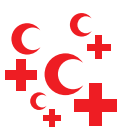


INCREASING RESILIENCE TO WEAPON CONTAMINATION THROUGH BEHAVIOUR CHANGE

GUIDELINES TO PROMOTE RISK AWARENESS AND SAFER BEHAVIOUR
WITH REGARD TO CONVENTIONAL WEAPONS AND CHEMICAL, BIOLOGICAL,
RADIOLOGICAL AND NUCLEAR HAZARDS, FOR USE BY THE COMPONENTS
OF THE INTERNATIONAL RED CROSS AND RED CRESCENT MOVEMENT



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FOREWORD AND ACKNOWLEDGEMENTS

These guidelines are designed to be used by the ICRC, the International Federation of Red Cross and Red Crescent Societies (IFRC) and National Red Cross and Red Crescent Societies (National Societies). They are relevant in a wide range of situations worldwide, in periods of armed conflict as well as times of peace, and in any country that is affected by conventional weapons and/or chemical, biological, radiological and nuclear (CBRN) hazards. While they are written in general terms so as to apply to all situations involving weapon contamination, they are nevertheless based firmly on the principle that all interventions should be tailored to the specific context following a thorough assessment.

These guidelines are based on a risk-management approach. They aim to help the components of the Movement to fulfil their obligations under the Movement Strategy on Landmines, Cluster Munitions and other Explosive Remnants of War¹ while at the same time fostering the development of an intra-Movement approach to dealing with issues related to weapon contamination.² They were written in accordance with existing frameworks from the Red Cross and Red Crescent Movement, including the ICRC's response to weapon contamination,³ and the International Mine Action Standards. These guidelines should not be implemented without taking into account the specific national context so that the guidelines complement or supplement – rather than conflict with – national legislation, standards and guidelines.

The guidelines were prepared for the ICRC by Belinda Goslin, Igor Ramazzotti and Maryam Walton. The ICRC also gratefully acknowledges the contribution of the Working Group on Weapon Contamination, which operates within the Disaster Management Advisory Group (DMAG) for the Middle East and North Africa;⁴ the Working Group consists of Ahmed Mizab (chair), Maged Alotaibi, Mutlaq Al Hadid and Omer Bodbos, along with the Norwegian Red Cross. Finally, the ICRC wishes to thank all ICRC colleagues, both in the WeC Unit and other units, who contributed to the discussion and helped develop these guidelines.

¹ Movement Strategy on Landmines, Cluster Munitions and other Explosive Remnants of War: Reducing the Effects of Weapons on Civilians, Resolution 6, Council of Delegates of the International Red Cross and Red Crescent Movement, Nairobi, Kenya, 23–25 November 2009.

² Ibid.

³ Internal document: *ICRC Weapon Contamination Response and Approach* (December 2017), produced by OP/Assist/WEC.

⁴ The Disaster Management Advisory Group for the Middle East and North Africa includes representatives of the following National Societies: Algerian Red Crescent, Bahrain Red Crescent Society, Egyptian Red Crescent Society, Red Crescent Society of the Islamic Republic of Iran, Iraqi Red Crescent Society, Jordan National Red Crescent Society, Kuwait Red Crescent Society, Lebanese Red Cross, Libyan Red Crescent, Moroccan Red Crescent, Palestine Red Crescent Society, Qatar Red Crescent Society, Saudi Arabian Red Crescent Authority, Syrian Arab Red Crescent, Tunisian Red Crescent, Red Crescent Authority for United Arab Emirates, and Yemen Red Crescent Society.

ACRONYMS AND ABBREVIATIONS

AAP	Accountability to affected populations
CBRN	Chemical, biological, radiological and nuclear
CP	Control point
DMAG	Disaster Management Advisory Group
EOD	Explosive ordnance disposal
ERW	Explosive remnants of war
HIRA	Hazard Identification Risk Assessment
ICRC	International Committee of the Red Cross
IED	Improvised explosive device
IFRC	International Federation of Red Cross and Red Crescent Societies
ISO	International Organization for Standardization
IMSMA	Information Management System for Mine Action
KAP	Knowledge, attitudes and practices
MACC	Mine Action Coordination Centre
MENA	Middle East and North Africa
MRE	Mine risk education
NGO	Non-governmental organization
OSCE	Organization for Security and Co-operation in Europe
OSV	Other situations of violence
PPE	Personal protective equipment
RASB	Risk awareness and safer behaviour
SALW	Small arms and light weapons
SCMS	Security and crisis management support
UN	United Nations



CHAPTER 1

INTRODUCTION

1.1 ABOUT THESE GUIDELINES

1.1.1 BACKGROUND

These guidelines were developed to meet an identified need to help the Red Cross and Red Crescent Movement to better manage the risks associated with weapon contamination. They provide guidance on conducting RASB interventions aimed at reducing the likelihood of casualties among staff, volunteers and the civilian population. They assist the components of the Movement in fulfilling their obligations under the Movement Strategy on Landmines and ERW.⁵

Some excellent work has been done in this area⁶ by the ICRC and National Societies since 1996, but a common set of Movement guidelines had never been prepared. There are several reasons for developing these guidelines now:

1. The ICRC and National Societies are interested in having a common Movement approach to mitigating the risks associated with weapon contamination in a wide variety of contexts.
2. Weapon-contamination measures taken in previous years focused mostly on landmines and ERW. The Movement strategy developed in 2009 broadened this focus to include other kinetic energy weapons used in conflict and other situations of violence. Since 2009, the ICRC has expanded its capacity to deal with CBRN hazards and has supported a number of interventions in these fields. Beyond its work in the context of armed conflict, the ICRC can bring its CBRN capacity and experience to bear in supporting the response to domestic accidents that fall within the disaster management mandate of some National Societies.
3. There is an effort within the Movement to adopt a more transversal approach to programming and to integrate Movement resources into mitigating the risk of weapon contamination (the focus on facilitating safer behaviour is highlighted in Chapter 4 of these guidelines).
4. A need has been identified for a more systematic and evidence-based approach to programming that is driven by the principles of risk management and that draws on a thorough assessment and analysis in consultation with other partners (Chapter 2).⁷
5. Greater emphasis is now placed on accountability and performance monitoring, which makes it possible to define what a successful intervention is (Chapter 5).

1.1.2 THE PURPOSE OF THESE GUIDELINES

These guidelines are designed to meet the objective of increasing resilience to weapon-contamination hazards through behaviour change. They focus on assessing, designing, implementing and monitoring activities in order to raise awareness of weapon-contamination hazards and to promote and facilitate a change in behaviour by Movement staff and affected communities. The specific aims are to reduce their risk of exposure and their vulnerability, to increase their mechanisms to cope with weapon contamination and, should an incident occur, to recover better.

These guidelines describe a conceptual and methodological risk-management approach to managing the risks posed by conventional weapon and CBRN hazards in the light of three imperatives, which apply to all components of the Movement:

- ensuring the safety and security of staff
- continuing operations and ensuring institutional integrity
- fulfilling their humanitarian mandates to assist vulnerable populations, especially those people who are affected by weapon contamination.

⁵ See note 1 above.

⁶ Previously referred to as mine risk education.

⁷ It must also be in line with the following internal document: *ICRC Weapon Contamination Response and Approach* (December 2017).

1.1.2.1 Safety of Movement staff

Ensuring staff safety is part of the duty of care that the components of the Movement owe to staff and volunteers. It is also a pre-condition to enabling humanitarian operations to continue – and thus to protecting and assisting people in weapon-affected environments. Weapon contamination is not a stand-alone issue; it has to be addressed as part of a wider organizational response to staff safety. These guidelines are intended to help the ICRC, the IFRC and the National Societies to achieve this through the implementation of risk-awareness and safer-behaviour activities.

With regard to the safety and security of staff, these guidelines should be integrated into existing mechanisms which relate to this. At the ICRC, this means working in conjunction with SCMS staff and in accordance with SCMS guidelines. At the National Societies, it may be part of operational security risk management,⁸ for example as part of the Safer Access Framework.⁹ When using these guidelines for staff safety, National Societies should ensure that the issue of weapon contamination is addressed as part of any staff safety and security guidelines or initiatives in countries that are affected by weapon contamination. Furthermore, National Societies should adapt any activity designed to mitigate the risk from weapon contamination to the country in question and ensure the activity fits in with the broader initiatives and activities taking place in that country.

1.1.2.2 Operational continuity

Resilience to weapon contamination means Movement operations can be run more safely in weapon-contaminated environments. For example, where access to the civilian population is hindered by weapon contamination, humanitarian operations can take place if Movement staff are aware of the risk and know how to operate safely in a weapon-contaminated environment.

Sometimes other mitigation measures need to be implemented by technical weapon-contamination specialists, and requests can be made to the relevant authorities, or other organizations in the country for such action. The ICRC also has technical weapon-contamination specialists within the Weapon Contamination Unit who can be requested to provide technical assistance to an ICRC delegation or a National Society. These can involve:

- surveying an area to identify alternative safe routes
- marking hazardous areas, and training staff to recognize these markings
- providing CBRN detection equipment and PPE to staff, and training them in how to use the equipment appropriately¹⁰
- removing the hazard (i.e. through EOD, mine clearance or CBRN hazard containment and removal).

⁸ Operational security risk management is one of the eight elements of the Safer Access Framework and consists of assessing an operational context; identifying and analysing risks to staff and volunteers, assets and operations; and implementing mitigating strategies and measures to reduce the likelihood and impact of an undesirable event.

⁹ The Safer Access Framework focuses on acceptance, security and access of Movement personnel in a variety of sensitive and unsafe situations. It consists of a Safer Access Practical Resource Pack containing guidance and tools to enhance the protection of Movement staff and volunteers so that they can safely carry out their humanitarian mandate and roles.

¹⁰ The ICRC Weapon Contamination Unit can provide this type of support to the Movement, or can approve the choice of another technically qualified organization as per ICRC and IMAS standards.

1.1.2.3 Increasing the resilience of populations affected by weapon contamination

All members of the Movement have an obligation to help increase the resilience of populations affected by weapon contamination and to reduce the impact of weapon contamination. The 2009 Council of Delegates Resolution 6, through which the Movement Strategy on Landmines and ERW was adopted, commits “all components of the Movement to taking flexible, appropriate, coordinated and integrated action to reduce the impact of weapon contamination through data gathering and analysis, risk reduction, risk education, and survey and clearance.”¹¹

1.1.3 WHO SHOULD USE THESE GUIDELINES

These guidelines were developed for all components of the Movement, which should take them into account when designing and implementing RASB activities for Movement personnel and civilian populations in environments affected by conventional weapons and CBRN hazards. The guidelines should be used by staff who have been trained in RASB.

In several places, the guidelines refer to instances where a weapon-contamination (WeC) technical specialist is required. A technical specialist is a person who is qualified to conduct CBRN and EOD interventions.¹² While it is not necessary to be a technical specialist in conventional weapons or CBRN hazards to use these guidelines or to conduct RASB activities, it is necessary to have access to such a specialist to:

- obtain information on the nature, extent and potential impact of the hazards through a risk assessment (see Sections 1.3.2 and 2.2.1)
- brief Movement staff and related personnel who need to enter contaminated areas, and to accompany them to the site if possible (see Section 3.2.2)
- implement technical activities such as surveying; marking hazardous areas; conducting EOD, mine clearance or CBRN hazard containment and removal (see Section 1.3.3); and providing CBRN detection equipment and PPE training to staff.¹³

1.1.4 HOW THESE GUIDELINES SHOULD BE USED

These guidelines provide the components of the Movement with an overall conceptual and methodological approach to help them to increase resilience to weapon contamination through behaviour change.

This document is not a prescriptive how-to guide but rather general guidance with some examples. Each delegation and National Society is active in a specific context, with their own established procedures for gathering and analysing data, conducting operations and monitoring performance. As such, the specific approach to assessing needs and planning, implementing and monitoring RASB interventions must be decided on a case-by-case basis. These guidelines cannot be fully prescriptive; because they apply broadly to all contexts and scenarios, all the information they contain will have to be adapted in view of local needs.

These guidelines are supplemented by a web-based resource centre that provides an accessible and user-friendly set of resources for use by National Society staff. They are also the source of documents for RASB training, which are designed to help Movement staff and volunteers to understand the approach presented and develop context-relevant interventions.

¹¹ See note 1 above. Note that, in these guidelines, the term ‘risk education’ is referred to as risk awareness and the promotion of safer behaviour, and ‘risk reduction’ activities are the activities that facilitate safer behaviour.

¹² EOD and CBRN competency standards.

¹³ The ICRC Weapon Contamination Unit can provide this type of support to the Movement or approve the choice of another technically qualified organization as per ICRC and IMAS standards.

1.1.5 THE STRUCTURE OF THE GUIDELINES

Chapter 1 introduces the concept of resilience to weapon contamination and the reasons for conducting RASB activities, and it gives the rationale for, and an overview of, the risk-management approach used.

Chapter 2 focuses on why and how to conduct the assessment, analysis and consultation steps, which must be done before effective RASB interventions can be developed.

Chapter 3 addresses how to raise awareness of the risks of weapon contamination and promote safer behaviour through effective communication interventions.

Chapter 4 discusses how to integrate safer-behaviour activities with other Movement or partner interventions so that staff, volunteers and populations affected by weapon contamination will adopt the behaviours they learn and, ultimately, proactively mitigate the risk of weapon contamination.

Chapter 5 looks at monitoring the level of risk and the RASB intervention and reviewing the intervention to ensure that it is reducing the level of risk for the most vulnerable people in the most effective way.

There are several annexes with more details on how to conduct a risk assessment; terms and definitions; weapon-contamination hazards; and hazard mapping and behaviour-change strategies. References to relevant online resources are also provided throughout the document in the footnotes.

1.2 TERMS AND DEFINITIONS

The following three definitions are fundamental for understanding these guidelines. All other terms and definitions used in this document are provided in Annex B.

Resilience is a form of capacity. In common usage, resilience typically relates to the ability of systems and people to effectively respond and adapt to changing circumstances and to develop skills, capacities, behaviours and actions to deal with adversity. Resilience can therefore be described as a process of adaptation before, during and after an adverse event. Within the Movement, resilience is defined as “the ability of individuals, communities, organizations or countries exposed to disasters, crises and underlying vulnerabilities to anticipate, prepare for, reduce the impact of, cope with and recover from the effects of shocks and stresses without compromising their long-term prospects.”¹⁴

Weapon contamination refers to contamination from both conventional weapons and CBRN hazards. There are a variety of hazards of immediate concern to the Movement, including conventional weapons, non-conventional (CBRN) weapons, and the accidental or deliberate release of chemical, biological or radiological agents that are unrelated to non-conventional weapons. In these guidelines, these hazards are collectively referred to as weapon-contamination hazards.

Safer behaviour is behaviour that makes a person, a group of people in a community, or an organization better protected from recognized hazards that are likely to cause harm.

¹⁴ IFRC, *IFRC Framework for Community Resilience*, IFRC, Geneva, 2014.

Risk awareness and safer behaviour in the context of landmine or ERW contamination is usually known as MRE¹⁵ and is the focus of an international standard.¹⁶ Whilst these guidelines comply with this standard, they use the term ‘risk awareness and safer behaviour’ rather than MRE. This is because they deal with many more types of weapon contamination than mines and ERW, such as the use of weapons during conflict and other situations of violence, and CBRN hazards. The term ‘risk awareness and safer behaviour’ also clearly articulates the fact that more than just education is involved: the term ‘safer behaviour’ refers to both promoting and facilitating safer behaviour through other Movement activities using the transversal approach.

1.3 THE RISK-MANAGEMENT APPROACH

These guidelines use a recognized risk-management approach to mitigating the risk from conventional weapons and CBRN hazards. The aim of this approach is to make sure that risk assessments are done systematically and objectively so that interventions effectively reach the most at-risk staff and the most vulnerable people in affected communities. The risk-assessment procedure is provided in Annex A, and the risk-management definitions are given in Annex B. Figure 1 below shows the risk-management process according to the International Organization for Standardization (ISO).

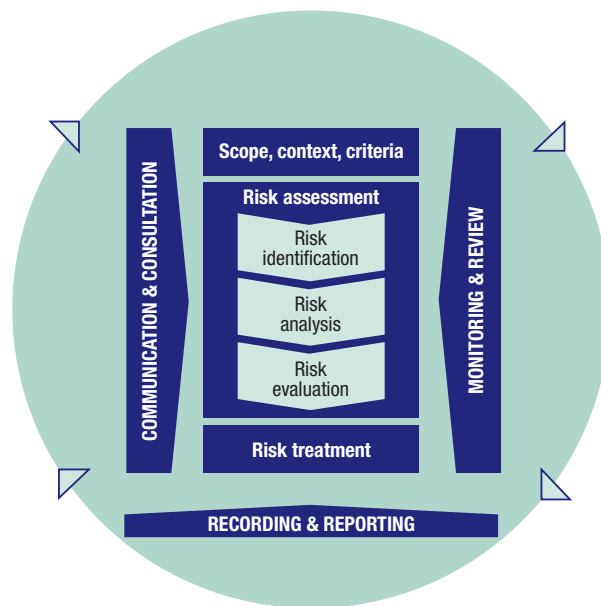


Figure 1: The ISO risk-management process¹⁷

¹⁵ “The term mine/ERW risk education (MRE) refers to activities that seek to reduce the risk of death and injury from mines and ERW, (including unexploded sub-munitions), by raising awareness and promoting safe behaviour. These activities include information exchange with at-risk communities, communication of safety messages to target groups, and support for community risk management and participation in mine action.” IMAS 12.10 (see next footnote).

¹⁶ United Nations, IMAS 12.10, *Mine/ERW Risk Education*, 2nd edition, UN, New York, 1 April 2010 (Amendment 2, June 2013). This document is accompanied by a series of 12 best-practice guidebooks for MRE programmes and projects.

¹⁷ ISO 31000:2018.

1.3.1 ELEMENTS OF RISK

The risk associated with a particular hazardous situation depends on the following elements:

- the severity of harm that can result from the hazard in question
- the probability that harm will occur, which is a function of: exposure to the hazard, a hazardous event occurring, and possible ways of avoiding or limiting the harm.

The elements of risk are shown in Figure 2.

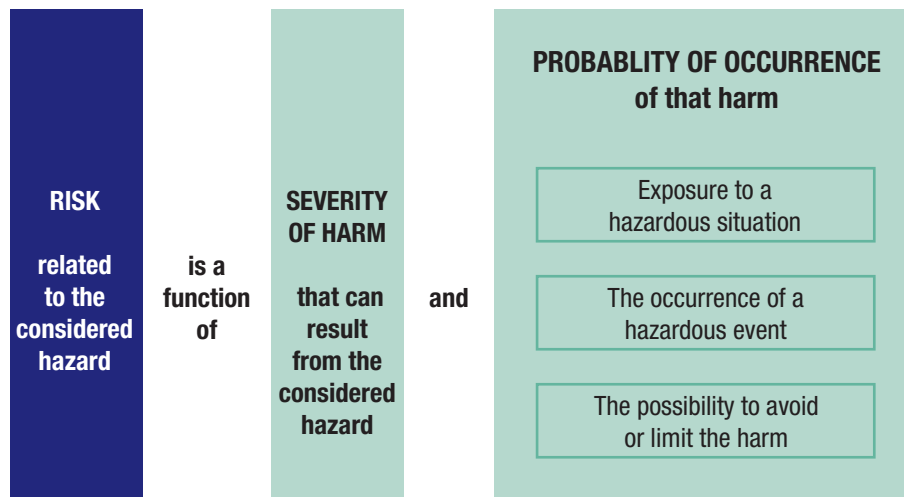


Figure 2: The elements of risk¹⁸

1.3.2 RISK ASSESSMENT

The likelihood and severity of a given impact is determined during the risk assessment stage, which involves risk identification, analysis and evaluation.

