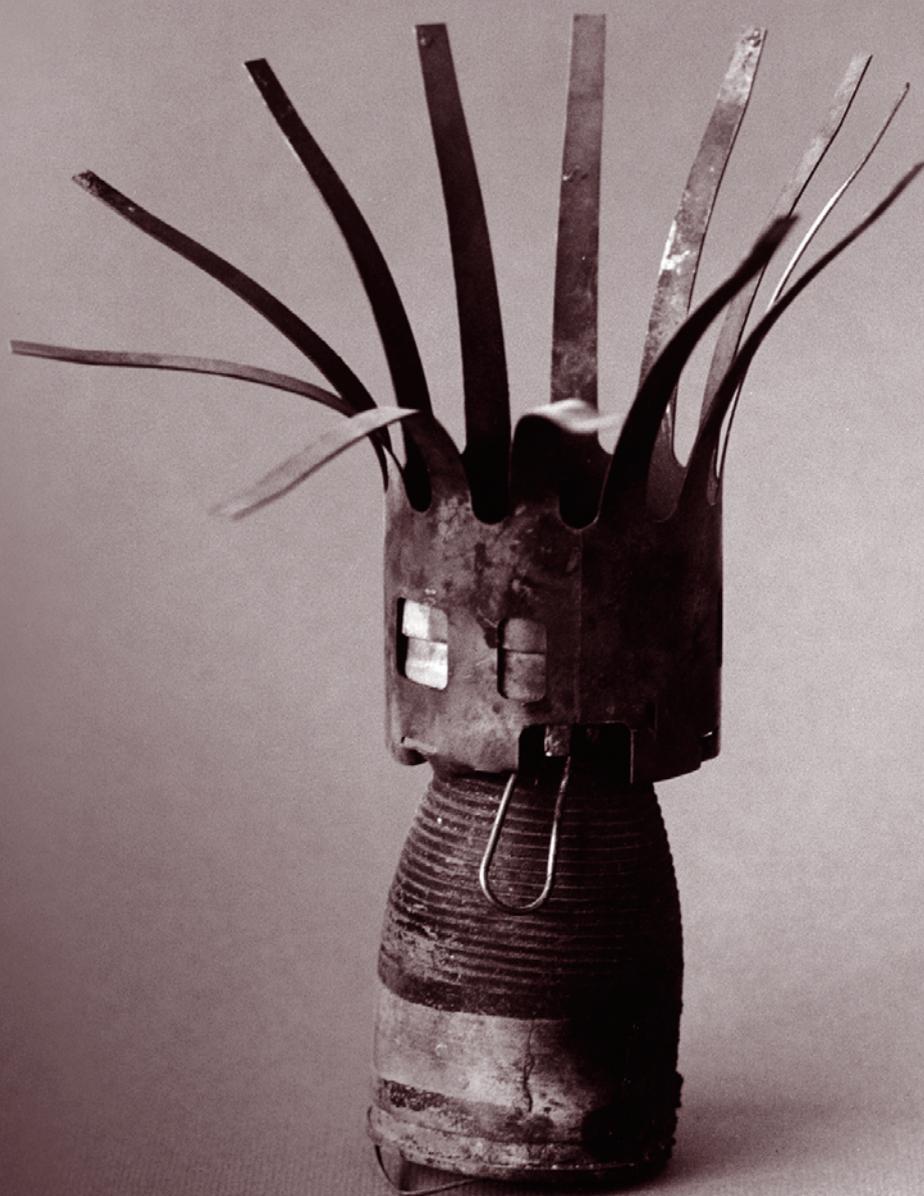


landmine action

# Failure to protect

A case for the prohibition of cluster munitions



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**THE WORK CONTINUES**

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# Executive summary

*Failure to protect* lays out the policy framework of Landmine Action in relation to cluster munitions. It provides the broad basis for Landmine Action's call for a prohibition on the use, stockpiling, production and transfer of these weapons.

According to evidence gathered by non-governmental and international organisations (including Landmine Action), the use of cluster munitions has resulted in a consistent pattern of civilian harm. The pattern involves civilian casualties at the time of attacks because of the area-affect of the munitions and civilian casualties in the post-conflict period as a result of unexploded ordnance contamination. While the full extent of this harm cannot be known because of difficulties in gathering information at the time of attacks and because casualties are still occurring in almost all countries where cluster munitions have been used, what is known provides a compelling case for a prohibition.

At different times a large number of states have recognised particular humanitarian problems as being associated with cluster munitions – though they have disagreed on the extent of those problems and the responses necessary.

The dominant approach amongst states asserts that a case-by-case assessment of likely civilian harm and anticipated military advantage in specific attacks remains the most effective and appropriate legal regime for deciding on the acceptability of the use of these weapons. Many states also suggest that limited reforms to technology could help to reduce the humanitarian impact associated with cluster munitions. When set against the history of civilian harm, this approach can be seen to be inadequate because:

- The 'case by case' approach to determining the legitimacy of cluster munitions attacks has been ineffective.
  - \_ The current international humanitarian law framework underpinning decisions on use has serious inadequacies in relation to cluster munitions and these inadequacies are unlikely to be resolved in the near future.
  - \_ Appropriate evidence regarding probable civilian harm is unlikely to be available to commanders undertaking attacks because states have systematically failed to evaluate the harm that results from such attacks. Key user states have rejected evidence from non-governmental and international organisations, and have made misleading assertions about their own efforts to assess likely impact on civilians.
- Most of the technical reforms proposed could only partially address the humanitarian problems evidenced and it is unclear that they are a workable basis for enhanced protection or would be sufficiently broadly adopted.
  - \_ Technical modifications tend to focus on 'failure rates' – addressing post-conflict contamination but not impact at the time of attacks.
  - \_ Even an obligation for all submunitions to be fitted with self-destruct mechanisms would still present problems of reliability, transparency and cost.

Given the history of civilian harm, and the failure to protect civilians from harm which is perpetuated in the currently dominant approach amongst many states, Landmine Action calls for a general prohibition on the use, stockpiling, production and transfer of cluster munitions.

This call for a general prohibition is founded on:

- A precautionary approach: that in the face of consistent evidence of civilian death, injury and hardship, dispute over legal interpretations, and insufficient user-state efforts to understand or limit humanitarian impacts, the working presumption should be that the use of these weapons causes unnecessary civilian harm.

- Recognition that the solutions proposed short of a general prohibition are inadequate without broader reforms to state practice.

Landmine Action therefore calls upon states to adopt a general prohibition on cluster munitions as a matter of national policy and to work for the extension of that policy amongst other states as the strongest available mechanism for preventing further unnecessary harm from these weapons.

Against this background Landmine Action also calls upon committed states to develop more substantive, transparent and accountable mechanisms for limiting the humanitarian impact of conflict. The ‘problem of cluster munitions’ lies not only in the technology but also in the failure of key user states to understand or address the civilian harm that results from their actions. Responding to such underlying problems has an importance that goes beyond these specific weapons.

In democratic countries the means and methods of violence chosen should accord with the values of the society. Such an alignment can only be ensured through scrutiny and open evaluation of the humanitarian impact of military actions. The responsibility for such scrutiny and evaluation must rest first and foremost with states. On this basis, the approach advocated here works to build greater democratic accountability. In the absence of such scrutiny and evaluation, states may be seriously misleading the public about the civilian harm that will result from violence done in their name.

## glossary of common acronyms

APM	Anti-personnel mines
CBU	Cluster Bomb Unit
CMC	Cluster Munition Coalition
CCW	Convention on Certain Conventional Weapons
ERW	Explosive remnants of war
GGE	Group of Governmental Experts
ICRC	International Committee of the Red Cross and Red Crescent
IHL	International humanitarian law
IGOs	Inter-governmental organisations
MoD	Ministry of Defence
NGOs	Non-governmental organisations
UK	United Kingdom
UNMAS	United Nations Mine Action Service
UXO	Unexploded ordnance

# 1.0 Evaluating the risk: a consistent pattern of civilian harm

According to non-governmental organisations and certain international organisations such as the International Committee of the Red Cross (ICRC) and United Nations Mine Action Service (UNMAS), the use of cluster munitions has resulted in a consistent pattern of unnecessary civilian harm. The pattern involves civilian casualties at the time of attacks because of the area-affect of the munitions and civilian casualties in the post-conflict period as a result of unexploded ordnance contamination.

Over the last 40 years, non-governmental and international organisations have repeatedly raised concerns about the humanitarian consequences of cluster munitions use.<sup>1</sup> The purpose of this section is to provide a summary of the types of concerns that have been raised, and some of the types of data put forward, for a range of conflicts where cluster munitions have been used.

Through such a review it is possible not only to demonstrate the recurring problems posed by cluster munitions but also the recurring difficulties associated with documenting the full extent of humanitarian impact. This section is not intended as a definitive statement of the evidence of civilian harm – simply as an illustration of the consistent pattern of such problems over an extended period. Although primarily summarising existing data, this section also highlights new information that further supports the case being made.

## World War II

The following account of the use of German ‘butterfly bombs’ in Grimsby highlights that from as early as 1943 humanitarian concerns have persisted with cluster munitions despite changes in technology and assertions of reformed practice:

[...] the bombs that were dropped that night were later to be known as ‘butterfly bombs’. As they descended, the outer casings were released allowing a number of small anti-personnel bombs to be scattered over a large area.

[...] Some exploded on impact with the ground, some landed in the trees and were suspended by their ‘wings’ on the branches of trees, others caught on guttering, telephone wires, chimney stacks. It was dangerous to touch them. A young naval [officer] was seriously injured that night after kicking one of these bombs just outside the Hostel. The Salvation Officer and I tried to help him but he died before the ambulance arrived.

The police and the army were put in charge of trying to make them safe. The public was asked to report any sighting but under no circumstance attempt to move them. [...] There was complete terror among the population of the town for many months as these bombs turned up in the most unexpected places.<sup>2</sup>

The civilian population were as much the recipients of the attack as any military forces, and the threat from the bombs continued after the attack. These concerns have persisted in relation to cluster munitions as will be seen through the examples that follow. Some of the ‘butterfly bombs’ had fuzes that made their persistence intentional. The World War II norms regarding making the civilian population the object of attack differ from those enshrined in international humanitarian law today. However, despite changes in technology and targeting policy between 1943 and the present, the same patterns of civilian harm continue to be associated with this class of weapons.

## South East Asia – Cambodia, Lao PDR & Vietnam

Although early cluster munitions were used in World War II, significant international attention to such weapons stemmed from their use by US forces in South East Asia during the Vietnam War. The majority of concern was focused then on civilian death and injury at the time of use because of the wide area affect of the munitions. Given the limited information available from official

sources, such concerns were largely substantiated through post-incident observations by news reporters.

Thus it was argued in the journal *Foreign Affairs* in 1974 that “both in design and in its practical development, the most indiscriminate antipersonnel weapon used in the Vietnam War was almost certainly the so-called Cluster Bomb Unit,”<sup>3</sup> the same article also noted that “no knowledge is available on whether CBUs caused extensive civilian casualties in the trail areas of Laos...”<sup>4</sup>

What was known or presumed about cluster munitions use in Vietnam though was enough for Sweden (with support from Egypt, Mexico, Norway, Sudan, Switzerland, and Yugoslavia) to issue a proposal at the 1974 Conference

of Government Experts on Weapons that May Cause Unnecessary Suffering or Have Indiscriminate Effects that “cluster warheads with bomblets which act through the ejection of a great number of small calibered fragments or pellets are prohibited for use.”<sup>5</sup> At a following meeting in Lugano in 1976, Algeria, Austria, Egypt, Lebanon, Mali, Mauritania, Mexico, Norway, Sudan, Switzerland, Venezuela, and Yugoslavia supported a development of the Swedish paper arguing that anti-personnel cluster munitions:

tend to have both indiscriminate effects and to cause unnecessary suffering...The effect of such a detonation on unprotected persons – military or civilian – in the comparatively large target area is almost certain to be severe with multiple injuries caused by many tiny fragments. Multiple injuries considerably raise the level of pain and suffering. They often call for prolonged and difficult medical treatment and the cumulative effect of the many injuries increases the mortality risk... When the normal weapon effect is so extensive as to cover areas of several square kilometers in an attack by a single aircraft, these weapons are hardly capable of use anywhere without hitting civilians incidentally.<sup>6</sup>

The discussion at both conferences was characterised by conflicting claims about the basic facts of the weapons’

characteristics and by what criteria the suffering and effects of weapons should be calculated.<sup>7</sup> There are probably no mechanisms available now for determining with any accuracy how many civilian casualties resulted from the use of cluster munitions during the conflict in South East Asia. The proposal put forward by Sweden in 1974 is one of the few documents that speaks on behalf of those victims.

Since the 1970s, an appreciation has developed of the post-conflict impact of cluster munitions in South East Asia. In Lao PDR, for instance, the ICRC has stated some 11,000 deaths and injuries are attributable to unexploded ordnance (UXO) since the end of fighting in 1975, 30 percent of these inflicted on children.<sup>8</sup> How many of these casualties resulted from cluster munitions, however, is hard to determine. In line with the relative proportion of munitions deployed by the US though, it has been estimated that 44 percent of the total UXO casualties are attributable to cluster bombs.<sup>9</sup> A sample of UXO casualties from three Provinces of Lao in 2003-2005, published in a report by the Geneva International Centre for Humanitarian Demining (GICHD), shows cluster munitions accounting for some 54 percent of those casualties where the accident record indicated the type of item.<sup>10</sup> Similarly, accident data from central provinces of Vietnam for 2000-2005 shows cluster munitions accounting for 57 percent of incidents where the type of ordnance was recorded.<sup>11</sup>

Despite various ordnance clearance programs, in 2003 the ICRC reported estimates of between 9 and 27 million unexploded submunitions remaining in Lao PDR.<sup>12</sup> Cluster munitions continue to be cleared in Vietnam and Cambodia. As argued by the Mennonite Central Committee, with hindsight it is evident that estimations offered during the Vietnam War regarding the reliability of particular cluster bombs proved highly unrealistic.<sup>13</sup>

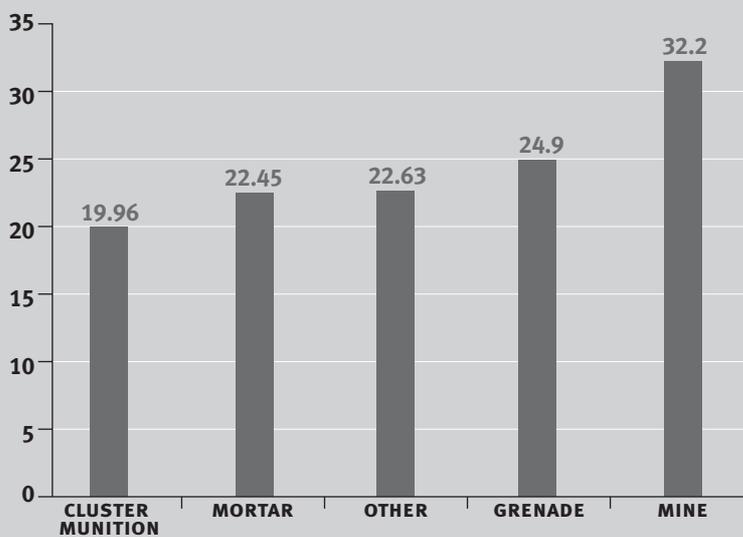
Most significantly, some 30 years after the cessation of cluster munitions use, the civilian harm caused by these weapons continues to grow as new civilian casualties continue to be incurred. Due to difficulties in information gathering, the full extent of civilian harm caused by cluster munitions in this area will never be known.

