EXPERT MEETING

IDENTIFYING AND ADDRESSING CHALLENGES TO IMPLEMENTATION OF ARTICLE 4 OF PROTOCOL V TO THE CCW

ICRC

REPORT

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Summary Report

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1. INTRODUCTION

When hostilities have ended, the battlefields are often littered with explosive debris such as unexploded or abandoned artillery shells, mortars, grenades, bombs and rockets. Many civilians have lost their lives and limbs by intentionally or accidentally disturbing these explosive remnants of war (ERW). Two of the most immediate effects of ERW are to prevent displaced people from returning to their homes and to block the delivery of humanitarian assistance. Even after armed conflicts have ended, ERW continue to pose a threat to civilians, preventing them from working their fields, fetching water, and going to schools, health centres and places of worship. In the long term, these devices can also hamper the rebuilding of basic infrastructure, such as schools, hospitals, roads and wells.

In November 2003, the High Contracting Parties to the 1980 Convention on Certain Conventional Weapons (CCW) took a significant step towards reducing the human suffering caused by ERW by adopting the Protocol on Explosive Remnants of War (Protocol V).

The Protocol requires each party to a conflict to clear ERW from the territory it controls once the hostilities are over. It also requires them to provide technical, material and financial assistance to clear, in areas not under its control, ERW that resulted from its own operations. As clearing a country of these weapons may take years, interim measures such as marking, fencing and risk education for the local population must also be taken to help protect civilians.

To facilitate these activities, Article 4 of the Protocol requires parties to a conflict to record information on the explosives they used during a conflict and share that information with other parties and clearance organizations once the fighting has ended. This requirement is critical to effectively eliminating ERW, as lack of information has often hampered past efforts to do so.

In November 2011, the Fifth Conference of High Contracting Parties to Protocol V decided that the Coordinator on National Reporting – with the support of the CCW Implementation Support Unit – would provide an assessment based on the national reports submitted on the progress in implementing the provisions of the Protocol.[1] This assessment revealed that only a small number of States were reporting fully on the steps they had taken to implement Article 4. The Coordinator also found that there was "a low level of implementation of Article 4." It appeared that a significant number of States were facing challenges in implementing this provision.

[1] CCW/P.V/CONF/2011/12, para 37(d).

If the Protocol is to make a meaningful contribution to protecting the civilian population from the effects of ERW, challenges and obstacles to its implementation need to be understood and addressed. Accordingly, the ICRC decided to host a meeting of experts from governments and international and non-governmental organizations to identify and discuss approaches to implementing Article 4.

The Expert Meeting on Identifying and Addressing Challenges to Implementation of Article 4 of Protocol V to the CCW was held in Geneva, Switzerland from 8-9 November 2012. The purpose of the meeting was to examine strategies for implementing Article 4 through informal discussions with experts.

Participants included technical experts, specialists in international humanitarian law, government officials, military personnel, representatives of agencies clearing explosive remnants or war and specialist non-governmental organizations. The experts attended in their personal capacities.

The discussion was organized around three main subjects:

- recording and retaining information
- transmission of information
- compliance, including the issuing of appropriate instructions and operating procedures, and the incorporation of the requirements of Article 4 into military education, training and exercises.

Each session began with presentations by experts, which were followed by an informal discussion among the participants. Presentations and discussions have been summarized here by the ICRC. Discussions during the meeting were held under the Chatham House Rule – that is, comments would not be attributed to specific individuals. However, those participants who made formal presentations to the meeting are identified.

2. INTRODUCTORY PRESENTATIONS AND DISCUSSION OF THE REQUIREMENTS AND IMPLEMENTATION OF ARTICLE 4 OF PROTOCOL V TO THE CONVENTION ON CERTAIN CONVENTIONAL WEAPONS

2.1. Opening remarks

Ms Kathleen Lawand, Head of the Arms Unit of the ICRC

In her opening remarks, Ms Lawand emphasized that the ICRC attached great importance to Protocol V and its full implementation. Indeed, it was the ICRC that had first proposed to the High Contracting Parties of the CCW that they consider developing a new protocol to deal with ERW. The ICRC had done so because it had seen − in conflict and post-conflict situations around the world − the devastating impact ERW had on civilians.

Ms Lawand underlined the fact that the success of the Protocol depended upon the full and effective implementation of its provisions. Without information on the location of explosive ordnance used or abandoned in conflict, the marking and clearance of ERW was difficult, if not impossible. In this regard the effective implementation of Article 4 and the guidelines in Part 1 of the Technical Annex were particularly important. These provisions required the recording, retaining and transmission of information about ERW with a view to facilitating their clearance. In addition, each High Contracting Party was required to institute national procedures to record the use or abandonment of explosive ordnance immediately when that took place. Unless these procedures were formalized in military doctrine and consolidated through military training well in advance of the outbreak of armed conflict, High Contracting Parties were unlikely to be able to fulfil their obligations.

Ms Lawand pointed out that the analysis done by the CCW's Coordinator on Clearance indicated that while some High Contracting Parties had made progress in implementing their obligations under Article 4, a significant number of States continued to face challenges in doing so. The effectiveness of the Protocol could be undermined if High Contracting Parties were either not understanding its requirements completely or not implementing them fully.

The meeting was therefore designed to identify challenges to the full and effective implementation of Article 4 of Protocol V and to suggest guidelines or best practices to assist High Contracting Parties. The participation in the meeting of government experts and of experts from clearance organizations would make it possible to identify the types of explosive ordnance that were of greatest concern, as well as to gather information that would be of great help in the clearance of ERW. This would ensure that Protocol V had a decisive impact.

2.2. National reporting on the implementation of Article 4

Presentation by Ms Hine-Wai Loose, Political Affairs Officer, CCW Implementation Support Unit (ISU)

Ms Loose gave an overview of the ISU's analysis of national reporting on the implementation of Article 4. In their reporting, some States had provided very general information on Article 4, which might have been an indication of the lack of detailed procedures to ensure the implementation of this provision in case of an armed conflict. Other States reported on contamination on their own territory or declared Article 4 not to be applicable because there was no contamination within their own territory. This may have been because they believed that Article 4 only covered recording of ERW information on their own territory, confusing it with Article 3 of the Protocol. Still other States reported only on procedures for recording the use of explosive ordnance in training exercises, which again left open two questions: whether they fully understood their obligations in the case of an armed conflict and whether they had the required recording system in place. Another group of States simply provided insufficient information to indicate whether or not they had in place any of the procedures required by Article 4. Some countries made clear in their reports that they did not use explosive ordnance.

Discussion

One expert involved in the original negotiations for Protocol V expressed surprise that so little progress had been made in the implementation of Article 4. She explained that during the negotiating process, the provision in question was thought to have the greatest potential for facilitating clearance of ERW.

The experts discussed the reasons for the problems of implementation and whether they resulted from a misinterpretation of the Article. One of the experts mentioned the time gap between the negotiations for the Protocol and its final adoption and entry into force, which may have had a detrimental impact on the level of understanding of Article 4. As a result of this incomplete understanding, even some of the High Contracting Parties that had actively supported the inclusion of Article 4 during the drafting process now seemed not to be implementing it.

Some experts felt that there was a degree of confusion among High Contracting Parties about the exact nature of the obligations imposed by Article 4. Many High Contracting Parties appeared to believe that the requirements of Protocol V applied only during armed conflict or only after it had ceased. However, in order to be in a position to implement Protocol V during an armed conflict, a High Contracting Party should establish procedures to record and retain

relevant information well in advance, i.e. in peacetime. Even those High Contracting Parties that were not currently involved in military operations, or that did not envisage such involvement, needed to have in place systems to record the use of explosive ordnance should they ever need to undertake military operations. Moreover, they should report on their implementation of these procedures in their annual reports to the High Contracting Parties.

One expert suggested that, in his experience, the majority of High Contracting Parties interpreted the provision correctly, namely that Article 4 considered together with Article 11 of the Protocol required establishing a system for recording and retaining relevant information in peacetime. Several experts commented on the relevance of Article 11 of the Protocol (which required the issuing of appropriate instructions and operating procedures, etc.) in this regard. Mention was made of analogous rules in other IHL treaties, in particular the 1949 Geneva Conventions, which although expressly applicable in situations of armed conflicts, contained obligations on training for military personnel that were indisputably binding and operative in peacetime. The provisions of Article 11 had a similar purpose and should be interpreted accordingly.

The obligation for a High Contracting Party to put in place procedures for the recording, retaining and transmission of ERW information regardless of whether it was actually involved in an armed conflict was accepted by most experts. However, one expert insisted that High Contracting Parties were not required to establish procedures to implement Article 4 unless they were engaged in armed conflict or military operations since it was only in such circumstances that High Contracting Parties had the obligation to collect and transmit information on explosive ordnance.

Another challenge mentioned by some experts was the fact that the implementation of Protocol V required the involvement of a number of different governmental authorities: foreign services, development programmes, victims' assistance services and, most importantly, armed forces. The successful implementation of Article 4 also implied close collaboration between diplomats attending the meetings of the High Contracting Parties to Protocol V and the military. Some armed forces were still trying to grasp the essence of their obligations under Article 4 and may have been reluctant to share information on Article 4 procedures through national reporting.

One expert mentioned another challenge for the implementation of Article 4: generating the necessary political and institutional will to put in place a compliant system of recording. In some States, inter-agency coordination might be a problem. For others, resources for implementing such a system might be an issue; in addition, having a system of this kind

might not be perceived as something of immediate importance.

Several experts mentioned that systems for recording, retaining and transmission of information about the use of explosive ordnance already existed in most armed forces. For example, some of this information was automatically recorded by computerized artillery systems. Therefore, in practice many States were already at least partly complying with their obligations under Article 4. One expert added that the obligation to record the use of explosive ordnance was not new in IHL. For instance, the original and Amended Protocol II to the CCW contain obligations on recording the use of landmines. Such an obligation also exists in customary IHL.

The experts also discussed the specific challenges of recording information on the use of explosive ordnance. While agreeing that there were very good recording tools for artillery and certain other weapons, the experts also recognized the challenges in recording the use of smaller calibre explosive ordnance used by highly-mobile infantry sub-units (such as 40 mm grenades, and 12.7 mm machine-gun and sniper ammunition with explosive projectiles). Recording information on every use of these munitions would require a very effective information management system. Recording could be problematic when there was a quick change of positions or when these munitions were used by a quick reaction force (as opposed to being fired from stable delivery systems and fixed positions). One government expert mentioned that, in his view, it was more difficult to record non-artillery munitions such as those delivered by tanks or helicopters (as these were typically fired "on the move" rather than from surveyed positions). Mention was also made of some confusion regarding the appropriateness of using software tools designed for managing information on contaminated areas (as per Article 3) for recording the use of explosive ordnance (as per Article 4). It was suggested that different systems were required to meet the separate requirements of Articles 3 and 4.