When it comes to managing risk related to conventional-weapon and CBRN hazards, the likelihood and severity of a given impact is determined by:

- the type of weapons and munitions or the nature of the CBRN agent in question
- the number of weapons that are (potential) hazards, or the extent to which the CBRN agent is present in the environment
- the frequency of incidents caused by conventional-weapon and CBRN hazards
- the vulnerability of staff, operations and the community to the potential impact of the hazard (including their level of exposure to the hazard and their capacity to reduce or limit their exposure and the harm that the hazard may cause).

The risk-assessment guidelines provided in this document apply only to weapon-contamination hazards. They do not apply to any other hazards or threats posed to the organization, which may be included in a broader, organization-wide security risk assessment.

Assessing the risk of weapon contamination involves:

- identifying the hazard and the potential severity of the impact (consequences) of a weapon-contamination incident on Movement staff, operations and the civilian population
- assessing the likelihood of an incident (given the frequency of previous occurrences and the vulnerability of staff, operations and the civilian population to the risk and their ability to limit or reduce any resulting harm).

¹⁸ International Organization for Standardization and International Electrotechnical Commission, ISO/IEC Guide 51:2014(E), *Safety Aspects – Guidelines for Their Inclusion in Standards*, ISO and IEC, Geneva, 2014.

With the help of pre-defined scoring criteria, the likelihood and severity of a weapon-contamination incident are plotted onto a risk matrix in order to assess the risk to various groups of Movement staff, to operations or to civilian populations. Figure 3 below is an example of a matrix for assessing the risk to the civilian population of weapon contamination. The risk-assessment procedure is developed further in Annex A.

RISK TO CIVILIAN POPULATION		LIKELIHOOD					
		Very unlikely	Unlikely	Possible	Likely	Very likely	
CONSEQUENCE	Catastrophic	Mass casualties/fatalities, local medical capacity overwhelmed	5A	5B	5C	5D	5E
	Severe	Serious injuries requiring clinical care and long-term rehabilitation	4A	4B	4C	4D	4E
	Significant	Injuries requiring clinical care with no long-term disability	3A	3B	3C	3D	3E
	Moderate	Injuries requiring local treatment	2A	2B	2C	2D	2E
	Negligible	Minor injuries requiring no medical assistance	1A	1B	1C	1D	1E

Figure 3: The risk matrix – assessing the risk of weapon contamination on the civilian population

1.3.3 MONITORING AND REVIEWING THE RISK

Monitoring the risk involves:

- re-evaluating the weapon-contamination environment and potential severity of impact
- re-assessing any changes that may affect the vulnerability of staff, operations and the civilian population and the likelihood of an incident.

With risk monitoring, staff can revise the risk category on the risk assessment matrix if necessary and confirm whether the groups that are being targeted by RASB activities are still those most at risk.

Downgrading the risk category on the risk assessment matrix can be one way of showing that the RASB intervention is working, although the improvement may be the result of other, non-attributable factors, such as the cessation of hostilities.

1.3.4 RISK TREATMENT

According to the risk-management theory, risks can be treated by:

- avoiding the risk by not starting, or by stopping, an activity that gives rise to the risk
- accepting the risk in order to pursue an important activity
- removing the risk source (i.e. the hazard)
- changing the likelihood associated with the risk
- changing the consequence associated with the risk
- sharing the risk with another party or other parties (through collaborative projects for instance).¹⁹

¹⁹ International Organization for Standardization, ISO Guide 73:2009, *Risk Management – Vocabulary*, ISO, Geneva, 2009–11.

Once the risk has been assessed, a risk-treatment option should be chosen. In most weapon-contaminated environments in which the Movement works, it is not usually feasible to remove all risk sources (i.e. all conventional weapon and CBRN hazards), nor is it standard practice to transfer the risk – although it may be shared through joint collaboration with other actors. Accepting the risk may be an option in some instances after careful consideration and in agreement with management as to which risks are acceptable. Avoiding the risk means not engaging in, or ending, operations in a weapon-contaminated environment; this may be an option in the event of heavy shelling or following the release of a CBRN agent, for example.

The majority of risk-treatment options chosen will be those that mitigate the risk by:

- reducing the likelihood associated with the risk (reducing exposure and vulnerability);
- changing the consequence associated with the risk (reducing the severity); or
- removing one of the risk sources (a specific hazard).

Mitigating the risk of weapon contamination within the Movement can be done through any combination of the following:

- RASB interventions:
 - to raise awareness of the risk and to promote safer behaviour through the ICRC, National Societies or other partners in accordance with these guidelines
 - to reduce the impact of weapon contamination and facilitate the adoption of safer behaviour through the ICRC, National Societies or other partners in accordance with these guidelines
- technical interventions to remove or reduce the hazard, when necessary through the relevant national or local authorities (e.g. military, police, national mine action authority or disaster management authority) or through other technically qualified and accredited organizations that operate in the area, including the ICRC, upon agreement with the relevant authorities and in compliance with national laws.

1.4 MITIGATING RISK THROUGH RISK-AWARENESS AND SAFER-BEHAVIOUR ACTIVITIES

Whether the hazard is crossfire from conflict or armed violence, landmines, ERW, or leaks from a toxic industrial chemical plant, the at-risk groups can take control of their situation by being aware of the risk, knowing how to behave and taking proactive measures to reduce the risk.

RASB activities are an effective way of reducing the vulnerability of Movement staff and operations and the civilian population to the hazard's impact. By being more aware of the risks from the conventional weapons or the CBRN hazards present, adopting safer behaviour around the hazards and identifying and using safety measures, Movement staff, volunteers and populations affected by weapon contamination can reduce their vulnerability to the risk and thereby prevent casualties. RASB is the only way to increase resilience where removal of the hazard is not possible or will take time.

1.4.1 INCREASING RISK AWARENESS AND PROMOTING SAFER BEHAVIOUR

Mitigating risk from weapon contamination should initially be conducted through communication activities aimed at increasing risk awareness and promoting safer behaviour. The goal is to reduce people's exposure to hazardous situations and teach them the behaviour they must adopt in order to avoid or limit harm. These communication activities are essential, particularly in the early stages of a conflict or crisis when hazards are new and Movement staff and the civilian population are not aware of the risks or what to do when confronted with a particular conventional weapon or CBRN hazard. Whenever possible, communication-based activities to promote safer behaviour should be coupled with broader Movement activities to facilitate the safer behaviour promoted – as discussed in the following paragraph.

1.4.2 ACTIVITIES TO FACILITATE SAFER BEHAVIOUR

Activities designed to facilitate safer behaviour, which are sometimes referred to as risk-reduction activities, help people to proactively take protective measures to reduce the likelihood and severity of incidents caused by weapon contamination. Whenever possible, the communication-based activities discussed in the previous paragraph should be combined with other activities in order to support safer-behaviour measures being implemented by other departments, units or organizations. A truly transversal approach would ensure that these activities are properly identified at the assessment stage (as described in Chapter 2) and then built into the joint, inter-departmental or inter-organizational RASB intervention from the outset with all the relevant departments, units or organizations (as described in Chapter 4). Activities range from providing equipment for safe areas and ensuring safe access to basic services to helping to negotiate safe areas among parties to the conflict. These actions are a fundamental part of the RASB intervention and should be run in conjunction with the core RASB activities.

1.5 MITIGATING THE RISK THROUGH OTHER WEC TECHNICAL INTERVENTIONS

In some instances, the RASB intervention will identify situations where specialist technical advice and/or a technical intervention is required to mitigate the risk of weapon contamination. Where this support should be requested will vary from one situation to another, although it is usually provided by government agencies, non-governmental organizations or companies. It can also be contracted out and coordinated by a national authority or a duly authorized international organization. If a technical intervention is deemed necessary, a request should be made to the relevant authorities.

In certain circumstances, it may be necessary to request technical support from the ICRC. This may be true, for example, if the weapon-contamination hazard is interfering with humanitarian operations and no other entity is able to remove it or to provide the markings needed to identify safe access routes. The ICRC is the component of the

Movement with the relevant technical expertise and capacity to provide technical support for the Movement, upon express request, in accordance with both the Movement Strategy on Landmines and ERW²⁰ and the role that the ICRC has been assigned by the Council of Delegates.²¹ This can be done in any emergency in which weapon contamination is an issue,²² particularly:

- to ensure the safety of staff or safe access for assistance or protection activities, or to save lives;
- when only the ICRC has access to a contaminated area where mines/ERW have a discernible impact on the population and are blocking ICRC relief activities or posing a threat to the safety of staff;²³ or
- when the needs are so great that the ICRC's risk-removal intervention will have the additional benefit of providing assistance and protection to the civilian population.

The ICRC's technical expertise includes surveying, marking, explosive ordnance disposal, CBRN reconnaissance and assessment; the organization can also provide advice on safely handling and storing weapons and munitions.²⁴ Clear guidance on when a technical clearance intervention (i.e. to remove a conventional weapon or CBRN hazard) can be sanctioned is given in the *Guiding Framework for the Clearance of Explosive Remnants of War and Landmines by the ICRC*.²⁵

²⁰ See note 1 above.

²¹ Ibid.

²² Ibid.

²³ ICRC, *Weapon Contamination Manual: Reducing the Impact of Explosive Remnants of War and Landmines through Field Activities*, ICRC, Geneva, August 2007, Book 3, Chapter 1.3 ("Survey and clearance").

²⁴ G. Malich et al. "Chemical, biological, radiological or nuclear events: The humanitarian response framework of the International Committee of the Red Cross", *International Review of the Red Cross*, No. 899, Autumn 2015, pp. 647–661.

²⁵ Internal document: *Guiding Framework for the Clearance of Explosive Remnants of War and Landmines by the ICRC*, approved by the ICRC's Department of Operations on 3 December 2012.



CHAPTER 2

ASSESSMENT, ANALYSIS AND CONSULTATION

2.1 ESTABLISHING CONTEXT IN AN INTEGRATED WAY

The first stage in any risk-management process is to establish context. It is not possible to identify and assess risks without having first established the context. This means having a clear understanding of both the interrelated political, social, cultural and economic aspects of the evolving operational environment and the inherent risks. Together, this forms the basis for preventing and managing those risks.²⁶

One of the strengths of the Movement is having that contextual understanding through the host National Societies. It is crucial that this information be effectively disseminated among the components of the Movement to ensure that all Movement staff and volunteers understand the context and risks as a basis for managing them effectively.

Deciding how to deal with the problem of weapon contamination should be part of a holistic, integrated approach that includes all operational capacities of a Movement component, its Movement partners and other actors where appropriate. Assessments of the weapon-contamination situation should draw on existing mechanisms within the Movement or a specific component, e.g. the Movement guidelines for conducting assessments in emergencies,²⁷ the context and risk assessment that is part of the Safer Access Framework,²⁸ or the ICRC's EcoSec handbook for assessing economic security.²⁹

Data collection is a regular part of the ICRC's civilian protection work, and the organization has produced a number of tools to help establish context. These include the "Accountability to Affected People" operational support toolkit³⁰ and the community-level question library for Economic Security Assessments and Monitoring.³¹ National Societies also regularly conduct assessments of communities likely to be vulnerable to weapon contamination; they use a selection of assessment tools, such as the vulnerability and capacity assessment.³²

While technical specialists are required to conduct some of the specific hazard mapping, field staff are largely responsible for information gathering. The field staff must therefore make full use of any existing data collection tools to ensure that the problem of weapon contamination is properly assessed and that people are not subjected to more questioning than necessary.

²⁶ ICRC, *Safer Access: A Guide for All National Societies*, in *Safer Access Practical Resource Pack*, ICRC, Geneva, 2013.

²⁷ ICRC and IFRC, *Guidelines for assessment in emergencies*, ICRC and IFRC, March 2008.

²⁸ See note 26 above.

²⁹ ICRC, *EcoSec Handbook – Assessing Economic Security*, ICRC, Geneva, 2017.

³⁰ The ICRC's "Accountability to Affected People" (AAP) Institutional Framework provides a set of common processes and activities designed to promote a more integrated and transversal approach to putting people at the centre of the organization's actions and supporting ways in which they already respond to risk and reinforce their protective behaviour. AAP can also be effective in improving the contextual understanding. The ICRC's AAP measuring and learning toolkit provides an operational framework for measuring and learning from this approach. The organization is also engaged in an ongoing process with the IFRC and selected National Societies to harmonize AAP-related concepts, approaches and processes. A consolidated Movement approach to AAP will be proposed for approval at the Council of Delegates.

³¹ ICRC, *Economic Security Assessments and Monitoring – Community-Level Question Library*, version 1, ICRC, Geneva, April 2015.

³² IFRC, *How to do a VCA: A Practical Step-by-Step Guide for Red Cross Red Crescent Staff and Volunteers*, IFRC, Geneva, 2007. Other related resources are available at: <http://www.ifrc.org/vca>.

2.2 DATA GATHERING AND ASSESSMENT

Data gathering and assessments are conducted to understand if and how Movement staff and the civilian population are affected by weapon contamination. It is important to find out what information is already available – and does not need to be collected again – and what has already been assessed. Consulting with colleagues and other stakeholders from the very beginning of the process is therefore essential.

It is important to remember that the consequences of weapon contamination are both direct (i.e. death, injury and suffering) and also indirect (e.g. reduced access to essential services, goods and infrastructure). It is therefore important to assess if there are risks affecting health-care services, livelihoods, agriculture, household security and the availability of shelter, water, fuel and food, and if these risks are caused by weapon-contamination hazards.

If the consultation shows that the data required for the assessment has not yet been gathered, an agreement should be reached with colleagues and other stakeholders on who should collect that data in order to answer the questions identified.

Following data collection, the assessment is needed in order to identify, analyse and prioritize the risks from weapon contamination and determine the most appropriate options for mitigating the risk.

The assessment phase involves four broad sets of activities:

1. Assessing the weapon-contamination situation – hazard identification and mapping.
2. Assessing the capacities and vulnerability of Movement personnel and civilian communities and understanding their current levels of risk awareness and behaviour, any barriers to behaviour change, and the ways in which they communicate.
3. Consulting with colleagues, Movement partners and other actors to assess their capacity to mitigate the risk to civilian communities from weapon contamination.
4. Analysing and evaluating the risk to different target groups and plotting them on a risk-assessment matrix, to help identify the priority target groups for RASB interventions.

The assessment should be documented, as the evidence of risk can help to identify target groups, justify the design of interventions and monitor and measure progress in mitigating the risk.

2.3 ASSESSING THE WEAPON-CONTAMINATION SITUATION

Assessing the weapon-contamination situation involves identifying and mapping the hazards in order to determine the potential severity of the impact or consequences on staff, operations and the civilian population.

Before starting any RASB activities, the following baseline information should be known:

- the general type of weapons or CBRN agents used
- the location of suspected hazardous areas
- the markings or warning signs used to indicate weapon contamination.

If a technical intervention is deemed necessary to remove the hazard, then technical specialists must be called in to do a more detailed assessment of the nature of weapon contamination. The first port of call will be the relevant authorities in the country in question. The ICRC is committed to helping National Societies find the most appropriate response to these types of situation.

2.3.1 IDENTIFYING THE HAZARDS

Hazard identification information should be both swiftly obtained and as accurate and reliable as possible. Where risks have to be quickly assessed in order to design timely risk-mitigation measures, sources of information on hazards may be:

- you, if you hear shelling, bombing, fighting or warning alarms or sirens
- known contacts (Movement colleagues, authorities, hospitals, other organizations on the ground, etc.)
- media reports
- directly affected individuals (possibly including combatants).

Hazard information may also come through more formal reporting mechanisms, such as local community surveys, telephone hotlines, incident data analysis and formal coordination and information-sharing forums. CBRN hazards should include industrial and medical facilities that produce or store CBRN agents.

Monitoring systems for collecting new data on hazards, vulnerability to hazards and the impact of hazards should be identified and used from the outset. If no such monitoring system exists, it is recommended to establish one as early as possible, including when there are no hostilities in “contexts prone to conflict”. Establishing monitoring systems is addressed in more detail in paragraph 2.3.3.4.

2.3.1.1 Conventional weapon hazards

Conventional weapons are used in most conflict situations and other situations of violence. In post-conflict situations, victim-activated weapons, such as landmines and ERW, are a legacy of the conflict. They represent a significant weapon-contamination hazard to the local population – including those returning home after hostilities have ceased – and humanitarian workers. The conventional weapon hazards most likely to be encountered during humanitarian operations are:

- kinetic-energy and explosive weapons being used in a conflict or another situation of violence
- landmines
- explosive remnants of war (unexploded and abandoned ordnance)
- improvised explosive devices (IEDs)
- poorly managed stockpiles and ammunition stores.

More details on conventional weapons are provided in Annex C. If National Societies prefer to have technical advice on detailed hazard identification, they should work with the relevant authorities on this. The ICRC also has this technical expertise, including qualified EOD personnel and equipment, and is ready to support Movement components upon request.³³

2.3.1.2 Conventional weapon hazards during a conflict/OSV

The greatest hazards to Movement staff and civilians during a conflict or other situation of violence come from kinetic-energy and explosive weapons. The risk lies in being caught unintentionally in crossfire or being hit by stray rounds from small

³³ Further information on the ICRC’s technical capabilities can be found in the *Guiding Framework for the Clearance of Explosive Remnants of War and Landmines by the ICRC* (see note 25 above).

arms or light or heavier weapons, including larger airborne bombs and man-portable, ground-to-air weapons. Landmines, explosive remnants of war and IEDs also pose a threat, particularly in periods of large population movements.

2.3.1.3 Conventional weapon hazards immediately after a conflict/OSV

Immediately after a conflict or other situation of violence, there is often a large-scale movement of people returning to areas that were previously off limits owing to conflict. This is also a time when Movement operations are expanded, which puts staff and volunteers at risk.

The greatest weapon-related risk immediately after a conflict is victim-activated devices, such as landmines, IEDs and other explosive remnants of war. Because landmines are usually buried or hidden, they are a significant danger to civilians and humanitarian workers. Rather than knowing what mines, IEDs and other explosive remnants of war look like, it is therefore more important to look for clues suggesting the presence of these items, such as signs of prior military positions or combat.

In the longer term, following the immediate aftermath of a conflict, it is common for unexploded ordnance to cause more injuries than landmines. This may be because people are more aware of the risks but nonetheless adopt risk-taking behaviour, such as scavenging for scrap metal out of economic necessity. This would be an instance where spreading the RASB message alone is not enough and where other income-generating activities should be provided in order to stop the risk-taking behaviour.

There are also hazards from unexpected explosions in munitions stores, which can take place at any time before, during or after a conflict and are often in unsafe environments where normal routine maintenance and safety procedures are not carried out.