## cluster munitions and children in central vietnam 2000–2005

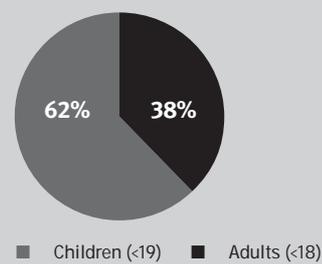
Clear Path International (CPI) have collected data on mine and ordnance casualties across central provinces of Vietnam from 2000 onwards. The dataset analysed here contains records of 488 casualties. Of these 137 are attributed to cluster munitions. For a significant number (266) the type of ordnance is not recorded – these are categorised in the ‘other’ category in the bar chart below.

The data supports the assertion that in post-conflict Vietnam cluster munitions by comparison with other types of ordnance contamination present a particularly high risk to children.

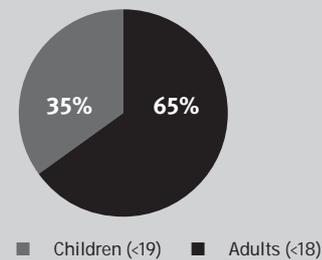
average age of casualties by type of ordnance



proportion of children and adults amongst cluster munition casualties



proportion of children and adults amongst other munition casualties (where type is recorded)



## Lebanon

In a 2005 report *Cluster munitions in Lebanon*, Landmine Action provided an account of the consequences resulting from the use of cluster munitions during Israeli attacks in 1978 and 1982. Significant concerns were raised in the report about both the impact at the time of use and the legacy of humanitarian problems post-conflict. Although it was acknowledged as difficult to obtain reliable data on the numbers of people killed and injured, personal testimonies indicated that civilians in Lebanon were killed and injured during strikes on military targets located in or near populated areas.

The report highlighted the fact that the US Government (which had sold the cluster munitions to Israel) had imposed additional restrictions on Israel that related

specifically to the use of these weapons. As argued in *Cluster munitions in Lebanon*, this imposition can be seen as a recognition by the U.S. Government that cluster munitions are a distinctly problematic category of weapons and that the generic rules of international humanitarian law are insufficient to control the predictable problems of civilian casualties during attacks. In response to Israel's apparent breach of these additional restrictions the U.S. Government prohibited further sale of these weapons.

Post-conflict, as noted in the 2002 Landmine Monitor Report, over 2,500 submunitions were cleared from Lebanon during a period of approximately one year – this decades after the weapons were used. Civilian

## Israel dropped U.S. cluster bombs in raids

*Violates U.S. Restrictions*

# Israel Admits Bomb Use

## Cluster Bombing Called Violation

# Administration bans cluster bombs for Israel

*Press coverage from 1982 highlighting the US Government response to Israeli cluster munition use.*

casualties continue to be incurred. As in South East Asia, whilst it can be asserted that the full scale of civilian harm continues to grow, the lack of comprehensive data means that the full extent of that harm may never be known.

In July and August 2006, Israel again used cluster munitions in Lebanon. Researchers from Human Rights Watch documented one person killed and 12 injured amongst the civilian population in the Lebanese village of Blida when it was hit by Israeli cluster munitions on July 19th 2006. As of 22 August 2006, six days after the ceasefire, the United Nations had already recorded eight dead and 23 injured by unexploded submunitions. In the same period the UN and bomb disposal teams identified 226 individual sites contaminated by cluster munitions and destroyed 1,235 unexploded submunitions.

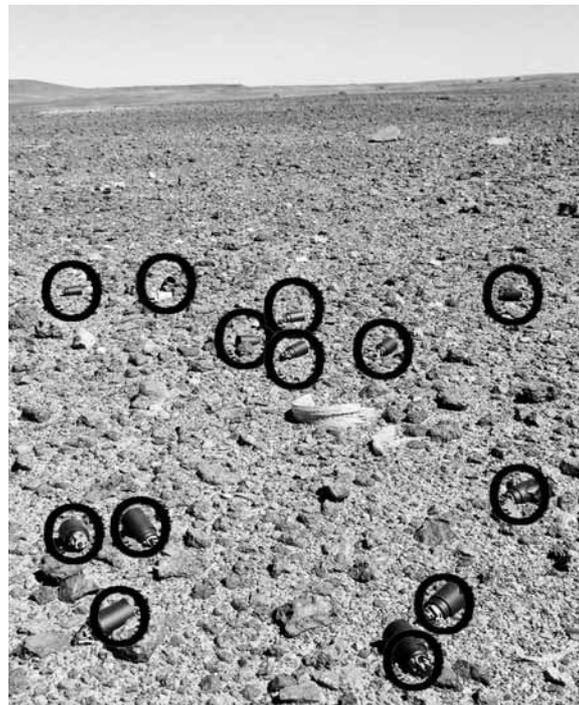
## Western Sahara

A *New York Times* article of July 1982 suggested that the US had sold cluster munitions to Morocco around the same time as it had been providing similar munitions to Israel. Under the heading "U.S. Aides say Arab's got cluster munitions" it reported:

"Pentagon officials said today that the United States had sold cluster bombs to Arab countries as well as to Israel, but had attached conditions on their use only in the case of the Israelis. The officials said the identity of the Arab buyers was secret, but others said that Saudi Arabia and Morocco were among them and that it was logical to assume that Jordan also bought them. On Monday, the United States barred the delivery of cluster-type artillery shells to the Israelis until it determines whether cluster bombs were misused in Lebanon."

Many commentaries on the displacement of the Saharawi people from much of Western Sahara note Morocco's use of the U.S. supplied cluster munitions, for example: "The major bulk of Saharawis became refugees after Moroccan planes bombed civilian camps in the interior of Western Sahara with banned napalm and cluster bombs in the early months of 1976."<sup>14</sup>

The predictable post-conflict legacy of cluster munitions is still very visible. However, no comprehensive assessment has been undertaken of the impact of cluster munitions in Western Sahara either at the time of use or subsequently.



Photograph by Simon Conway © Landmine Action.

*Dense cluster munitions contamination persists in Western Sahara. These are U.S. manufactured, artillery-delivered M42 submunitions.*

## The 1991 Gulf War

The 1991 Gulf War witnessed the extensive deployment of cluster munitions by US and British forces.<sup>15</sup> The total number of submunitions used is estimated at over 13 million. Due to limitations on gathering data during conflict, little information exists about the immediate humanitarian consequences of strikes. The reliability of munitions and post-conflict casualties though has been a topic of significant discussion. Environmental conditions, manufacturing procedures, use practices, and other factors have been said to have led to much greater rates of failure than expected.<sup>16</sup> In a study of ERW for the ICRC, Colin King (editor of *Jane's Mines and Mine Clearance*) estimated the most common air-dropped sub-munitions used (i.e., the Mk-118) might have failed to explode on impact some 20-40 percent of the time due to an insufficient drop height and its use on soft sand.<sup>17</sup>

High failure rates were also observed and acknowledged in military planning with respect to BLU-97 submunitions used within the CBU-87 cluster bomb. The Gulf War Air Power Survey produced by the US Air Force noted: "... the preferred F-16 munitions was the CBU-87 combined-effects munitions. But CENTAF's restrictions on the use of this munitions in the middle of the war – a sensible decision in view of the heavy fighting that might have occurred during the ground war – limited its employment as well."<sup>18</sup> The restrictions referred to here were to reduce the risk to U.S. forces encountering unexploded munitions on the ground. Such restrictions suggest that the expected contamination from these munitions was considerable.

Cluster munitions are reported to have been responsible for "most" of the 191 casualties incurred during the post-conflict ordnance clearance operation.<sup>19</sup> Seven US troops were killed in a single incident whilst stacking unexploded BLU-97s.<sup>20</sup>

The humanitarian consequences of cluster munitions use in this conflict have been substantial. A report by Human Rights Watch noted that by February 2003, 1,600 civilians had been killed and 2,500 injured in Kuwait and Iraq (60 percent of victims under 15 years old) because of ground and air-launched cluster munitions.<sup>21</sup>

## Croatia

In January 1995 the Government of Croatia made a statement to the Group of Governmental Experts to the CCW that highlighted the particular problems presented by cluster munitions:

From the air the enemy dropped [UK manufactured] BL 755 cluster bombs. They had obtained 4,000 of these prior to the war ... Between 93-95 percent of the bomblets are actuated when touching down and the remainder can be actuated at a later stage by the presence of a person. These bombs were dropped in the area of the towns of Sisak and Kutina and the broader area along the river Kupa, around Slavonski Brod and across the entire front line. The parts of the country with tourist resorts were spared.<sup>22</sup>

Their comments here seem to mistake the failure rate of the BL755 for a deliberate design feature of the weapon – a telling reminder of the landmine-like effect of cluster munitions on post-conflict populations.

A further use of cluster munitions in Croatia has resulted in an ongoing legal process. Milan Martić currently stands accused before the International Criminal Tribunal for the former Yugoslavia of war crimes in the shelling of Zagreb with cluster munitions on 2nd and 3rd of May 1995. Testimony given to the Tribunal in February 1996 described elements of these attacks:

[...] six Orkan rockets fitted with [cluster warheads] [...] were launched against Zagreb. These rockets impacted at about 10.30 in the morning, mainly in central areas of the city, all heavily trafficked locations within the central commercial district. It caused the death of 5 civilians and injured another 186. Buildings and trams were hit, windows broken and at least 100 cars damaged. On the following day, Wednesday the 3rd, another six rockets were launched and, again, the centre of the city was hit at lunchtime. This attack caused the death of two persons and injured another 50 [...]

Later in the testimony the clearance operation is described:

Mr Petric. How many unexploded bomblets did your unit retrieve or disarm on 2nd and 3rd May 1995?

A. On 2nd May 1995, they collected approximately 500 of such bomblets.

Q. And how many on 3rd?

A. On 3rd May it was less, because we had had one fatality and one severely injured officer in the meantime. So we continued with the disposal very slowly, and it took us a while.

Q. When you say "a while", how long?

A. Well, around fifteen days. We spent fifteen days working, and then we decided – we made sure that the great part of the work had been finished, and then we could fully guarantee that all of the bomblets had been retrieved.

Q. How many bomblets did you, in fact, retrieve?

A. We retrieved around 1,599 bomblets.<sup>23</sup>

Again this incident clearly evidences the familiar pattern of civilian casualties at the time of the attack and the problematic legacy of unexploded items.

## Chechnya

In the first Chechen War (1994-96) and with the resumption of major fighting in 1999, cluster munitions were extensively deployed by Russian forces. As Colin King argued in a report for the ICRC the lack of outside scrutiny has made it difficult to assess the consequences of their use.<sup>24</sup> Likewise, the Mennonite Central Committee concluded "there appears to be a dearth of publicly available data concerning the use and lasting effects of Russian or Chechen submunitions."

In an attempt to offer what assessment was possible, that report gave an account "gleaned from international and Russian press reports, United Nations documents, human rights organisations, and communications with unexploded ordnance removal agencies [which provided a picture that was] not intended as a comprehensive listing of such attacks."<sup>25</sup> Included within that account were repeated reports of civilian deaths from the use of cluster munitions in a manner that failed to discriminate between civilians and combatants. The attacks on the village of Elistanzhi and Grozny market in 1999 were two of the most high profile incidents of cluster munitions use. Reporting on the use of cluster munitions by Russian forces in an attack on Grozny market in 1999 The Mennonite Central Committee have quoted the following statement:

"Blood was everywhere," said Aslan Akhmatov, "There were torn pieces of flesh, legs and hands. Many people were alive, but badly mutilated, and they were screaming quite terribly."

According to landmine clearance organisation The HALO Trust, 137 people were killed and many more injured in the strike.

The particular problems associated with cluster munitions in this area are also part of a broader problem regarding the risk to which civilians are exposed during attacks. In 2000 Human Rights Watch concluded that:

"Since the beginning of the conflict, Russian forces have indiscriminately and disproportionately bombed and shelled civilian areas, causing heavy civilian casualties. They have ignored their Geneva Convention obligations to focus their attacks on combatants, and appear to take few safeguards to protect civilians."<sup>26</sup>

As with so many other areas, the full civilian harm caused by cluster munitions in Chechnya remains unknown and will probably never be fully known.

## Ethiopia and Eritrea

Whilst not used extensively in the conflict between Ethiopia and Eritrea (1998-2000) specific instances give a clear indication of particular problems arising from the use of these weapons.

In June 1998 Eritrean aircraft dropped cluster bombs in the town of Mekele, Ethiopia. The cluster attack missed its target and hit a school. As a result some 53 civilians were killed and a further 185 were injured in the attack – 54 of the casualties were school children. The attack on Mekele was subject to a legal ruling in the Hague which found the attack to be illegal on the basis of a failure to take “feasible precautions.” This ruling did not specifically criticise the type of weapons used.

Ethiopian aircraft also dropped cluster munitions on civilians in Eritrea. On 9th May 2000, UK manufactured BL755 cluster munitions were dropped on a camp for displaced people. Although there were few casualties at the time hundreds of unexploded submunitions continued to litter the area after the attack. The camp administrator reported to Landmine Action that:

“There were 7,000 families here at the time of the air strike but no military personnel. They had retreated through this area already. The aircraft came in low and dropped the cluster bomb cases one at a time. They dropped more than ten cases I think. Only one person was killed in the air strike, a young child. Everybody just ran to find somewhere to hide.”<sup>27</sup>

In the period after the attack more than 420 unexploded BL-755 submunitions were found by landmine clearance organisations trying to make the area safe.

The extent of UK commercial and political involvement in facilitating Ethiopia’s use of BL755 cluster munitions remains unknown.

These incidents should cause serious concern about the extent of cluster munitions proliferation internationally.



*In Ethiopia, the Mekele incident and the photographs purportedly depicting it were used extensively in the media and by the government as a propaganda tool to depict the barbarity of the enemy. One article stated, “And so we proceeded to bury our dead children and as we did, we cried deeply. Who would not at the funerals of the very young burned dead by cluster bombs?”*

## Kosovo and former Yugoslavia

In advance of the bombing of Kosovo, non-governmental organisations appealed to NATO not to use cluster munitions on the basis of the excessive civilian harm from these weapons evidenced in previous conflicts.<sup>28</sup> The representatives of NATO states effectively denied that any particular problems were associated with cluster munitions and used them in large quantities and in areas of civilian concentration.