Regarding the content of the annual reports submitted by the High Contracting Parties of Protocol V, one expert who was present during the drafting of the Protocol recalled that there had been some confusion from the beginning of the negotiations about what exactly was to be included in annual reports with regard to Article 4. It was emphasized by various speakers that States were asked merely to report on the implementation of Article 4 and not to provide actual data on used or abandoned explosive ordnance in their annual reports. The information on explosive ordnance, used or abandoned, that High Contracting Parties and parties to an armed conflict were required to record pursuant to Article 4 was to be retained for their own use, and for transmission to the States affected and to the clearance community. It was never intended to be included in annual reports. The expert also pointed

out that, unlike under the Anti-Personnel Mine Ban Convention and the Convention on Cluster Munitions, there was no entity specifically resourced and charged with monitoring and reviewing national reports under Protocol V, which made the task of assessing them very difficult. It was suggested that consideration be given to providing resources for this task, which would allow the CCW Implementation Support Unit and the ICRC to more easily assess the implementation of the Protocol.

An expert from one of the more recently acceded High Contracting Parties shared his country's experience in establishing a system of reporting. He stated that newly acceding States were likely to use other countries' national reports as templates but would find very little information on the implementation of Article 4. The speaker expressed his hope that the expert meeting would deliver best practices for implementation and reporting on Article 4, taking into account the different economic and political situations of the various High Contracting Parties.

Some experts shared their respective States' practices regarding inter-agency cooperation in annual reporting on the implementation of Protocol V. The focal point in most States was the Ministry of Foreign Affairs (or its equivalent), which received information from other ministries and departments (Ministry of Defence, Ministry of Interior, Ministry of Justice, Defence Force Headquarters, etc.). It was accepted that such an approach could present a bureaucratic burden for States. One government expert suggested that the key to good reporting was its institutionalization at all levels of defence forces, so that relevant information could be complied by defence headquarters for any weapons treaty at any time.

Finally, the experts discussed the issue of applying Article 4 in multinational operations. One expert stated that opinions differed on the extent to which this article applied to High Contracting Parties taking part in combined military operations. The experts discussed the conflict in Libya and one expert recalled that the members of the coalition had been providing information on explosive ordnance as a matter of practice through NATO headquarters. It was suggested by some experts that High Contracting Parties that participated in international missions abroad but did not use ERW-producing weapons systems, should mention that in their respective reports. It was also suggested that NATO should be involved in discussions on reporting under Article 4 so that it could support individual members in their reporting obligations.

2.3. Information requirements for ERW clearance

Presentation by Mr David McIvor, Chief of Operations (Libya), UN Mine Action Service

In his presentation, Mr McIvor outlined the information required for clearance operations, using the example of clearance activities in Libya. Among the most important requirements were the following:

- **Location.** Useful location information included: the location of ERW, any marking used, any available records, the location of defensive positions at the time of explosive ordnance use, the location of target areas, the direction/location of attack (since explosive ordnance does not always land where it is aimed), and terrain. This information should be provided in an easily understandable format, for example, exact Military Grid Reference System (MGRS) coordinates.

- **Target information.** Target information should include the type of target, especially if it was a target of opportunity (e.g., a military convoy), and whether the target was military or dual-use (in order to better assess potential risks for civilians).

- **Munition information.** Munition information should include the type (e.g., landmines, cluster munitions, aircraft bombs or projectiles), quantity and pertinent technical information (e.g., type of fusing mechanism).

- **Conflict information.** Conflict information should include the date and duration of the conflict, the season, what impact the environment may have on the ERW or marking (e.g., moving sand in Libya), and how long the marking was likely to last.

Presentation by Mr Daniel Eriksson, Head, Information Management, GICHD

In his presentation, Mr Eriksson shared the experience of the Geneva International Centre for Humanitarian De-mining (GICHD) on the subject. The GICHD had observed a gradual improvement in the recording and releasing of data on explosive ordnance as well as a growing understanding of the need to collect data, at least on the biggest munitions (bombs, artillery weapons) and to share it with the clearance community. However, there remained some concerns. According to Mr Eriksson, political goodwill did not necessarily always translate into effective recording and transmission of data. States may discover after hostilities that necessary data had not been collected or had been collected in a format that made it difficult to share. Where artillery strikes numbered in the thousands, translating the data into a format usable by the clearance community could present a major challenge. If

there were a standardized format (such as the Information Management System for Mine Action (IMSMA) used in mine action), the exchange of information could become swifter and could facilitate a faster response.

In addition, Mr Eriksson mentioned the need for a standard catalogue or glossary of data, since different High Contracting Parties might use different labels or spelling variations, which could significantly affect the interpretation of the recorded information. He also emphasized that if Protocol V was to be interpreted as requiring reporting on 40 mm grenades and .50 calibre (12.7 mm) ammunition, then High Contracting Parties should be more ambitious with regard to the standard and the format of data. He stated that in the case of these munitions, the need to have a standard reporting system was even greater. The issue of standardized reporting was also relevant for reporting on locations. Target point location was recorded at different times (e.g. intended target point at takeoff, intended target point on route, target point, actual target point, bomb damage assessment target point) and there was currently no common understanding of which one should be provided to clearance organizations.

Discussion

The experts discussed the issue of the release of information on fusing mechanisms. One clearance expert explained that in the case of Libya, different NATO States had used explosive ordnance with different fusing mechanisms, some of which included new technology. In densely populated areas, like Tripoli, it was not always safe to destroy unexploded ordnance (UXO) in place. If those carrying out clearance operations had technical information on the fuse, the UXO could be rendered safe and removed, to be destroyed in a different location. However, some fuses could not be rendered safe and the UXO had to be destroyed in place. Furthermore, it was important to know whether the fuse system was activated by pressure, magnetic influence or had a time-delay function, since these differences could not always be distinguished visually. One government expert, although supporting the need to provide information on fusing mechanisms, especially in the case of self-destruction mechanisms, or new or experimental munitions, pointed out that the release of this information could be difficult in practice. He said that, despite the fact that the subject of the discussion was "information requirements," the actual type and the details of the data provided by High Contracting Parties was to be decided by the States themselves. In this regard, the expert emphasized the voluntary aspect of Part 1 of the Technical Annex to Protocol V.

Another government expert agreed that the "best practice" in the Technical Annex, which provides for the release of information on methods for safely disposing of UXO might be somewhat controversial owing to the reluctance of certain States to share information on fuses, their designs and deactivation procedures. However, the position of his government was that High Contracting Parties to the Protocol should be prepared to release this data.

One clearance expert shared the example of the information released by NATO in the context of the conflict in Libya. The information had been received directly from NATO rather than from individual member States (with the exception of the United States). The expert claimed that in many instances the information was provided as a result of particular members of the clearance community, who were former members of the military themselves, having personal contacts; and that this sped up the sharing of relevant data. A government expert from one NATO Member State, however, emphasized that there were also NATO military and technical advisers on the ground with a specific official remit to work together with clearance organizations and provide ERW information.

The experts discussed the issue of timeliness in connection with the transmission of relevant ERW information. This issue was also brought up during the discussion on general requirements under Article 4. Several clearance experts emphasized that timing was crucial. As soon as fighting stopped in one area, internally displaced persons returned to their homes; so, if even incomplete ERW information were available, clearance organizations would be able to mobilize their resources and to react accordingly. Conversely, no matter how well the recording was being done, if the recorded data was not released there would be no effective clearance; and effective clearance was the ultimate purpose of the Protocol. As pointed out by one clearance expert, the information could be divided into the ‘short-term critical’ (unknown fusing systems and other safety-related data) and the much more detailed, broad targeting information necessary to release affected areas to the civilian population. One clearance expert reminded the meeting that, according to Article 4, the release of relevant information had to take place "without delay after the cessation of active hostilities" and not after the conflict was finally resolved. He added that according to Article 4, the release of information could be done either bilaterally or through third parties such as the UN.

Another clearance expert supported the need to share information on targets (so that it could be matched against data on ammunition fired) and types of fuse. He stressed that rather than the exact design of the fusing system, clearance personnel needed to know whether or not there was a time-delay function, so that the civilian population could be informed or prevented from immediately returning to their homes. It was also important to know if the ammunition used was equipped with an anti-handling device so that it could be dealt with by

specialists using special equipment. In summary, there was a need for accurate reporting on type and quantity of ERW, location of impact area, target details, and post-bombing target assessment if available. Ideally, the information would be provided in a standardized reporting format; an acknowledgement of responsibility for the use of the explosive ordnance would also be useful. In general, the more information the better, as the relevance of particular data could be evaluated on the ground. On the other hand, as was pointed out by another clearance expert, too much low-quality information could be burdensome as it would take far too much time to sort through.

A clearance expert also reminded the meeting that mine action was broader than just mine clearance and included risk education activities, medical assistance, etc. Therefore, the recording of data was important not only for the purposes of clearance. For instance, the GICHD ran educational programmes for the local population, teaching them how to react to and report ERW, and for that purpose would appreciate having pictures and guidelines from States to make its mine-risk education activities better targeted and formatted.

The experts discussed possible challenges in the transmission of certain types of information. One expert raised the issue of the provision of technical information by a landmine-manufacturing State that was not a party to the conflict and thus not covered by the obligations in Protocol V. Another participant pointed out that the examples given in the presentations covered provision of information by the "winning" parties in conflicts; it might well be more difficult to obtain information from the defeated side. He gave the example of the Qaddafi army in Libya, whose members might be in hiding or dead. The new government may therefore have little or no information on the use of explosive ordnance to share.

The experts discussed the issue of the release of information by States not party to the Protocol. The experience of some organizations involved in clearance showed that, on a case-by-case basis, States not party to Protocol V, when asked by mine-clearance organizations about the ERW on their territory, would often provide information as a matter of practice. However, that of course did not address the legal obligation to systematically record and transmit information, which was the subject of the expert meeting. Other experts confirmed that there was a growing State practice of providing information to clearance organizations whether or not the States concerned were party to Protocol V. For instance, Israel provided information on the use of explosive ordnance in Lebanon after the conflict in 2006 and the US provided information on the use of explosive ordnance in Kosovo before becoming party to Protocol V. For States not party to a particular treaty such growing practice was an indication of new standards in sharing information on the use of explosive ordnance.

3. RECORDING AND RETAINING INFORMATION

Presentation by Colonel Jim Burke, Director of Engineering, Irish Defence Forces

Colonel Burke shared the experience of Ireland in establishing procedures to implement the requirement of Article 4 to record and retain information "to the maximum extent possible and as far as practicable," as well as the Technical Annex, even though the latter was not legally binding. He also mentioned that given the particular requirements of Article 11, including the duty to provide training to military personnel, Ireland saw itself obliged to have specific instructions and operating procedures consistent with the Protocol.