2.3.1.4 CBRN hazards

CBRN hazards include both the use of non-conventional weapons (CBRN warfare) and the accidental or deliberate release of CBRN agents. The CBRN hazards most likely to be encountered by the Movement are chemical and radiological agents. The risks include:

- nerve and blistering agents
- toxic industrial chemicals, such as ammonia and chlorine
- the intentional or unintentional spread of radioactive material
- cross-contamination of chemical agents from patients to medical staff.

CBRN hazards present a risk in times of peace; this risk increases significantly during a conflict or other situation of violence and in post-conflict scenarios.

CBRN agents may be released unintentionally (owing to outbreaks of disease, natural disasters, transport or industrial accidents, collateral damage in a conflict, remnants or contaminants from past use of such agents, etc.) or intentionally (e.g. through targeted or indiscriminate military action, or attacks by individuals or groups using purpose-built or improvised devices to cause injury or death, temporarily incapacitate, or terrorize).³⁴

CBRN emergencies often fall within the category of “technological emergencies”. In addition to CBRN events, this category includes other emergencies stemming from technological and industrial activities such as dam ruptures, transport accidents and factory explosions, to name a few.

More details on CBRN hazards are provided in Annex C.

³⁴ See note 3 above.

2.3.2 MAPPING THE HAZARDS

Once the hazards have been identified, it can be useful to create a hazard map, which highlights areas that are affected by or vulnerable to a particular hazard. A hazard mapping exercise with relevant stakeholders can be useful in determining the risks of working or living in a certain area. Thanks to these maps, people can become aware of the dangers they might face from hazards in a specific area.

Hazard mapping has been used extensively for mapping natural hazards – such as earthquakes and flooding – but it can also be useful in managing mine actions and mapping other conventional weapon and CBRN hazards. The aim of hazard mapping can range from identifying broad geographical areas (from the national to the village level) that may be vulnerable to one or more hazards, to producing specific, detailed, geo-referenced maps – this is usually managed by the relevant authorities and used for planning a technical intervention.

Where there is a national mine action authority, all known mine and ERW hazards should be mapped and recorded in a national database. Any agencies involved in managing industrial disasters may be able to provide maps or help to map CBRN hazards.³⁵ During conflict, there is usually some authority or coordinating agency responsible for mapping combat areas. The National Society or ICRC delegation should draw on these existing tools to create a multi-hazard map that can be used to understand the extent of the risk from weapon contamination for both Movement staff and the civilian population.

In certain instances, when some parties (such as the military or non-state armed groups) consider it too sensitive to discuss the specific location of a hazard, this type of mapping can be used to generate “safe area maps”³⁶ in conjunction with those parties. These maps are less sensitive by design and capable of being shared with Movement staff and the civilian population.

When using hazard mapping, it is important to bear in mind that the maps are only a representation of the hazards known at one particular time. As the hazard situation changes, which can be fast in the case of a conflict/OSV, the maps can become outdated and potentially dangerous to use. Hazard maps should be checked periodically and updated as part of the on-going risk monitoring and review.

More information on hazard mapping can be found in Annex D.

2.3.3 THE COLLECTION AND USE OF INCIDENT DATA

An incident is a hazardous event that leads or could lead to an accident. Incident data therefore means the collection of data on all incidents related to weapon contamination, whether or not they have resulted in an injury. In practice, it is easier to collect information on events that have led to an accident, as there is more information available (e.g. from medical sources). But an effort should be made to collect data on all incidents using a broader array of sources (e.g. the communities affected, the police or other authorities and the media).

Collecting data on weapon-contamination incidents is an ongoing process aimed at compiling comprehensive data from multiple sources. Incident data are used to enable and inform the Movement’s RASB and medical-rehabilitation activities and wider

³⁵ For example, UNEP and OCHA have developed a hazard-mapping resource called the Flash Environmental Assessment Tool (FEAT), which can be useful in mapping CBRN hazards in preparation for industrial disasters.

³⁶ Safe area maps show only safe areas and safe access routes; they do not reveal the location of hazards.

mine action planning by other organizations. Incident data are analysed in order to gain an overview of the scope, type and location of weapon contamination; to identify certain features of vulnerable groups, including age, gender and location; and, wherever possible, to identify the activities that put the groups at risk and the reasons for their unintentional or intentional risk-taking. More details on the ICRC's approach to weapon-contamination data gathering and analysis is provided in the ICRC's *Weapon Contamination Manual*.³⁷

2.3.3.1 What incident data should be collected

- Informant (and date of information)
- Name and ID of victim
- Geographical location of the incident (with coordinates where possible)
- Age (or date of birth) and gender of victim
- Date and time of the incident (at least the general time of day if specifics are not available)
- Activity at the time of the incident (reason for being there)
- Number of times that person has carried out the same activity in the same location
- Prior knowledge of the risk of weapon contamination
- Cause of incident/type of hazard (if known).

2.3.3.2 Using incident data (analysis)

The incident data are used to analyse who is at risk from weapon contamination and why (including populations moving into or through high-risk areas) in order to identify target groups for RASB activities. The data also serves to analyse where people are injured, where the risk is greatest, where risk-taking behaviour is taking place, what the risk-taking behaviour is and why it is happening. This analysis can help to identify target geographical areas for RASB activities, which behaviours need to be changed and which messages are required depending on the target group. More detailed information is often collected on victims and casualties as well; this information is usually recorded on a separate form and used to inform medical-rehabilitation and victim-assistance activities rather than risk-awareness, risk-reduction, clearance or other mine action activities.

2.3.3.3 Who should collect incident data and from what sources

Incident data collection is a key and sustainable role for the ICRC and National Societies during conflict or post-conflict situations and other situations of violence. It should be done in conjunction with a national authority and within the scope of the overarching national mine action plan and public health plan, if they exist. Incident data collection should also be integrated into the ICRC and the National Societies' broader response (e.g. protection, assistance, disaster management, communication and other activities). Data sources may be hospitals, clinics and orthopaedic centres; police authorities; local authorities (e.g. municipal and village representatives); the spectrum of national, regional and international entities with which there is regular coordination; the media; and, of course, the affected people and communities themselves.

If possible, the incident form should be in a standard format³⁸ agreed upon by the ICRC and the National Society, the department of health, the Mine Action Coordination Centre (MACC) or national mine action authority, if one exists, and any related organizations in that area. All Movement staff and volunteers should be aware of and have access to the weapon-related injury/incident data-collection form and use it to report any weapon-related incidents they encounter during their work.

³⁷ See Book 3, Chapter 1.1 of *Weapon Contamination Manual* (see note 23 above).

³⁸ A sample incident form can be found in Book 3, Chapter 1 of *Weapon Contamination Manual* (see note 23 above).

2.3.3.4 Establishing a monitoring system

The ICRC and the National Society should ensure that a monitoring system for collecting incident data is established as early as possible in conflict/weapon-contamination situations. As there is not often a nationwide governmental system that captures all the necessary data, this role may be taken on by the National Society through the extensive reach of its network; the ICRC or a partner National Society could provide support if required. In the longer term, this capacity should become a national resource and be incorporated into the Ministry of Health and any national mine action authority.

Where the department of health (or equivalent entity) collects data on weapon-related injuries from hospitals and clinics, the focus is naturally on casualties and injuries rather than on their causes and the circumstances. By liaising closely with hospitals, clinics and the department of health, the ICRC or the National Society may be able to convince them to modify their injury data collection form in order to include the questions above, which are required for the development of preventative risk-reduction measures. Collecting this additional data is unlikely to be their priority in a conflict situation, but with advocacy, training and support it could be part of a longer-term, epidemiological approach integrated in a wider public health initiative.

2.3.3.5 Protection of personal data

Conducting individual interviews during armed conflicts and other situations of violence can put people at risk not only because of the sensitive nature of the information collected, but also because these people can be stigmatized or targeted for merely participating in the process.³⁹ For all components of the Movement, safeguarding the personal data of individuals, particularly during armed conflicts and other situations of violence, is an essential aspect of protecting people's lives, physical and mental integrity, and dignity. This needs to be clearly explained to those who are affected and to the relevant stakeholders.

The collection and handling of data containing personal details must be done in accordance with the rules and principles of international law and other relevant regional or national laws on individual data protection. The protection of personal data is based on the right to privacy that is recognized in most general international human rights treaties. The ICRC also provides humanitarian organizations with clear data-protection rules as well as guidance⁴⁰ on how to collect and handle personal data.⁴¹ In addition, domestic or regional laws may contain provisions on protecting information that go beyond the ICRC's standards.⁴²

Responsible incident-data collection is based on the principle that data must be collected by personnel with knowledge of the professional standards⁴³ and the requisite expertise and experience in working with vulnerable people.

³⁹ See Chapter 6, "Managing Data and Information for Protection Outcomes", in ICRC, *Professional Standards for Protection Work*, ICRC, Geneva, 2018, p. 109.

⁴⁰ Guidance is provided in the ICRC Rules on Personal Data Protection [<https://www.icrc.org/publication/4261-icrc-rules-on-personal-data-protection>] and in Chapter 6 ("Managing Data and Information for Protection Outcomes") of the ICRC's *Professional Standards for Protection Work* (Ibid.).

⁴¹ Brussels Privacy Hub and ICRC, *Handbook on Data Protection in Humanitarian Action*, Brussels Privacy Hub and ICRC, Geneva, July 2017.

⁴² www.icrc.org/en/document/data-protection.

⁴³ Including the ICRC's *Professional Standards for Protection Work* (see note 39 above) and related international and national treaties, laws and regulations.

When interviewed, victims of weapon contamination should:

- be treated equitably, to protect their interests and preserve their dignity
- not be exposed to repeated or futile questioning or unwelcome attention
- understand that the information collected will only be used to inform the design of protection and assistance activities to reduce the risk of future incidents and will not be used for other purposes without their consent
- have a clear understanding of what type of protection or assistance is likely to result and not have unrealistic expectations.

Once the personal details are removed and the data are compiled for the RASB planning analysis, the information becomes less sensitive. For RASB planning, it is more common for casualty data to be used after being compiled. And while the need for caution is a key principle, it should in no way be interpreted as a call to avoid sharing information. On the contrary, when the individuals and communities concerned stand to benefit, the information should indeed be shared, as appropriate, with local, regional or national authorities; UN peacekeeping operations [and Mine Action Coordination Centres]; other protection-related organizations; and service providers.⁴⁴

2.4 ASSESSING CAPACITY AND VULNERABILITY TO WEAPON CONTAMINATION

Once the extent of the weapon-contamination hazard is known, and the incident data (where available) have been analysed, it is important to liaise with Movement staff, volunteers and the communities affected to understand their vulnerability to weapon contamination and their capacity to avoid or limit harm. Questions designed to ascertain the likelihood of an incident should be assessed, including the community's exposure to the hazard; its knowledge of the occurrence of hazardous events; and possible ways of avoiding or limiting the harm. For Movement staff and volunteers, this may be done separately or as a part of a regular security assessment process. For affected communities, it could form a part of existing vulnerability and capacity assessments⁴⁵ or an emergency assessment process.

Not everyone is at equal risk from weapon-contamination hazards. A thorough assessment and analysis of the data gathered should give an indication of who is most vulnerable to the risk of weapon contamination, so that priority target groups can be identified for RASB activities.

At a **minimum**, the following should be established:

- Who is especially at risk and why?
- Where are they especially at risk?
- When are they most at risk?
- Why are they coming into contact with weapon-contamination hazards?
- How can those at greatest risk be reached most effectively by RASB activities?

⁴⁴ Quote from Chapter 6 ("Managing Sensitive Protection Information") of the ICRC's *Professional Standards for Protection Work*, pp. 80-1 (see note 39 above).

⁴⁵ See note 33 above. Other related resources are available at: <http://www.ifrc.org/vca>.

2.4.1 ASSESSING THE VULNERABILITY OF MOVEMENT PERSONNEL

The first priority for all components of the Movement is the duty of care toward their personnel, both paid staff and volunteers. The following questions should be answered to assess how vulnerable their staff are to weapon contamination:

- Where will they be working in relation to the known weapon-contamination situation?
- What type of hazard are they most likely to be exposed to?
- How much do they know about the risk, and what is their attitude to the risk?
- Do they know how to behave in the particular weapon-contaminated environment(s) to which they may be exposed?
- How vulnerable are they to the risk of weapon contamination?
- What is the likelihood that they will be exposed to weapon contamination?
- What would happen to them (the impact/consequence) if they were exposed?

It would also be useful to assess the organization's attitude to the general risk and to the more specific risk of weapon contamination, and how the risk of conventional weapon and CBRN hazards is perceived compared to that of other hazards in the country.

2.4.2 ASSESSING THE VULNERABILITY OF THE ORGANIZATION'S ONGOING OPERATIONS

The second priority in the event of weapon contamination is to continue humanitarian operations. If the organization is vulnerable and operations cannot continue owing to the risk from weapon contamination, then the victims of conflict cannot be protected and assisted.

At a **minimum**, the following questions should be answered in consultation with the relevant security personnel to assess the vulnerability of Movement operations to weapon contamination:

- Is the operation planned in an area of known weapon contamination?
- Who will have information on the potential hazards, and is up-to-date information available?
- Have there been any recent casualties in the area from fighting, mines, etc.?
- Are there any marking/warning systems in place? (If so, familiarize yourself with them.)
- Has there been recent violence? Are mines likely to have been laid? Has any mine clearance taken place?
- Are there indications that fighting is ongoing, or that it may start/resume?
- Is there a security plan? Do staff know about safe behaviour and what to do in the event of exposure to weapon contamination? Do they have radios, first-aid training etc.?

More details on the questions to ask when planning a field trip and what to look out for when conducting field assessments in mine/ERW-contaminated environments are given in the ICRC's *Weapon Contamination Manual*.⁴⁶ The ICRC can provide preparedness support for situations of active conflict.

A National Society's assessment of the vulnerability of its staff and operations to weapon contamination should be conducted as part of the Operational Security Risk Management phase of the Safer Access Framework.⁴⁷

⁴⁶ See Book 2, Chapter 3 ("Determining vulnerability") of *Weapon Contamination Manual* (see note 23 above).

⁴⁷ Operational Security Risk Management is the eighth and final element of the Safer Access Framework for all National Societies. It consists of assessing an operational context, identifying and analysing risks to personnel, assets and operations, and implementing mitigating strategies and measures to reduce the likelihood and impact of an undesirable event.

2.4.3 ASSESSING THE VULNERABILITY OF PEOPLE AND COMMUNITIES TO WEAPON CONTAMINATION

The Movement's humanitarian activities should include building the resilience of people and communities who are affected by weapon contamination. The following questions should be answered to ascertain their vulnerability in order to develop effective interventions.

- Where do they live/work/travel in relation to the known weapon-contamination situation?
- Will this pattern change now due to the conflict/other situation of violence/new situation?
- What type of hazard are they most likely to be exposed to?
- How much do they know about the risk?
- How do they perceive the risk of conventional-weapon and CBRN hazards relative to other hazards in country?
- Do they know how to behave in a risky environment?
- Do they know what measures they can take to reduce the likelihood of exposure to weapons or CBRN hazards? Do they already take any such measures?
- Do they know what measures they can take to reduce the severity of exposure to weapon or CBRN hazards? Can they do this themselves, or do they need assistance?
- Is their access to schools, medical centres, water points, fuel, income-generating activities (or other essential services and infrastructure) affected by the presence of these hazards?
- Do they know who to contact if they need help or information on preparing for an incident?
- Do they know who to contact if they need help or information on recovering from an incident?

More detailed questionnaires on what to ask people during needs-assessment visits to the field are provided in the ICRC's *Weapon Contamination Manual*.⁴⁸

Any action or assistance should not only take the target group and its needs into account, but it should put that group in charge of the response. Liaising with weapon-affected communities as early as possible in the assessment stage is critical to ensuring that the assistance provided is appropriate and builds on what the communities already do and need. All Movement personnel should work closely with the affected group and take account of local value systems, the information ecosystem (see 2.5.7) and the group's specific vulnerabilities and perception of its needs.

Any action should also take into account the capacity of individuals and communities to protect themselves and should support these capacities, taking care not to inadvertently weaken any existing mechanisms. The actions should build the capacity of individuals and communities, add to their knowledge and provide them with the means to prevent and avoid risks.⁴⁹

⁴⁸ See Book 2, Chapter 3 ("Determining vulnerability") of *Weapon Contamination Manual* (see note 23 above).

⁴⁹ ICRC, "ICRC Protection Policy", *International Review of the Red Cross*, No. 871, September 2008, pp. 751-775.

The concept of community engagement, which puts affected people and communities at the centre of activities, is not limited to weapon-contamination activities but is the basis of all humanitarian engagement by the Movement and referred to in several key policies and frameworks.⁵⁰ The level of community engagement should increase as circumstances allow.

Where possible, the questions on vulnerability to weapon contamination should be incorporated into other emergency assessments or vulnerability and capacity assessments that are being coordinated by the Movement or other partners.

2.4.4 ASSESSING BOTH RISK AWARENESS AND EXISTING BEHAVIOUR

For RASB interventions to be effective, those who plan the interventions must be aware of the existing behaviour of Movement personnel and the civilian population and how much they know about the risk. This is often referred to as understanding knowledge, attitudes and practices (KAP). KAP surveys are useful for gathering this information and establishing both monitoring and evaluation baselines.

To ensure interventions have the desired impact, the level of knowledge and behaviour regarding weapon contamination must be assessed ahead of time. Formal KAP surveys of the civilian population are not usually possible during the emergency phase. In such cases, the questions above should be sufficient to get a general understanding of people's knowledge and behaviour. It should be possible to obtain this information directly or via colleagues during field visits.

In situations where it is not possible to immediately access KAP-related information – due to restricted access for example – RASB interventions should be designed on the basis of best practice. As soon as the information from the local population becomes available, the interventions can be revised and fine-tuned. RASB interventions should never be delayed in order to wait for the results of surveys, as even generic safety messages can save lives in the critical early days of a conflict or other situation of violence. Generic safety messages are provided in Section 3.2.2.

2.4.5 UNDERSTANDING BARRIERS TO ADOPTING SAFER BEHAVIOUR

People at risk from weapon contamination can be broadly categorized as:

- “the Unaware” (those who do not know about the danger)
- “the Uninformed” (those who know about the danger but not the safer behaviour to adopt)
- “the Misinformed” (those who have received the wrong information about the danger or the safer behaviour to adopt)
- “the Reckless” (those who know about safer behaviour but choose not to adopt it)
- “the Forced” (those who have little option but to adopt unsafe behaviour in order to survive)

Communicating RASB information is therefore essential, but it is not always sufficient to get people to actually adopt safer behaviour. There are many individual, social and environmental barriers that prevent awareness and knowledge being turned into action. Discussing the barriers to behaviour change and potential ways to overcome them is important; it takes place through a dialogue at the assessment stage, through two-way communications during the implementation phase, and during monitoring and review.

⁵⁰ See A. Cotroneo and M. Pawlak, “Community-based protection: the ICRC approach”, *Forced Migration Review*, FMR 53, October 2016: <https://www.fmreview.org/community-protection/cotroneo-pawlak>, accessed 13 February 2019; and ICRC and IFRC, *A Red Cross Red Crescent Guide to Community Engagement and Accountability (CEA): Improving communication, engagement and accountability in all we do*, ICRC and IFRC, Geneva, 2016.