An analysis by Landmine Action (forthcoming) suggests that NATO forces dropped more than 2,000 cluster munitions, scattering over 380,000 individual submunitions. All of the main cluster munitions types used had established histories of unreliability.

The military impact of this extensive use of cluster munitions was strongly contested after the conflict. In the UK the House of Commons Defence Select Committee rejected assertions by the Ministry of Defence that these weapons had been 'most effective.' In an analysis for the International Security Information Service, General Sir Hugh Beach noted that:

"[Our] analysis suggests that, in the British case, the delivery of some 530 cluster bombs in the course of the campaign may have resulted in the destruction of as few as 30 major items of military equipment [such as tanks, armoured personnel carriers, artillery]. This achievement can in no sense have influenced the outcome of the campaign."<sup>29</sup>

Casualties were documented during the bombing as a result of inaccurate attacks and the area affect of cluster munitions striking civilians as well as military targets.<sup>30</sup>

Specific problems caused by cluster munitions after the bombing were emphasised in a report from the UN Mine Action Coordination Centre in Kosovo to the UN Convention on Certain Conventional Weapons:

"Experience from Kosovo showed that submunitions were likely to cause multiple casualties (including fatalities), and that a high proportion of victims were under the age of 18. This was because the shape and colour made them appear "toy like", and the destructive power and lethality of the weapons was completely misunderstood.

One of the key lessons learned from Kosovo was that submunitions needed to be singled out for particular attention as part of the awareness campaign. To simply include cluster bombs as part of a generic UXO threat was not sufficient, given the threat that they posed."<sup>31</sup>

According to data from the International Committee of the Red Cross, in the year after the bombing cluster munitions were responsible for some 82 percent of unexploded ordnance (UXO) accidents in Kosovo.<sup>32</sup> This despite repeated assertions by NATO political and military representatives that cluster munitions were just the same as other weapons in creating a UXO threat. Indeed as the ICRC data suggested – cluster munitions were more akin to landmines in their post-conflict impact:

"Cluster bomblets and anti-personnel mines accounted for 73 percent of the 280 incidents individually recorded by the ICRC between 1 June 1999 to 31 May, 2000, with each type of ordnance responsible for 102 deaths or injuries .... In addition, as compared to those killed or injured by anti-personnel mines, those injured or killed by cluster bombs were [much more] likely to be under age 14."<sup>33</sup>

This ICRC report also cast doubt on the veracity of NATO estimations of the number of submunitions that failed to detonate, suggesting the overall failure rate was between 10 and 15 percent. The overall and type-specific failure rates have been matters of significant ongoing disagreement between IGOs, NGOs, and government officials.<sup>34</sup>

Cluster munitions were said to pose a particular challenge for disposal operations because of their sensitive fuzes, the need for *in situ* destruction, the inability to use mechanical clearance techniques, and the frequency with which they penetrated the soil.

On the basis of its report, the ICRC contended that "the use of cluster bomblets should be suspended until an international agreement on their use and clearance has been achieved." They recommended a proscription on the use of cluster munitions against military objects in populated areas and called for the application of self-destruction mechanisms.

The fact that the level of casualties from cluster munitions dropped very rapidly immediately after the conflict can be substantially related to the very high levels of investment in mine action in the region. According to the Landmine Monitor Report 2002: “[an] evaluation concluded that a total of about \$85 million had been invested in the mine action program in Kosovo from mid-1999 to the end of 2001.” Despite these high levels of investment cluster munitions continue to be cleared in Kosovo some seven years after the conflict.

## Afghanistan

The air bombing campaign in Afghanistan in 2001-2002 included the use of cluster munitions by the US. Based on site visits, assistance from clearance organisations in Afghanistan, and discussions with US officials, Human Rights Watch concluded that:

- 1,228 cluster bombs containing 248,056 bomblets were used between October 2001 and March 2002. In the main, these consisted of CBU-87B and CBU-103 dispensers.
- “Ample evidence [exists] that cluster bombs caused civilian harm,” this including at least 25 deaths at time of use resulting from strikes in or near populated areas.

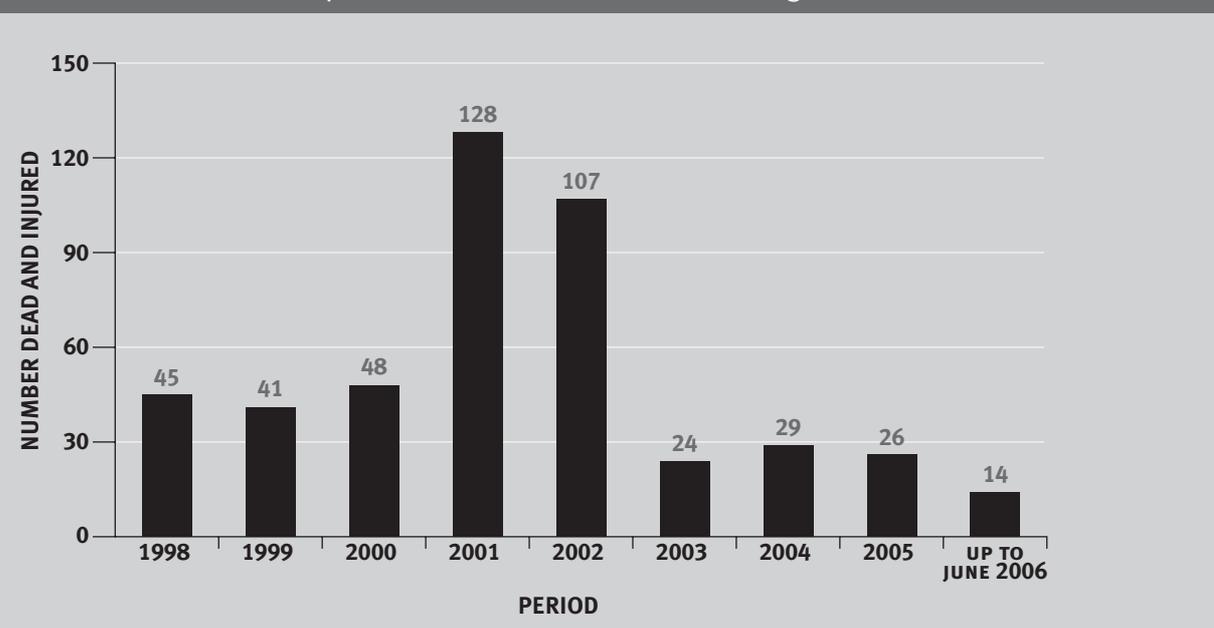
- Although it was impossible to establish overall or type-specific reliability rates, “at least 127 civilians as well as two deminers were killed or injured by cluster bomblets” post-conflict by the time of their report.
- While the US had improved its targeting and technology, it was continuing to use cluster bombs in or near populated areas and it had “not solved the problem of unexploded bomblets by lowering the dud rate to an acceptable level.”<sup>35</sup>

An article in the *Journal of the American Medical Association* in 2003 presented findings regarding death and injury from landmines and unexploded ordnance in Afghanistan.<sup>36</sup> Noting that contamination with landmines and unexploded ordnance was already severe in Afghanistan, this article noted that “coalition air strikes in the fall of 2001 exacerbated the problem by deploying a new type of ordnance – cluster bomblets.” They went on to report “a pronounced increase in injuries from unexploded cluster munitions began in October 2001, when the conflict began between the Taliban government and coalition forces.”

## Iraq

During major hostiles in Iraq in 2003 various artillery- and air-delivered cluster munitions were deployed.

casualties from unexploded cluster munitions in afghanistan



An ICRC database of landmine and ordnance casualties in Afghanistan now contains records of 462 people killed and injured by cluster munitions from 1998 to June 2006. Of these 47 percent were children.

Official figures about usage in the 2003 Iraq War vary,<sup>37</sup> but the UK MoD stated that 70 RBL 755 cluster bombs were dropped, mainly around Baghdad.<sup>38</sup> In addition, approximately 2,000 L20A1 extended range bomblet shells were fired, mainly around Basra. The US air-delivered at least 1,200 cluster bombs, included in this total were 818 CBU-103s, 182 CBU-99s, 118 CBU-87s, and 88 CBU-105s.<sup>39</sup> In addition, the US used various artillery-delivered cluster munitions including MLRS rockets, Tactical Missile System missiles, and artillery shells with Sense and Destroy Armor Munitions.

As with the other conflicts noted above, significant concerns were raised about the humanitarian consequences of cluster munitions both in respect to their immediate and post-conflict effects. Human Rights Watch heavily criticised the number of attacks with cluster munitions in civilian areas by US and UK forces.<sup>40</sup> While noting the use of air-delivered cluster bombs in populated areas had decreased in comparison to past wars, it argued ground-launched cluster munitions had been fired extensively in populated areas and this had resulted in hundreds of civilian casualties.

Though UK officials characterised the use of these weapons as targeted “against dispersed Iraqi military forces in the open or on the periphery of built up areas”,<sup>41</sup> specific criticisms have been made regarding their use in the Hay al-Muhandissin al-Kubra and al-Tannuma neighbourhoods of Basra.<sup>42</sup>

Post-conflict, assessments of casualties vary. In June 2003 the Iraq Body Count noted that between 200 and 372 people were reported to have been killed by cluster munitions in the media sources they track (147 of the suspected 372 reported casualties were from accidents with exploded items rather than casualties at the time of attacks).<sup>43</sup> In July of the same year, UNICEF stated that “since the end of the war, more than 1,000 children have been injured by weapons such as cluster bombs dropped by coalition forces, or the thousands of tonnes of munitions stockpiled and abandoned by Iraqi forces in public buildings and residential areas of Iraq.”<sup>44</sup> Again, because of problems of access and security it has not been possible for NGOs and IGOs comprehensively to state the full level of civilian harm either during or after attacks.

## Conclusions regarding humanitarian impact

This overview has not sought to provide a comprehensive documentation of the humanitarian problems caused by cluster munitions over the last 40 years. Indeed, there are a number of other countries where cluster munitions have



Photograph © League of Iraqi Doctors/Landmine Action.

*13 year old Muslim Farhan was left quadriplegic after being injured during a cluster munition attack in Basra on 23 March 2003*

been used that are not touched upon here. Through the evidence presented though, it has justified two conclusions:

- Despite variations in the specific types of weapons deployed, ongoing technical developments and the different circumstances of use in different locations a consistent pattern of civilian harm is associated with cluster munitions. Their immediate and post-conflict consequences have been persistent topics of substantiated concern. While not every use of each type of munitions has necessarily resulted in civilian casualties, recurring evidence has been presented regarding the detrimental humanitarian effects of this class of weapons.
- Fully detailing the extent of humanitarian effects is not straightforward. It has overwhelmingly fallen on NGOs, IGOs, news reporters, and affected individuals to present evidence of humanitarian harms. The users of cluster munitions have done virtually nothing to contribute to understanding of the civilian harm caused by these weapons. This is a cause for grave concern given the repeated assertions on the part of such states that they are constantly weighing evidence regarding civilian harm in order to accord with the requirements of international humanitarian law.

## 2.0 States that acknowledge humanitarian problems relating to cluster munitions

Some 30 states have recognised particular humanitarian problems as being associated with cluster munitions.

At different times, the states listed below have made statements that recognise cluster munitions as a specific cause for concern. This is not to assert that these states are in any way unified in their evaluation of the humanitarian problems caused by cluster munitions or in the responses demanded. Indeed some of these statements date from the 1970s and do not reflect the opinions of those states today. However, this list is a useful illustration of the large number of states that have expressed some concern over the problems identified in the previous sections.

country	reference
Algeria	At a meeting in Lugano in 1976, by Algeria, Austria, Egypt, Lebanon, Mali, Mauritania, Mexico, Norway, Sudan, Switzerland, Venezuela, and Yugoslavia proposed a ban on cluster munitions in a working paper that argued that anti-personnel cluster munitions: "tend to have both indiscriminate effects and to cause unnecessary suffering..."
Australia	See senate resolution of 8 October 2003 calling for an immediate moratorium on cluster munitions, available at: <a href="http://www.aph.gov.au/Senate/work/notice/2003/snrf_102.pdf">www.aph.gov.au/Senate/work/notice/2003/snrf_102.pdf</a> .
Austria	See the parliamentary resolution adopted by the government on 12 July 2006 stating that Austria will work towards international negotiations on a cluster munitions instrument, parliamentary document reference: 1608 der Beilagen XXII. GP.
Belgium	See the law banning cluster munitions that entered into force on 9 June 2006.
Brazil	Brazil's response to an international humanitarian law questionnaire within the CCW raises specific concerns about the use of cluster munitions in high altitude bombing: see document CCW/GGE/XII/WG.1/WP.1 dated 12 September 2005.
Canada	Statement to the 2003 Meeting of States Parties to the CCW, Geneva, 17 November 2003: "Last week in The Hague, I observed the public launch of the new NGO Cluster munitions Coalition. We can expect the calls for states to constructively address and explore the issues such groups are raising will only grow in momentum in the future. We need not shy away from these issues, even if we do not fully agree with all of the positions taken by these groups; the concerns they have raised warrant serious attention and need therefore to be addressed – and seen to be addressed – seriously."
Croatia	Statement by the Delegation of the Republic of Croatia, January 1995, to the 4th Session of the Group of Governmental Experts to Prepare the Review Conference of the States Parties to the CCW noting concerns posed by unexploded cluster submunitions.
Denmark	Statement to the 14th session of the Group of Governmental Experts to the CCW, Geneva, 20 June 2006 noting the importance of regulating cluster munitions in order to eliminate the humanitarian impact of cluster munitions.
Egypt	See above reference to the working paper presented in Lugano.
France	France has noted that "cluster weapons, (...) can have an appreciable failure rate and consequently occasion a significant humanitarian risk to civilians." Document CCW/GGE/II/WP.6 entitled Technical Improvements to Submunitions, dated 10 July 2002.
Germany	See Germany's 8-point position on cluster munitions, presented at the CCW in June 2006, "The characteristics of cluster munitions are a lack of autonomous target detection capability and a usually high number of dangerous duds that pose serious humanitarian concerns after the use."