After becoming Party to Protocol V, Ireland set up an implementation working group within the Defence Forces with representatives of the Operations Directorate, Engineering Corps, Ordnance Corps and Communication and Information Service Corps, the last-named included because of the information-sharing aspect. The working group consulted all users of explosive ordnance in the Irish military (infantry, artillery, cavalry, Naval Service, Air Corps, etc) and released an interim report, which identified the obligation to record information as a major challenge. The prototype system of recording was tested by one of the army's brigades. Based on that experience, the system was adjusted and introduced to the entire Defence Forces in 2011, including units based overseas. Ireland had a relatively small armed forces with relatively few platforms launching explosive ordnance. Ireland also decided to go beyond the scope of Protocol V and to include weapons covered by Amended Protocol II to the CCW. Therefore, the Irish recording system now applied to field artillery, mortars, direct fire anti-armour systems, armoured platforms, anti-air systems, grenades and engineer munitions covered by Amended Protocol II.

Colonel Burke shared the template used by the Irish Defence Forces for recording information on explosive ordnance: a comprehensive electronic form. It was explained that all details would not be available in every single case but should be available in case of larger weapons systems, particularly those with digital recording tools (as in artillery fire control systems). For recording locations, the Irish recording template used a map reference or a Global Positioning System (GPS) reference. For targets, Ireland recorded range, bearing (in degrees or mils), altitude, fuse type, shell type, calibre, and number of rounds fired, whenever this data was available. For point of impact, the template sought information on the number of rounds fired, latitude, longitude, map info, grid reference, and dispersion. The electronic form also included remarks on suspected UXO or percentage of UXO expected from a particular weapons system. The focal point for collecting data was the Joint Operations Centre (JOC) in Defence Forces Headquarters (DFHQ), which dealt with activities both in Ireland and in all operations overseas.

Colonel Burke mentioned that there had been challenges in convincing the Irish Defence Forces as a whole of the importance of recording information, largely because it was a significant additional burden. Within each brigade, the information was collated at brigade headquarters level, which received recorded data from units, including infantry battalions, artillery regiments, cavalry squadrons, engineer companies, etc. and forwarded it to the JOC.

Colonel Burke also explained that the Irish armed forces digitally recorded information on artillery fire control systems and on some of the armoured vehicle-mounted weapons, which made the task of recording for these weapons easier. He pointed out that in general the larger weapons (e.g. air-dropped munitions and larger artillery systems) were relatively easy to record for most States. In the case of Ireland, for example, information on the larger weapons systems was already being recorded before the adoption of Protocol V, although it was not retained and transmitted in a format that would have been compatible with Protocol V requirements. The greatest challenge was presented by the less advanced systems, for which the recorded information was less precise, and it was therefore necessary to make such recording compatible with the Protocol V requirements.

Colonel Burke also emphasized the importance of training military personnel in recording procedures; only then could the system be fully implemented and function properly. Knowledge of the recording requirements had to be provided to the actual users of the explosive ordnance, which meant essentially at junior leader level, including section commander level, and at private soldier level for certain systems.

Colonel Burke also touched upon the issue of transmission of data to clearance organizations. Although it was the Ministry of Foreign Affairs that was responsible for the transmission, the military had to ensure that every recording system it had would be of use in its raw data form for the clearance community. For that purpose, armed forces needed advice and lessons from the field to help them adjust their recording systems to clearance organizations' requirements. The Irish armed forces had concerns with regard to the speed with which they were sending information currently, transmitted and were working to improve in this respect.

Colonel Burke gave a practical example of the recording of information − during an Irish military training exercise in Chad − and shared some of the lessons identified by the Irish armed forces:

- The recording system should be capable of providing the most comprehensive information, (although this would not be available in every case); for example, in a major engagement it might only be possible to say how many grenades were used in

a certain grid square; it could be difficult to provide precise target information but it should be possible, as a minimum, to give the general area, the number of rounds fired, the type of fusing system used and information on render safe procedures, which was of great assistance in post-conflict clearance.

- At the same time States should not be too prescriptive in the type of information required, but should be as flexible as possible (e.g. map references in different grid systems may be different).

- Classroom education was not sufficient; these activities needed to be incorporated in live exercises; reporting had to be required of all users of explosive ordnance, and not only during armed conflicts; this made training personnel and implementing correct procedures even more important.

Colonel Burke also stressed that there was value beyond complying with IHL in knowing what explosive ordnance your forces had used, when they were used and where. This was particularly so if something went wrong, (causing friendly force casualties, hitting the wrong target, etc.) and the incident was under investigation. Thus, it was clearly in States' interest to record this information.

Presentation by Lieutenant Colonel Craig Jolly, Staff Officer Grade One - Assessments, Australian Defence Force Counter Improvised Explosive Device Task Force

Lieutenant Colonel Jolly explained the historical background for the recording of information on explosive ordnance in the Australian armed forces. The Australian experience was shaped by the war in Vietnam, during which the Australian military had used a barrier minefield to protect its task force base in Vietnam. That minefield had become a laying-up haven for the enemy, as well as a magazine from which the enemy took mines that it later used with great success to ambush Australian forces. The mines were used conventionally (as mines); and the explosive harvested from them was also used to create booby-traps. Not only did the minefield turn out to be a failure, but subsequent de-mining also became a significant challenge. Despite the fact that the location of mines had been recorded, many of them had been moved by the enemy. Consequently, Australia had supported Amended Protocol II to the CCW and the international ban on anti-personnel landmines.

It was against this background that the recording and reporting of explosive ordnance was institutionalized in the Australian armed forces. After the war in Vietnam, military personnel were trained in the importance of recording the use of explosive ordnance; this duty was included in military doctrine and in the *Australian Defence Force Manual on the Law of*

Armed Conflict. Currently, all mines and booby-traps emplaced by the Australian military had to be covered by observation and fire, and recorded in a standard minefield report form. Additionally, Australia had a policy restricting the use of booby-traps by Australian personnel to very high- level (major-general) authorization.

With the introduction of the CCW Protocols, the Australian approach became very much doctrine-driven. When Australia ratified the Protocols, their provisions were issued to the Defence Force in the form of a directive. After that, the Australian armed forces developed doctrine and thus ensured that any decision at the operational level was in accordance with the CCW's requirements. Current operational guidance with regard to UXO and ERW was to proactively deal with all explosive hazards, including ERW, in theatres of operations, even before active hostilities had ceased. The responsibility for the doctrine's operationalization was vested in the Commander of Joint Operations. The doctrine was institutionalized in every operational order that went out, whether it was for regional operations in the Pacific or in places like Afghanistan. At the bottom end, there were a series of engineers' reports, which dated back to the pre-Vietnam era and were used by all soldiers to report whenever they come across explosive ordnance. All theatres were required to report their UXO/ERW. UXO were identified and marked where practicable. Reports were sent to Headquarters Joint Operations Command on a monthly basis. Training was also provided beyond the Australian armed forces: for example, it was included in regional assistance programmes (e.g. training for the police in Thailand).

Lieutenant Colonel Jolly explained that the Australian military recorded the use of all explosive munitions and did not distinguish between tactical reporting for Amended Protocol II and Protocol V. For artillery systems or air-dropped weapons recording was quite easy and accurate. For infantry use of explosive ordnance, there was usually an immediate incident report, followed by a supplementary incident report, which covered ammunition use. The Australian forces were also working on predicting potential smaller-calibre contamination based on an understanding of the occurrence of tactical contacts, the usage of various munitions and the expected UXO rate. However, under current procedures, in the case of a special forces patrol engaging in a tactical engagement, for example, the Australian military may have little more than the contact report with the information on munitions fired and their general direction, thus making it a challenge to work out the UXO contamination that may have resulted.

Discussion

The experts were asked whether High Contracting Parties had any specific procedures for cases where explosive ordnance had been abandoned or encountered any specific challenges in this area. One government expert said that the recording of abandoned explosive ordnance (AXO) was included in training packages but that his military did not have a specific recording mechanism for AXO, since explosive ordnance was almost never left behind. Another government expert agreed with this approach. His military tended to blow up unused explosive ordnance before leaving the area of operations, and if ammunition was transferred to local forces (e.g. in Afghanistan), that was recorded as well. To highlight the danger of AXO, one expert gave an example of the Israeli withdrawal from Lebanon, when a major position had to be abandoned in a hurry. The attempt to destroy the stockpiles was unsuccessful and resulted in the contamination by explosive ordnance of the entire area; in this instance the explosive ordnance qualified as both UXO and AXO. In addition, the area had been under attack for many years and was littered with older UXO, a hazard for clearance personnel collecting the recent AXO.

Finally, one government expert asked the speakers about the main challenges and priority areas in recording, storing and sharing information. The question was relevant for States that were currently in the process of introducing recording systems in their armed forces. One government expert named political will as the first priority. He added that most armed forces were already recording the use of explosive ordnance to a degree, but had to ascertain how they could adapt their existing systems to Protocol V requirements. Another government expert stressed the importance of creating a culture of recording and reporting, which had to start with the adoption of doctrine. Both speakers agreed that there also needed to be a culture of awareness and recording in general, which would help States to comply with their legal obligations.

4. TOOLS FOR RECORDING AND RETAINING INFORMATION

Presentation by Major Per-Henrik Åberg, Commanding Officer, EOD IS, Swedish Armed Forces

Major Åberg delivered a presentation on the Swedish Explosive Ordnance Disposal Information System (EODIS) in the context of its potential use by High Contracting Parties for assistance in complying with the requirements of Article 4. The system's primary aim was to provide information required to identify and disarm any UXO on land or at sea. The main users of EODIS were armed forces, other national bodies (e.g. the police), and international organizations. It is currently being used by 14 States.

Presentation by Ms Hine-Wai Loose, Political Affairs Officer, CCW Implementation Support Unit

Ms Loose delivered a presentation on the Generic Electronic Template (GET). She explained that when Protocol V entered into force and the first Meeting of High Contracting Parties was held in 2007, Article 4 was recognized as a priority. As a result, the United Nations Mine Action Service (UNMAS) was requested to develop a tool to help States understand and implement Article 4. While working on the GET, the drafters followed some basic principles. First, they wanted to ensure consistency between the GET, Article 4 and Part 1 of the Technical Annex. They also tried to strike a balance between requesting very specific and detailed information and States' concerns about the military sensitivity of the shared data. The template also had to be relevant for facilitating rapid marking and clearance of ERW. The drafters of the template also sought to unify national practices.

Ms Loose recognized that the existing template raised many questions: Was it self-explanatory and easy to fill in? It was extremely important for clearance operators to have standardized information, but how realistic was it to have States adopt one single format for recording the use and abandonment of explosive ordnance? Would it be better to look for "recording champions" within each region and disseminate their experience as best practices? Ms Loose also recognized that it was difficult to assess to what extent the template was actually assisting States, and whether it would be easier for them to develop their own procedures, perhaps using GET as guidance.