In instances where safer behaviour is known but risk-taking behaviour is still being demonstrated, it may be useful to conduct a more detailed analysis of the barriers to behaviour change. The aim of this type of analysis is to identify the specific barriers preventing a particular target group from changing their behaviour and more effective RASB interventions from being developed. The analysis may point to changes needed in the messages and/or the communication channel, or it may identify other activities that can improve livelihoods and reduce the need to adopt unsafe behaviour. It is important that assumptions not be made about why people do not change their behaviour. Rather, a proper assessment must be conducted through dialogue with ICRC staff and Movement partners and effective community engagement. Annex F gives an overview of the main barriers to behaviour change and how to analyse them, together with strategies to overcome those barriers.

2.4.6 UNDERSTANDING CHANNELS OF COMMUNICATION AND THE INFORMATION ECOSYSTEM

Before an RASB intervention is designed, it is important to look at how information is accessed, used and shared and to understand what the available and trusted channels of communication in the target area are and how the target groups usually communicate and learn. A prior understanding of the “information ecosystem”⁵¹ and the communication channels that will be used will ensure that the actions are designed effectively using the most appropriate communication channels. A National Society may already have a good understanding of the preferred communication channels for the target groups, although the channels used may need to be adjusted if there is a change in the target population’s communication practices during the conflict or other situation of violence. More details on information ecosystems are given in the report *Why Information Matters: A Foundation for Resilience*.⁵² Existing media analyses such as the ICRC EcoSec questionnaire on access to information and communication channels and any publicly available information⁵³ can provide a useful overview of internet usage and the main media channels in a given country.

2.5 ASSESSING THE ROLE AND CAPACITY OF MOVEMENT AND OTHER ACTORS

Before planning an RASB or risk-reduction action, it is essential to understand what information is already being collected, what activities are already being carried out and what is planned in order to identify where there is a gap where the ICRC or the National Society can add value.

Before assessing the role and capacity of other, non-Movement, actors, it is vital to assess the existing capacity of the ICRC and National Society and know what other Movement activities are ongoing or planned. By understanding what is in place or being planned, those responsible for planning the RASB activities can ensure the activities are

⁵¹ Information ecosystems are complex adaptive systems that include the information infrastructure, tools, media, producers, consumers, curators, and sharers. They are complex organizations of dynamic social relationships through which information flows and changes. Through information ecosystems, information appears as a master resource, like energy, the lack of which makes everything more difficult.

⁵² T. Susman-Peña, *Why Information Matters: A Foundation for Resilience*, Internews, May 2015: <http://www.cdacnetwork.org/tools-and-resources/i/20150304132547-0u2yb>, accessed 13 February 2019.

⁵³ See for example: <https://medialandscapes.org/>.

fully integrated in the overall Movement's response. This begins with incorporating the question of weapon contamination in existing assessment procedures and ensuring weapon contamination is addressed in the Safer Access Framework context and risk assessment as well as in any planned or ongoing emergency assessment or vulnerability and capacity assessments. This joint analysis as part of the transversal approach is essential if it is to be followed up with effective integrated programme design. Interventions could be specifically designed to reduce the risk of weapon contamination and to facilitate safer behaviour, or they could be modified or expanded (in terms of target population or geographical area) in order to incorporate additional people and communities affected by weapon contamination.

Once the Movement's capacities have been assessed, it is then essential to assess the capacities of other actors. Relevant non-Movement stakeholders include local, national, regional and international actors. Local and national actors include local and national authorities such as government departments (health, education, etc.), the emergency services, civil society organizations and the weapon-affected communities themselves. Regional actors are those organizations that work on one continent or specific group of countries on a variety of issues, such as the Organization for Security and Co-operation in Europe (OSCE). International actors are UN agencies and international NGOs. A detailed overview of all actors that deal with landmines and ERW is outlined in the chapter on mine action actors in the ICRC's *Weapon Contamination Manual*.⁵⁴ When it comes to small arms and light weapons, shelling or CBRN hazards, other actors will be involved.

In many cases the ICRC or National Society will be one of the first actors present before a coordination mechanism exists. In such cases, it is important to find out which other national, regional or international actors are doing or planning risk-mitigation activities and when, and to liaise accordingly to ensure that there is no duplication of effort, that no conflicting information is disseminated and that activities are prioritized according to need.

Assessing the role of other actors can also be done through a formal coordination mechanism if one has been established (by the government or the UN, for example). This may be a general humanitarian coordination forum and/or a MACC; both are good forums to gather and share information and coordinate activity. If there is a MACC, there may also be national mine action standards, with which weapons related RASB activities should comply.⁵⁵

A detailed overview of the mine action coordination management tool, coordination mechanisms and coordination structures is given in the ICRC's *Weapon Contamination Manual*.⁵⁶

⁵⁴ See Book 1 ("Weapon Contamination Environment") of *Weapon Contamination Manual* (see note 23 above).

⁵⁵ Note that these guidelines were written in accordance with the International Mine Action Standards (IMAS). If there are IMAS-based national mine action standards in the country in question, then these should also be complied with.

⁵⁶ See Book 1 ("Weapon Contamination Environment") of *Weapon Contamination Manual* (see note 23 above).

2.6 ANALYSING AND EVALUATING THE RISK

Through an analysis and evaluation of the data gathered, the different target groups can be plotted on a risk matrix for purposes of prioritizing both RASB activities and other risk-mitigation activities where applicable. The risk-assessment process uses informed but subjective judgement in assigning the values for likelihood and impact. It is best done in collaboration with other colleagues and stakeholders to ensure that all known factors have been taken into consideration and that the assessment is therefore evidence-based and as accurate as possible. More details on the risk-assessment procedure are provided in Annex A.

2.6.1 ANALYSING THE POTENTIAL SEVERITY OF THE IMPACT

After the hazards have been identified and mapped, the potential severity of their impact can be scored according to pre-defined scoring criteria ranging from negligible to catastrophic, as given in the risk matrix example in Figure 3 above and the examples in Annex A. These types of matrices are used to assess the potential impact of weapon contamination on staff and volunteers, operational continuity and the civilian population. It is advisable for this to be done in conjunction with a conventional-weapon or CBRN specialist, who could be provided by a relevant authority or by the ICRC in order to support a delegation or a National Society where appropriate and upon request.

2.6.2 ANALYSING THE LIKELIHOOD OF THE RISK EVENT

Once the hazards have been identified and their potential severity estimated, the likelihood of an incident should be assessed.

This will depend on:

1. exposure to the hazard
2. the occurrence of a hazardous event
3. possible ways of avoiding or limiting the harm.

This information should be obtained during the assessment stage described in this chapter. It will be based on an understanding of the frequency of incidents, the existing level of risk awareness, and existing attitudes and behaviour in hazardous situations. All this information, which is collected during the assessment and identifies the vulnerability of staff, operations and the civilian population, will be considered when assessing the likelihood of an incident.

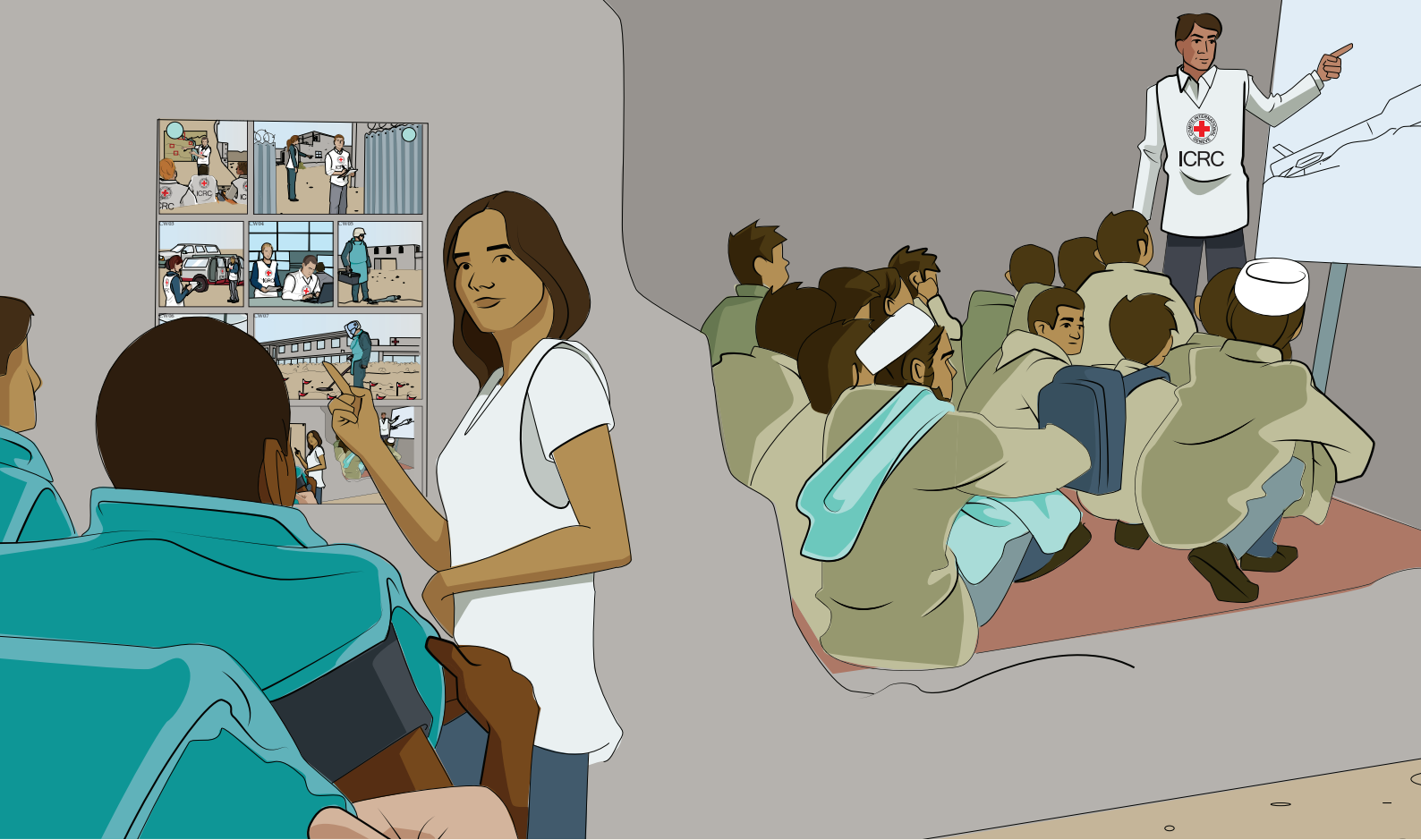
The likelihood of a given event (or incident) can be scored using scoring criteria ranging from 'very unlikely' to 'very likely', as shown in the three risk matrices (for staff, operations and populations) in Annex A. It is advisable for this to be done in conjunction with other colleagues and stakeholders who have participated in the assessment process.

2.6.3 CONFIRMING THE RISK CATEGORY

In the previous two steps, the likelihood and severity of the risk are assessed and plotted on the risk matrix, where their potential impact is categorized as high, medium or low. The risks should be assessed separately for staff, operations and the civilian population.

With all the information collected during the assessment, it is advisable to discuss it with informed but impartial colleagues and/or other stakeholders and agree on the risk categorization in the risk matrix, the priority target audiences and the priority activities to be carried out. This is especially important if the other risk-mitigation activities aimed at promoting safer behaviour will involve a number of other departments or organizations, as their buy-in will be required in order to implement a properly integrated response.

The next stage is to plan the risk-mitigation activities. Chapters 3 and 4 focus on designing and implementing RASB interventions.



CHAPTER 3

**INCREASING
RISK AWARENESS
AND PROMOTING
SAFER BEHAVIOUR**

The aim of all RASB interventions is to reduce both the likelihood of the risk associated with weapon contamination and the severity of the impact or consequence associated with this risk. This chapter focuses on communications-based interventions aimed at reducing this risk by raising awareness of the risk and promoting safer behaviour.

3.1 PLANNING THE INTERVENTION

Managing RASB interventions involves analysing, planning, implementing and monitoring/controlling the process. Once the data have been gathered and the assessment conducted, the target groups will have been defined and planning can commence. RASB interventions should be planned in accordance with existing planning processes, which can vary by organization.

3.1.1 IDENTIFYING OUTCOMES AND INDICATORS

One particularly useful planning tool for behaviour change initiatives is the Theory of Change.⁵⁷ It may be useful to start the planning stage by developing a theory of change, together with any relevant stakeholders. The aim will be to determine which outcomes are required and which activities need to be implemented in order to change people's behaviour and increase their resilience to weapon contamination. An example of a theory of change for an RASB intervention is given in Annex G.

All planning processes should clearly specify the indicators that will be used to assess the success of the intervention during monitoring. Indicators should be developed for the overall impact or general objective of the intervention (i.e. a reduction in the number of casualties) as well as for the outcomes or specific objectives (e.g. the percentage of personnel or civilian population whose knowledge of safer behaviour has increased, and the extent to which people are behaving safely or demonstrating increased resilience). Output indicators, such as the number of sessions delivered or the number of leaflets distributed, also need to be developed for project management purposes but cannot be relied upon alone as proof of a successful intervention.

Indicators for monitoring increased resilience should be developed at the planning stage, and the data collected on knowledge, attitudes and practice during the assessment phase should be used as a baseline against which to measure the effectiveness of the RASB intervention. Examples of impact, outcome and output indicators for measuring the success of an intervention are given in Annex G.

3.2 RISK-AWARENESS AND SAFER-BEHAVIOUR MESSAGES

3.2.1 DEVELOPING MESSAGES

Following the analysis and planning phases, the RASB messages can be developed. Messages to be communicated depend on the identified target audiences, what they already know or believe, the safer behaviour to be promoted and the factors likely to influence target audiences to adopt the desired behaviour. Messages should be culturally, linguistically and socially appropriate (in line with the AAP approach⁵⁸) and incorporate any official key messages where appropriate.

⁵⁷ For more information on the Theory of Change, see www.theoryofchange.org.

⁵⁸ ICRC, *Accountability to Affected People: Institutional Framework*, ICRC, Geneva, 2019.

Messages should always be positive and reinforce positive behaviour, as people need to feel that they can take action and that by taking action they can improve their own and their families', communities' or colleagues' lives. Messages do not need to be short, but they should be clear, identify specific actions to take and always state where to find additional information and assistance.⁵⁹

3.2.2 MESSAGE CONTENT

Messages and how they are delivered will be slightly different if they are aimed at Movement staff or at the civilian population. In addition, they must always be tailored to the knowledge, attitudes and behaviour of the target group. That said, there is still some generic content to include in any risk-awareness and safe-behaviour message that applies to all audiences and all weapon-contamination scenarios. This includes (but is not limited to) the following:

- knowing potential hazards and their impact
- signs of a conventional weapon or CBRN hazard
- behaviour to adopt in order to reduce the likelihood of an incident and/or the severity of the impact from the hazard
- developing other solutions for reducing risk (how to self-assist)
- where to get more preparedness information and/or assistance
- what to do if exposed to a hazard (with a selection of scenarios)
- who to report to if exposed to a hazard.

Messages should be tailored to the specific context and environment and to the target groups that are most at risk. The focus should be on promoting safe behaviour that is appropriate to the specific situation and in keeping with people's existing knowledge. The impact of weapon contamination in the two main environments – urban and rural settings – differs, and the behaviour to adopt may vary accordingly.

Target groups can be divided by (inter alia):

- geographic area
- age and gender
- ethnic, religious or linguistic group
- profession/source of income
- other socio-economic groupings, such as parents
- specific needs (e.g. people with disabilities).

It is important to understand and take into account what the target groups already know or believe. If the RASB message contradicts what they think or believe, then the message may not be taken seriously if it is not sufficiently justified.

Once the target groups are identified, the messages should address the specific needs of each group. Messages should not be patronizing or assume a lack of knowledge, and they should not tell people not to do something without giving them viable alternatives. The behaviour being promoted in the message must be feasible. There is no point in promoting behaviour that is inappropriate for economic, political, social or religious reasons.

⁵⁹ See note 16 above.

Messages for children should be as clear and simple as possible, using language and images they will understand. Technical details of weapons should never be mentioned when addressing children or youth, as this may spark their interest rather than deter them. It is important to differentiate between young children, pre-school-age children, school-age children, older children and teenagers, and to design the messages and communication channels accordingly. In some instances, it can be good to engage children to communicate risk messages to other children, using a recognized peer-teaching approach.⁶⁰

The components of the Movement may become involved in addressing weapon contamination in several scenarios: situations of armed conflict, other situations of violence, areas prone to conflict, post-conflict situations, and peace-time situations where CBRN hazards may pose a risk. In the following sections, RASB messages are provided for each of those scenarios, but they will need to be adapted in view of the specific environments.

All messages should be adapted to the specific context (including the hazard, environment and target audience) based on the information gained during the assessment stage outlined in Chapter 2. Messages should also respect the Fundamental Principles of the Red Cross and Red Crescent Movement (humanity, impartiality, neutrality, independence, voluntary service, unity and universality).

3.2.2.1 Messages during armed conflict

In situations of ongoing armed conflict, the greatest risk to Movement personnel and civilians is being unintentionally caught in the line of fire from gunfights, shelling and bombardment. Landmines and ERW also pose a risk, as do CBRN hazards either from the use of non-conventional weapons in the conflict or from CBRN agents being accidentally released from facilities where CBRN hazards are located. Knowing the potential hazards means recognizing the signs of weapon contamination during a conflict. Such signs include people deserting the streets (knowing trouble is coming); the sound of shooting, shelling or bombing; warning sirens; smells; and clouds of smoke.

Being prepared means being familiar with any munitions stores or CBRN hazards in the area, as well as any safe areas or evacuation plans that may exist in the event of an emergency. It also means developing solutions for reducing risk, which may include establishing safe areas in buildings (at home, work, school, etc.) and identifying safe places to seek shelter before travelling anywhere. The ICRC has developed technical guidance on how to passively enhance the physical security of its premises in the field.⁶¹

Messages should include specific information on what to do in the event of bombardment, shelling or shooting. Specific messages in the event of exposure to a hazard include:

- Once fighting, shelling or bombing is heard or detected, react immediately and seek immediate cover.
- If outside, seek cover in the nearest building.

⁶⁰ See, for example, Child to Child Trust, *Child-to-Child Mine Risk Education Activity Booklet*, Child to Child Trust, London, 2014: http://www.childtochild.org.uk/wp-content/uploads/2014/10/Child_to_Child-Mine_Risk_Education.pdf, accessed 13 February 2019.

⁶¹ ICRC, *Passive Security – Technical Guidance for ICRC Premises in the Field*, ICRC, Geneva, (2017).

- If outside and no cover can be found, adopt a safe body position, which depends on the type of hazard:
 - If you are at risk of crossfire from small arms or light weapons, you should drop to the ground quickly and lie as flat as possible while attempting to identify the source and direction of the shooting and locate a safe area nearby. If safe to do so, quickly make your way to the safe area whilst staying as low as possible.



- If you are at risk from bombing, shelling or heavier weapon fire, the greatest risk is from blast fragmentation (shrapnel and other debris) and you should protect your vital organs. The best position is to lie on your back (to protect your organs from the back), holding your head with your arms bent and elbows covering your ears, bringing your knees to your chest (to protect your organs from the front) and opening your mouth to exhale in order to avoid excessive internal pressure that could damage your lungs (see below). If you are unable to hold this position, lie flat on the ground (the recommended position for being caught in crossfire), bearing in mind that your vital organs will not be so well protected.⁶²



- If inside, move to a designated shelter, safe area or basement if available or otherwise to a safe area on the ground floor between two solid walls or beneath a concrete staircase.
- Stay away from windows and other glass and mirrors.
- Wait until the shelling/fighting has ceased before leaving your cover to seek information on the situation.
- Messages on CBRN hazards in conflict situations will be the same as in other situations (see Section 3.2.2.5).