The Holy See	Statement to the 14th session of the Group of Governmental Experts to the CCW, Geneva, 19 June 2006 calling for a moratorium on cluster munitions.
Ireland	Statement to the 2005 Meeting of States Parties to the CCW, Geneva, November 2005 expressing concerns associated with the use of cluster munitions.
Jordan	Statement to the 14th session of the Group of Governmental Experts to the CCW, Geneva, 22 June 2006 noting that "cluster bombs are not a safe weapon".
Lebanon	See above reference to the working paper presented in Lugano.
Mali	See above reference to the working paper presented in Lugano.
Mauritania	See above reference to the working paper presented in Lugano.
Mexico	Statement to the 2005 Meeting of States Parties to the CCW, Geneva, November 2005 emphasising the need for action to deal with cluster munitions.
New Zealand	Statement to the 14th session of the Group of Governmental Experts to the CCW, Geneva, 23 June 2006 noting that there is "a persuasive case for specific work on cluster munitions within the CCW process".
The Netherlands	In 2004 the Dutch government withdrew its MLRS cluster munitions. Former Commander Pier Gonggrijp noted that this withdrawal was due to "too much collateral damage". Cited in Pax Christi Netherlands, Necessity or Convenience, 2005.
Norway	See statement announcing a moratorium on the use of cluster munitions at the 14th session of the Group of Governmental Experts to the CCW, Geneva, 20 June 2006.
Poland	Polish Ministry of National Defence, communication to Pax Christi Netherlands, 14 Feb. 2005, cited in Pax Christi Netherlands, Necessity or Convenience, 2005. ("... one can come to the conclusion that under existing rules of International Humanitarian Law the use of cluster bombs in 'densely populated regions' is prohibited.")
Spain	Spain's response to an IHL questionnaire within the CCW singles out cluster munitions as weapons that "could generate a substantial quantity of ERW." See document CCW/GGE/XV/WG.1/WP.1, dated 29 June 2006.
Sudan	See above reference to the working paper presented in Lugano.
Sweden	Statement to the 14th session of the Group of Governmental Experts to the CCW, Geneva, 20 June 2006, ("...there is a growing and non-negligible concern about the effects of cluster munitions.")
Switzerland	Statement to the 14th session of the Group of Governmental Experts to the CCW, Geneva, 19 June 2006, ("...Switzerland had already identified in 2001 that cluster munitions posed a particular humanitarian problem...")
United Kingdom	In its working paper CCW/GGE/X/WG.1/WP.1, dated 21 February 2005, the UK notes that: "The persistent nature of cluster munitions when they fail to explode forms one of the most problematic aspects of these munitions."
U.S.A	See U.S policy committing itself to a maximum 1 percent dud rate for cluster munitions: Secretary of Defense William Cohen, "Memorandum for the Secretaries of the Military Departments, Subject: DoD Policy on Submunition Reliability (U)," January 10, 2001.
Venezuela	See above reference to the working paper presented in Lugano.
Yugoslavia	See above reference to the working paper presented in Lugano.

In the next section we look at the suggestions that some states have made about how to respond to the humanitarian problems associated with cluster munitions.

## 3.0 The 'limited reform' response

The dominant state-led approach asserts that the case-by-case assessment of likely civilian harm and anticipated military advantage in specific attacks remains the most effective and appropriate legal regime for these weapons. As part of this, some states suggest a need to clarify international humanitarian law (IHL) and modify targeting procedures.

In addition, many states suggest that limited modifications to technology could help to reduce the harm associated with cluster munitions.

As we have established so far, in response to a documented history of civilian harm a substantial number of states have made statements recognising the particularly problematic nature of cluster munitions. A few have gone so far as to adopt or call for strong measures to control or prohibit cluster munitions.<sup>45</sup> Such concern has not been limited to individual states. For instance, inter-governmental UN agencies have singled out cluster munitions as posing severe humanitarian problems.<sup>46</sup> In 2001 the European Parliament passed a resolution calling on States Parties to the CCW to "declare an immediate moratorium until an international agreement has been negotiated on the regulation, restriction or banning of the use, production, and transfer of cluster munitions under the CCW, including air-dropped cluster munitions and submunitions delivered by missiles, rockets, and artillery projectiles."<sup>47</sup>

In contrast, some states, such as the Russian Federation, have denied that there are any grounds for specific concern regarding these weapons.<sup>48</sup>

When problems are recognised with these weapons the most common response by states has been to propose *limited reforms* in their design and use as well as to the governing provisions of international humanitarian law (IHL). These states fall short of suggesting that the existing legal framework is substantially deficient or that the problems with cluster munitions mean that use of these weapons should be prohibited. In this reformist agenda, emphasis has been given by most states to:

- 1) a case-by-case risk assessment that seeks to balance anticipated civilian harms and military benefits as set out in existing or slightly modified IHL;

- 2) technical alterations that might reduce unexploded or dangerous sub-munitions.

### Case-by-case assessment

At the time of writing, the majority of State Parties to the Convention on Certain Conventional Weapons (CCW) would likely concur with the following composite of statements:

The legitimacy of cluster munitions use "depends on the assessment of a military commander in a concrete situation...taking into account [the munitions'] 'effectiveness' in combat."<sup>49</sup>

Under the rules of IHL, anticipated incidental loss of civilian life and damage to civilian property must be "carefully considered"<sup>50</sup> against the anticipated military advantage.

This is to be done almost exclusively by military commanders.<sup>51</sup>

What happens in practice is that "the commanding officer applies IHL principles [sic. rules] in selecting the method of fire and type of munitions whose use will present the lowest risk for the civilian population."<sup>52</sup>

On some occasions this might require them foregoing cluster munitions strikes.

Thus the use of cluster munitions, as with the use of any other weapon, has to be evaluated in relation to each specific circumstance. In each situation, the anticipated military benefit of the attack must be weighed against the available information about foreseeable civilian harm. This general approach derives from Additional Protocol I of the Geneva Conventions and the rules specifically governing the legitimacy of attacks.

Yet the adequacy of IHL has been a matter of disagreement in the past. While countries such as Russia and the UK<sup>53</sup> have offered unqualified statements about their strict adherence to the rules of IHL, others such as France have suggested that IHL "supplies no guidance for gauging proportionality."<sup>54</sup>

Within the 'case-by-case' approach some suggestions have been made for improvements in targeting that might further reduce civilian harm. As prominent cluster munitions users, the US and UK have claimed advanced and improved procedures for targeting in conflicts such as the 2003 Iraq War.<sup>55</sup> This reportedly involved the use of "no strike lists" and factoring in concerns about civilian casualties to strike decisions. In a CCW paper to the March 2005 GGE, the UK made further comments specific to the targeting of cluster munitions when it noted that "The UK does not regard it appropriate to use cluster munitions when the coordinates or location of a target are not known."<sup>56</sup> Other countries which have made little or no use of cluster munitions in recent times have prescribed the scenarios for which its stockpiles might be used. France, for instance, has stated that its ground-to-ground munitions (i.e., multiple rocket launchers and 155mm bomblet shells) "are intended to be used by the French armed forces only in a conflict against enemy armed forces that possess arms which are of the same type or are capable of directly endangering the security of our forces present in the field."<sup>57</sup>

However, despite such suggestions, the 'case-by-case' position is essentially an assertion that cluster munitions are not different from any other type of conventional explosive ordnance and the current legal regime is adequate to control effectively the impact on civilians. The starting presumption therefore is that their use is generally permissible unless it were somehow proven otherwise; and the criteria for proving otherwise are set in such a way as to make this almost impossible.

Under this framework, military commanders must consider for each attack the anticipated humanitarian consequences against the perceived military necessity. To justify prohibiting a category of weapons outright it is held that the humanitarian cost would *always* have to outweigh the military benefit. Furthermore, the onus is on those concerned about the humanitarian impact of the weapons to provide proof to that effect. Even justifying a more limited legal restriction might be held to require proof for all situations that might occur within the parameters of the restriction – such as all possible situations of cluster munitions use within populated areas. By placing the onus of proof so heavily with those

concerned about humanitarian effects this structure allows a single hypothetical instance of unproblematic use to be held up in opposition to ongoing and widespread evidence of actual civilian harm.

Amongst the majority of states, whilst certain kinds of employment of these weapons or certain munitions types might be ruled out as a matter of national policy, the essential legality of cluster munitions is rarely if ever challenged.

## Improving technology

Whilst asserting that the current legal framework is adequate for the control of cluster munitions, the proponents of limited reform have generally suggested that improved weapons technology holds the key to reducing civilian harm.

For instance, in 1994 at a meeting convened by the ICRC, Australia drafted a 'non paper' proposing that cluster bomblets include self-destruction fuzes.<sup>58</sup> In 2001 the U.S. Secretary of Defense proposed to reduce the failure rate of its *new* cluster munitions to below 1 percent by 2005.<sup>59</sup> Since then the USA has deployed cluster munitions such as the SADARM and CBU-105 Sensor Fused Weapon and it has also evaluated the possibility of retrofitting existing submunitions with components for improving accuracy or reducing dud-rates<sup>60</sup>. In addition, other countries such as Argentina, Denmark, Germany, Norway, Poland, South Africa, and Sweden have set minimum reliability rates for future procurements, generally at 98 or 99 percent.<sup>61</sup> Reliability is now a topic for discussion within Group of Governmental Expert sessions under the CCW.

In line with concerns about the reliability and effects of older 'legacy munitions', states such as Australia, Belgium, Canada, Denmark, France, Germany, Greece, Italy, Netherlands, Norway<sup>62</sup>, Poland, Switzerland, United Kingdom, and United States<sup>63</sup> have plans to withdraw from service or have destroyed certain types of cluster munitions.

In the next section we present a critique of these approaches as a response to the humanitarian problems caused by cluster munitions.

## 4.0 Why the 'limited reform' approach is inadequate

When set against the history of civilian harm, the limited reform approach can be seen to be inadequate based on the following:

- The 'case-by-case' approach to determining the legitimacy of cluster munitions attacks has been ineffective.
  - \_ The current international humanitarian law framework underpinning decisions on use has serious inadequacies in relation to cluster munitions and these inadequacies are unlikely to be resolved in the near future.
  - \_ Appropriate evidence regarding probable civilian harm is unlikely to be available to commanders undertaking attacks because states have systematically failed to evaluate the harm that results from such attacks. Key user states have rejected evidence from non-governmental and international organisations, and have made misleading assertions about their own efforts to assess likely impact on civilians.
- Most of the technical reforms proposed would only partially address the humanitarian problems evidenced and it is unclear that they are workable or would be sufficiently broadly adopted.
  - \_ Technical reforms tend to focus on 'failure rates' – addressing post-conflict contamination but not impact at the time of attacks.
  - \_ Even an obligation for all submunitions to be fitted with self-destruct mechanisms would still present problems of reliability and transparency. Furthermore such an obligation would be costly to implement and may not be broadly adopted.

### The failings of the 'case-by-case' approach

As we have noted a 'case-by-case' approach to controlling the humanitarian impact of cluster munitions is strongly supported by many states. The starting presumption that the use of these weapons is permissible unless proven otherwise places the onus on those seeking a general prohibition to prove why this is justified. However, it is the very failure of this approach over recent decades to provide adequate humanitarian protection that is the basis for much of the concern expressed by non-governmental and international organisations. Closer examination provides some clear indications of why such an approach has been ineffective.

#### *The limitations of IHL*

Of course, the existence of explicit prohibitions barring the use of certain weapons 'does not exhaust the meaning of the general principle.' But, absent an overt exclusion in the *lex scripta*, there are frequent disagreements which cannot be easily resolved. Thus, opinions are divided as regard the legitimacy of the use of small-calibre (high velocity) bullets, shot guns, cluster bombs ..

Yoram Dinstein (2004), *The Conduct of Hostilities under the Law of International Armed Conflict*, Cambridge University Press.

An analysis at Annex A of this report highlights how different assessments of the legality of cluster munitions have been made under the existing rules of international humanitarian law. These assessments range from assertions of the outright illegality of cluster munitions to confidence that there are no specific legal problems with cluster munitions as distinct from any other type of explosive ordnance. Thus it important to note that, in terms of theoretical evaluations, the general legitimacy of cluster munitions is contested.

The different legal interpretations presented at Annex A stem in part from different attitudes towards the following:

- The facts: The humanitarian problem is framed differently in different arguments – some address only post-conflict problems whereas others engage also with problems at the time of use. Alternative claims are made about the reliability of submunitions, the sensitivity of fuzes, the accuracy of munitions, and other key matters. Sometimes this stems from individuals' differential access to data, at other times it reflects different choices regarding which data to represent.
- Importance of past experience: Those critical of cluster munitions have said the repeated mistakeness of manufacturers' and governments' previous claims about their reliability and effectiveness is grounds for scepticism regarding more recent claims. On the other hand, those less critical have downplayed or ignored concerns about the accuracy of past claims. The practicality or likelihood of promised initiatives are matters on which there is substantial scope for disagreement.
- The standing of rules: While some analysts have taken the rules of IHL as providing viable criteria for assessing the legality of a category of weapons, others have argued that the rules are too vague to provide a basis for making definitive appraisals.
- The specific meaning of terms: While all of the analysts examined noted the importance of attending to the expected humanitarian effects of cluster munitions as unexploded ordnance, just what should be counted as 'expected' is a topic of disagreement. While some have suggested that this include long term consequences, others have argued that only relatively short term impact of unexploded items can be reasonably foreseen.

Depending on how these and other considerations are addressed, justification can be given to a variety of assessments.

With regard to IHL and cluster munitions, CCW States Parties have increasingly focused on the third and fourth points, the standing of rules and the specific meaning of terms. For instance, there have been different opinions expressed by states about how any likely loss of civilian life in the more distant future should be factored into decisions made about the appropriateness of cluster munitions. Austria contended the "probability of harming civilians is essential"<sup>64</sup> to assessments of proportionality and that the effects necessarily taken into account should include intended direct effects as well as unintended, but expected, ERW effects.<sup>65</sup> Norway has stated this rule requires "taking into account more long-term humanitarian problems caused by ERW."<sup>66</sup> Sweden has maintained that "[i]f, under current IHL, the long-term effects of ERW are not regarded as relevant when applying the principles of proportionality and precaution in attack, it may be difficult to conclude that present IHL is sufficient to deal with the problems that arise out of ERW."<sup>67</sup> Other legal opinions have rejected such a reading of the current IHL rules by suggesting that the level of longer-term harm cannot reasonably be foreseen by commanders.<sup>68</sup>

More generally, when states responded to a questionnaire asking about how the various rules of international humanitarian law were interpreted or acted upon at a national level in relation to explosive remnants of war the variation in national interpretation was clearly highlighted.<sup>69</sup>

"[...] it is obvious that there are significant inconsistencies in approach between Respondent States: in understanding the relevant principles; in articulating how they apply to the problem of ERW; and in explaining the approaches adopted for the national implementation of these legally binding obligations."<sup>70</sup>

In relation to the rule of proportionality, for instance, the report said responses to the IHL questionnaire revealed "inconsistencies in [its] interpretation and application". Widespread confusion was noted between the 'rules' and 'principles' of IHL in state submissions and different respondents were seen to place emphasis in different areas:

“Those States which consider cluster munitions to have a high military utility seek to emphasise the importance of military necessity and those States (and international and non-governmental organisations) concerned about the deleterious humanitarian consequences of the use of cluster munitions seek to emphasise the importance of the general principle of humanity.”<sup>71</sup>

Despite the majority of states being in favour of a case-by-case balancing of expected humanitarian risks and military gains there is fundamental confusion and uncertainty about what factors need to be “carefully considered” in such a process.