Discussion

Government and clearance experts generally agreed that EODIS was more relevant for Article 3 of Protocol V and questioned its relevance for Article 4 activities. One clearance expert also asked to what extent EODIS was compatible with IMSMA, the information management system currently being used by States to which the UN is providing assistance in mine action. Major Åberg responded by saying that there was no competition between the two tools and that the data from IMSMA could be used in EODIS. An expert from the GICHD confirmed that IMSMA and EODIS could exchange information. Furthermore, several experts recognized the usefulness of the EODIS database of explosive ordnance.

Some experts suggested considering the possible benefits of EODIS for countries affected by ERW or for the clearance community, and how use of the system could be broadened. Major Åberg stated that these new uses could be considered in the new version of the tool, which was currently under development, and that in principle sharing non-classified information with clearance operators should not present any problems.

In response to the questions raised by Ms Loose in her presentation on the GET, several experts expressed the view that although the GET was useful at the time of its adoption and still had relevance for some States as a starting point, it could not be expected to serve as a common template for all the High Contracting Parties for recording and retaining information. One government expert said that the GET was not compatible with national data collection systems and one clearance expert said that sharing information in its original recording format rather than transferring it to the GET made it possible to release information more quickly. It was also pointed out that imposing a standard format on all High Contracting Parties might be premature at this early stage of the Protocol's implementation. It was suggested that the GET be used as a reference point to help States develop their own instruments. For instance, the information contained in the template could be relevant for States that were deciding what type of data they should be collecting; but the usefulness of the template itself was called into question. Some government and clearance experts also recognized that Part 1 of the Technical Annex set out the information requirements well and provided clearer guidance than the GET in this regard.

Some clearance and government experts felt that if the decision to have a common template held, the template would have to comply with modern technology and could not remain fixed; it would have to be reviewed and updated periodically. On the other hand, it was pointed out that updating the GET too frequently could create confusion for States that do actually use it as a template.

Several alternatives to the common template were discussed by the participants. One expert asked whether some States might be interested in Geographic Information System (GIS) technology, which was being widely used. If clearance organizations developed open metadata architecture and States were capable of providing appropriate GIS files, sharing information could be made considerably easier. Such a system would not be forced on all States, although GIS technology was fairly easy to use. One of the experts mentioned that it was already used extensively in Iraq and Afghanistan.

Some experts suggested adopting a list of minimum requirements under Article 4 and then letting every State make up its own form. Other proposed solutions included using the Irish template as a model, updating and expanding the existing Technical Annex and adopting another technical annex to Protocol V, to encourage the convergence of existing national systems. It was suggested that such a technical instrument did not necessarily have to be adopted within the CCW framework but could be a separate agreement between States and the clearance community.

One expert noted that useful precedents existed in other industries, for instance in risk management in the field of occupational health (i.e. reporting on accidents and near-miss incidents, which was designed to facilitate reporting from the lowest levels of an organization). Personnel at a section level could fill in a paper form that would be sent to platoon level/company level where it would be converted to an electronic format (e.g. GIS format). At higher levels, additional information could be attached, for instance aerial photographs. At the final level, technical warnings or special hazards for clearance operators could also be added.

One government expert, however, insisted that, when the GET was discussed, High Contracting Parties actually wanted to have a common template and that his State successfully used the GET as guidance for its armed forces. He noted that it would be useful to bring the template into line with new technological developments and adopt it as a common format. His position was partially supported by another expert who claimed that Part 1 of the Technical Annex on its own was insufficient, and that there was still a lot of confusion about Article 4 among High Contracting Parties. Further, it was noted that some countries did not have the technology or resources to use more sophisticated mechanisms.

5. TRANSMISSION OF INFORMATION

Presentation by Lieutenant Colonel Peter Sonnex, Conventional Weapons Policy and IHL, UK Ministry of Defence

Lieutenant Colonel Sonnex delivered a presentation on the UK's approach to the recording, retaining and transmission of ERW information, focusing on the transmission of information. He informed the meeting that although the UK was not a Party to Protocol V, it had fully implemented as matters of policy and practice the obligations under Article 4 to record and transmit relevant information.

According to Lieutenant Colonel Sonnex, the UK employed a large variety of weapon systems. These systems were characterized by large numbers of large munitions, and included for example, cruise missiles, precision-guided air-launched munitions, artillery (both unguided and precision-guided), naval gunfire, anti-armour, tactical air-to-surface and surface-to-surface missiles, Challenger 2 main battle tanks, a variety of self-propelled armoured vehicles, and the Apache AH 64 attack helicopter.

The UK Targeting Policy (Joint Service Publication 900) prescribed that data related to deliberate targets be recorded and retained. All related intelligence and information, and Target Summary Sheets should be included in the target folder and must be retained for audit purposes and as operational records. Whenever possible, this folder should be in an electronic format that was easily transferable and accessible to all levels of command. Responsibility to record data lay with those who requested the fire, those who delivered it, and the headquarters; responsibility for retention lay with the headquarters. All targeting records (for deliberate targets and combat engagements) had to be retained at Permanent Joint Headquarters for seven years before being transferred to Historical Records. After any attack, those calling in the fire (Fire Support Teams) during combat engagements were required to submit a SINCREP (Significant Incident Report), which would be retained by the headquarters in accordance with the UK Targeting Policy. All air-to-ground ordnance use must be recorded in a Mission Report (MISREP) by the aircraft commander. Policy and doctrine required that a record of all targets engaged by surface-to-surface fires was recorded and retained by the headquarters concerned. These records were very similar in format to the GET. An important element in these records was battle damage assessment (BDA), which was the key element in identification of explosive remnants. BDA was an assessment to determine the quantitative extent of physical damage caused to the target through the effects of blast, fragmentation and/or fire damage. The BDA was based on observed or interpreted damage.

Lieutenant Colonel Sonnex gave an example from the UK action over Libya. During operations, it was recorded that one of the many UK Storm Shadow cruise missiles launched had not reached its target. The information was immediately passed to clearance agencies and the UK military accompanied the clearance team on the ground. According to Lieutenant Colonel Sonnex, in terms of data sharing, the UK did not follow a one-size-fits-all approach. In many cases, the UK armed forces would share only that information which was strictly necessary in order to avoid overloading the recipient. The security situation would also determine how much information and to whom it would be passed. The information was usually transmitted bilaterally rather than publicly to avoid compromising security. Therefore, the post-conflict transmission of data to ensure ERW were rendered safe was conducted in a manner appropriate to the situation. Potential options included transmission to a UK government team, to a national government or to an NGO. The speaker emphasized that the UK was committed to ensure its ERW were dealt with in a safe and timely manner.

Presentation by Lieutenant Colonel Charles D. Bolton, Conventional Arms Control Branch Chief, US Department of Defense Joint Staff Plans and Policy Directorate

Lieutenant Colonel Bolton delivered a presentation outlining the system of recording, retaining and transmission of information on explosive ordnance in the US. He stressed that the ultimate goal for all recording, retaining and transmission of information was to prevent unintended harm. Therefore, as a matter of strategy, the US guidance required good communication to facilitate joint and multinational coordination and information flow. At the individual service level, the US military had an extensive training program on reporting unexploded ordnance, which complied with the requirements of Article 4. The focus of US doctrine was on the duties of military engineers and EOD technicians, while every service member was trained on identification and reporting of UXO or ERW.

Lieutenant Colonel Bolton explained that in its use of explosive ordnance the US was guided by three overriding considerations: legal analysis, proper reporting and recognition of the impact on civilians and the environment. Reporting, recording, and marking of minefields must be performed using methods that were consistent and well understood. Coordination went from the Joint Forces Commander through his staff to applicable agencies (Joint Targeting Coordination Board, Joint Force Engineer, Joint Force Air Component Commander).

One of the lessons learned by the US forces during their recent military campaign in Iraq was that tracking explosive hazards continuously throughout operations was extremely important. The US took that lesson to include the proactive establishment of an explosive hazards

database to facilitate a common understanding within the joint force, and with multinational forces, other government agencies, intergovernmental organizations and NGOs. This database, known as the Tactical Minefield Database System (TMFDB), included all known and suspected mines, IEDs, UXOs and other explosive hazards and provided a digital common operating picture (COP) to enhance situational awareness across the battlefield for the Coalition, the government of Iraq and humanitarian assistance partners. Using TMFDB, Coalition Forces tracked the location of all air- and ground-launched cluster munitions, as well as newly discovered and previously recorded minefields. Three days after the war began, Coalition Forces distributed to relevant agencies information about all known hazards in the database, including all known minefields and mine strike information, Dual Purpose Improved Conventional Munitions and cluster bomb unit munitions. All available data was placed in the database to establish a baseline, then daily data collection commenced. Daily reports of all cluster munitions employed in theatre were received. More than 5,000 explosive hazard areas, including cluster munition hazard areas and conventional minefields, were reported by the end of the ground campaign. The same process, albeit more focused on IEDs, was established in Afghanistan.

Lieutenant Colonel Bolton acknowledged that there were still challenges to overcome with respect to recording, storing and transmitting UXO and ERW data, especially with render safe procedures and working in alliance operations. Among the main challenges were:

- achieving secure, interoperable communications systems;
- achieving rapid and timely declassification of military data on locations of hazards;
- the fact that within NATO alliance operations some States members may not want to release information, while others do;
- the development of a common operating picture;
- a shift in focus from ERW/UXO to IED; and
- render safe procedures, which are viewed by the US as inherently governmental actions because of the sensitivity of the information involved, as opposed to destroy in place procedures, which were not sensitive.

Discussion

During the discussion, the experts raised the issue of the information recorded as opposed to the information released to mine action organizations. Government experts from two States explained that the issue was dealt on a case-by-case basis. It was recognized that there might be circumstances (e.g., in the case of an ongoing investigation), which could preclude the release of data. However, it was stated that there is no general "red flag" for certain types of data in the armed forces of those two States. One government expert added that clearance was in the interest of armed forces, as it prevented explosive ordnance from getting into insurgents' hands. Therefore, most recorded information was shared at the earliest opportunity.

One clearance expert raised the issue of sharing information on areas that could be used for harvesting of explosives (e.g. large anti-tank minefields with only anti-tank mines) as well as information on render safe procedures and fuses, which also would not be shared publicly. The speaker posed the question of whether a mechanism for sharing this type of sensitive data should be discussed within the CCW forum or whether it should continue to take place on a bilateral *ad hoc* basis. Government experts from two States agreed that there cannot be a completely public and open system of exchange of information but that the existing mechanisms, whether bilateral sharing or arrangements based on sharing within the clearance community, were sufficient to address the issue of sensitive data.