3.2.2.2 Messages during urban armed violence and other situations of violence

In other situations of violence, such as urban armed violence, the greatest hazards are crossfire and stray bullets from small arms and light weapons. Again, the main messages are:

- Knowing the potential hazards means recognizing the signs of weapon contamination during the violence or conflict; these signs can include people deserting the streets (knowing trouble is coming); the sound of shooting, shelling or bombing; warning sirens; smells; and clouds of smoke.
- Being prepared means being familiar with the areas where violence is most likely to erupt and avoiding them. It also means not getting involved in any arguments and keeping yourself out of trouble.

⁶² As recommended by Dr Mauro Dalla Torre, ICRC WeC Medical Advisor.

- Being prepared involves developing solutions for reducing risk, such as establishing safe areas in buildings (at home, work, school, etc.) and identifying safe places to seek shelter before travelling anywhere. It can also mean being familiar with any ‘no-go’ or ‘off-limit’ areas, munitions stores and CBRN hazards in your area along with any safe areas and evacuation plans that may exist in the event of an emergency.
- It is important to know what to do if violence erupts in your vicinity. The main message is to seek immediate cover in the nearest building and if no cover can be found during small arms fire, to drop to the ground quickly and lie face down. Cooperate fully with the armed actors and ensure you are not part of the argument/situation causing the violence.
- Messages relating to CBRN hazards in urban armed violence and other situations of violence will be the same as in other situations (see Section 3.2.2.5).

3.2.2.3 Messages in post-conflict situations

In post-conflict situations, after hostilities have ceased, mines and ERW represent the greatest weapon-contamination risk.

Messages should include:

- An overview of the conventional-weapon hazards (e.g. mines/ERW and stockpiled explosive hazards) and CBRN hazards in post-conflict environments and their potential impact on Movement staff, operations and the civilian population.
- Signs of weapon contamination and how to recognize dangerous areas to avoid (official and unofficial warning signs).
- Asking local people if they know where is safe and where is dangerous, and finding access maps on known contamination.
- Staying away from overgrown areas, military bases and equipment, trenches, other former combat areas, abandoned houses or places with dead animals. You are unlikely to see the mines and tripwires themselves, so it is essential to be aware of the indicators of mine/ERW contamination and to avoid the areas likely to be contaminated.
- Stay on well-used paths and never touch any suspicious objects (do not pick them up, kick them or throw anything at them).
- Know how and where to report any known explosive ordnance or suspected minefields (e.g. to the relevant authorities).
- Know what to do if you find yourself in a minefield or if someone else steps on a mine (do not move, immediately call for help and wait for help to arrive).
- The messages relating to CBRN hazards in post-conflict situations will be similar to those used in other situations (see Section 3.2.2.5).

3.2.2.4 Messages in conflict-prone contexts

In conflict-prone contexts, the message is generally a combination of the messages for conflict/armed violence and for post-conflict scenarios. It is often harder to sustain the message in conflict-prone contexts, as you cannot constantly engage in ‘emergency risk awareness’ without creating awareness fatigue, where people get used to hearing the same messages over and over. As with post-conflict contexts, you need to continue to maintain safe behaviour around landmine/ERW contamination, as this contamination will continue to be a hazard for some years to come; at the same time, you still need to remain prepared and ready to respond should a conflict or violence break out. This situation also presents an opportunity to spend time improving contingency plans and better preparing for how to respond to shelling and shooting should a conflict or violence break out again. The CBRN messages will be similar to those used in other situations (see Section 3.2.2.5).

3.2.2.5 CBRN messages

The key messages for CBRN emergencies are similar to the ones for all other scenarios. The most significant differences between each context are the type of hazard, the type of warning system and the designated response.

In terms of preparedness, it is important to:

- know the CBRN hazards in your area; for example, if there are any nuclear facilities or sites where hazardous and toxic substances are stored or used (e.g. factories, treatment plants, hospitals) and may be released inadvertently in the event of conflict/violence or a natural hazard
- familiarize yourself with existing warning systems and preparedness plans in your area
- know who the CBRN responders in your area are (civil defence, army, police, firefighters, etc.).

What to do if you are exposed to a hazard:

- Leave the area immediately perpendicular to the wind direction and listen to any instructions given by the relevant authorities.
- If you are outside an exposed area, move further away. Do not enter the contaminated area to get family or belongings.
- If you are in a building, and there is obvious contamination outside the building, it will be safer to stay inside than to leave the area. Make sure you go to a higher floor (NOT the basement in a CBRN scenario, as most chemical agents collect lower down, and NOT the top floor either if shelling is taking place). In this case, if it is not a pre-prepared CBRN safe area or shelter, try to seal the doors, windows, cracks, vents, fireplaces and other openings; have a means of information at hand (radio/TV, phone), and take as much food and water as possible.

If you fear you may be contaminated:

- Decontaminate yourself as soon as possible, before you enter a safe area.
- Cut off your clothes so they don't go over your head, and make sure you do not touch the outside of the garment.
- Dispose of your clothes in a double sealed bag. Put the bag as far away from you and others as possible. Wear new clothes.
- Wash your skin and hair thoroughly with tepid water and soap if possible, rinsing eyes and ears with bottled water, and blow your nose. Do not use warm water, as it facilitates contamination on the skin, and avoid water that is so cold as to cause hypothermia. Scrape or wipe contamination off the skin if no water is available.
- Pay extra attention to cleaning your mouth, nose, eyes and ears.
- Following decontamination, put on new or clean clothes.
- Make sure the food and water available to you are not contaminated.
- Seek medical attention as soon as you can.
- Get medical advice on how to maintain good hygiene practices after decontaminating.

3.2.2.6 Messages for Movement personnel who need to access weapon-contaminated areas

All Movement personnel working in countries that are affected by conventional weapons or CBRN hazards should be trained in the generic safety messages outlined in Section 3.2.2 above after the messages have been tailored to their specific context. There are safety and security guidelines for humanitarian volunteers in conflict areas; these apply to all Movement personnel.⁶³

⁶³ D.L. Roberts, *Staying Alive: Safety and Security Guidelines for Humanitarian Volunteers in Conflict Areas*, ICRC, Geneva, 2006.

In general Movement personnel should avoid entering weapon-contaminated environments. However, in some cases, Movement personnel or other emergency services staff may need to enter weapon-contaminated areas to conduct their work. The criteria for deciding whether to enter a contaminated area should be agreed in advance between the management and the personnel. Whilst it is specific to each context and organization, in general, personnel should never enter areas with ongoing shooting or shelling, areas likely to be mined or areas that pose an immediate chemical or biological hazard.

Movement personnel may need to enter an area where shooting and shelling have ceased and where explosive remnants of war are likely to be found. If they cannot be accompanied to the site by a technical specialist, they should be properly briefed by technical specialists before they travel to the site on how to identify the specific hazards they are likely to encounter. At a minimum, they should take the following steps:

1. First, establish a control point (CP) in a known safe area; the CP must not be vulnerable to attack.
2. Make a visual assessment to see if there are any explosive hazards (mines, IEDs or ERW).
3. Without touching any item, conduct a visual search of the area within at least a 30–50m⁶⁴ radius of the CP.
4. Do not enter buildings unless they have been declared clear.
5. Ensure that non-essential staff stay at the CP.
6. Try and work in pairs – one person should observe.
7. Make sure everyone knows what to do if an explosive hazard is located:
 - Do not touch.
 - Exit along the same route taken in.
 - Place a marker near the item on hard ground.
 - Inform the team leader.
 - Stop all other work in the immediate area.
 - Apply adequate safety distances.
 - Draw a sketch of what was found, including size, colour and shape.
 - Draw a sketch of the route taken to the hazard.
 - Cordon off the area if required.
 - Request an EOD response from the relevant authority or organization in charge.
 - Do not enter a minefield for any reason.

3.3 SELECTING THE COMMUNICATION CHANNELS

Communication channels are ways or methods of communicating messages. Communication can be one-way or two-way. In one-way communication, information is transferred in one direction only, from the sender to the receiver (i.e. the target group) without any opportunity for the receiver to give feedback to the sender. In two-way communication, information is sent to and feedback is sought from the target group. In other words, there is a dialogue.

An understanding of the communication eco-system should have already been achieved during the assessment stage (Chapter 2). The selection of the most appropriate communication channel will be based on the communication assessment and should take into consideration cultural factors, literacy rates, time available, access to mobile

⁶⁴ The appropriate distance from the CP to assess depends on the type of hazard and the environment. This should be determined by a technical specialist and included in the briefing before travelling to the site.

phones and the internet and trust in potential community partners. Understanding how specific target groups and communities access the information they need should be a prerequisite to determining which communication channel is the most appropriate in any given context.

When looking at mass media, such as print, TV and radio, it is important to know which ones are used most by the target groups. The same is true for social media platforms. Where detailed data by target group may not be available, information on the number of users of platforms including Twitter, Facebook and WhatsApp by country should be accessible. This information is generally available from communications specialists. When looking at interpersonal communication, it is important to be aware of who is known and trusted by the target groups, so that the most appropriate community partners can be identified to disseminate messages. This information should have already been gathered through focus group discussions or through dialogue with the target population itself.

The best way to influence behaviour change through messages is to disseminate the messages through numerous communication channels. Mass media (broadcast and print) may be the best way to disseminate RASB messages quickly and to as many people as possible, which is particularly important in the emergency phase. However, safer behaviour is more likely to actually be adopted if the messages are reinforced through two-way communication, ideally with people who are known and trusted, such as community partners.

A list of potential channels for communicating RASB messages is provided in Annex E. It should be remembered, however, that the selection of the most appropriate channels will be based on the communication assessment done in the assessment stage. For more information, see the *Red Cross Red Crescent Guide to Community Engagement and Accountability*.⁶⁵

3.4 DESIGNING THE COMMUNICATION MATERIALS

After selecting the messages that need to be delivered and the appropriate communication channels, you will need to design the communication materials that will accompany the message (if the main channel is face-to-face communication or community dissemination) or be used to convey it (e.g. via the internet or television or through printed texts, leaflets or posters). As with messages, materials always have to be adapted for the target audience in terms of factors such as age, gender, language, literacy level and socio-economic situation. The following section outlines some principles that apply to designing these materials.

3.4.1 PHOTOS

- Never show real people who are dead or injured.
- Do not portray people with disabilities in a negative way.
- Never show people handling any weapons, mines, ERW or other suspicious items.
- Do not show people demonstrating unsafe behaviour.
- The pictures, photos and messages should always reinforce positive safe behaviour.

⁶⁵ A Red Cross Red Crescent Guide (see note 50 above).

3.4.2 DESIGN AND LAYOUT

- Create storyboards before finalizing your layout.
- Generally, only present one message per illustration.
- Make materials interactive wherever possible.
- Arrange messages logically and sequentially.
- Use bright and friendly colours.
- Use illustrations to explain the text.

3.4.3 ILLUSTRATIONS

- Use simple illustrations.
- If you use cartoons, make sure the colours of mines/UXO and warning signs are accurate.
- Use familiar objects and situations.
- Show the scale of objects by juxtaposing them with something familiar.
- Make sure illustrations are understandable even if people do not read the text.
- Make sure any symbols that are used, like mine warning signs, are understood.
- Include 'official' and 'unofficial' warning signs as needed.

3.4.4 TEXT

- Use simple messages and phrases.
- Use as little text as needed to get the message across.
- Use positive messages and promote safer behaviour.
- Ideally use only one language in the material. While two languages may be used if that is common practice in that country/region and if the text is well-presented and clear, it is preferable to print each language separately.
- Repeat important messages.
- Make sure your font is easy to read for people with poor eyesight or limited reading ability.
- Avoid the following text colour combinations: green and red, green and brown, blue and purple, green and blue, blue and grey, green and grey, and black and grey. People who are colour blind will have difficulty reading texts in these colour combinations.

3.5 TESTING THE MESSAGES AND MATERIAL

All messages and material should be tested or reviewed in draft form before they are finalized. The point of testing is to ensure that the messages and materials are:

- understandable (right tone)
- socially acceptable
- relevant
- realistic
- persuasive.

3.5.1 WHO SHOULD TEST THE MATERIALS?

Messages and material should always be reviewed by:

1. MRE, EOD, or demining experts, to ensure the information and messages are technically correct
2. communications specialists, to ensure the messages are clear, easily understood, logical and likely to promote the intended behaviour
3. the target audience, to determine if the messages and images are clearly understood and relevant to their situation (e.g. if the audience is children, the materials should be reviewed by children).

The target audience can be broad or very specific. If the target audience consists of young male cattle-herders of a specific ethnic group, for example, then testing should be done among this group of people.

3.5.2 HOW TO TEST THE MATERIAL

Testing may be done at various levels of sophistication with different timeframes and costs. It should be conducted as swiftly as possible in emergency situations, but it should never be eliminated for the sake of expediency, as misleading or inaccurate messages and material can endanger people's lives and promote negative attitudes and behaviour.

Ideally it should be done through a combination of focus group discussions, one-on-one discussions and blind tests (where people are shown the material without any introduction and asked to state the key messages about what they should do).

3.5.3 QUESTIONS TO ASK THE TARGET AUDIENCE

1. What have you read; what is the text telling you?
2. What do you think about the message? Is there something you like or dislike about the message?
3. What is not clear to you; is there something you don't understand?
4. How would you improve the text?
5. What do you see in the pictures here?
6. What message are the pictures giving you?
7. What do you think about the message?
8. Does the message make sense to you, and is it appropriate?
9. Does the message in the text match the message in the pictures?
10. Do you like the pictures? Why or why not?
11. How could the pictures be improved?

3.5.4 REVISING AND RE-TESTING THE MATERIAL

It is important that the messages and material be revised and then retested and that they not be finalized until they are fully understood and accepted by the target audience. The materials should always be approved for release by the communications team and technical advisory team that provided input.

Testing should be repeated after the messages and material have been disseminated in order to get feedback on how the information was received and how people reacted to these messages. This can be considered a form of monitoring the impact of the messages, and it should be conducted on a regular basis to see if there are gaps or changes in people's behaviour. This topic is addressed in more detail in Chapter 5.



CHAPTER 4

FACILITATING SAFER BEHAVIOUR

4.1 CHANGING THE BEHAVIOUR OF PEOPLE AT RISK

A basic understanding of behaviour change theory can help in the process of designing interventions that will effectively change behaviour. Figure 4 below shows a simple behaviour change model used by public health specialists to encourage safe or healthy behaviour and thus reduce the spread of preventable diseases such as malaria, HIV and lung disease. The same model can be applied to changing the behaviour of those at risk from weapon contamination.

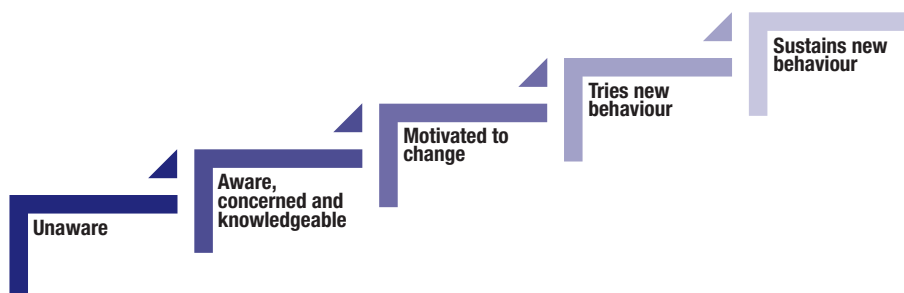


Figure 4: Stages in behaviour change

Knowing about the risk and how to behave safely is no guarantee that safer behaviour will be adopted. There are many potential barriers to behaviour change, and Annex F provides guidance on how to analyse these barriers in the assessment phase and come up with strategies to overcome those barriers through an RASB intervention.⁶⁶ Many of the barriers to behaviour change can be overcome through modifications to the RASB communication itself, i.e. by amending the messages and/or the means of communicating them (as addressed in Chapter 3).

However, not all barriers can be overcome through communication. Where people perceive the negative consequences of adopting safer behaviour as stronger than the positive ones, they will not adopt it. For example, the need for water or fuel or to carry out their livelihood may cause people to enter weapon-contaminated environments. They know they are taking risks, but they consider the risk of having no fuel or water to be greater than the risk posed by weapon-contamination hazards. Integrated multi-disciplinary programming can help people to address these negative consequences (for example by providing alternative water or fuel sources) so that people are able to behave in a safer manner.

4.2 INTEGRATED PROGRAMMING TO FACILITATE SAFER BEHAVIOUR

People affected by weapon contamination stand to gain the most when the interventions are well-coordinated within and among the components of the Movement and operationally consistent thanks to a joint problem analysis. This is referred to as the transversal approach.⁶⁷ In terms of staff safety, this means working with security personnel. For the civilian population, it means working with other departments that carry out prevention, protection and humanitarian assistance activities.

⁶⁶ World Bank, *Theories of Behavior Change*, World Bank, Washington D.C., 2010.

⁶⁷ Policy Document 4.9 on the ICRC's assistance policy, adopted by the ICRC Assembly on 29 April 2004.

In addition to the communication activities aimed at raising awareness and promoting safer behaviour, as detailed in Chapter 3, many other Movement activities can facilitate the adoption of safer behaviour and reduce the risk stemming from weapon contamination faced by staff, volunteers and affected communities. In some cases, external actors may be better positioned to conduct interventions that will facilitate safer behaviour.

For affected communities, the objective is to help people to stay away from hazardous areas while still being able to safely access essential services (such as sanitation, health care and communications) and commodities (such as food, water, electricity, and shelter supplies).

Identifying the requirement for broader Movement or external interventions to facilitate safer behaviour and reduce the risk from weapon contamination should be incorporated into the initial assessment and planning process. Integrated interventions should be based on an integrated assessment, analysis and consultation and carried out jointly with other departments, other components of the Movement and other actors (as highlighted in Chapter 2).

All RASB interventions should aim to reduce the likelihood and severity of incidents resulting from weapon contamination. Interventions to reduce the frequency of hazardous events include prevention activities (such as negotiating with armed actors, providing technical advice to authorities on how to make CBRN sites or conventional munitions storage sites safer, and facilitating technical assistance such as surveys, marking or EOD) and activities that increase people's ability to avoid or limit the harm (through such things as safe access to shelter, water and income-generating activities). Interventions to reduce the severity of potential incidents include applying passive security measures and providing first-aid training for conventional-weapon injuries and decontamination procedures for CBRN incidents.

4.2.1 EXAMPLES OF FACILITATING SAFER BEHAVIOUR

Specific interventions will be tailored to the needs of Movement personnel and people from the affected communities. Some examples of interventions designed to facilitate safer behaviour are given below.

4.2.1.1 Facilitating safer behaviour by Movement staff and volunteers

Organizational staff safety and security policy and guidelines should set out what sort of assistance is provided to Movement staff and volunteers to help them to behave safely and protect themselves from weapon contamination. The organizations' management and policies also specify the tolerable level of risk to staff members in accordance with the organizations' duty of care towards all staff and volunteers in hazardous areas.