Thus, there are significant grounds for concerns about the adequacy of the existing rules and principles of IHL as a basis for substantially reducing the casualties and suffering inflicted by cluster munitions. While clarification to some of those rules might aid the application of existing IHL, such clarification does not seem to be developing within the CCW. Despite broad interest in improving munitions failure rates as a response to humanitarian concern, the Group of Governmental Experts on explosive remnants of war (ERW) to the CCW has not yet produced any clear recommendation to clarify how longer term risks are to be evaluated and considered under the existing rules of IHL. Even if the will existed to clarify key terms within IHL, however, there are reasons for doubting the adequacy of such measures. This is the topic for consideration in the next sub-section.

#### *Insufficient efforts undertaken by user states*

There is strong evidence to suggest that key user states have not developed, or sought to develop, a sufficient understanding of the likely humanitarian impact of cluster munitions use. Given this, it becomes increasingly untenable to accept that the sort of cost-benefit weighing central to IHL discussions has often or even could have often functioned in the way implied in official pronouncements.

To elaborate, major user states such as the US, UK, and Russia have rarely given a sense of the evidential basis for their assessment of the use of cluster munitions in conflicts. This situation with respect to operational outcomes is paralleled by the overall lack of evidence presented in international expert fora such as the recent Group of Governmental Experts meetings under the CCW. Despite notable exceptions,<sup>72</sup> discussions of military

effectiveness, technical characteristics, or humanitarian effects of cluster munitions have consisted of largely abstract assertions. For the latter topic of humanitarian effects, in particular, it is difficult to identify any substantive state-based evidence presented in recent years.

The scarcity of such data gives cause for doubt regarding what information commanders or policy makers could or do employ when considering likely humanitarian effects. However, such initial reasons for reservation are extended further when the practices of user states are considered.

A November 2005 Landmine Action report entitled *Out of Balance* drew together publicly available material to detail the practices undertaken by the UK in the last 15 years to assess the humanitarian effects of cluster munitions. Despite repeated statements made by officials that the use of these weapons struck the appropriate balance between military advantage and injury to civilians and damage to civilian objects (as called for by the rule of proportionality), *Out of Balance* documented how over the course of successive conflicts the UK Government has done little or nothing to gauge humanitarian impacts. Specifically:

- The UK has undertaken no practical assessments of the humanitarian impact of cluster munitions and does not gather information that would be useful to such assessments despite being in a position to do so.
- The UK government is selective in citing data from other organisations regarding the humanitarian impact of cluster munitions. Despite having no significant comparable data of its own, and despite making little effort to gather such data, officials discredit material from external sources as unsubstantiated or unproven.
- In their analysis of the likely failure rates of cluster munitions, the UK has failed to gather relevant field data and has ignored what field data it does possess in favour of repeating claims of lower failure rates made by the munitions manufacturers.
- In describing publicly the military utility of cluster munitions UK officials have neglected to represent internal criticism of these weapon systems and have repeatedly described them only in extremely positive abstract terms.

- No substantive evidence has been provided on how UK Forces evaluate and control the humanitarian impact of cluster munitions use during operations. Decision making about proportionality can be devolved down to combat crew in certain circumstances.

The combination of such actions and inactions make it difficult to see how commanders in the field, even with the assistance of legal advisors, have or could pay sufficient attention to concerns about the consequences for civilians. What understanding exists of ‘anticipated effects’ must be markedly limited as far as the British government is concerned given the practices noted in *Out of Balance*. It is also far from clear how British armed forces have learnt humanitarian lessons from previous usages or how they will improve their practices in future conflicts on the basis of past experience.

The disparity between numerous UK statements about its adherence to IHL and the lack of efforts to translate this into concrete steps raises profound questions about the willingness of states to take the provisions of IHL seriously. As noted in Annex A, in a presentation to the November 2005 CCW Group of Governmental Experts, a former British CCW delegate criticised the vagueness of the rule of proportionality. He argued it is “essentially a ‘good faith’ test.”<sup>73</sup> Yet, it is difficult to see how the country he represented in the CCW could be said to act in good faith. On actual inspection of practices rather than taking abstract IHL statements at face value, it seems that the UK has given a systematic preference to military necessity over concerns about humanity.

It would likely be instructive to conduct similar analyses in other countries where political openness allows for such an exercise. Short of this, significant concerns about state practices are also raised by a 2005 report *Munitions System Reliability* by the US Department of Defense (DoD) Defense Science Board Task Force. This study examined the reliability of all munitions but gave special attention to so-called area-attack (i.e. cluster) munitions. The Defense Science Board functions as an independent federal advisory committee. It made a number of stark conclusions, including:

The Task Force could identify no comprehensive approach – empirical observation or otherwise – to determine and document operational combat failure rates of US munitions. The available data is inconsistent, largely anecdotal, and often from questionable sources. Area attack munitions –

designed to produce dispersed battlefield effects – can be highly effective in combat but difficult to analyse afterward. There is no method in place that can systematically determine and document the reliability rates of a broad range of munitions during combat.<sup>74</sup>

In relation to combat reliability, specific concerns were raised about legacy munitions, operational factors not accounted for in testing, and fuze technology.

In response to such systematic failures, the Task Force called for a number of technical and organisational changes: the development of robust assessment methodologies, research and development into new fuzes, target identification, and guidance systems, reforms in acquisition procedures, as well as improved focus within the DoD.

What the *Munitions System Reliability* report failed to draw any significant attention to was the disparity between its analysis and the long history of confident statements made by US officials regarding the known and dependable reliability performance of its cluster munitions arsenal.<sup>75</sup> In light of considerable evidence to the contrary assembled by non-governmental and international organisations the US has repeated relatively high reliability figures. The Task Force in effect determined that the US had been offering repeated unsubstantiated claims regarding the reliability of its munitions. The report did not, however, identify this as a serious problem of public transparency and accountability or make recommendations about how to address implication in those areas. Instead, attention was drawn to a perceived need for greater resources and better organisation.

*Out of Balance* and *Munitions System Reliability* both suggest major user states have been operating with fundamentally deficient evidence regarding key points of concern over cluster munitions. This has taken place despite their refutation of critical claims made by humanitarian organisations based on what evidence could be gathered.

Despite the dominance of the ‘case-by-case’ approach amongst states, some have already started to suggest general points of concern that might transcend case-by-case judgements. For example Sweden has noted that “it could be argued that a cluster bomb with a large ‘foot print’ can be considered to be indiscriminate if used in a populated area.”<sup>76</sup> Switzerland called use of cluster

weapons in densely populated areas “highly problematic” with regard to the principle of distinction.<sup>77</sup> Ireland has noted that “the wide footprint of cluster delivered sub-munitions, gives rise to concern that these weapon systems, even when operating as intended, may fail the tests of distinction, discrimination and proportionality when used in attacks against military targets close to concentrations of civilians.”<sup>78</sup> New Zealand has argued that it is not appropriate to use cluster munitions in populated areas.<sup>79</sup> Taking these statements of the problematic nature of cluster munitions use in or near populated areas one step further, Norway has explicitly urged CCW states parties to “consider a more general prohibition on the use of cluster munitions against military targets located in civilian areas.”<sup>80</sup>

### *Conclusions regarding ‘case-by-case’ evaluations*

As we have noted:

- There is no clear agreement over what rules are relevant, and how they should be interpreted;
- For major user states it is doubtful whether the sort of cost-benefit weighing central to IHL discussions has often *or even could have often* functioned in the way implied in official pronouncements. It is highly doubtful that commanders on the ground could have had the capacity to make adequately informed judgements because user states have made little or no effort themselves to understand key aspects of the humanitarian impact of the weapons yet have dismissed claims made by others;
- There is substantiated though partial evidence of 40 years of consistent civilian harm – the full level of harm continues to grow. User states have contributed virtually nothing to the development of this body of evidence.

On this basis the ‘case-by-case’ approach to controlling cluster munitions currently advocated by many states can be seen to have failed.

## Problems relating to technical reforms

Whilst remaining committed to the ‘case-by-case’ approach to controlling the impact of cluster munitions attacks, reforms have been proposed to the technology of cluster munitions. Such reforms have tended to focus on improving the accuracy of the container munitions (and thus improving the accuracy of the overall footprint area) and improving the reliability of individual submunitions. It is this latter issue of submunition reliability that has received the most recent attention.

At face value, improved accuracy and reliability of munitions are broadly positive developments. However, such technical reforms become more problematic when examined in detail as providing a proposed basis for humanitarian protection. In this section we note how many of the themes identified above relating to state practices to date also make it difficult to have confidence in the assertions made regarding munitions failure rates. Firstly, however, we note two important considerations regarding the limitations of technical reforms.

Improving submunition reliability does nothing to address the propensity of cluster munitions to kill and injure civilians as a result of their area-effect at the time of use. It has been asked whether a lower notional failure rate may in fact make states less hesitant in deploying cluster munitions in populated areas.<sup>81</sup> More generally, it can be asked whether any improvement in combat reliability rates might reduce whatever stigma currently surrounds this weapon and thus whether this might result in the greater overall usage. In any case, technical reforms to reduce the post-conflict impact of cluster munitions cannot on their own be sufficient to resolve the humanitarian problems associated with these weapons.

Furthermore, improving future submunition reliability does nothing to address the billions of unreliable cluster munitions currently stockpiled around the world unless states take action to destroy these stockpiles rather than using them or transferring them to others.

Even given these limitations, there are grounds for serious doubts about whether a ‘failure rates’ approach is capable of producing workable and accountable standards. The analysis below raises concerns regarding reliability and relevance of data, lack of confidence in state practices and inadequacies in the reasoning behind certain positions.

### *Failure rates*

The quantity and density of unexploded submunition contamination results from the number of munitions deployed, the likelihood of some failure within the whole system of delivery and the likelihood of failure for the individual bomblets. These latter elements are in turn conditioned by internal factors (such as the reliability of components) and external factors (such as the parameters of use, ground conditions, vegetation cover etc.). Internal factors relating to the likelihood of the failure of individual bomblets have received the most significant attention as a possible basis for policy or legal control.

### *Lack of reliable data*

Reliable data on failure rates generally requires information from user states but very little such data is made public. Where it is made public the data can be very vague, or it can be difficult to determine what the basis for this data is.

For example, with respect to the M77 submunitions of its Multiple Launch Rocket System the UK MoD asserts that:

“The failure rate, derived from actual flight tests is between 5% and 10% and is largely dependant on ground conditions and range.”<sup>82</sup>

However, further questioning reveals that no detailed information is available on the tests that produced these stated failure rates, or *how* “ground conditions and range” affect the failure rate, and that these failure rates are not subject to ongoing assessment.<sup>83</sup> It is therefore not possible to determine what if any evidence underpins the assertion of 5–10%.

The general lack of data is compounded by two particular problems: questions over the statistical validity or relevance of data produced (to what extent it offers a useful basis for predicting failure rates in combat operations) and lack of confidence that states are acting in good faith in their use of these statistics.

### *Statistical basis and relevance of data*

Where more detailed information is available it often raises questions about how the figures cited can really work as an index of the risk being created for civilians.

Problematic practices include combining different sets of test results to achieve an average failure rate; calculating a mean dud rate from sets of data that show wide variation in performance of submunitions; and a failure to incorporate actual combat data into assessments of failure rates.

The UK MoD, for example, has been happy to combine different data sets to produce favourable figures. Tests of the UK’s M85 submunitions, facilitated by the Norwegian Government, produced the following results:

“In Sept 05 the first in-service safety and performance test was carried out by the Director General Munitions Integrated Project Team supported by the Royal Artillery Trials and Development Unit and range staff at Hjerkind Range, Dombass, Norway. During the test 175 shells were fired of which none failed; 8,575 bomblets deployed of which 197 failed, giving a bomblet failure rate of 2.3 percent.”<sup>84</sup>

However, MoD officials added to the data above another set of data gathered during “acceptance proof” testing during which they report a failure rate of 0.74 percent. On this basis they assert that “across both in-service and proof tests the failure rate is 1.9 percent.”<sup>85</sup> No information has been provided about the conditions under which these “acceptance proof” tests were undertaken. Some two years prior to the Norway tests the UK Minister of State for Armed Forces had already stated in Parliament that the “artillery-delivered L20 extended range bomblet shells ... have a proven maximum bomblet failure rate of 2 percent.”<sup>86</sup> To the CCW they had stated in March 2005 that the bomblets leave “fewer than 1 percent unexploded.”<sup>87</sup>

It would appear that current practices regarding the testing of individual submunition failure rates are considerably removed from a realistic assessment of cluster munitions in real combat operations (and hence the reality of likely civilian harm.) As was noted earlier regarding the 2005 report *Munitions System Reliability* by the US Department of Defense (DoD) Defense Science Board Task Force, even amongst key user states there seems to have been no substantial assessment of munitions’ performance in combat situations. Little if any data from actual combat use seems to be incorporated into UK Government analyses of failure rates. Thus

although the Ministry of Defence asserted on 27 March 2006 that:

“Information on the failure rate of [BL755] cluster bomb sub munitions used by the RAF is collected during regular in-service surveillance trials and from field data.”

Adam Ingram, Minister of State for the Armed Forces, noted on 19th of July 2006 that:

“Some analysis of the accuracy and performance of BL755 cluster bombs used during operations has been undertaken; however, the reliability of individual weapons was not specifically addressed as part of this analysis.”

### *Lack of confidence in state assertions*

Linked to the problems noted above is a general lack of confidence in the assertions made by states. During the bombing of Kosovo, for example, UK Defence Secretary George Robertson stated regarding the BL755 that:

“... when used at medium level as during Operation Allied Force, the failure rate ... could be as low as 1 percent.”<sup>88</sup>

Despite the fact that civilian lives were at stake, this statement was mere speculation. Given a capacity and willingness for key user states to make assertions regarding these issues that have absolutely no basis in evidence there are clearly going to be problems of trust and transparency. Against a background suspicion of Governmental prejudice in approaching this issue, and given the complexities and challenges we have already detailed regarding the statistical basis for submunition failure rates, substantial confidence building would be required to establish a common ground from which to move forward.

### *Quantity of items deployed*

Despite the focus on failure rates, the quantity of items deployed is an equally significant index of likely civilian harm. The example below shows how a failure to address this can lead to policy statements that seem to be incoherent:

In a Working Paper to the CCW, the UK Government “accepts that its air-dropped cluster bombs [BL755] have a failure rate that is unacceptably high.”

Based on an analysis of UK bombing data for Kosovo, an average of 3.4 BL755 containers were used for each attack on a specific target area. With 147 submunitions in a container, this results in an average of 500 submunitions per attack. At the UK MoD stated failure rate of 6.4 percent this produces an expectation of some 32 unexploded munitions in the target area.

Whilst being considered “unacceptable” this predictable threat is significantly less than the number of unexploded munitions that could be expected from an MLRS attack.

With 644 submunitions contained within each MLRS rocket and the capacity of the system to deliver multiple rockets in a single attack, an attack with 12 rockets could be expected to leave some 386 – 773 unexploded submunitions within the target area (based on the UK Government’s stated failure rate of 5–10 percent).

The number of submunitions used is thus critical to the likely level of post-conflict risk that may result from the attack. The focus on submunition ‘failure rates’ threatens to obscure the fact that it is primarily the number of submunitions deployed that produces the particularly problematic impact from this category of weapons. Any approach to civilian protection that focuses on submunition ‘failure rates’ whilst ignoring this fact is inadequate.