The experts discussed the process of sharing information within alliance operations (e.g., NATO). One government expert and one clearance expert recalled that during the armed conflict in Libya, information was passed through NATO Headquarters with the approval of all participating member states, and not bilaterally. Another government expert, on the other hand, stated that NATO only provided information at the macro-level (where operations took place, for example); more detailed information was provided by member States, depending on the security situation. The expert pointed out that there was no NATO directive obliging member States to pass information through NATO Headquarters. Another government expert stressed that the issue was discussed during the negotiations for the Protocol and that each State Party should take responsibility for its own explosive ordnance, regardless of whether it was a member of an alliance. It was acknowledged, however, that there might be some confusion in the case of shared weapon systems.

The experts discussed the actual mechanism of transmission of information, i.e., whether there was a person in the military responsible for contacts with clearance organizations, whether these contacts were proactive or reactive, and how long it usually took to release information after a request was received. One government expert explained that in his

country's military, the focal point was the engineer community rather than a single person, and that his country had a proactive approach to the release of information; this had been demonstrated in a recent armed conflict. He also stated that the only impediment for prompt sharing of information was the fact that some of it may be classified. However, the information on any immediate hazard was released as soon as possible. Another government expert claimed that his country also had a proactive position as far as transmission was concerned. In an ongoing conflict, his country had personnel responsible for contacts with clearance agencies. It was pointed out that such a proactive approach benefited armed forces since it was in their interest that UXO and AXO were not harvested by the enemy. The latter point was agreed by clearance experts, who mentioned the problem of IEDs as an incentive for transmission of information as quickly as possible. On the other hand, according to one government expert, the timing of the release of information would depend on the context and would be determined by both military and humanitarian considerations. Another government expert explained that his country's armed forces had a special civil-military operations centre for contacts with NGOs. He also mentioned that his country's military had a classified weapons database which was available for humanitarian demands upon request and subject to declassification.

One clearance expert confirmed that there had been very close cooperation with the Coalition forces in Iraq. He explained that when States were reluctant to release sensitive data (e.g., information on fuses) they could send their own teams to deal with these ERW. In cases when this was not possible, there should be mechanisms for sensitive data sharing since the destruction *in situ* was not always acceptable because of safety considerations for civilians and civilian infrastructure. It was also pointed out that information on fuses was useful for local capacity building. These arguments were acknowledged by some government experts.

One clearance expert recalled from Lieutenant Colonel Bolton's presentation, that transmission was understood as covering not only the information on UXO and AXO but also on possible hazards to clearance organizations, humanitarian personnel and civilians. He pointed out that transmitting information on either ERW or potential hazards is not enough on its own. Lieutenant Colonel Bolton replied by saying that it was much quicker to transmit hazards data than the data on the use of explosive ordnance and that Protocol V required transmission of the latter only at the cessation of hostilities.

Government experts were asked how the data on explosive ordnance and potential ERW were exported from their respective databases and converted into a format available for sharing. One government expert explained that as far as engagement data was concerned,

the information entered the database from situation reports (SITREPs) but these did not provide the level of detail required for clearance. There would be general information on the area, amount and type of munitions used but not the exact coordinates. The information flowed into the system and when requested needed to be pulled out and processed accordingly. The expert stressed that it would be a significant burden for the military to record more detailed information. Therefore, his country's military captured the macro level data, which needed to be pulled from the database when it had to be transmitted. Another government expert supported this approach and said that every small arms or tactical level engagement would be very difficult to record other than at the macro level, but that his country's military conducted its own battlefield area clearance when the necessity arose, which usually comprised a visual search covering 12-15% of the ground.

One government expert raised the question of whether non-state actors (NSAs) were also recording and transmitting information on explosive ordnance, since Protocol V applied also to non-international armed conflicts. Another government expert recalled that the application of the CCW to NSAs was controversial when the draft Protocol VI on cluster munitions was under negotiation. The term “High Contracting Party and party to an armed conflict” in Protocol V could be interpreted as applying only to States Parties currently involved in armed conflict and some States followed this interpretation. Others, on the other hand, insist Protocol V provisions were meant also to apply to "parties to the conflict" other than High Contracting Parties, namely to NSAs. There was also the question as to the extent NSAs had the capacity to comply with Protocol V provisions. It was pointed out by several experts that the capacities of NSAs varied. If they were breakaway units of the State army, for example, they may have had training and the capacity to comply with Protocol V, whereas other NSAs may not. Therefore, NSAs were expected to record and provide information on explosive ordnance to the extent feasible and practical. There was currently no evidence of any NSAs taking measures in relation to Protocol V, although some of them would be clearly in a position to provide information on their use of landmines (for example, mapping etc).

6. IMPLEMENTATION AND MILITARY TRAINING, EDUCATION AND EXERCISES

6.1 Implementation

Presentation by Lieutenant Colonel Olivier Madiot, Arms Control Division, French Armed Forces

Lieutenant Colonel Madiot delivered a presentation on the implementation of Article 4 by France. He said that the main challenge for Article 4 was its universalization, not its implementation. Protocol V had a huge potential for universalization, because it served both military and humanitarian interests. Therefore, a very strict interpretation of obligations under Protocol V might hamper its universalization. The purpose of Protocol V was not to record and transmit information on all use of explosive ordnance but to do it "to the maximum extent possible." If compliance with these requirements was expensive, complex or produced an extra amount of work for armed forces, it would affect the universalization of the Protocol.

Since the extent of Protocol V obligations was ambiguous ("to the maximum extent possible and as far as practicable," "as soon as feasible," etc.), France had adopted a policy paper to detail the obligations for its own armed forces. The French Government had issued general guidelines and recommended precise and easy-to-understand procedures for its armed forces in the field.

Lieutenant Colonel Madiot also elaborated on the main difficulties faced by France in the implementation of the Protocol, namely the initial reluctance of army headquarters, and the need to determine limits for the implementation and optimization of the collection of data. The first challenge was to convince army headquarters, whose initial reaction to the Protocol was rather negative. The French armed forces, like many others, had already been recording information as a matter of practice but were reluctant to share it. The French military perceived the obligations under Protocol V as a serious constraint. To change this perception the following arguments were used:

- It was in the military's own interest to record information on explosive ordnance (to know the precision of the weapons, for the safety of its own personnel, for safety in the post-conflict phase, and to facilitate the transition phase).

- It was important to comply with IHL obligations to gain support from civil society for French military action.

- The recording of data became easier as technology advanced; recording information on the use of smaller weapons was challenging but the problem was likely to be resolved in the near future.

The second challenge in implementation was the need for a pragmatic approach. Lieutenant Colonel Madiot explained that no State could expect its soldiers to record detailed information under enemy fire. Therefore, the decision had been taken not to record the use of explosive ordnance by infantry units. Thresholds of recording for all services were set. Whenever possible and feasible, the French armed forces were using automatic recording systems (e.g. for artillery weapons systems). Whenever automatic recording was not available, the French military used manual procedures. If no recording of data was possible, the military were instructed to note down at least the area where the fighting had taken place.

The third challenge in implementation was the actual retention of data and its centralization at the highest level (Joint Staff), to ensure that it was properly stored and available when needed. It was decided that the military authority (Joint Staff) should be in charge of releasing the relevant data when requested.

Lieutenant Colonel Madiot gave examples of two particular weapons: air-to-air and ground-to-air missiles, which, if they missed their targets, were very difficult to track to their points-of-impact and which were therefore equipped with self-destruction devices. As for future weapons systems, Lieutenant Colonel Madiot suggested States should consider making it mandatory to equip every new weapon with an automatic recording system.

As far as transmission was concerned, the French armed forces would transmit ERW information on a case-by-case and bilateral basis. So far, data had been shared only after a political decision to do so.

This approach to implementation had turned out to be productive: the Protocol had been accepted by the French armed forces. The perception of Article 4 obligations had changed. They were no longer regarded as a constraint but as a mechanism that helped to improve military action. During its recent campaign in Libya, the French army had successfully recorded, retained and transmitted information on explosive ordnance as per Article 4 requirements.

Presentation by Lieutenant Colonel Peter Sonnex, Conventional Weapons Policy and IHL, UK Ministry of Defence

Lieutenant Colonel Sonnex delivered a presentation on the UK's position on implementing the provisions of Article 4. He stated that the UK military also regarded Protocol V as a constraint and that the key element for the successful implementation of Article 4 was political will. In the UK, the Ministry of Defence had issued a policy on the recording and transmission of information on explosive ordnance, which was later converted into military doctrine by the Joint Forces Command. The UK policy in this regard did not only have a basis in law; it also included strategic, political, and security considerations and was therefore more restrictive than the actual legal requirements. The policy was contained in the Joint Service Manual on the Law of Armed Conflict and in the Targeting Manual, which makes references to the Protocol V requirements and completely corresponds to the relevant provisions in the Protocol. The UK Defence Academy also delivered command and staff training, including for other countries' nationals. Therefore, the policy informed the doctrine, and the doctrine informed the training for targeteers. The policy had the status of an order of the Defence Council and had the authority of the Secretary of State for Defence. Compliance with it was mandatory.

Discussion

The experts discussed the French policy of excluding weapons, including mortars under 81 mm, from the provisions of Article 4 infantry. In the absence of available automatic recording technology, the French military considered it difficult to record the use of these weapons and required only general coordinates of the area where the fighting had taken place. According to Lieutenant Colonel Madiot, France's policy was consistent with the Article 4 obligation to record information "to the extent possible" and this interpretation was also open to States not yet party to the Protocol. One clearance expert confirmed that many States considering accession to the Protocol indeed had concerns about the feasibility of recording information on small weapons. Other experts, although agreeing that Article 4 did not contain an obligation to record the use of every single item of explosive ordnance to the degree of specificity in the Technical Annex, nonetheless expressed concern about a policy that excluded all infantry weapons from the recording requirement. Such a policy might result in the recording of the use or abandonment of 120 mm mortar bombs but not of 81 mm mortar bombs. Of course, States were not required to record the precise location of all explosive ordnance; but they had at least to record such information as the number of rounds, general location, failure rates, and type of munitions. In the view of most of the experts, simply excluding all infantry weapons from Article 4's provisions was not compatible with its

obligations.

As for transmission, one government expert noted in relation to Libya that High Contracting Parties were obliged to share information with the party "in control of the affected area," which did not have to be party to the Protocol; it could be either a State that was not a State Party (e.g. Libya) or a peacekeeping force.

6.2 Military education, training and exercises

Presentation by Colonel Jim Burke, Director of Engineering, Irish Defence Forces

Colonel Burke delivered a presentation on the role of military education, training and exercises in the implementation of Article 4. He began by reminding the participants that Article 11 of the Protocol established a direct obligation to train armed forces in Protocol V's provisions. Ireland had incorporated its international obligations under Protocol V in its domestic legal system. Ireland used the PRIDE formula to encourage compliance by the military with IHL obligations: P (**P**opular support for the force), R (compliance contributes to **R**estoration of peace), I (it encourages **I**nternal discipline), D (it is dictated by **D**omestic legislation), E (it encourages **E**nemy reciprocity). Colonel Burke explained that the recording system required knowledge at all levels of command because explosive ordnance was used by all levels, down to section level and below in some cases. Therefore, all general career courses, infantry weapons courses, artillery and cavalry courses, engineer and ordnance career courses included training in Protocol V. Training directives applied to courses for naval and air gunfire practitioners and the air corps as well. The depth of detail in the training for engineering personnel was greater, but the Irish approach was that all military personnel, and especially the users of explosive ordnance, should have knowledge of the system. For the major career courses, responsibility for the training lay with the engineering corps; for other courses, with the legal service. In order to inculcate the culture of recording, Ireland had taken the decision to apply the recording system to all use of explosive ordnance, not just in armed conflicts, so that soldiers were accustomed to the procedures and to using the template. The Defence Forces were also required to incorporate the concept in all exercises, even when the use of explosive ordnance was simulated.