In addition to providing training on safety messages and hazard-mapping, actions by the National Societies or ICRC delegations can include:

- providing communication equipment to staff and volunteers to enable them to contact the office and call for assistance if required
- providing PPE (e.g. CBRN protective equipment) and training on how to use it
- increasing the passive security of buildings, such as by creating safe areas and attaching blast-proof sheeting to windows⁶⁸
- providing first-aid training on injuries from conventional weapons and CBRN hazards
- providing training on decontamination procedures for CBRN incidents.

⁶⁸ Guidance on how to do this can be found in *Passive Security* (see note 61 above).

More detailed information on staff safety and security is provided in the ICRC's *Safety and Security Guidelines for Humanitarian Volunteers in Conflict Areas*.⁶⁹

4.2.1.2 Facilitating safer behaviour by people in weapon-contaminated communities

Interventions that help people to behave safely in weapon-contaminated areas and reduce the risk of weapon contamination in their day-to-day lives should be designed jointly by the RASB staff member, the people from the affected communities themselves, Movement colleagues with the requisite expertise, or partner organizations/authorities. The following list provides some examples of safer behaviour interventions for civilian populations that are not carried out by WEC RASB staff but by Movement colleagues. Note that the need for such activities should be identified in the assessment stage, as outlined in Chapter 2.

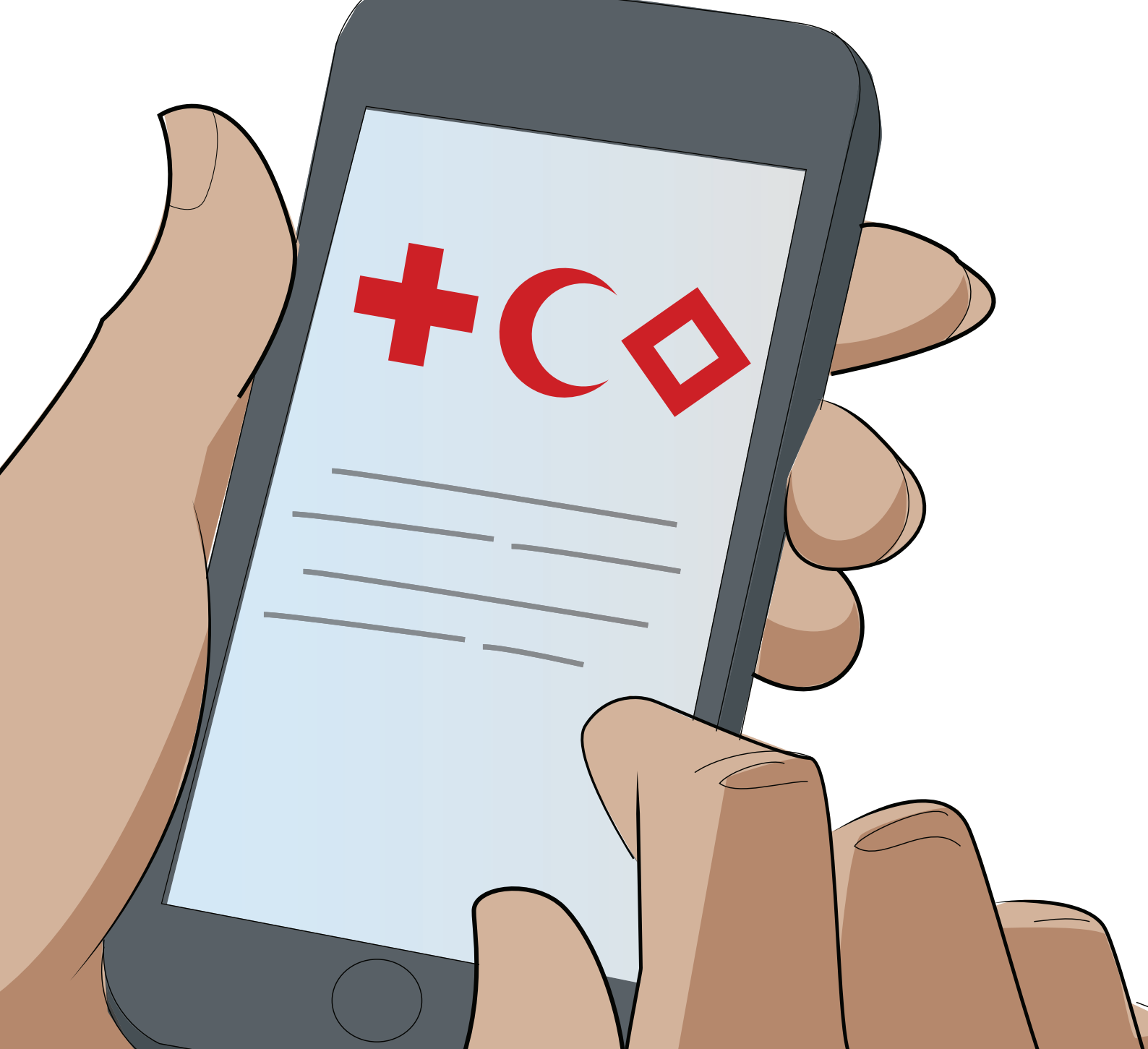
- Providing fuel or restoring a fuel supply, to prevent people from gathering fuel in contaminated areas.
- Providing water or restoring a safe water supply when water access is blocked by conventional-weapon contamination or a CBRN hazard.
- Granting microloans or providing training and equipment for alternative income generation in places where livelihoods are threatened, in order to reduce the risk associated with gathering scrap metal or entering dangerous areas to forage.
- Providing food or the training and equipment needed to grow food in safe areas, in places where existing farmland is contaminated by conventional-weapon or CBRN hazards.
- Providing shelter in places where access to accommodations is hindered by conventional-weapon or CBRN hazards.
- Installing sanitation facilities to provide safe alternative options where people would otherwise have to enter mine contaminated areas or exit a shelter during shelling (e.g. in Ukraine, portable toilets were installed at checkpoints and peepoo bags provided for use in school shelters).
- Providing radios or other communication equipment – and training on how to use them – to communities where there is poor access to information.
- Providing internet access or mobile phone charging facilities in areas without power so that people can stay connected.
- Implementing passive security measures (such as blast-proof sheeting) in buildings or providing building materials (and building expertise where needed) for the construction of safe areas. Detailed guidance on how to do this is given in the ICRC's passive security technical guidance.⁷⁰
- Providing CBRN protective equipment and training on how to use it.
- Sharing and disseminating information on people's rights and providing help to access the government services to which they are entitled, where appropriate (e.g. in Colombia, war victims received assistance with access to free health care).
- Negotiating with parties to conflicts for arms-free areas in communities.
- Advocating for parties to a conflict to comply with international humanitarian law (e.g. not laying anti-personnel landmines).
- Creating safe playgrounds for children, so they will not play in weapon-contaminated areas.
- Conducting technical EOD or CBRN interventions, such as those described in Section 1.5.

The ICRC's *Weapon Contamination Manual*⁷¹ provides examples of other activities that can also help to reduce risk.

⁶⁹ See note 62 above.

⁷⁰ See note 61 above.

⁷¹ See Book 2, Chapter 4 ("Strategies for Intervention") of *Weapon Contamination Manual* (see note 23 above).



CHAPTER 5

MONITORING AND REVIEW

Monitoring refers to an ongoing process in which data are systematically collected and used to assess progress towards the defined objectives and how much of the budget has been used.⁷² Monitoring is an essential element of any effective quality management system and can be found in strategic, operational, project, programme, safety, environmental and results-based management systems.⁷³

The risk from weapon contamination should be regularly monitored and re-assessed to make sure that the RASB activities that are being implemented are still relevant.

The RASB activities themselves also need to be monitored to ensure that they are being effectively implemented in accordance with the plan, that they continue to meet the indicator targets established in the planning stage, and that they are still relevant for the target audience.

The task of monitoring and reviewing programmes and interventions has to be factored in at the design stage with sufficient resources allocated to cover these activities. There should also be sufficient resources and budgetary flexibility in the event the monitoring and review process reveals the need to modify a programme or intervention.

5.1 RISK MONITORING

The risk-management approach requires a risk re-assessment that is conducted periodically (every 3–6 months) or triggered by a change in circumstances or an adverse event. Monitoring should be built into the intervention from the start and draw on information gathered from interactions with the affected communities, information-sharing forums and the incident surveillance system.

Risk monitoring involves:

- re-evaluating the weapon-contamination environment (the hazard) and potential severity of impact
- re-assessing any changes to the likelihood of an incident (based on the current frequency of incidents and on factors affecting the vulnerability of staff, operations and populations, including their exposure to the hazard and their ability to avoid or limit harm).

With the results of risk monitoring, staff can update the risk category on the risk assessment matrix and check whether the groups that are being targeted by RASB activities are still those most at risk or need to be modified. Refer to Chapter 1 for information on conducting risk assessments.

⁷² OECD/DAC definition taken from: United Nations, IMAS 04.10, *Glossary of Mine Action Terms, Definitions and Abbreviations*, 2nd edition, UN, New York, 2013.

⁷³ United Nations, IMAS 07.40, *Monitoring of Mine Action Organisations*, 2nd edition, UN, New York, 20 January 2016.

5.2 MONITORING RASB INTERVENTIONS

Monitoring should also look at how effectively RASB interventions are being implemented, how relevant they are to the needs of Movement staff, operations and the communities affected by weapon contamination, and the extent to which they are contributing to the success indicators outlined in the planning and design stage.

Monitoring RASB interventions involves:

- Looking at the RASB messages and assessing whether:
 - the messages are still appropriate
 - the communication channels are appropriate
 - the messages are being understood and accepted
 - the messages are being acted upon, i.e. safer behaviour is being adopted.
- Finding out why risk-taking behaviour is taking place.
- Discovering what other risk-reduction strategies are being adopted and what other assistance may be required to facilitate safer behaviour.

These monitoring approaches are part of an ongoing process and can use some of the same tools for conducting assessments and designing interventions that were mentioned in Chapters 2 and 3. Guidance also exists on monitoring and reviewing programmes and projects within the Movement. Wherever possible, the monitoring of RASB interventions should be linked with existing organization-specific monitoring mechanisms.⁷⁴

Based on the review of the risk and the effectiveness of the intervention, the RASB interventions should be modified or amended as required. This is part of a cyclical process of assessment, implementation, monitoring and review, which should take place for all activities.

Wherever possible, monitoring and review – like assessment and implementation – should be conducted in consultation with colleagues from various departments and other components of the Movement, as well as other actors where appropriate. This will help generate synergies and maximize the benefits of the intervention for the target population.

5.3 INDICATORS OF SUCCESS

The goal of our RASB interventions is to increase resilience to weapon contamination through behaviour change; progress in this regard is therefore what needs to be measured. It is important that the RASB intervention not be measured solely against outputs, such as the number of training sessions run or the number of leaflets distributed. Success must be measured in terms of concrete indicators dictated by the organization's broader humanitarian objectives. The indicators of success as well as how to measure them have to be agreed at the planning stage using baseline data gathered as part of the assessment.

⁷⁴ IFRC, *Project/Programme Monitoring and Evaluation (M&E) Guide*, IFRC, Geneva, 2011.

A reduction in the number of incidents and casualties caused by weapon-contamination hazards is an obvious indicator of success and can be very useful for both planning and monitoring RASB interventions. That said, this indicator must not be given too much importance when it comes to civilian populations. In conflict and immediate post-conflict situations for example, incident data is hard to obtain; furthermore, the number of reported incidents often increases – rather than decreases – during RASB interventions, but this usually has to do with improved reporting rates rather than an increase in actual incidents.

Similarly, if RASB interventions target regions where people are moving back into hazardous areas following the end of a conflict or the signing of a peace agreement, for example, then there will most likely not have been any previous incidents; any new incidents will therefore represent an increase. Similarly, people moving away from areas with a high rate of recorded incidents may also skew the figures. However, a reduction in incidents and casualties amongst Movement staff and volunteers during operations is a good indicator of success, as these statistics will be reliable.

Examples of impact, outcome and output indicators that can be used to measure the effectiveness of RASB interventions are provided in Annex G.



ANNEXES

ANNEX A: RISK-ASSESSMENT PROCEDURE

OBJECTIVE

Risk assessments serve to assess the level of risk that weapon contamination poses to Movement personnel (staff and volunteers), Movement operations, and individuals and communities affected by conventional-weapon and CBRN hazards. Risk assessments use information from the data-gathering and assessment stage (see Chapter 2) to gauge the risk faced by various groups of Movement personnel and civilians and to identify which groups are most at risk and should be given priority in RASB interventions. Risk assessments are conducted before RASB interventions but can also be run during and after them as part of the monitoring process to see if the risk has changed. A reduction in the risk category on the risk matrix can be an indicator of success (see Chapter 5⁷⁵).

APPLYING THE PROCEDURE

For Movement staff and operations, the risk-assessment procedure can be applied either generically (i.e. to cover all staff, volunteers and operations) or specifically for each team or operation. It is advisable to conduct a generic risk assessment, for all personnel in delegations, sub-delegations and regional offices, along with specific risk assessments, for those personnel and operations that are likely to be exposed to weapon-contamination hazards. For civilians affected by weapon contamination, the risk-assessment procedure can be applied generically, to cover all those living in hazardous areas, and specifically, for communities in particular regions and for different socio-economic groups (disaggregated by sex and age).

ASSESSING THE RISK OF WEAPON CONTAMINATION

The risk associated with a particular hazardous situation depends on two elements: first, the severity of harm that can result from the hazard in question; and second, the probability that an incident which causes harm will actually occur. That probability depends in turn on a combination of factors: exposure to the hazard; how often the hazardous event occurs; and possible ways of avoiding or limiting the harm. The elements of risk are shown in Figure 4 below.

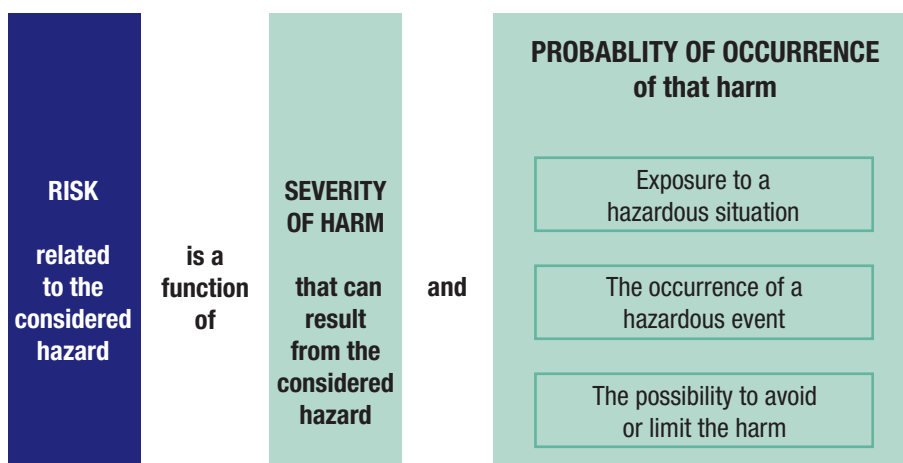


Figure 5: The elements of risk⁷⁶

⁷⁵ Note that these guidelines only refer to assessing the risk of conventional-weapon and CBRN hazards. They do not apply to any other hazards or threats posed to the organization, which may be included in a broader, organization-wide security risk assessment.

⁷⁶ International Organization for Standardization and International Electrotechnical Commission, ISO/IEC Guide 51:2014(E), *Safety Aspects – Guidelines for Their Inclusion in Standards*, ISO and IEC, Geneva, 2014.

Assessing the risk of weapon contamination involves two stages:

1. Identifying the conventional-weapon or CBRN hazard and the potential severity of its impact on:
 - Movement staff
 - operations
 - the civilian population.
2. Assessing the likelihood of the incident (given the known vulnerability of staff, operations and the civilian population).

Assessments are best done in collaboration with other colleagues and stakeholders to ensure that all known factors are taken into consideration. This ensures the assessment is as accurate as possible.

ASSESSING THE POTENTIAL SEVERITY OF THE IMPACT

The assessment of severity is based on:

- the nature of the hazard
- the environment in which it is found (e.g. urban versus rural, conflict vs post-conflict).

The potential severity of impact of an incident or risk event can be defined using established scoring criteria, which range from catastrophic to negligible as shown below.

SCORING CRITERIA FOR IMPACT	NEGLECTIBLE	MODERATE	SIGNIFICANT	SEVERE	CATASTROPHIC
Movement staff	Minor injuries requiring no medical assistance	Injuries requiring clinical care	Injuries requiring immediate pre-hospital and clinical care	Injuries requiring immediate pre-hospital and long-term clinical care	Life-changing injuries, or fatalities
Movement operations	No impact on operations	Operations continue with further risk-mitigation measures	Operations and staff limited to essential-only	Operations cannot continue, all movement stopped	Stop operations and evacuate staff
Civilian population	Minor injuries requiring no medical assistance	Injuries requiring local treatment	Injuries requiring clinical care with no long-term disability	Serious injuries requiring clinical care and long-term rehabilitation	Mass casualties/fatalities, local medical capacity overwhelmed

Figure 6: Examples of criteria to evaluate impact on Movement staff, Movement operations and the civilian population

Before the potential severity of the impact can be determined, the weapon-contamination situation must be assessed, as described in Chapter 2. It is advisable for this to be done in conjunction with a conventional-weapon or CBRN technical specialist. Such specialists can be provided by a relevant authority or by the ICRC's Weapon Contamination Unit in order to support a delegation or a National Society where appropriate and upon request.

ASSESSING THE LIKELIHOOD OF THE RISK EVENT

Once the hazards have been identified and their potential severity assessed, the likelihood of harm should be gauged. The likelihood of a given risk event (or incident) can be categorized as very unlikely, unlikely, possible, likely, and very likely. It will be assessed on the basis of:

- people's exposure to the hazard (are there any hostilities, are any CBRN agents or conventional-weapon hazards known to be present, are there allegations that conventional weapons or CBRN agents have been used, are CBRN facilities and conventional-weapons stores well managed, are there physical signs on the ground?)
- the frequency of incidents due to weapon contamination (e.g. are there any confirmed incidents or casualties?)
- possible ways people have to avoid or limit the harm (their level of knowledge of the risk and of the safe behaviour to adopt, their attitude toward the risk and toward the benefits of behaving safely, their actual behaviour in weapon-contaminated environments, and their ability to avoid or limit harm through pro-active risk-mitigation measures, such as building shelters and finding alternative routes or income-generating activities).

The information needed to measure likelihood should also be obtained during the assessment stage described in Chapter 2. It will be based on an analysis of both the incident data, in order to understand the frequency of incidents, and the assessment of the vulnerability of the staff, operations and affected civilian population to weapon contamination in view of existing knowledge, attitudes and behaviour. It is advisable for the scoring to be done in conjunction with the staff and affected communities themselves, as well as with other colleagues and stakeholders who have participated in the assessment process.

EVALUATING THE RISK AND ASSIGNING A RISK CATEGORY

The previous two steps describe how to assess the likelihood and severity of the risk. These two factors are then plotted on the risk matrix to determine the risk category, which ranges from high to low.

Not everyone is at equal risk from weapon-contamination hazards. A thorough analysis of available casualty figures, coupled with the information gathered during the assessment stage on knowledge, attitudes and practice, should indicate who is most vulnerable to the risk of weapon contamination. This is how target groups can be identified.