### *Self-destruct mechanisms*

The ICRC has previously proposed that cluster munitions should be required to have self-destruction mechanisms in order to ensure the destruction of any unexploded items.<sup>89</sup> Such an approach has precedents within the CCW. Failure rates for specific components of munitions systems have been incorporated into CCW Amended Protocol II on mines and have been considered in CCW Governmental and Military Expert discussions regarding anti-vehicle mines.

Amended Protocol II contains binding obligations regarding the failure rate of self-destruction and self-deactivation systems within anti-personnel mines. The failure rate of these self-destruction and self-deactivation systems conditions the likely residual threat of these munitions to the civilian population (in much the same way as failure rates for submunitions condition the likely threat from those weapons).

The Technical Annex requires that:

“... no more than one in one thousand activated mines will function as a mine 120 days after emplacement.”

CCW Amended Protocol II does not explain how this formulation derives from the foreseeable risk to civilians and the number of munitions deployed is not considered along with the percentage failure rate.

Although the failure rate requirements are legal obligations in Amended Protocol II, there are no mechanisms within the Protocol relating to how systems are to be evaluated to ensure their accordance with these legal obligations. This again raises issues of confidence and accountability in practice.

Although it does not make explicit how the specific technical requirements are derived from the obligation of humanitarian protection, Amended Protocol II does provide a yardstick for evaluating what an acceptable level of risk has been considered to be under the CCW framework. Although scaled over time, Amended Protocol II establishes an effective failure rate of 0.1 percent of items remaining a threat after their purpose has expired. This is significantly more demanding than the failure rates currently being suggested with respect to cluster munitions.

Although the stated design purpose of the weapons may be different, the purpose of any self-destruct or self-neutralisation mechanism is essentially the same: to reduce the foreseeable risk presented to the civilian population to an acceptable level. Thus where cluster munitions rely on self-destruct mechanisms in order to limit the threat to civilians, the precedent of Amended Protocol II could be significant.

However, such an approach also raises problems of cost and retro-active enforcement. If new rules were adopted on this basis they might be rejected by many on the grounds that they cannot afford to accord with such requirements. Similarly, it is unlikely any new rules would succeed in outlawing the billions of submunitions currently in stockpiles that do not have self-destruct mechanisms. Furthermore, uptake of such a proposal by a limited number of states is not likely to have substantial impact in terms of stigmatising the use of legacy munitions by others.

### *Conclusions regarding technical reforms*

This section has raised questions about the utility and practicability of using submunition failure rates as a basis for policy or legal efforts to protect civilians. This is not to assert that no humanitarian benefit could be achieved through such an approach. However, it is important to recognise that such an approach suffers from significant problems relating to:

- how accurately assertions regarding failure rates provide an index of humanitarian protection;
- how much confidence can be placed in state assertions given recent experience;
- how the outcomes of any regulation approach based on failure rates would really shape cluster munitions use internationally.

Given the difficulties inherent in developing legal rules based on failure rates, the outcome of international discussions on this would likely be states suggesting that they will do better next time – on a voluntary basis. Forty years of civilian casualties from cluster munitions during and after attacks, and the death toll still rising in almost every conflict where they were used, suggests that such an approach is insufficient.

### *The need for enhanced precaution*

Combined, the points made in this section suggest significant limitations to the narrow legalist, technical and cost-benefit language that serves to frame the dominant state-led approach in formal international fora such as the CCW. To the extent that decision making is framed as a matter to be undertaken through a case-by-case weighing of advantages and civilian costs regarding individual situations (mainly by military commanders), there is a danger that many important issues will be downplayed:

1. Despite such an approach ostensibly being followed in the past, humanitarian problems have been associated with cluster munitions for decades and persist now.
2. As we have noted, there is a broad scope for different interpretations of IHL. It is not at all clear how the advantages and disadvantages of attacks are assessed or evaluated in practice.

3. Major questions exist about the viability of the evidence-based practice implied by such a frame of reference. Despite the numerous assertions by state representatives regarding their adherence to IHL and the factual basis of claims about the operational use of cluster munitions, there seem to be major evidential deficiencies in the pronouncements of key user states.
4. It is far from certain that reasonably consistent approaches are undertaken or envisaged by different states even when operating under the same legal framework.
5. It is important to bear in mind that in the past and today the task of documenting the humanitarian

effects of cluster munitions has overwhelmingly fallen on inter-governmental and non-governmental organisations. When access and resource constraints have prevented the gathering of this data, states have used the absence of evidence as an indication that problems do not exist.

These factors suggest the need to move beyond the initially reassuring but ultimately problematic veneer of the legalist, cost-benefit language. Instead what is needed is an approach that recognises the complexity, uncertainty and scope for disagreement in answering the question of what should be done.<sup>90</sup> In this respect, the ethical and social commitments informing positions should be the starting point for consideration.

## growing stigmatisation: dsei bans cluster munitions from trade fair

Growing recognition that cluster munitions are problematic and need to be addressed is evidenced not only in changing government positions but also through certain actions of the arms trade. Reed Exhibitions organises the Defence Systems & Equipment International (DSEi) trade fair which is undertaken in association with the UK Ministry of Defence and styles itself as “the world’s most prestigious defence exhibition.” They have chosen to ban cluster munitions from the 2007 event stating:

“[We] have taken the decision to ban from display, publication, offer or marketing in any form, all weapons and references to them, that can loosely be described as Cluster Bombs. Although no international treaty bans this family of weapon systems, their use is increasingly coming under scrutiny as the Laws of Armed Conflict continue to be interpreted by Courts with reference to Proportionality and Humanity.”<sup>91</sup>

Reed Elsevier, of which Reed Exhibitions is a part, publishes the medical journal *The Lancet*. In 2005 an editorial article by *The Lancet* and *The Lancet’s* International Advisory Board stated:

[...] one would expect the world’s largest medical publisher to align its business values with the professional values of the majority of those it serves. Values of harm reduction and science-based decision making are the core of public-health practice. Certain military technologies that Reed Elsevier has allowed to be showcased at DSEi are contrary to these values. In 2003, Reed Elsevier allowed INSYS, Israeli Military Industries, and Raytheon (all cluster bomb manufacturers) to exhibit at DSEi. [...]

*The Lancet* has consistently opposed the use of cluster bombs. It will be incomprehensible to the journal’s readers that our owners are engaged in a business that so clearly undermines [...] principles of public-health practice.<sup>92</sup>

## 5.0 A prohibition based on precaution

Given the history of civilian harm, and the apparent shortcomings of the currently dominant state-led approach, Landmine Action calls for a general prohibition on the use, stockpiling, production and transfer of cluster munitions.

This call for a general prohibition is founded on:

- A precautionary approach: that in the face of consistent evidence of civilian death, injury and hardship, dispute over legal interpretations, and insufficient user-state efforts to understand or limit humanitarian impacts, the working presumption should be that the use of these weapons causes unnecessary civilian harm.
- Recognition that the solutions proposed short of a general prohibition are inadequate without broader reforms to state practice.

Landmine Action therefore calls upon states to adopt a general prohibition on cluster munitions as a matter of national policy and to work for the extension of that policy amongst other states as the strongest available mechanism for controlling the future humanitarian harm from these weapons.

There are numerous different bases by which weapons may be prohibited. Annex B provides a short summary of some of the different approaches.

Treaties that regulate when, where or how certain weapons can be used step beyond the 'case-by-case' decision making framework provided by the rules of IHL governing the legitimacy of attacks. As we have examined, the 'case-by-case' approach basically asserts that each situation is different and it is only by having all the evidence regarding a specific situation that the legitimacy of one form of attack or another can be determined.

By contrast, rules that control the use of certain weapons recognise that certain outcomes are sufficiently predictable to warrant controls. For example, under Protocol III to the CCW it has been considered that air-dropped incendiary weapons used in areas of civilian concentration will predictably affect combatants and non-combatants alike.

The process of adopting these more explicit and specific rules tends to be a process that shifts what assumptions are made. Reliance on the 'case-by-case' approach means reliance on a particular set of assumptions about how commanders in the field weigh certain evidence that is available to ensure a balance between anticipated military advantage and expected civilian harm. We have already examined these particular assumptions with respect to cluster munitions and found serious shortcomings in theory and in practice.

In response to the history of civilian harm from cluster munitions, and given the shortcomings noted above, the key question should be: what set of assumptions can provide an adequate basis for civilian protection?

### A precautionary approach

In the face of consistent evidence of civilian death, injury and hardship, dispute over legal standing, and insufficient user-state efforts to understand or limit the humanitarian impact, the starting assumption should be that the use of cluster munitions causes unnecessary civilian harm. Adopting such an assumption does not require that we assert that these weapons must necessarily cause excessive civilian harm every time that they are used – rather that the balance of evidence suggests that unnecessary civilian harm is likely and therefore the prudent course of action is to put restrictions in place. Such an approach has parallels in other areas where risks and uncertainties have to be managed.

For example, in relation to scientific uncertainties and unknowns about the environmental consequences associated with modern chemical manufacturing and dissemination processes, the importance of a precautionary orientation to risks has become commonplace. Elsewhere, the need to err on the side of caution in handling future risks has become integral to many aspects of policymaking. A precautionary orientation suggests one should not wait for conclusive proof before taking action in the face of mounting concern. What is required is recognition of the importance of erring on the side of caution in the face of persistent dispute. Central to many formulations of the precautionary principle is the requirement that the burden for proving the safety or acceptability of practices rests with those producing risks.

Yet, the 'precautionary principle' appears in many forms and is used to characterise a wide range of practices and policies. While international agreements such as the Rio Declaration on Environment and Development call for such an orientation to risks, varied working definitions of the precautionary principle have been taken up through national and international policies. Therefore, what such a precautionary orientation might mean in relation to cluster munitions is a matter in need of consideration.

#### *A specific precautionary approach: prohibit and shift the onus*

The strongest application of the precautionary principle would establish a general prohibition on the use, stockpiling, transfer or production of cluster munitions. Such a response would be undertaken first and foremost as a matter of national policy with states working to develop a shared policy position amongst a like-minded group.

In opposition to this it might be argued that there are responses and positions short of a general prohibition that might provide an adequate level of civilian protection. It could be argued, for example, that a prohibition on the use of cluster munitions only in populated areas would be sufficient to limit civilian harm from cluster munitions at the time of attacks. However, the actual effectiveness of such a rule in practice is unknown. It might be theoretically compelling as a legal response – and yet reliance on field commanders making case-by-case assessments has also been considered compelling but has failed to provide adequate civilian protection. Moreover, the assumptions behind such a

position as related to accountability of state practice are not currently warranted by the long history of harm from these weapons and the problems regarding state rhetoric and action noted in previous sections. That such assumptions are not currently warranted is a substantial cause for concern.

In order to address this situation there is a need to shift the burden of proof in analysis and discussion of the acceptable application of violence. Without such a shift the underlying inadequacies of the current situation are likely to go unchallenged. Under the current framework it is often contended that cluster munitions would have to cause excessive harm *in every hypothetical situation* before being prohibited. Thus a single hypothetical example can be held up as sufficient to block action despite consistent evidence of civilian harm across many different countries. The history of humanitarian problems associated with cluster munitions would suggest that this is an unsatisfactory basis for protecting civilians. Indeed it is clearly based on a structure that systematically downgrades the principle of humanitarian protection.

There is a need then to challenge rather than to accept the framework of analysis that currently dominates such discussions. Thus against the background of a prohibition on cluster munitions a broader discussion needs to be initiated. Key questions in such a discussion might be:

- How can sufficient confidence be generated in state practice, whilst understanding that some information will remain uncertain or unknown, particularly given the serious past failings of some states to live up to their humanitarian rhetoric?
- What measures are required to support increased transparency or accountability?
- In operational situations, what should be the minimum level of information required about the target area in order to make attack decisions? How recent must this data be in order to be considered a reliable basis for decision making? Who are the specific individuals responsible for deciding how such evaluations are made and whether sufficient evidence exists to make an appropriate decision?
- Where concerns have been raised in the past, by what criteria and standards would states in the future determine whether technical reforms have been adequate in advance of weapons being deployed?

- How can the current focus on decision making and responsibility by military commanders be broadened out to include others? For instance, what measures must be undertaken by defence ministries in advance of any use or procurement of disputed weapons?
- Most of the recent use of cluster munitions in war has taken place in situations where those using cluster munitions have had a considerable air and ground superiority. How do such asymmetrical capabilities affect decision making? How do expectations regarding military losses relate to the burden of risk borne by civilians?

Addressing such questions would provide a basis for a more substantive, transparent and accountable approach by states committed to limiting the humanitarian impact of conflict. The 'problem of cluster munitions' lies not only in the technology but also in the failure of key user states to understand or address the civilian harm that results from their actions. Responding to such underlying problems has an importance that goes beyond these specific weapons.

The precautionary approach advocated here would ensure that unsubstantiated assertions can no longer stand in the way of concrete measures to address real humanitarian concerns. The acceptability of practices and technologies should have to be demonstrated by proponents and the criteria and procedures for doing this should be openly established in a manner that fosters the development of international understanding and agreement.

In democratic countries the means and methods of violence chosen should accord with the values of the society. Such an alignment can only be ensured through scrutiny and open evaluation of the humanitarian impact of military actions. The responsibility for such scrutiny and evaluation must rest first and foremost with states. On this basis, the approach advocated here works to build greater democratic accountability. In the absence of such scrutiny and evaluation, states may be seriously misleading the public about the civilian harm that will result from violence done in their name.

## the example of belgium: prohibiting and defining cluster munitions

Recent events in Belgium illustrate a precautionary-type orientation to questions of definition. On 16 February 2006, the Belgian House of Representatives adopted legislation comprehensively prohibiting submunitions by a vote of 112 in favour and 2 against (with 22 abstentions). At the same time, additional draft legislation was proposed that offered two categories of exemption:

- "dispensers that only contain smoke-producing material, or illuminating material, or material exclusively conceived to create electric or electronic counter-measures;"
- "systems that contain several munitions only designed to pierce and destroy armoured vehicles, that can only be used to that end without any possibility of indiscriminately saturating combat zones, including by the obligatory control of their trajectory and destination, and that, if applicable, can only explode at the moment of the impact, and in any case cannot explode by the presence, proximity or contact of a person."

As an outcome, the exceptions made do not pose *special* humanitarian problems in terms of what is allowed by the way of force options. The first because it refers to weapons which would not pose direct harm to civilians and the second because it sets out a series of robust aspirations for future capabilities that would substantially minimise concerns about civilian casualties.

As a process, the practice of first laying out a wide ranging prohibition and then justifying any exceptions is in line with the precautionary approach advocated in this report. A key aspect in this is that the onus for making any exceptions on a general prohibition should fall on proponents for the need to retain cluster munitions.