The training was focused primarily on recording and retaining information and did not usually include the transmission element. However, sometimes the Irish Defence Forces conducted joint training programmes with other States; and it was there that the opportunity to train personnel in the transmission function. Colonel Burke explained that, generally, release had a political aspect and was separate from recording, which was done completely within the

military. He mentioned that although Ireland was not a NATO member, it applied most NATO standards of recording for interoperability, in case of combined operations.

Colonel Burke shared the lessons identified by Ireland with regard to military education and training:

- The decision to adopt policy was not sufficient. Constant championing was required to implement and maintain compliance.
- There was a need to separate Article 4 training from general IHL education requirements because Protocol V had practical implications at all levels.
- Effort must be sustained over a long period to achieve a change in culture.

Discussion

The experts shared their respective States' practices concerning the training of military personnel from other countries. Ireland had trained students from the US, Germany, Eastern Europe, Pakistan, North Africa, etc. They received the same instruction as the Irish students. Australia had similar programmes for students from South Pacific countries and Indonesia. Lieutenant Colonel Bolton explained that the US did not have a specific training course in Article 4 of Protocol V. Only the engineering and EOD personnel were given specific instruction on Protocol V obligations; everyone else received general IHL training. Therefore, for other categories of US military personnel, training in Protocol V was more implicit.

One government expert pointed out that since Article 4 applied only to present and future armed conflicts, any intensive training in the recording of ERW information could be perceived as an indication of that State's intention to engage in armed conflict, which could affect its relationships with neighbouring countries. He stated that it was arguable whether such training was needed for smaller countries with defensive doctrines, since it could turn out to be counterproductive for their foreign policy. Other experts were unaware of such problems in States that actively trained their military personnel and suggested that in sensitive cases, regional training could be carried out jointly within the region. It was also pointed out that High Contracting Parties largely accepted that their obligations under Protocol V included the responsibility to be prepared for carrying out the provisions of Article 4 if needed, and that training played an essential role in this regard.

7. SUMMARY OF CHALLENGES AND NEXT STEPS

Reports by the rapporteurs

At the end of the meeting, the rapporteur on recording and retaining ERW information, Lieutenant Colonel Jolly, identified the following key points of the discussion:

- Requirements for recording and retaining were quite well defined in Part 1 of the Technical Annex; States were mostly comfortable with them as they were.

- Requirements for the military to do battle-damage assessment were in line with the Protocol V requirements on the humanitarian side. There was a good match between military needs and humanitarian needs and therefore recording and retaining information on explosive ordnance should not be too difficult.

- The biggest challenge for the military was the institutionalization of the requirement to record and retain information. This had to begin at the policy level, with sufficient political will behind it. There was a need to align doctrine, training and operations, with doctrine driving training and training driving operations.

- The Generic Electronic Template (GET) might be a good start for States with no recording systems in place, but otherwise the template was outdated.

- The military aspects of recording requirements were already quite clear. The discussion should be centred more on how to transfer the information requested as opposed to what format it should be in.

The rapporteur on transmission of information, Lieutenant Colonel Bolton, identified the following key points of the discussion:

- Effective transmission was impossible without effective recording and storage of information.

- Although many States were already carrying out Article 4 activities as a matter of practice, each State should work towards an explicit responsibility of compliance, while institutionalizing the transmission of information within its service components.

- Past experience showed good information flow at lower levels with short-term "cross talk" amongst humanitarian and governmental agencies; however, politics still hampered strategic-level correspondence.

- Another issue was timeliness of transmission, which could be affected by the confidentially of certain types of data. The related problem was "render safe" (which could in some cases involve sharing sensitive information) as opposed to "destroy *in situ*" procedures.

- There were different considerations for transmission of information after the cessation of active hostilities as opposed to the transmission of information during hostilities.

- Alliance operations complicated the rapid and timely dissemination of ERW information. Nevertheless, experience demonstrated the ability of States Parties involved in conflicts to collate and release appropriate data when needed.

The rapporteur on training and education, Colonel Burke, identified the following key points of the discussion:

- The requirement to train military personnel, in IHL and particularly in Protocol V provisions, was widely accepted.

- It was also generally accepted that personnel involved in clearance activities required more specific instruction in Protocol V obligations.

- As far as other personnel were concerned, some believed that general instruction in IHL was enough and that Protocol V issues could be addressed within this general training; others trained their military personnel in Protocol V obligations separately and in a specific manner.

ANNEX 1: RECOMMENDED BEST PRACTICES FOR IMPLEMENTATION

Identifying and addressing challenges to implementation of Article 4 of Protocol V to the CCW

On 8 and 9 November 2012, the ICRC hosted a meeting of experts from governments and international and non-governmental organizations on the implementation of Protocol V, focusing on Article 4 on the recording, retention and transmission of information on explosive remnants of war (ERW). Based on the discussions during the meeting, the ICRC recommends the following best practices for implementation of Article 4.

1. High Contracting Parties should record and retain ERW information on the full range of explosive ordnance used by their armed forces, including all calibres of exploding ammunition, grenades and other infantry weapons. However, it is recognized that the type and detail of the information recorded may vary depending on the type of explosive ordnance and the situation in which it is being used. Under Article 4, States must record and retain information "to the maximum extent possible and as far as practicable."
2. The provisions of Article 4 should be formalized in appropriate military instructions and operating procedures. In developing such instructions and procedures, States should have regard for Part 1 of the Technical Annex.
3. The provisions of Article 4 should be incorporated in military doctrine and manuals, and consolidated and maintained through military education, training and field exercises. The incorporation and reinforcement of the recording, retention and release of information in accordance with Article 4 in peacetime training and exercises is an important measure to ensure that armed forces fulfil their Article 4 obligations in situations of armed conflict and in peacekeeping activities.
4. States' armed forces should seek to establish and maintain an institutional "culture of recording" that includes the recording of information in accordance with Article 4.
5. The implementation of Article 4 should involve all military services and branches that use explosive ordnance. This would normally include, at a minimum, the involvement of engineer, ordnance and artillery corps, armoured forces, infantry, special forces, air combat forces and naval combat forces.
6. When transmitting ERW information to clearance organizations, States should aim to quickly release time-critical, safety-related information, such as information about delayed fusing, self-destruction mechanisms and anti-handling devices.
7. Interested States and clearance organizations should establish a forum for the discussion and development of an appropriate open information architecture, geographic information system (GIS), electronic file format and associated metadata standards for the rapid and effective transmission of ERW information from armed forces to clearance organizations.

ANNEX 2: LIST OF PARTICIPANTS

Identifying and addressing challenges to implementation of Article 4 of Protocol V to the CCW

Expert meeting

8-9 November 2012
Geneva, Switzerland

Governmental Experts

Argentina	Col. Oscar Osvaldo Giacomelli Warhead Department Manager Defence Scientific and Technical Research Institute
Australia	Lt-Col. Craig Jolly Staff Officer Grade One - Assessments, Australian Defence Force Counter Improvised Explosive Device Task Force Australian Department of Defence
Belarus	Mr Ivan Grinevich Counsellor Mission of Belarus
Canada	Maj. Kevin Billinghurst SJS-ACV 2-5 Canadian Forces / Strategic Joint Staff - Arms Control Verification Directorate
Czech Republic	Mrs Markéta Homolková Permanent Mission of the Czech Republic to the UN Office in Geneva
France	Lt-Col. Olivier Madiot Joint Staff - Desk Officer CCW French Ministry of Defence
Germany	Col. Gerfried Elias Military Adviser Permanent Representation of the Federal Republic of Germany to the Conference on Disarmament
India	Mr Vipul Counsellor (Disarmament) Permanent Mission of India to the Conference on Disarmament
Ireland	Col. Jim Burke Director of Engineering Irish Defence Forces

Lithuania	Mr Artūras Gailiūnas Minister Counsellor Permanent Mission of the Republic of Lithuania to the UN Office and other International Organizations in Geneva
Pakistan	Mr Irfan Bokhari Third Secretary Permanent Mission of Pakistan
South Africa	Mr Michiel Combrink Disarmament Counsellor South African Mission Ms Bronwen Levy First Secretary South African Mission
Sweden	Mr Per-Henrik Åberg Commanding Officer, EOD IS Swedish Armed Forces Lt-Col. Lars Olsson Staff Officer Swedish Armed Forces lars.o.olsson@mil.se
United Kingdom	Lt-Col. Peter Sonnex Weapons & IHL Policy UK Ministry of Defence
United States of America	Lt-Col. Charles Bolton Conventional Arms Control Branch Chief US Department of Defense Joint Staff Plans and Policy Directorate Ms Katherine Baker Foreign Affairs Officer US Department of State, Bureau of Political-military Affairs

Non-governmental experts

GICHD	Mr Erik Tollefsen Adviser, Stockpile destruction, EOD and Technology GICHD Mr Daniel Eriksson Head, Information Management GICHD Mr Halil Radogoshi Adviser, Information Management GICHD

UN Office for Disarmament Affairs	Mr Peter Kolarov Political Affairs Officer UN Office for Disarmament Affairs, Geneva branch
CCW Implementation Support Unit	Ms Hine-Wai Loose Political Affairs Officer CCW Implementation Support Unit
UN Mine Action Service	Mr David McIvor Chief of Operations (Libya) UN Mine Action Service Mr Gustavo Laurie Acting Senior Liaison Officer Office of Rule of Law and Security Institutions Department of Peacekeeping Operations
ICRC	Ms Kathleen Lawand Head of Unit Arms Unit, Legal Division Mr Louis Maresca Legal Adviser Arms Unit, Legal Division Mr Raymond Smith Military and Technical Adviser Arms Unit, Legal Division Mr Ben Lark Head of Sector Weapon Contamination Unit, Assistance Division Ms Anna Leshchinskaya Legal Attachée Arms Unit, Legal Division

ANNEX 3 PROGRAMME

Identifying and addressing challenges to implementation of Article 4 of Protocol V to the CCW