Through this risk-assessment process, the different target groups can be plotted on the risk-assessment matrix. The results can then be used to prioritize RASB activities as well as other risk-mitigation activities where necessary.

It is advisable to do both generic risk assessments for all the organization's staff and operations along with separate ones for those operations or groups of staff and volunteers who may be at a higher risk than others. Similarly, it is advisable to conduct risk assessments of sub-groups of the civilian population, divided by geographical area, gender, age, profession, etc. By evaluating these groups separately and plotting them on the matrix, those most at risk can be clearly and quickly identified and prioritized for RASB activities and other risk-mitigation measures.

The three risk-assessment matrices shown below are for Movement staff, operations and the civilian population. They all relate to both conventional-weapon and CBRN hazards.

RISK ASSESSMENT MATRIX 1

Assessing the risk of weapon contamination to Movement staff and volunteers

RISK TO MOVEMENT STAFF AND VOLUNTEERS		LIKELIHOOD					
		Very unlikely	Unlikely	Possible	Likely	Very likely	
SEVERITY OF IMPACT (CONSEQUENCES)	Catastrophic	Life-changing injuries, or fatalities	5A	5B	5C	5D	5E
	Severe	Injuries requiring immediate pre-hospital and long-term clinical care	4A	4B	4C	4D	4E
	Significant	Injuries requiring immediate pre-hospital & clinical care	3A	3B	3C	3D	3E
	Moderate	Injuries requiring clinical care	2A	2B	2C	2D	2E
	Negligible	Minor injuries requiring no medical assistance	1A	1B	1C	1D	1E

RISK ASSESSMENT MATRIX 2

Assessing the risk of weapon contamination to Movement operations

RISK TO MOVEMENT OPERATIONS			LIKELIHOOD				
			Very unlikely	Unlikely	Possible	Likely	Very likely
SEVERITY OF IMPACT (CONSEQUENCES)	Catastrophic	Stop operations and evacuate staff	5A	5B	5C	5D	5E
	Severe	Operations cannot continue, all movement stopped	4A	4B	4C	4D	4E
	Significant	Operations and staff limited to essential-only	3A	3B	3C	3D	3E
	Moderate	Operations continue with further risk-mitigation measures	2A	2B	2C	2D	2E
	Negligible	No impact on operations	1A	1B	1C	1D	1E

RISK ASSESSMENT MATRIX 3

Assessing the risk of weapon contamination to civilian populations

RISK TO CIVILIAN POPULATION			LIKELIHOOD				
			Very unlikely	Unlikely	Possible	Likely	Very likely
SEVERITY OF IMPACT (CONSEQUENCES)	Catastrophic	Mass casualties/fatalities, local medical capacity overwhelmed	5A	5B	5C	5D	5E
	Severe	Serious injuries requiring clinical care and long-term rehabilitation	4A	4B	4C	4D	4E
	Significant	Injuries requiring clinical care with no long-term disability	3A	3B	3C	3D	3E
	Moderate	Injuries requiring local treatment	2A	2B	2C	2D	2E
	Negligible	Minor injuries requiring no medical assistance	1A	1B	1C	1D	1E

CONSULTING AND AGREEING THE RISK CATEGORY TO IDENTIFY PRIORITY TARGET AUDIENCES

With all the information collected during the assessment, it is advisable to discuss it with informed but impartial colleagues and/or other stakeholders and agree the risk categorization on the risk matrix, the priority target audiences and the priority activities to be carried out. This is especially important if the other risk-mitigation activities aimed at promoting safer behaviour will involve a number of other departments or organizations, as their buy-in will be required in order to implement a properly integrated response.

The next stage is to identify, prioritize and plan the activities to treat the risk (as discussed in Chapter 1 and described in detail in Chapters 3 and 4) so that target groups can eventually be moved to a lower risk category on the risk-assessment matrix.

ANNEX B: TERMS AND DEFINITIONS

Abandoned explosive ordnance (AXO) is 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 that is no longer under the control of the party that left it behind or dumped it. Abandoned explosive ordnance may or may not have been primed, fuzed, armed or otherwise prepared for use.⁷⁷ It refers to ordnance from conventional and non-conventional weapons.

An **accident** is an undesired event that results in harm.⁷⁸

CBRN stands for chemical, biological, radiological and nuclear agents. For the purposes of these guidelines, CBRN agents encompass hazardous materials in the form of toxic chemicals; biological materials such as viruses, bacteria and toxins or other micro-organisms; and radiological or nuclear materials.

The **CCW** (the 1980 Convention on Certain Conventional Weapons) is one of the main treaties of international humanitarian law regulating conventional weapons with a view to minimizing their indiscriminate effects. It has five protocols, two of which are relevant for mine action. Amended protocol II (adopted in 1996) deals with landmines, booby-traps and other devices, and protocol V (adopted in 2003) seeks to address the problem of explosive remnants of war (ERW).⁷⁹

Explosive ordnance (EO) refers to all munitions containing explosives, nuclear fission or fusion materials, or biological or chemical agents. This includes bombs and war-heads; guided and ballistic missiles; artillery, mortars, rockets and small arms ammunition; all mines, torpedoes and depth charges; pyrotechnics; cluster dispensers and sub-munitions; cartridge- and propellant-actuated devices; electro-explosive devices; improvised explosive devices; and all similar or related items or components that are explosive in nature.⁸⁰

Explosive ordnance disposal (EOD) includes the detection, identification, evaluation, rendering safe, removal and/or disposal of explosive ordnance.

Explosive remnants of war (ERW) are unexploded ordnance and abandoned explosive ordnance. They include conventional munitions (CCW protocol V)⁸¹ and ordnance from non-conventional weapons/weapons of mass destruction.

Harm is injury or damage to human health, or damage to property or the environment.⁸²

A **hazard** is a 'risk source' and a 'potential source of harm'.⁸³ With regard to weapon contamination, the hazard refers to the type or number of weapons present, including the extent of the presence of a CBRN agent in the environment.⁸⁴

⁷⁷ United Nations, IMAS 04.10, *Glossary of Mine Action Terms, Definitions and Abbreviations*, 2nd edition, UN, New York, 2013.

⁷⁸ Ibid.

⁷⁹ Ibid.

⁸⁰ Ibid.

⁸¹ Ibid.

⁸² International Organization for Standardization and International Electrotechnical Commission, ISO/IEC Guide 51:2014(E), *Safety Aspects – Guidelines for Their Inclusion in Standards*, ISO and IEC, Geneva, 2014.

⁸³ Ibid.

⁸⁴ Internal document: *ICRC Weapon Contamination Response and Approach* (December 2017).

A **hazardous event** is an event that caused or could have caused harm. It is sometimes referred to as an accident or an incident.⁸⁵ These guidelines use the terms incident and event.

A **hazardous situation** is a circumstance in which people, property or the environment is/are exposed to one or more hazards.⁸⁶

Impact is the consequence or outcome of an incident and is considered in terms of its impact on staff, operational continuity and the civilian population.

An **improvised explosive device (IED)** is “a device placed or fabricated in an improvised manner incorporating explosive material, destructive, lethal, noxious, incendiary, pyrotechnic materials or chemicals designed to destroy, disfigure, distract or harass. They may incorporate military stores, but are normally devised from non-military components.”⁸⁷

An **incident** is an event that causes or could cause an accident. It is sometimes referred to as a hazardous event.

Mine action (2009) refers to activities aimed at reducing the social, economic and environmental impact of mines and ERW, including unexploded sub-munitions.⁸⁸

Mine risk education (MRE) refers to activities that seek to reduce the risk of death and injury from mines and ERW (including unexploded sub-munitions) by raising awareness and promoting safe behaviour. It includes exchanging information with at-risk communities, delivering safety messages to target groups and supporting activities in the areas of community risk management and mine action.⁸⁹

Note that raising risk awareness and promoting safer behaviour in the context of land-mine and ERW contamination are more commonly known as MRE and are the subject of an international standard.⁹⁰ Whilst these guidelines comply with this standard, they use the term ‘risk awareness and safer behaviour’ rather than MRE, as they deal with a much wider range of weapon contamination than just mines and ERW; indeed, they include CBRN hazards as well as the use of weapons in conflict situations and other situations of violence. The term ‘risk awareness and safer behaviour’ also clearly articulates that the approach involves more than just education: the term ‘safer behaviour’ implies both promoting and facilitating safer behaviour through other protection, assistance, prevention and cooperation activities using the transversal approach.

Other situations of violence (OSV) are not a legally defined concept, but this term is used by the ICRC to describe any situation of violence that does not reach the threshold of armed conflict beyond which international humanitarian law applies. OSV are situations of collective violence that, despite the significant humanitarian consequences, does not reach the armed-conflict threshold. OSV include internal disturbances, internal tensions and other forms of communal violence, even when the latter are not as intense as internal tensions.

⁸⁵ International Organization for Standardization, ISO Guide 73:2009, *Risk Management – Vocabulary*, ISO, Geneva, 2009–11.

⁸⁶ See note 6 above.

⁸⁷ See note 1 above.

⁸⁸ Ibid.

⁸⁹ United Nations, IMAS 12.10, *Mine/ERW Risk Education*, 2nd edition, UN, New York, 1 April 2010 (Amendment 2, June 2013). This document is accompanied by a series of 12 best-practice guidebooks for MRE programmes and projects.

⁹⁰ Ibid.

Resilience is a capacity. In common usage, resilience typically relates to the ability of systems (and people) to effectively respond and adapt to changing circumstances and to develop skills, capacities, behaviours and actions to deal with adversity – ‘resilience’ can be described as a process of adaptation before, during and after an adverse event. Within the Movement, resilience is defined as “the ability of individuals, communities, organizations or countries exposed to disasters, crises and underlying vulnerabilities to anticipate, prepare for, reduce the impact of, cope with and recover from the effects of shocks and stresses without compromising their long-term prospects”.⁹¹

Risk is the combination of the probability that a harm will occur and the severity of that harm.⁹²

Risk management involves the cycle of establishing the context; identifying and assessing the risk; treating the risk (or in the case of weapon contamination, mitigating the risk by reducing the severity and/or likelihood of the impact); monitoring and reviewing the risk and the risk-mitigation measures; and adapting the risk-mitigation measures.

Safe is the state of being protected from recognized hazards that are likely to cause harm.⁹³

Safer behaviour is behaviour that better protects a person or a group of people in a community or an organization from recognized hazards that are likely to cause harm.

A **threat** is a risk source that combines the hazard and the user’s intent (e.g. the use of conventional weapons or a CBRN hazard with aggressive or violent intentions).⁹⁴ Please note, these guidelines use the word ‘hazard’ rather than ‘threat’, as they are written on the underlying assumption that Movement staff, volunteers and civilian populations are not deliberately targeted by conventional weapons or CBRN hazards and are unintentional victims of the conflict or other situation of violence. Where there is the recognized intent to use the weapon or CBRN hazard in acts of aggression or violence (i.e. a threat), then these guidelines should be supplemented by the appropriate organizational security guidelines.

Vulnerability is the intrinsic quality of something or someone that makes them susceptible to a hazard that can lead to an incident.⁹⁵ Vulnerability to the weapon-contamination hazard can be reduced by changing this intrinsic quality (and susceptibility), which then reduces the likelihood of the incident and the severity of the impact. Reducing vulnerability to weapon contamination therefore ultimately reduces casualties among Movement staff and the civilian population. Please be aware that the primary purpose of RASB activities is to change the intrinsic quality of a person, community or organization to make them less susceptible to risk.

Unexploded ordnance (UXO) is explosive ordnance that has been primed, fuzed, armed or otherwise prepared for use or used. It may have been fired, dropped, launched or projected, yet it has not yet exploded owing to malfunction, by design, or for any other reason.⁹⁶

⁹¹ IFRC, *IFRC Framework for Community Resilience*, IFRC, Geneva, 2014.

⁹² See note 6 above.

⁹³ Ibid.

⁹⁴ Ibid.

⁹⁵ Adapted from the definition in ISO 73:2009 (see note 9 above).

⁹⁶ See note 1 above.

Weapon contamination refers to contamination from both conventional weapons and chemical, biological, radiological and nuclear (CBRN) hazards. There are a variety of hazards of immediate concern to the Movement, including conventional and non-conventional (chemical, biological, radiological, nuclear) weapons and the accidental or deliberate release of chemical, biological and radiological agents that are unrelated to non-conventional weapons. In these guidelines, these hazards are collectively referred to as weapon-contamination hazards (or conventional-weapon and CBRN hazards).

ANNEX C: OVERVIEW OF CONVENTIONAL-WEAPON AND CBRN HAZARDS

There are a variety of weapon-contamination hazards of immediate concern to Movement personnel. The conventional-weapon hazards most likely to be encountered are kinetic-energy and explosive weapons used in conflict; explosive remnants of war (unexploded and abandoned ordnance); landmines; improvised explosive devices (IEDs); and poorly managed stockpiles and ammunition stores.

The hazards related to the release of non-conventional agents that pose the highest risk to Movement staff include nerve agents (e.g. sarin); cross-contamination of chemical agents from patients to medical staff; toxic industrial chemicals (whether or not released intentionally); and radioactivity (whether or not released intentionally).

Below are basic descriptions of some of the most common types of weapons and agents that could be encountered.

CONVENTIONAL WEAPONS

1. Small arms and light weapons

Small arms refer to assault rifles, machine guns, hand grenades and other military weapons designed to be carried and used by an individual combatant. The definition also includes commercial firearms such as handguns and hunting rifles. The term 'light weapons' refers to portable weapons designed for use by one or several people working together, such as heavy machine guns, mounted grenade launchers, portable anti-aircraft guns, portable anti-tank guns, portable anti-tank missile launchers, and mortars. The ammunition used by small arms and light weapons includes cartridges, shells, missiles, rockets, grenades and other projectiles.

Small arms and light weapons pose a hazard to Movement staff and civilians during conflicts and other situations of violence. The main risk is getting caught in the cross-fire or hit by stray bullets.

Small arms and light weapons, together with their ammunition, also constitute a hazard in post-conflict situations for a variety of reasons. Although ex-combatants are usually disarmed and surplus weapons removed, large numbers of weapons frequently remain in the hands of both ex-combatants and civilians as well as in abandoned weapons caches. These are often acquired or held for purposes of protection and self-defence where criminality is rife. They may also end up on the black market and therefore be easily obtainable for criminal or political purposes. Many post-conflict environments are plagued by high levels of armed violence conducted with readily available small arms. Accidents involving small arms and ammunition are also common, for example due to tampering, accidental discharge or, in some areas, celebratory shooting. Small-arms ammunition can be particularly attractive to children, who may detonate it by striking the base, throwing it into a fire or separating the bullet from the case to extract propellant. All these actions can cause death or injury.

2. Explosive remnants of war (ERW)

ERW consists of both unexploded ordnance (UXO), which has been fired or dropped but has failed to explode as intended, and abandoned ordnance (AXO), which has been left behind by combatants because it is too difficult to move or has been forgotten or abandoned in the heat of battle. Unexploded ordnance is the unplanned consequence of the

use of weapons systems rather than a deliberate tactic such as mine-laying. Reasons for ordnance failure may include manufacturing defects, poor storage, the use of outdated ammunition, the failure to properly set fuses, incorrect firing procedures, weather, and soft terrain or terrain that the ordnance was not designed for.

This following section gives an overview of the main categories of explosive remnants of war. It is important to remember that new weapons systems, explosives and delivery systems are constantly being developed, especially now that the typical tactical requirements have changed from the more conventional “industrial war” scenario to smaller and less conventional engagements, or “war amongst the people”.

a. Fuses

Fuses are the first element in the explosive train, the sequence of events that culminates in the detonation of ordnance or landmines. Fuses launch the detonation process in explosives. For example, a flame lights a fuse, which detonates the initial or primary explosive, which will in turn trigger a secondary high explosive and cause it to detonate. Fuses come in various shapes and sizes, can be found at the front or the back of the munition and have different detonation mechanisms. They are often found in battle areas and can pose a serious threat if handled. Some types of fuse pose a particular threat to children, who sometimes mistake them for pens or other objects.

b. Grenades

Hand grenades and rifle grenades can pose a serious post-conflict risk. Hand grenades are simple devices, and their effects include fragmentation (for anti-personnel purposes), smoke, illumination and blast (stun). They normally consist of a main body, a fuse and a safety device held in place with a pin. They generally lie abandoned in former battle areas and are often attractive to children. They have also been used for purposes of robbery, revenge or extortion. Rifle grenades, as the name implies, are fired from an attachment on a rifle. Because of their unique fusing mechanism, unexploded rifle grenades can be very sensitive if disturbed.

c. Mortars

Mortars are an extremely common weapon and can be found in many conflict situations. They fire “mortar bombs” over relatively short ranges and are normally man-portable. The mortar bombs most commonly used contain high explosives or produce illumination or smoke. They are nose-fused and have to be struck on the nose (front) to explode. Mortars are a source of scrap metal and are sometimes used by people as counterweights for wells or hammers. If the mortar has been fused (i.e. it has had the fuse attached), it is significantly more hazardous. Un-fused mortar bombs are relatively safe unless an attempt is made to salvage their explosive content or metal casings.

d. Projectiles

Projectiles are fired from direct-fire weapons such as tank guns or indirect-fire weapons such as artillery. Projectiles may contain high explosives or cluster munitions, produce illumination, or release smoke or, in rare cases, noxious chemicals. The components of many types of projectiles are made of high value metal, including tungsten carbide and copper, which is used to seal the space between the barrel and the shell and is known as the driving band. In post-conflict situations, it is rare to see an expended shell with its driving band intact, as this will normally be the first battlefield debris to be scavenged.

e. Rockets

A rocket is an explosive device containing its own means of propulsion as well as explosives. Where a rocket has been fired but has failed to explode, some breakage of the body normally occurs on impact; debris will include the warhead and the fuse and, potentially, unburnt propellant. Rockets are often fired in salvos and designed to saturate an area. There are a number of names for such systems, such as multi-launch rocket systems (MLRS) and Katyusha (after the famous Soviet system used in the Second World War). Warheads can contain standard high explosives or cluster munitions, or they can fragment. Apart from the warhead itself, an unfired or malfunctioning rocket motor can pose a threat to civilians.

f. Aircraft bombs

Air-dropped bombs, which vary in size, generally have enormous destructive power. Aircraft bombs that have been dropped and have failed to explode pose a relatively low risk to the population as long as they are not tampered with. Attempts to extract the explosive filler or to recycle the bodies as scrap metal can cause the bomb to detonate. In some cases, air-dropped bombs are fitted with a package that allows the bomb to be steered to its target, either through remote designation of the target by laser or through a video camera fitted to the nose of the bomb. Aircraft bombs may penetrate deep into the ground; European cities bombed during the Second World War are still contaminated with sub-surface bombs.

g. Cluster munitions and sub-munitions

Cluster munitions can be dropped from aircraft or fired from mortars, artillery or rocket systems. At a pre-defined altitude, the clamshell, projectile or rocket releases many smaller sub-munitions over the targeted area. The number of sub-munitions or bomblets dispersed depends on the type of ordnance. The aim is to saturate the targeted area. If incorrectly fused, fired or dropped, there is a real possibility these munitions will land in areas outside the defined target area – where there may be non-combatants and civilian objects. In modern conflicts, combatants are increasingly mixed with the civilian population, potentially rendering such munitions indiscriminate in their effect.