# Annex A

## Assessments of the legality of cluster munitions under international humanitarian law

International humanitarian law (IHL) pertains during the conduct of armed conflict and seeks to balance concern for humanitarian problems with respect for requirements of military action. The balancing of these principles is reflected in a number of specific rules.

This section examines six individual opinions (written in English since 2000) of the legality of cluster munitions under existing IHL. In doing so it considers a number of key questions:

- What arguments have been made for or against a prohibition under the existing rules of IHL?
- On what matters of fact or interpretation are such contrasting assessments substantiated?
- What is seen as required by the way of evidence to justify a prohibition?

Legal analysts have offered a wide range of appraisals of the legality of cluster munitions; the following sections are organised according to the conclusions reached.

### *Position 1: clearly illegal*

In a 2002 working paper to the UN Sub Commission on the Promotion and Protection of Human Rights, Y.K.J. Yeung Sik Yuen argued there could be little doubt that cluster munitions “are indiscriminate and accordingly contrary to humanitarian and human rights law.”<sup>93</sup> The predictability of civilian deaths and injuries that makes them illegal was substantiated through stating the high failure rate (between 5 and 30 percent) of submunitions, noting the number of them dispersed in prominent CBUs, and linking their use to deaths in recent conflicts. This appraisal followed a 1996 resolution by the then UN Sub-Commission on Prevention of Discrimination and Protection of Minorities that the production and use of cluster munitions were “incompatible with international human rights and humanitarian law.”<sup>94</sup>

### *Position 2: compelling reasons for considering illegal*

In a 2000 article, Prof. Virgil Wiebe provided a detailed assessment of the legality of cluster munitions that supported banning them because of their inherently indiscriminate nature.<sup>95</sup> As argued, in civilian areas the large impact “footprint” combined with inaccurate means of delivery meant the effects of strikes could not be limited as required by Additional Protocol I, Article 51(2). In addition, the unreliability of cluster munitions meant they functioned as *de facto* landmines. In total, “[t]hese cumulative characteristics of cluster bombs make them inherently indiscriminate and outweigh their military utility.”<sup>96</sup> In substantiating this conclusion, Wiebe cited a range of evidence from IGOs, NGOs, and others for doubting the veracity of many past manufacturers’ and governments’ claims regarding the reliability and tightly controlled use of these weapons. The continuing falsity of these statements was cited as reason for scepticism regarding the probability of success for technical fixes to humanitarian problems. He also contended that the extent of past experience with cluster munitions meant that the weighing of military advantage and civilian damage as called for by the rule of proportionality ought to include the long term effects on civilians.

In a lunchtime presentation organised by the Cluster munitions Coalition on the margins of the November 2005 CCW meeting of governmental experts, Wiebe reiterated many of these points to suggest reasons for supporting a ban.<sup>97</sup> The continued stockpiling of highly unreliable cluster weapons by many countries despite the growing documentation of the humanitarian effects of these munitions was said to heighten the need for action. As well, he emphasised that many governments, in particular the US, are systematically recognising the need to take longer term effects of weapons into the calculus of when to use certain weapons. To the contention that the ban or restriction of cluster munitions would

necessitate the use of larger numbers of unitary weapons that might be “worse” to civilians by some measure, he argued that “just because the discrimination rules may prohibit use of a particular weapon does not necessarily allow the use of an even worse weapon for the particular situation”.

### *Position 3: conditional illegality*

In a 2006 article for the *Canadian Yearbook of International Law*, legal scholar Dr. Karen Hulme presented another detailed and critical analysis of the legality of cluster munitions under existing IHL.<sup>98</sup> Central to it was the starting contention that forty years of experience meant that time of use and long-term consequences for human health and the environment should be regarded as foreseeable. This was justified largely through drawing on empirical studies undertaken by NGOs and IGOs as well as media reports regarding the effects of past strikes.

Grounds for concern were noted with regard to the rule against indiscriminate attacks. Here Hulme distinguished between older, ‘legacy’ munitions (e.g., CBU-87 CEM, RBL-755) and more recent types. In relation to the former, the number of submunitions, their area of dispersal and their proven unreliability mean these are ‘indiscriminate weapons’. In summing up the argument she states:

The effects of cluster weapons are abundantly clear. Those older weapons systems with a proven failure rate of at least five percent, therefore, can arguably be classified as inherently indiscriminate ... As for the newer weapons, boasting only a two percent failure rate, the question is a little more difficult. One might still suggest that this failure rate is still too high to remain lawful. As suggested earlier, it may also be too early to sing the praises of the L20, at least until its actual performance on the battlefield can be fully assessed. And hence the boasted two percent failure rate confirmed.

As such, the legality of these munitions would depend on a careful analysis of their wartime performance.

### *Position 4: illegality consistent with spirit of IHL*

In a lengthy legal assessment with special reference to US actions in Kosovo and Afghanistan, Prof. Thomas Michael McDonnell contended that cluster weapons “violate the spirit if not the letter of humanitarian law.”<sup>99</sup> Reference to the spirit of law is important because he expressed considerable apprehension regarding the definitiveness of the rules specified in Additional Protocol I. For example, the open-endedness of how military advantage and civilian damage should be calculated meant that the rule of proportionality is “vague and subject to abuse.”<sup>100</sup> Likewise Protocol I is not specific enough to determine whether the large area effect of cluster munitions would make them indiscriminate. The vagueness of IHL combined with the need for strict culpability in proving war crimes (e.g., the requirement to demonstrate individuals ‘knowingly’ acted against the law) meant it would be very difficult, if not impossible, to prosecute individuals for war crimes in relation to the misuse of cluster munitions.

While acknowledging various legal ambiguities and the scope for disagreement, McDonnell argued a strong case could be put forth that the use of cluster weapons transgresses IHL. So, in relation to the rule against indiscriminate attack and long term effects, it was said that their “foreseeable high dud rate, the small size of the cluster bomblets, their ability to hide themselves in the mud, water and undergrowth, the extreme sensitivity of their fuzes, their attractiveness to children, their extraordinary powerful destructive effects despite their size, all put the dud cluster bomb in another category as compared to most other unexploded ordnance.”<sup>101</sup> In relation to superfluous injury and unnecessary suffering, he contended that their pronounced fragmentation effects and high lethality meant good reasons existed to question their legality when solely used against troops rather than ‘hard’ targets.

All told, for McDonnell the *legal* rules in Additional Protocol I could not justify an outright ban, but they arguably required additional regulations be imposed. However, given the grave concerns about cluster munitions, as a prudent matter of policy, he argued a categorical ban should be introduced. Such a comprehensive ban would provide a practical policy to implement, bring the necessary deterrence factor required, and even help to win hearts and minds.

### *Position 5: increased diligence required*

In a presentation to the November 2005 CCW Group of Governmental Experts, former British CCW delegate Charles Garraway spoke to the permissibility of cluster munitions.<sup>102</sup> As he argued, the humanitarian problems with these weapons meant the current situation could not simply be left as is. Garraway though did not recommend a comprehensive or partial ban because these weapons are not so widely available as landmines, and improvements are being made to their reliability.

For Garraway, equating cluster munitions with anti-personnel mines (as done by Y.K.J. Yeung Sik Yuen and others) was inappropriate because the former are “primarily a high-tech system whereas anti-personnel mines are cheap and thus readily available.” Thus, cluster weapons did not represent the severity of threat of the latter. As further stated, reliability rates were “improving steadily” and what was needed was to set an “acceptable” failure rate.

If a ban was not justified for Garraway, neither was restriction on the use of cluster weapons near concentrations of civilians. The reason given was that the extra risk posed “is not contained in the nature of the weapon system itself but in situations where it does not perform as it is intended to perform.” Therefore, what is needed in cases of attacks near civilians is to conduct case-by-case calculations of proportionality in line with those undertaken for any other force option.

Despite these conclusions, Garraway did argue that the past experience with cluster munitions meant that humanitarian concerns had to be taken seriously. While, in line with McDonnell, Garraway criticised the vagueness of the rule of proportionality, he said it did act as a “good faith” test. In efforts to anticipate the civilian harm from attacks states should “consider very seriously the use of older munitions systems where failure rates are such as to increase markedly the risk of collateral damage, even if such damage may be acceptable in terms of the proportionality balance.”

### *Position 6: cluster munitions are unexceptional*

Writing in the *US Air Force Law Review*, Major Thomas Herthel of the US Air Force Judge Advocate General School offered an in-depth legal analysis that challenged many of the bases for condemning clusters munitions given above.<sup>103</sup> Specifically he contested the proposition that they would fall foul of the rules regarding unnecessary suffering and superfluous injury, indiscriminate attacks, and proportionality.

With regard to unnecessary suffering and superfluous injury, Herthel cited a 1977 study<sup>104</sup> to argue that cluster munitions are no more lethal than other high explosive and fragmentation weapons. The contention that cluster munitions constitute a disproportionate force option was in the main refuted through citing statements by military officers and politicians regarding their high military value, such as their destructiveness against hard and soft skinned objects and troop formations. Moreover, by reference to arguments presented at the 1976 Lugano conference and a presentation at the Judge Advocate General’s School of the Army<sup>105</sup>, he concluded in some situations that “the use of cluster munitions may actually reduce collateral damage”.<sup>106</sup>

In relation to the rule of proportionality, both the accuracy and dud-potential aspects were examined in Herthel’s analysis. With regard to the former he argued that while improvements in guiding mechanisms could and were being pursued, it was not warranted to contend that all cluster weapons were inaccurate. The accuracy of any munitions system depends on many conditional factors which meant it was not possible to attribute inaccuracy to these munitions per se. With regard to the concerns about unexploded submunitions, he said that all munitions produce duds through malfunctioning. Since unexploded submunitions are unintended, equating them with anti-personnel landmines to suggest they should be banned does not follow. Instead, under the provisions of IHL, what is required is a case-by-case assessment of expectations of military advantage and “collateral damage” (including the likely future effects from duds). As argued, this situation applied to landmines too. Although certain states have prohibited them “as a matter of policy and/or domestic law”, “[c]ustomary international law, however, still recognises their legality.”<sup>107</sup>

## Conclusions

The divergent positions summarised in Annex A stem in part from different attitudes towards the following:

- **The facts:** The humanitarian problem is framed differently in different arguments – some address only post-conflict problems whereas others engage also with problems at the time of use. Alternative claims are made about the reliability of submunitions, the sensitivity of fuzes, the accuracy of munitions, and other key matters. Sometimes this stems from individuals' differential access to data, at other times it reflects different choices regarding which data to represent.
- **Importance of past experience:** Those critical of cluster munitions have said the repeated mistakenness of manufacturers' and governments' previous claims about their combat reliability, effectiveness, etc. is grounds for scepticism regarding more recent claims. On the other hand, those less critical have downplayed or ignored concerns about the accuracy of past claims. The practicality or likelihood of promised initiatives are matters on which there is substantial scope for disagreement.
- **The standing of rules:** While some analysts have taken the rules of IHL as providing viable criteria for assessing the legality of a category of weapons, others have argued that the rules are too vague to provide a basis for making definitive appraisals.
- **The specific meaning of terms:** While all of the analysts examined noted the importance of attending to the expected humanitarian effects of cluster munitions as unexploded ordnance, just what should be counted as 'expected' is a topic of disagreement. While some have suggested that this include long term consequences, others have argued otherwise.

Depending on how these and other considerations are addressed, justification can be given to a variety of assessments. Thus it important to note that, in terms of theoretical evaluations, the general legitimacy of cluster munitions is contested.

## summary of appraisals of the legality of cluster munitions under existing ihl

Analyst	Legality	IHL rules of concern	Key identified issues
Yeung Silk Yuen	Unambiguously illegal	Rule against indiscriminate attacks	Predictable excessive civilian deaths and post-conflict similarity to anti-personnel mines.
Wiebe	Strong case for comprehensive ban	Rule against indiscriminate attacks Rule of proportionality	Long term humanitarian effects should be included in calculations of proportionality. If this is done, significant reason for doubting legality. As a minimum states should not use cluster munitions in civilian areas and further obligations should be imposed on users.
Hulme	Legacy munitions illegal, open question regarding newer types	Rule against indiscriminate attacks	Proof required regarding the operation of non-legacy munitions in terms of their performance (with particular reference to reliability)
McDonnell	Ban justified under spirit not letter of law	Rule on superfluous injury and unnecessary suffering Rule against indiscriminate attacks	Certain rules of IHL require greater clarity Self-destruction mechanisms and other technical modifications unlikely to reduce humanitarian concerns As a minimum, additional responsibilities should be placed on users to reduce UXO effects
Garraway	Ban not legally justified	Rule of proportionality	'Case-by-case' analysis required to ensure proportionality and distinction. Attention required to anticipated collateral damage Appropriateness of 'legacy munitions' needs to be carefully considered
Herthel	No legal grounds for ban		'Case-by-case' analysis required of lawfulness and military value of the target as well as the feasibility of striking them Likely collateral damage should be taken in account in planning

# Annex B

## Different approaches to prohibiting weapons

As stated in Article 35(1) of 1977 first Additional Protocol to the Geneva Conventions of 1949:

In any armed conflict, the right of the Parties to the conflict to choose methods or means of warfare is not unlimited.

Thus there is an established understanding that certain methods or means of warfare, including specific types of weapons, might be prohibited.

Two basic types of justifications are made for prohibitions on weapons:

1. they are unacceptable in all expected uses, *or*
2. they are considered acceptable in some situations but can also be used in ways deemed unacceptable.

Protocol I to the CCW on non-detectable fragments and the Biological and Toxin Weapons Convention are examples of categorical prohibitions (in line with point one above)<sup>108</sup>. Typically such wide ranging prohibitions have been said to be warranted because of the superfluous injury or unnecessary suffering inflicted by certain weapons, their inability to be used in a way which discriminates combatants from non-combatants, or their moral repugnance.<sup>109</sup>

In line with point two above, regulated weapons include incendiary devices under Protocol III of the CCW. This protocol curtails their use by prohibiting air-delivered incendiary weapons in all circumstances against “any military objective located within a concentration of civilians;” it limits the scope for incendiary weapon attacks on such an objective through means other than air-delivery; and prohibits making plant cover an object of attack except in certain circumstances. Herein, incendiary devices are not regarded as unacceptable outright; rather, care needs to be taken in how they are used. In a similar manner, Protocol II of the CCW specifies various conditional restrictions on mines and booby traps.

Depending on how the means and methods of warfare are assessed, prohibition options can relate to:

- specific types of weapons (e.g., CCW Protocol IV in relation to blinding laser weapons)
- the circumstances of their use (e.g. CCW Protocol III in relation to incendiary weapons)
- certain effects of weapons (e.g., CCW Protocol I in relation to non-detectable fragments)
- certain purposes served by science and technology (e.g., the Chemical Weapons Convention).

Protocol V of the CCW on ERW is novel in the manner in which it proposes responsibilities for States Parties relevant across a wide range of weapons.