Expert meeting

8-9 November 2012
Geneva, Switzerland

Thursday, 8 November 2012

9:30 – 9:50	**Opening remarks** ▪ Ms Kathleen Lawand, Head, Arms Unit, Legal Division, ICRC
Session 1	**Introduction** (Chair: Ms Kathleen Lawand)
9:50 – 10:30	**Overview of requirements of Article 4 and the Technical Annex** ▪ Mr Ray Smith, Military and Technical Adviser, Arms Unit, Legal Division, ICRC **Analysis of national reporting on Article 4** ▪ Ms Hine-Wai Loose, Political Affairs Office, CCW Implementation Support Unit
10:30 – 11:00	**Discussion**
11:00 – 11:30	**Coffee break**
11:30 – 12:10	**Information requirements for ERW clearance** ▪ Mr David McIvor, Chief of Operations (Libya), UN Mine Action Service ▪ Mr Daniel Eriksson, Head, Information Management, GICHD
12:10 – 12:40	**Discussion**
12:40 – 13:50	**Lunch**
Session 2	**Recording and retaining information** (Chair: Ms Katherine Baker)
13:50 – 14:50	**Recording and retaining information: Panel discussion** ▪ Col. Jim Burke, Director of Engineering, Irish Defence Forces ▪ Lt-Col. Craig Jolly, Staff Officer Grade One – Assessments Australian Defence Force Counter Improvised Explosive Device Task Force, Australian Department of Defence
14:50 – 15:20	**Discussion**
15:20 – 15:50	**Coffee break**

Session 3 **Tools** (Chair: Ms Katherine Baker)

15:50 – 16:10 **EODIS and the requirements of Article 4 and the Technical Annex**
- Maj. Per-Henrik Åberg, Commanding Officer, EOD IS, Swedish Armed Forces

16:10 – 16:30 **Article 4 Generic Electronic Template: Analysis and assessment**
- Ms Hine-Wai Loose, Political Affairs Office, CCW Implementation Support Unit

16:30 – 17:00 **Discussion**

Friday, 9 November 2012

Session 4 **Transmission of information** (Chair: Mr Gustavo Laurie)

9:00 – 10:00 **Transmission of information *(*Operation ELLAMY*)***
- Lt-Col. Peter Sonnex, Weapons and IHL Policy, UK Ministry of Defence

Transmission of information: US perspective
- Lt-Col. Charles D. Bolton, Conventional Arms Control Branch Chief, US Department of Defense Joint Staff Plans and Policy Directorate

10:00 – 10:30 **Discussion**

10:30 – 11:00 **Coffee break**

Session 5 **Implementation** (Chair: Mr Gustavo Laurie)

11:00 – 11:50 **Implementation overview: Panel**
- Lt-Col. Olivier Madiot, Arms Control Division, French Armed Forces
- Lt-Col. Peter Sonnex, Weapons and IHL Policy, UK Ministry of Defence

11:50 – 12:10 **Incorporating the requirements of Article 4 in military education, training & exercises**
- Col. Jim Burke, Director of Engineering, Irish Defence Forces

12:10 – 12:40 **Discussion**

12:40 – 14:00 **Lunch**

Session 6 **Summary of challenges and next steps** (Chair: Mr Lou Maresca)

14:00 – 14:30 **Rapporteurs**
- Recording & retaining (Lt-Col. Jolly)
- Transmission (Lt-Col. Bolton)
- Training, education & exercises (Col. Burke)

14:30 – 15:00 **Conclusion**

ANNEX 4: PROTOCOL ON EXPLOSIVE REMNANTS OF WAR (PROTOCOL V)

The High Contracting Parties,

Recognising the serious post-conflict humanitarian problems caused by explosive remnants of war,

Conscious of the need to conclude a Protocol on post-conflict remedial measures of a generic nature in order to minimise the risks and effects of explosive remnants of war,

And willing to address generic preventive measures, through voluntary best practices specified in a Technical Annex for improving the reliability of munitions, and therefore minimising the occurrence of explosive remnants of war,

Have agreed as follows:

Article 1
General provision and scope of application

1. In conformity with the Charter of the United Nations and of the rules of the international law of armed conflict applicable to them, High Contracting Parties agree to comply with the obligations specified in this Protocol, both individually and in co-operation with other High Contracting Parties, to minimise the risks and effects of explosive remnants of war in post-conflict situations.

2. This Protocol shall apply to explosive remnants of war on the land territory including internal waters of High Contracting Parties.

3. This Protocol shall apply to situations resulting from conflicts referred to in Article 1, paragraphs 1 to 6, of the Convention, as amended on 21 December 2001.

4. Articles 3, 4, 5 and 8 of this Protocol apply to explosive remnants of war other than existing explosive remnants of war as defined in Article 2, paragraph 5 of this Protocol.

Article 2
Definitions

For the purpose of this Protocol,

1. *Explosive ordnance* means conventional munitions containing explosives, with the exception of mines, booby traps and other devices as defined in Protocol II of this Convention as amended on 3 May 1996.

2. *Unexploded ordnance* means explosive ordnance that has been primed, fused, armed, or otherwise prepared for use and used in an armed conflict. It may have been fired, dropped, launched or projected and should have exploded but failed to do so.

3. *Abandoned explosive ordnance* means explosive ordnance that has not been used during an armed conflict, that has been left behind or dumped by a party to an armed conflict, and which is no longer under control of the party that left it behind or dumped it. Abandoned explosive ordnance may or may not have been primed, fused, armed or otherwise prepared for use.

4. *Explosive remnants of war* means unexploded ordnance and abandoned explosive ordnance.

5. *Existing explosive remnants of war* means unexploded ordnance and abandoned explosive ordnance that existed prior to the entry into force of this Protocol for the High Contracting Party on whose territory it exists.

Article 3
Clearance, removal or destruction of explosive remnants of war

1. Each High Contracting Party and party to an armed conflict shall bear the responsibilities set out in this Article with respect to all explosive remnants of war in territory under its control. In cases where a user of explosive ordnance which has become explosive remnants of war, does not exercise control of the territory, the

user shall, after the cessation of active hostilities, provide where feasible, inter alia technical, financial, material or human resources assistance, bilaterally or through a mutually agreed third party, including inter alia through the United Nations system or other relevant organisations, to facilitate the marking and clearance, removal or destruction of such explosive remnants of war.

2. After the cessation of active hostilities and as soon as feasible, each High Contracting Party and party to an armed conflict shall mark and clear, remove or destroy explosive remnants of war in affected territories under its control. Areas affected by explosive remnants of war which are assessed pursuant to paragraph 3 of this Article as posing a serious humanitarian risk shall be accorded priority status for clearance, removal or destruction.

3. After the cessation of active hostilities and as soon as feasible, each High Contracting Party and party to an armed conflict shall take the following measures in affected territories under its control, to reduce the risks posed by explosive remnants of war:

(a) survey and assess the threat posed by explosive remnants of war;
(b) assess and prioritise needs and practicability in terms of marking and clearance, removal or destruction;
(c) mark and clear, remove or destroy explosive remnants of war;
(d) take steps to mobilise resources to carry out these activities.

4. In conducting the above activities High Contracting Parties and parties to an armed conflict shall take into account international standards, including the International Mine Action Standards.

5. High Contracting Parties shall co-operate, where appropriate, both among themselves and with other states, relevant regional and international organisations and non-governmental organisations on the provision of inter alia technical, financial, material and human resources assistance including, in appropriate circumstances, the undertaking of joint operations necessary to fulfil the provisions of this Article.

Article 4
Recording, retaining and transmission of information

1. High Contracting Parties and parties to an armed conflict shall to the maximum extent possible and as far as practicable record and retain information on the use of explosive ordnance or abandonment of explosive ordnance, to facilitate the rapid marking and clearance, removal or destruction of explosive remnants of war, risk education and the provision of relevant information to the party in control of the territory and to civilian populations in that territory.

2. High Contracting Parties and parties to an armed conflict which have used or abandoned explosive ordnance which may have become explosive remnants of war shall, without delay after the cessation of active hostilities and as far as practicable, subject to these parties' legitimate security interests, make available such information to the party or parties in control of the affected area, bilaterally or through a mutually agreed third party including inter alia the United Nations or, upon request, to other relevant organisations which the party providing the information is satisfied are or will be undertaking risk education and the marking and clearance, removal or destruction of explosive remnants of war in the affected area.

3. In recording, retaining and transmitting such information, the High Contracting Parties should have regard to Part 1 of the Technical Annex.

Article 5
Other precautions for the protection of the civilian population, individual civilians and civilian objects from the risks and effects of explosive remnants of war

1. High Contracting Parties and parties to an armed conflict shall take all feasible precautions in the territory under their control affected by explosive remnants of war to protect the civilian population, individual civilians and civilian objects from the risks and effects of explosive remnants of war. Feasible precautions are those precautions which are practicable or practicably possible, taking into account all circumstances ruling at the time, including humanitarian and military considerations. These precautions may include warnings, risk education to the civilian population, marking, fencing and monitoring of territory affected by explosive remnants of war, as set out in Part 2 of the Technical Annex.

Article 6
Provisions for the protection of humanitarian missions and organisations from the effects of explosive remnants of war

1. Each High Contracting Party and party to an armed conflict shall:

(a) Protect, as far as feasible, from the effects of explosive remnants of war, humanitarian missions and organisations that are or will be operating in the area under the control of the High Contracting Party or party to an armed conflict and with that party's consent.

(b) Upon request by such a humanitarian mission or organisation, provide, as far as feasible, information on the location of all explosive remnants of war that it is aware of in territory where the requesting humanitarian mission or organisation will operate or is operating.

2. The provisions of this Article are without prejudice to existing International Humanitarian Law or other international instruments as applicable or decisions by the Security Council of the United Nations which provide for a higher level of protection.

Article 7
Assistance with respect to existing explosive remnants of war

1. Each High Contracting Party has the right to seek and receive assistance, where appropriate, from other High Contracting Parties, from states non-party and relevant international organisations and institutions in dealing with the problems posed by existing explosive remnants of war.

2. Each High Contracting Party in a position to do so shall provide assistance in dealing with the problems posed by existing explosive remnants of war, as necessary and feasible. In so doing, High Contracting Parties shall also take into account the humanitarian objectives of this Protocol, as well as international standards including the International Mine Action Standards.

Article 8
Co-operation and assistance

1. Each High Contracting Party in a position to do so shall provide assistance for the marking and clearance, removal or destruction of explosive remnants of war, and for risk education to civilian populations and related activities inter alia through the United Nations system, other relevant international, regional or national organisations or institutions, the International Committee of the Red Cross, national Red Cross and Red Crescent societies and their International Federation, non-governmental organisations, or on a bilateral basis.

2. Each High Contracting Party in a position to do so shall provide assistance for the care and rehabilitation and social and economic reintegration of victims of explosive remnants of war. Such assistance may be provided inter alia through the United Nations system, relevant international, regional or national organisations or institutions, the International Committee of the Red Cross, national Red Cross and Red Crescent societies and their International Federation, non-governmental organisations, or on a bilateral basis.