# Notes

- 1 See, for instance, UNICEF, *In Iraq, unexploded munitions become child's play* Press Release Baghdad/Geneva: UNICEF 17 July 2003; Landmine Action, *Explosive Remnants of War: unexploded ordnance and post-conflict communities*, London: Landmine Action, 2002; Pax Christi, *Cluster Weapons: Necessity or Convenience*, Utrecht: Pax Christi, 2005; C. King, *Explosive Remnants of War*, Geneva: International Committee for the Red Cross, 2000; ICRC, *Explosive Remnants of War*, Geneva: ICRC, 2003; Handicap International, *Cluster Munitions Systems: Situation and Inventory*, Paris: Handicap International, 2003; Human Rights Watch, *Cluster Munitions: A Foreseeable Hazard in Iraq*, New York: Human Rights Watch, 2003; and R. McGrath, *Cluster Bombs: The Military Effectiveness and Impact on Civilians of Cluster Munitions*, London: Landmine Action and Mennonite Central Committee, 2000, and V. Wiebe and T. Peachey, *Drop Today, Kill Tomorrow: Cluster Munitions and Inhuman and Indiscriminate Weapons*, Akron, PA, USA: Mennonite Central Committee, 1993.
- 2 *My Life in the Royal Navy during the Second World War*, by Jack Dixon, online at: [www.carlsen.karoo.net/mainpage/4\\_draft.htm](http://www.carlsen.karoo.net/mainpage/4_draft.htm)
- 3 M. Krepon. 'Weapons Potentially Inhumane' *Foreign Affairs* 1974 52(3): 595.
- 4 Ibid.: 603. To reduce the likelihood of other weapons resulting in the same sort of negative consequences, Krepon argued that four steps be followed:
  1. Get political input on weapons from the start
  2. Evaluate collateral damage possibilities of weapons as they are developed
  3. Prepare guidelines for antipersonnel weapons' use prior to engagement
  4. Conduct field checks once weapons are operational.
- 5 E. Prokosch. *The Technology of Killing*, London: Zed, 1995: 149.
- 6 Cited from Mennonite Central Committee. *Call for a moratorium on cluster bomb use, production, and transfer* 2003 [www.mcc.org/clusterbomb/moratorium/#fn1](http://www.mcc.org/clusterbomb/moratorium/#fn1) See as well R. Matthews and T. McCormack. 'The Influence of Humanitarian Principles in the Negotiation of Arms Control Treaties' *International Review of the Red Cross* June 1999: 331-51.
- 7 E. Prokosch. *The Technology of Killing*, London: Zed, 1995.
- 8 ICRC. *Explosive Remnants of War*, Geneva: ICRC, 2003: 6.
- 9 R. McGrath. *Cluster Bombs: The Military Effectiveness and Impact on Civilians of Cluster Munitions*, London: Mennonite Central Committee and Landmine Action, 2000: 30.
- 10 GICHD (2005) *Scrap metal collection in Lao PDR*.
- 11 Data collated by Landmine Action from Clear Path International. Some 57 percent of ordnance casualties recorded by Clear Path International, and where the type of ordnance is recorded, are attributed to cluster munitions (limited data from central provinces from 2000 to 2005).
- 12 ICRC, *Explosive Remnants of War*, Geneva: ICRC, 2003: 6.
- 13 T. Peachey and V. Wiebe. *Clusters of Death Appendix 1: Laos* November Akron, PA: Mennonite Central Committee, 2000.
- 14 *Causes and consequences: conflict-induced displacement* by Forced Migration Online, available at [www.forcedmigration.org/guides/fmo035/fmo035-4.htm](http://www.forcedmigration.org/guides/fmo035/fmo035-4.htm)
- 15 R. McGrath, *Cluster Bombs: The Military Effectiveness and Impact on Civilians of Cluster Munitions*, London: Mennonite Central Committee and Landmine Action, 2000.
- 16 For instance, see US General Accounting Office. *Cost and Performance of the Aircraft and Munitions in 'Desert Storm'*, Appendix IV GAO/NSAID-97-134 Washington, D.C.: General Accounting Office, 1997.
- 17 C. King, *Explosive Remnants of War*, Geneva: International Committee for the Red Cross, 2000.
- 18 U.S. Air Force, *Gulf War Air Power Survey*, vol. 2, part 1, p. 261.
- 19 King (2001) *Explosive Remnants of War: A study on submunitions and other unexploded ordnance*, ICRC, Geneva. P.19.
- 20 King (2001) *Explosive Remnants of War: A study on submunitions and other unexploded ordnance*, ICRC, Geneva. P.19.
- 21 S. Goose, 'Cluster munitions: Towards a global solution', in *Human Rights Watch World Report*, New York: Human Rights Watch, 2004, 254.
- 22 Statement by the Delegation of the Republic of Croatia, January 1995, to the 4th Session of the Group of Governmental Experts to Prepare the Review Conference of the States Parties to the CCW.
- 23 The International Criminal Tribunal for the former Yugoslavia, Case No. IT-95-11-R61, Transcript of the Trial Chamber, Friday 27th February 1996.
- 24 C. King, *Explosive Remnants of War*, Geneva: International Committee for the Red Cross, 2000.
- 25 T. Peachey and V. Wiebe. *Clusters of Death – Chapter 3: Cluster Munitions Use by Russian Federation Forces in Chechnya* November Akron, PA: Mennonite Central Committee, 2000.

- 26 Human Rights Watch, "Recommendations to the UNHCR: Chechnya," April 2000, [www.hrw.org/campaigns/geneva/chechnya.htm](http://www.hrw.org/campaigns/geneva/chechnya.htm).
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- 27 From Landmine Action (2002) *Explosive remnants of war: unexploded ordnance and post-conflict communities*, p.50.
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- 28 For example: Human Rights Watch background paper (May 11, 1999), *NATO's Use of Cluster Munitions in Yugoslavia*, available online at [www.hrw.org/backgroundunder/arms/clus0511.htm](http://www.hrw.org/backgroundunder/arms/clus0511.htm)
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- 29 General Sir Hugh Beach (2001), p.3. *Cluster bombs: a case for banning?*, ISIS Briefing Paper No. 79, February 2001, International Security Information Service, London.
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- 33 International Committee of the Red Cross. *Explosive Remnants of War* August Geneva: ICRC, 2001: 9.
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- 34 See, for instance, T. Peachey and V. Wiebe. *Clusters of Death – Chapter 3: Cluster Munitions Use by Russian Federation Forces in Chechnya* November Akron, PA: Mennonite Central Committee, 2000.
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- 35 See Human Rights Watch, *Fatally Flawed: Cluster Bombs and their Use by the US in Afghanistan*.
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- 36 Oleg O. Bilukha; Muireann Brennan; Bradley A. Woodruff, *Death and Injury From Landmines and Unexploded Ordnance in Afghanistan* Journal of the American Medical Association (JAMA), Aug 2003; 290: 650–653.
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- 37 See H. Benn, *House of Commons Hansard* 5 Nov 2003: Column 657W.
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- 39 Figures given in Human Rights Watch, *Off Target*, New York: Human Rights Watch, 2003.
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- 40 Human Rights Watch, *Off Target*.
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- 41 A. Ingram, *House of Commons Hansard* London: HMSO 11 Feb 2004 : Column 1459W.
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- 43 J. Sloboda and H. Dardagan, *How Many Civilians were Killed by Cluster Bombs?* Iraq Body Count 6 May 2003, see [www.peaceuk.co.uk/archive/modules.php?name=News&file=article&sid=576](http://www.peaceuk.co.uk/archive/modules.php?name=News&file=article&sid=576)
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- 44 UNICEF, *In Iraq, unexploded munitions become child's play* Press Release Baghdad/Geneva: UNICEF 17 July 2003.
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- 45 See for example: The European Parliament. *European Parliament resolution on cluster bombs*. B5-0765, 0775, 0782 and 0789/2001 2001 calling on States Parties to the CCW to 'declare an immediate moratorium until an international agreement has been negotiated on the regulation, restriction or banning of the use, production, and transfer of cluster munitions under the CCW, including air-dropped cluster munitions and submunitions delivered by missiles, rockets, and artillery projectiles' As of early 2006, however, only the Holy See and Mexico have endorsed wide ranging international moratorium calls such as those made by the European Parliament and members of the Cluster munitions Coalition. While not regarding cluster munitions as illegal under IHL, Australia forgoes the use of these weapons because of said associated risks (Senator Hill. 'Iraq' *Senate Official Hansard of the Commonwealth of Australia* 20 March 2003: 9877.) In 2006, the Belgium Parliament adopted a law banning the national use, production, stockpiling and transfer of cluster submunitions. In Norway a clear commitment to work towards an international ban on cluster munitions has been issued. In the March 2006 meeting of the CCW, Sweden indicated its support for those calling for a negotiating mandate within the CCW that would address cluster munitions.
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- 46 See Paper for Meeting of the Geneva Forum 5 March 2006 entitled *The United Nations Involvement in Issues Related to Cluster Munitions*.
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- 47 *The European Parliament. European Parliament resolution on cluster bombs*. B5-0765, 0775, 0782 and 0789/2001 2001. Further in this resolution, the parliament called for additional examination of the ERW effects of submunitions and for steps to improve their reliability. In 19 January 2006, the European Parliament agreed a resolution on disability and development that stated it: 'Supports fully, given the effects especially on child victims, the global battle to eradicate anti-personnel landmines and other related controversial weapon systems such as cluster submunitions.'

- 48 Russia has said it rigorously implements the rules of IHL. As part of this it employs cluster munitions "in strict compliance with existing IHL principles and rules." (Russia, *Responses to Document CCW/GGE/X/WG.1/WP.2, Entitled IHL and ERW, dated 8 March 2005*, Group of Government Experts of 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 CCW/GGE/XII/WG.1/WP.3 21 October 2005: 2.) In addition, its representatives made repeated interventions in the CCW during 2005 that rejected the need for special attention to cluster munitions. In the August GGE meeting of the CCW an expert from the Russian Federation posed the question of whether the humanitarian threat from these weapons was 'real or mythical' and concluded the threat was greatly exaggerated.
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- 49 The Republic of Croatia, *Responses to Document CCW/GGE/X/WG.1/WP.2, Entitled IHL and ERW, dated 8 March 2005* Group of Government Experts of 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 CCW/GGE/XII/WG.1/WP.7 11 November 2005.
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- 50 United States, *Responses to Document CCW/GGE/XI/WG.1/WP.2, Entitled IHL and ERW, dated 8 March 2005* Group of Government Experts of 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 CCW/GGE/XI/WG.1/WP.8 25 July 2005: 3.
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- 51 Germany, Statement by H.E. Ambassador Bernhard Brasack Permanent Representative of Germany to the Conference on Disarmament on "Explosive Remnants of War" 8 March 2006.
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- 52 Russia, *Responses to Document CCW/GGE/X/WG.1/WP.2, Entitled IHL and ERW, dated 8 March 2005* Group of Government Experts of 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 CCW/GGE/XII/WG.1/WP.3 21 October 2005.
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- 53 G. Hoon, *House of Commons Hansard* London: HMSO 14 April 2003: Column 571W.
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- 54 France, *Explosive Remnants of War and International Humanitarian Law* Group of Government Experts of 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 CCW/GGE/XI/WG.1/WP.17 11 August 2005: 4.
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- 55 See, e.g., United Kingdom of Great Britain and Northern Ireland, *Responses to Document CCW/GGE/X/WG.1/WP.2, Entitled IHL and ERW, dated 8 March 2005* Group of Government Experts of 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, CCW/GGE/XI/WG.1/WP.1 24 June 2005.
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- 56 United Kingdom of Great Britain and Northern Ireland, *Responses to Document CCW/GGE/XI/WG.1/WP.2, Entitled IHL and ERW, dated 8 March 2005* Group of Government Experts of 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 CCW/GGE/XI/WG.1/WP.1 24 June 2005. Supporting evidence for this is given in figures indicating that in the Kosovo bombing UK forces did not drop bombs on 40 percent of sorties, see House of Commons Defence Committee. *Minutes of Evidence taken before the Defence Committee* London: HMSO: 2000.
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- 57 France, *Working Paper on Submunitions* Group of Government Experts of 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 CCW/GGE/XII/WG.1/WP.9 17 November 2005: 4.
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- 58 Cited in International Committee of the Red Cross. 2001. *Explosive Remnants of War* August Geneva: ICRC: 9.
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- 59 W. Cohen, *Memorandum for the Secretaries of the Military Departments: Department of Defense Policy on Submunition Reliability*, 10 January Washington, DC: Department of Defense, 2001.
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- 60 Human Rights Watch, *Cluster Munitions: A Foreseeable Hazard in Iraq* March.
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- 61 See, e.g., See V. Heinsberg. *Statement to CCW Working Group on Explosive Remnants of War* 8 March 2005 and Pax Christi (Netherlands). *Cluster Weapons* De Hague: Pax Christi, 2005: 33.
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- 63 See Human Rights Watch, *Cluster Munitions: Measures to Prevent ERW and Protect Civilian Populations*, New York: Human Rights Watch, 2003.
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- 64 Austria, *Responses to Document CCW/GGE/XI/WG.1/WP.2, Entitled IHL and ERW, dated 8 March 2005* Group of Government Experts of 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 CCW/GGE/XI/WG.1/WP.14 4 August 2005: 3.
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- 65 See as well, Switzerland, *Responses to Document CCW/GGE/XI/WG.1/WP.2, Entitled IHL and ERW, dated 8 March 2005* Group of Government Experts of 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 CCW/GGE/XI/WG.1/WP.13 3 August 2005: 3.
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- 66 Norway, *Responses to Document CCW/GGE/XI/WG.1/WP.2, Entitled IHL and ERW, dated 8 March 2005* Group of Government Experts of 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 CCW/GGE/XI/WG.1/WP.5 29 July 2005: 5.

- 67 Sweden, *Responses to Document CCW/GGE/XI/WG.1/WP.2, Entitled IHL and ERW*, dated 8 March 2005 Group of Government Experts of 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 CCW/GGE/XI/WG.1/WP.8 29 July 2005: 2.
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- 73 C. Garraway. 'How does existing international law address the issue of explosive remnants of war?' CCW, 12th Session of the Group of Governmental Experts of the States Parties, 17 November 2005.
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- 81 See Human Rights Watch. *Off Target*: 112–3.
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- 85 Letter of 27 March 2006 from UK MoD to Landmine Action.
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103 Major Thomas Herthel "On the Chopping Block: Cluster Munitions and the Law of War," *Air Force Law Review* 51 2001: 256-59.

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105 Major John Scotto, Remnants of War Conference at The Judge Advocate General's School of the Army 20 February 2001.

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106 Major Thomas Herthel "On the Chopping Block: Cluster Munitions and the Law of War," *Air Force Law Review* 2001 51: 258.

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107 Ibid.: 265.

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108 More accurately in the case of the BTWC and CWC, the prohibition is not against biological or chemical weapons per se. Instead, it is a general restriction of certain purposes served by science and technology.

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109 The Preamble to the BTWC, for instance, states that the weaponization of biological agents would be 'repugnant to the conscience of mankind and that no effort should be spared' to minimise the possibility of this taking place.



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