3. Each High Contracting Party in a position to do so shall contribute to trust funds within the United Nations system, as well as other relevant trust funds, to facilitate the provision of assistance under this Protocol.

4. Each High Contracting Party shall have the right to participate in the fullest possible exchange of equipment, material and scientific and technological information other than weapons related technology, necessary for the implementation of this Protocol. High Contracting Parties undertake to facilitate such exchanges in accordance with national legislation and shall not impose undue restrictions on the provision of clearance equipment and related technological information for humanitarian purposes.

5. Each High Contracting Party undertakes to provide information to the relevant databases on mine action established within the United Nations system, especially information concerning various means and technologies of clearance of explosive remnants of war, lists of experts, expert agencies or national points of contact on clearance of explosive remnants of war and, on a voluntary basis, technical information on relevant types of explosive ordnance.

6. High Contracting Parties may submit requests for assistance substantiated by relevant information to the United Nations, to other appropriate bodies or to other states. These requests may be submitted to the Secretary-General of the United Nations, who shall transmit them to all High Contracting Parties and to relevant international

organisations and non-governmental organisations.

7. In the case of requests to the United Nations, the Secretary-General of the United Nations, within the resources available to the Secretary-General of the United Nations, may take appropriate steps to assess the situation and in co-operation with the requesting High Contracting Party and other High Contracting Parties with responsibility as set out in Article 3 above, recommend the appropriate provision of assistance. The Secretary-General may also report to High Contracting Parties on any such assessment as well as on the type and scope of assistance required, including possible contributions from the trust funds established within the United Nations system.

Article 9
Generic preventive measures

1. Bearing in mind the different situations and capacities, each High Contracting Party is encouraged to take generic preventive measures aimed at minimising the occurrence of explosive remnants of war, including, but not limited to, those referred to in part 3 of the Technical Annex.

2. Each High Contracting Party may, on a voluntary basis, exchange information related to efforts to promote and establish best practices in respect of paragraph 1 of this Article.

Article 10
Consultations of High Contracting Parties

1. The High Contracting Parties undertake to consult and co-operate with each other on all issues related to the operation of this Protocol. For this purpose, a Conference of High Contracting Parties shall be held as agreed to by a majority, but no less than eighteen High Contracting Parties.

2. The work of the conferences of High Contracting Parties shall include:

(a) review of the status and operation of this Protocol;
(b) consideration of matters pertaining to national implementation of this Protocol, including national reporting or updating on an annual basis.
(c) preparation for review conferences.

3. The costs of the Conference of High Contracting Parties shall be borne by the High Contracting Parties and States not parties participating in the Conference, in accordance with the United Nations scale of assessment adjusted appropriately.

Article 11
Compliance

1. Each High Contracting Party shall require that its armed forces and relevant agencies or departments issue appropriate instructions and operating procedures and that its personnel receive training consistent with the relevant provisions of this Protocol.

2. The High Contracting Parties undertake to consult each other and to co-operate with each other bilaterally, through the Secretary-General of the United Nations or through other appropriate international procedures, to resolve any problems that may arise with regard to the interpretation and application of the provisions of this Protocol.

Technical Annex

This Technical Annex contains suggested best practice for achieving the objectives contained in Articles 4, 5 and 9 of this Protocol. This Technical Annex will be implemented by High Contracting Parties on a voluntary basis.

1. Recording, storage and release of information for Unexploded Ordnance (UXO) and Abandoned Explosive Ordnance (AXO)

(a) Recording of information: Regarding explosive ordnance which may have become UXO a State should endeavour to record the following information as accurately as possible:

(i) the location of areas targeted using explosive ordnance;

(ii) the approximate number of explosive ordnance used in the areas under (i);
(iii) the type and nature of explosive ordnance used in areas under (i);
(iv) the general location of known and probable UXO;

Where a State has been obliged to abandon explosive ordnance in the course of operations, it should endeavour to leave AXO in a safe and secure manner and record information on this ordnance as follows:

(v) the location of AXO;
(vi) the approximate amount of AXO at each specific site;
(vii) the types of AXO at each specific site.

(b) Storage of information: Where a State has recorded information in accordance with paragraph (a), it should be stored in such a manner as to allow for its retrieval and subsequent release in accordance with paragraph (c).

(c) Release of information: Information recorded and stored by a State in accordance with paragraphs (a) and (b) should, taking into account the security interests and other obligations of the State providing the information, be released in accordance with the following provisions:

(i) Content:
On UXO the released information should contain details on:
(1) the general location of known and probable UXO;
(2) the types and approximate number of explosive ordnance used in the targeted areas;
(3) the method of identifying the explosive ordnance including colour, size and shape and other relevant markings;
(4) the method for safe disposal of the explosive ordnance.

On AXO the released information should contain details on:
(5) the location of the AXO;
(6) the approximate number of AXO at each specific site;
(7) the types of AXO at each specific site;
(8) the method of identifying the AXO, including colour, size and shape;
(9) information on type and methods of packing for AXO;
(10) state of readiness;
(11) the location and nature of any booby traps known to be present in the area of AXO.

(ii) Recipient: The information should be released to the party or parties in control of the affected territory and to those persons or institutions that the releasing State is satisfied are, or will be, involved in UXO or AXO clearance in the affected area, in the education of the civilian population on the risks of UXO or AXO.

(iii) Mechanism: A State should, where feasible, make use of those mechanisms established internationally or locally for the release of information, such as through UNMAS, IMSMA, and other expert agencies, as considered appropriate by the releasing State.

(iv) Timing: The information should be released as soon as possible, taking into account such matters as any ongoing military and humanitarian operations in the affected areas, the availability and reliability of information and relevant security issues.

2. Warnings, risk education, marking, fencing and monitoring

Key terms

(a) Warnings are the punctual provision of cautionary information to the civilian population, intended to minimise risks caused by explosive remnants of war in affected territories.

(b) Risk education to the civilian population should consist of risk education programmes to facilitate information exchange between affected communities, government authorities and humanitarian organisations so that affected communities are informed about the threat from explosive remnants of war. Risk education programmes are usually a long term activity.

Best practice elements of warnings and risk education

(c) All programmes of warnings and risk education should, where possible, take into account prevailing national and international standards, including the International Mine Action Standards.

(d) Warnings and risk education should be provided to the affected civilian population which comprises

civilians living in or around areas containing explosive remnants of war and civilians who transit such areas.

(e) Warnings should be given, as soon as possible, depending on the context and the information available. A risk education programme should replace a warnings programme as soon as possible. Warnings and risk education always should be provided to the affected communities at the earliest possible time.

(f) Parties to a conflict should employ third parties such as international organisations and non-governmental organisations when they do not have the resources and skills to deliver efficient risk education.

(g) Parties to a conflict should, if possible, provide additional resources for warnings and risk education. Such items might include: provision of logistical support, production of risk education materials, financial support and general cartographic information.

Marking, fencing, and monitoring of an explosive remnants of war affected area

(h) When possible, at any time during the course of a conflict and thereafter, where explosive remnants of war exist the parties to a conflict should, at the earliest possible time and to the maximum extent possible, ensure that areas containing explosive remnants of war are marked, fenced and monitored so as to ensure the effective exclusion of civilians, in accordance with the following provisions.

(i) Warning signs based on methods of marking recognised by the affected community should be utilised in the marking of suspected hazardous areas. Signs and other hazardous area boundary markers should as far as possible be visible, legible, durable and resistant to environmental effects and should clearly identify which side of the marked boundary is considered to be within the explosive remnants of war affected area and which side is considered to be safe.

(j) An appropriate structure should be put in place with responsibility for the monitoring and maintenance of permanent and temporary marking systems, integrated with national and local risk education programmes.

3. Generic preventive measures

States producing or procuring explosive ordnance should to the extent possible and as appropriate endeavour to ensure that the following measures are implemented and respected during the life-cycle of explosive ordnance.

(a) Munitions manufacturing management

(i) Production processes should be designed to achieve the greatest reliability of munitions.

(ii) Production processes should be subject to certified quality control measures.

(iii) During the production of explosive ordnance, certified quality assurance standards that are internationally recognised should be applied.

(iv) Acceptance testing should be conducted through live-fire testing over a range of conditions or through other validated procedures.

(v) High reliability standards should be required in the course of explosive ordnance transactions and transfers.

(b) Munitions management

In order to ensure the best possible long-term reliability of explosive ordnance, States are encouraged to apply best practice norms and operating procedures with respect to its storage, transport, field storage, and handling in accordance with the following guidance.

(i) Explosive ordnance, where necessary, should be stored in secure facilities or appropriate containers that protect the explosive ordnance and its components in a controlled atmosphere, if necessary.

(ii) A State should transport explosive ordnance to and from production facilities, storage facilities and the field in a manner that minimises damage to the explosive ordnance.

(iii) Appropriate containers and controlled environments, where necessary, should be used by a State when stockpiling and transporting explosive ordnance.

(iv) The risk of explosions in stockpiles should be minimised by the use of appropriate stockpile arrangements.

(v) States should apply appropriate explosive ordnance logging, tracking and testing procedures, which should include information on the date of manufacture of each number, lot or batch of explosive ordnance, and information on where the explosive ordnance has been, under what conditions it has been stored, and to what environmental factors it has been exposed.

(vi) Periodically, stockpiled explosive ordnance should undergo, where appropriate, live-firing testing to ensure that munitions function as desired.

(vii) Sub-assemblies of stockpiled explosive ordnance should, where appropriate, undergo laboratory testing to ensure that munitions function as desired.

(viii) Where necessary, appropriate action, including adjustment to the expected shelf-life of ordnance, should be taken as a result of information acquired by logging, tracking and testing procedures, in order to maintain the reliability of stockpiled explosive ordnance.

(c) Training

The proper training of all personnel involved in the handling, transporting and use of explosive ordnance is an important factor in seeking to ensure its reliable operation as intended. States should therefore adopt and maintain suitable training programmes to ensure that personnel are properly trained with regard to the munitions with which they will be required to deal.

(d) Transfer

A State planning to transfer explosive ordnance to another State that did not previously possess that type of explosive ordnance should endeavour to ensure that the receiving State has the capability to store, maintain and use that explosive ordnance correctly.

(e) Future production

A State should examine ways and means of improving the reliability of explosive ordnance that it intends to produce or procure, with a view to achieving the highest possible reliability.

MISSION

The International Committee of the Red Cross (ICRC) is an impartial, neutral and independent organization whose exclusively humanitarian mission is to protect the lives and dignity of victims of armed conflict and other situations of violence and to provide them with assistance. The ICRC also endeavours to prevent suffering by promoting and strengthening humanitarian law and universal humanitarian principles. Established in 1863, the ICRC is at the origin of the Geneva Conventions and the International Red Cross and Red Crescent Movement. It directs and coordinates the international activities conducted by the Movement in armed conflicts and other situations of violence.

ICRC

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