Sub-munitions may fail as a result of incorrect use or the type of terrain encountered, and their failure rate varies. Failed sub-munitions may either penetrate the ground, rest on the surface or hang on trees, foliage or infrastructure. They therefore pose a double threat, and in any strike area the sub-surface must be checked at the same time as the surface, foliage and infrastructure. Failing to do so may result in deaths and injuries for many years, when people dig foundations or fields. Removing only the surface contamination means that the visible signs of a strike area are erased, posing a serious, hidden risk to those using the land in the future. Sub-munitions are generally very powerful and, if they do not function as designed, very sensitive. They are a particular danger to children.

3. Landmines

The key feature of landmines is that they are victim-activated.

a. Anti-personnel mines

The use of anti-personnel mines (APM) has been stigmatized since the Anti-Personnel Mine Ban Convention was agreed and widely accepted by States. However, APMs can still be found in the arsenal of several armies and continue to contaminate former conflict areas, even where clearance efforts have been under way for some years. They have been used in the past by regular armed forces and non-state actors. For some armed non-state actors, they remain a weapon of choice today.

APMs are used in different ways depending on the situation and the need. Armed forces have used them to protect their front and flank and to provide extra security around outposts or roadblocks where there is a risk of surprise attack from the side or rear. They have also been used to protect temporary individual positions, for instance a patrol's overnight position. In such cases, and in situations of less organized fighting taking place over several years, this type of use has resulted in many small areas containing just a few mines.

Mines have also been used by non-state actors to directly attack civilians, cover their retreat when pursued by more powerful forces and sow fear and uncertainty through random use in areas occupied by military forces. In some cases, APMs have been used to block access to water and other basic needs.

Anti-personnel mines are divided into three categories: blast, bounding fragmentation and directional fragmentation. APMs can be produced industrially or improvised in nature (i.e. improvised mines).

Blast mines are usually buried just beneath the surface and cannot normally be seen. They are designed to explode when pressure is applied to the top of the mine. Depending on the explosive content, they may destroy one or both legs either above or below the knee. Victims who then fall onto another mine may also injure one or both arms. Debris from the explosion will also be driven into the body, which may cause other injuries such as blindness.

Bounding fragmentation mines are either laid on the surface or buried just below the surface with the fuse protruding. The fuse may or may not be connected to a tripwire. Walking into the tripwire or hitting the fuse will cause an explosive canister to be fired from the body of the mine to hip height, where it will explode. Fragments are projected over a 360-degree radius. The severity of injury and likelihood of death depend on the distance from the mine and whether there are any solid objects between the explosion and the victim.

Directional fragmentation mines consist of a fragmentation body mounted on a stake that is planted in the ground. The mines are normally tripwire-initiated and spread fragments over approximately 180 degrees up to a range of 200 m, depending on the type of mine.

b. Anti-vehicle mines

Anti-vehicle mines (AVMs) are normally designed to destroy armoured fighting vehicles, such as tanks, either by blast effect or by penetrating the vehicle's skin. They are typically buried and triggered through pressure or through the movement of a tilt rod protruding above the ground. The presence or suspected presence of these mines can restrict the use of land and roads.

In many cases, livestock, carts, tractors or civilian vehicles can apply enough pressure to trigger anti-vehicle mines. AVMs can also be triggered by vehicles pressing against a tilt rod. They are sometimes placed directly beneath anti-personnel mines in order to boost their power. The level of destruction depends on the type of mine, the depth at which it is buried, the type of soil and the part of the vehicle closest to the mine when it explodes.

There is no easy and reliable way to check whether a road is free of anti-vehicle mines. Because of this, even the rumour of a single mine on a road can block it. The fact that vehicles have previously driven safely down a road is no indication that it is free of mines.

4. Improvised explosive devices (IEDs)

Improvised explosive devices (IED) are devices that are fabricated or placed in an improvised manner and that incorporate explosive, destructive, lethal, noxious, incendiary or pyrotechnic materials, or chemicals designed to destroy, disfigure, distract or harass. They may incorporate military stores, but they are normally devised from non-military components.⁹⁷ In the ICRC's view, victim-activated IEDs incorporating explosives are considered improvised mines.

5. Booby-traps

Booby-traps are explosive or non-explosive devices deliberately placed to cause casualties when an apparently harmless object is disturbed or a normally safe act is performed, like opening a door or turning on a television.

6. Ordnance stockpiles

Stockpiles of ordnance are an increasing problem around the world, particularly since the break-up of the Soviet Union. Stockpiles are areas where different types of ordnance are stored, and the quantities can reach tens of thousands of tonnes. The safe storage of ordnance requires custom-built storage facilities and constant oversight. In many countries this does not happen, and ordnance is stored in the open or in inappropriate structures; in some cases, it is kept beyond its safe life or held in facilities that are no longer properly maintained. Stockpiles are sometimes filled beyond their designated capacity and even contain ordnance that is fused and ready to fire. Many of these stockpiles date from the Cold War and are becoming more dangerous as time passes. If storage facilities are not properly secured, there is the risk of theft and a danger to anyone who enters in search of scrap metal or out of curiosity. During times of conflict or armed violence, stockpiles of arms and ordnance are often abandoned and left unsecured within easy access of civilians and armed groups. It is now widely acknowledged that in almost all post-conflict environments, and in many developing countries, communities are endangered by the proximity of abandoned, damaged or inappropriately stored and managed stockpiles of ordnance and explosives.

CBRN HAZARDS

Characteristics of CBRN agents

CBRN is the abbreviation for chemical, biological, radiological and nuclear agents. For the purposes of these guidelines, CBRN agents encompass hazardous materials in the form of toxic chemicals; biological materials such as viruses, bacteria, and toxins or other microorganisms; and radiological or nuclear materials. CBRN agents may be released in a variety of situations, whether incidentally or maliciously; they may be dispersed as a result of an accident at a location or facility where the materials are produced, used or stored; or they may spread as a result of deliberate action by States, non-State armed groups or criminals.

These agents include by-products of nuclear fission and other radioactive materials, biological agents that cause infection or disease, and toxic chemicals. They are hazardous materials, either naturally occurring or artificially produced, and they can have significant adverse effects on human health, including severe illness and death, depending on the nature of the agent and the circumstances of exposure.

The taxonomic grouping of these different materials as 'CBRN agents' is standard international practice, although the exact term or abbreviation may vary. While there may be some similarities between events that lead to their dispersal, CBRN agents are

⁹⁷ United Nations, IMAS 04.10, *Glossary of Mine Action Terms, Definitions and Abbreviations*, 2nd edition, UN, New York, 2013.

very different in their physical and chemical nature, their origin and their properties. There are also significant differences in the type of injury or illness they produce, and the period of time between exposure and the appearance of signs and symptoms.

1. Nuclear and radiological hazards

Radioactive materials and sources are a hazard to humans in two ways:

- Irradiation through significant exposure to highly penetrating radiation (e.g. gamma, neutrons or X-rays).
- Irradiation of tissues and organs in the body if the radioactive agents or substances contaminated with it are inhaled, ingested or absorbed through the skin by direct contact.

Radioactive sources emit different types of ionizing radiation according to their different physical and chemical properties. Alpha radiation emits particles that consist of protons. These particles have a short range and low penetration, e.g. they cannot penetrate human skin. However, alpha-emitting materials have high energy and can still be harmful, especially if inhaled or ingested. Beta radiation emits particles that consist of negatively charged electrons. These particles may travel several feet through the air and are moderately penetrating, e.g. they can penetrate the top layer of human skin. Gamma radiation and X-rays are highly penetrating forms of electromagnetic radiation. Together with neutrons, they can pass through the human body and can only be stopped by 10cm of lead or a concrete wall.

The differences between nuclear hazards and radiological hazards stem from their origin. Nuclear radiation is generated by nuclear fission, which occurs when a nuclear weapon is detonated or nuclear power plants are operating. Radiological hazards result from the radiation emitted by radioactive material used in industrial, scientific or medical applications and consumer products.

Radiation from any source can cause acute, life-threatening injuries after an exposure period lasting anywhere from a few minutes to several hours, depending on the dose and type of radiation (e.g. alpha, beta or gamma). Adverse health effects from such exposure are known as deterministic effects. The effects of low doses of radiation are harder to gauge accurately. Significant exposure to low doses of radiation can lead to an increased risk of cancer at a later date, with the latency period lasting many years. These increased risks are referred to as stochastic effects. A low-level radiation injury does not usually require immediate medical attention.

For more information on the Movement's response to nuclear and radiological hazards, please refer to the IFRC's *Nuclear and Radiological Emergency Guidelines*.⁹⁸

2. Biological agents

Biological agents are microorganisms (i.e. viruses, bacteria and fungi) that can be naturally occurring, genetically modified or synthetically engineered. These agents may cause infection, toxicity or allergy in humans, animals or plants. Toxins are also classified as biological agents. These are naturally occurring poisonous chemicals produced by biological organisms, including plants, animals and microorganisms (although some may be artificially synthesized). As poisons, toxins are comparable to toxic chemical agents in their mechanism of action. Typical biological agents cause sickness and disease by infection, usually producing symptoms a number of days later. In general, these agents have a long latency period. The route of exposure to a biological agent can have a significant effect on the type and severity of infection. In addition, the method of

⁹⁸ IFRC, *Nuclear and Radiological Emergency Guidelines: Preparedness, Response and Recovery*, IFRC, Geneva, 2015.

transmission can have a major impact on whether the infection spreads among a population. Some infections may be transmitted only by direct physical contact between individuals or contact with contaminated materials or surfaces. Others are spread from person to person by airborne transmission, enabling the potentially rapid spread of the disease. Some agents may require an insect vector to transmit the infection, e.g. the yellow fever virus carried by mosquitoes. A wide range of biological agents have been turned into weapons in military biological weapons programmes. Bacterial agents include those causing anthrax, plague, tularaemia, glanders and brucellosis. Viral agents include those that cause Q-fever, Venezuelan equine encephalitis and smallpox. Toxin agents include ricin, botulinum toxin and staphylococcal enterotoxin B. The severity of illness and the risk of death from exposure to biological agents will depend on several factors: the type of agent, the route, the level of exposure, the health of the victim and the medical response.

3. Chemical agents

Chemical agents are toxic chemical substances that occur naturally or are artificially synthesized. Many are produced and used for legitimate industrial, agricultural or medical purposes, e.g. hydrogen cyanide (industry), chlorine (industry), organophosphates (agriculture) and carbamates (medicine). Chemical agents developed under military chemical weapons programmes include:

- blister agents, such as sulphur mustard (i.e. mustard gas), which cause contact burns and blisters on skin and damage the respiratory tract if inhaled
- nerve agents such as sarin and VX, which interfere with the action of the acetylcholine neurotransmitter and cause muscle spasms, secretions, respiratory failure and loss of consciousness
- blood agents such as cyanide, which inhibit the transfer of oxygen in the blood, causing convulsions and respiratory failure
- choking agents such as phosgene, which damage the lungs and result in respiratory problems
- incapacitating agents, which act on the central nervous system and lead to psychomimetic effects (delusions and hallucinations; an example of this type of agent is BZ) or a loss of consciousness and respiratory failure (example: fentanyl)
- irritant agents (also known as riot control agents or tear gas) such as CS, CN, CR and oleoresin capsicum (OC), which cause irritation to the eyes, skin and respiratory tract.

The severity of illness and the risk of death from exposure to chemical agents will depend on several factors, particularly the type of agent, the route, the level of exposure, the health of the victim and the medical response.⁹⁹

For more information on the characteristics of CBRN agents, the characteristics of CBRN events, the basics of responding to CBRN and the response to allegations of use of CBRN weapons, please refer to the following ICRC publication: *Chemical, Biological, Radiological and Nuclear Response*.¹⁰⁰

⁹⁹ ICRC, *Chemical, Biological, Radiological and Nuclear Response: Introductory Guidance*, ICRC, Geneva, 2014.

¹⁰⁰ Ibid.

ANNEX D: HAZARD MAPPING

DEFINING THE HAZARD DATA TO BE MAPPED

The hazard map should show all weapon–contamination hazards, including:

- conventional weapons being used in a conflict or other situation of violence
- landmines, explosive remnants of war and improvised explosive devices
- poorly managed stockpiles and ammunition stores
- sites with toxic industrial chemicals that could be released (intentionally or not)
- sites with radioactive sources that could be dispersed (intentionally or not)
- sites where other CBRN agents may be stored
- sites where non–conventional weapons have (or have allegedly) been used or where there has been previous CBRN contamination.

WHERE TO GET THE DATA

Where conventional weapons are being used in a conflict or other situation of violence, there is usually an authority or international coordinating agency¹⁰¹ responsible for mapping out the areas of fighting. In some cases, the ICRC or the National Society may have to collect the information and create the map itself. The map should show broad geographic areas rather than specific geo–referenced polygons, as the hazard situation is likely to be fluid.

Information on the presence of landmines, ERW and, to some extent, IEDs will come from a national mine action authority or UN mine action coordination centre that is authorized to collect and share hazard data. Where there is a national mine action authority, all known mine and ERW hazards should be mapped and recorded in a systemized tool such as the information management system for mine action (IMSMA) and made available to the Movement. Whenever a conflict or other situation of violence moves geographically, it is likely to leave ERW contamination behind, even though the exact location of the contamination may not be known or recorded in IMSMA.

Information on the management of stockpiles and munition stores may be provided by the relevant national authorities and/or by international organizations that have access to this information.

Information on CBRN hazards may be more difficult to obtain but should be available from national authorities and other agencies involved in managing industrial disasters. They may also be able to provide CBRN hazard maps or help create them.¹⁰²

HOW TO DRAW HAZARD MAPS

Depending on what they are required for, hazard maps can vary significantly in terms of detail. Ideally, they should show all weapon–contamination hazards, using different colours or symbols, for example, to identify different types of hazard. They can be overlaid on existing organizational maps, such as those depicting areas of operation or the location of the most socio–economically vulnerable people (as identified, for example, through vulnerability and capacity assessments). Similarly, they can be overlaid on other hazard maps that have been created (such as for natural hazards). It is preferable to use mapping tools that are already in use in your organization, your partner organization or the relevant national authority.

¹⁰¹ Such as the UN Office for the Coordination of Humanitarian Affairs.

¹⁰² For example, UNEP and OCHA have developed a hazard–mapping tool called the Flash Environmental Assessment Tool (FEAT). It is appropriate for mapping CBRN hazards in anticipation of industrial disasters.

A national hazard map may simply identify broad geographical areas (represented as circles or ovals, for example) that are affected by conventional–weapon and CBRN hazards. An organization’s headquarters would find this information useful when conducting an overall risk assessment for staff and operations.

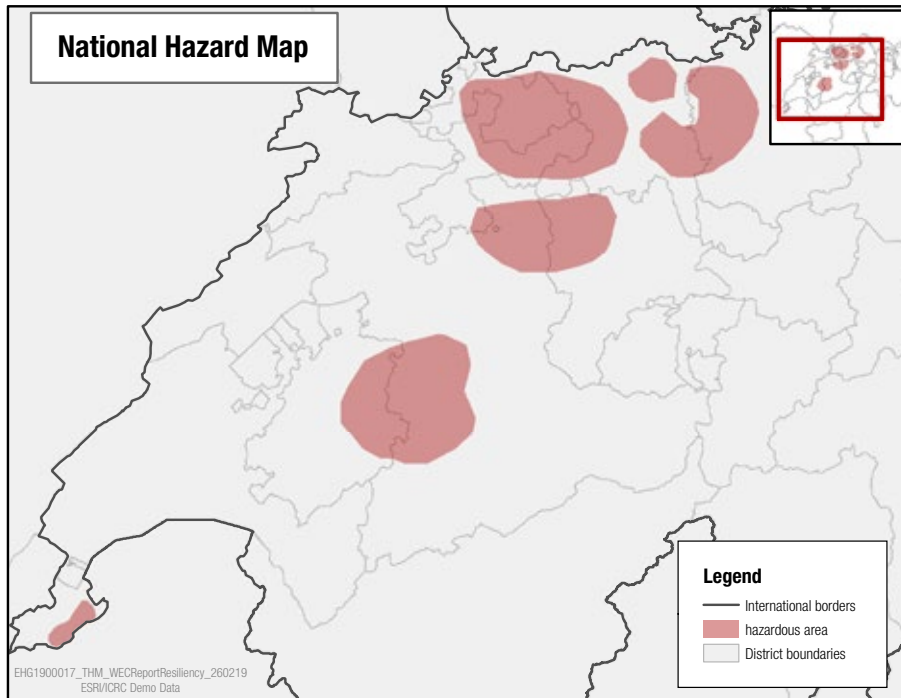


Figure 7: Example of a national hazard map¹⁰³

A village or community hazard map may use circles, for example, to represent areas that are considered hazardous or potentially hazardous. This is one way of identifying the main areas in the community that are exposed to conventional–weapon or CBRN hazards.

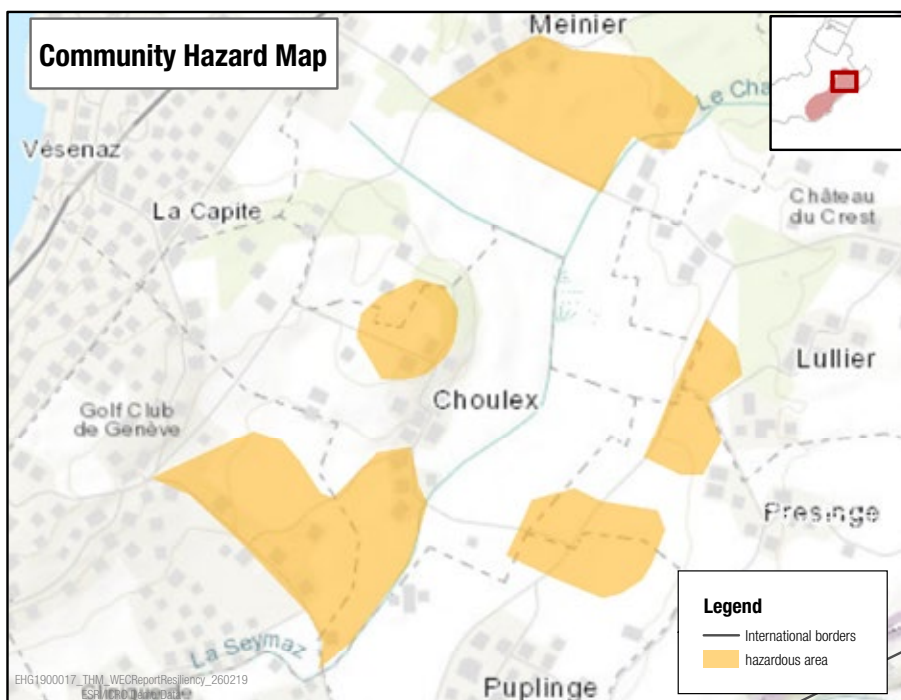


Figure 8: Example of a community hazard map¹⁰⁴

¹⁰³ This map is for illustrative purposes only and does not represent actual contamination.

¹⁰⁴ This map is for illustrative purposes only and does not represent actual contamination.

Hazard maps can also be produced at the sub-village or site-specific level. Under this approach, hazardous areas are located using specific, geo-referenced mapping and shown as polygons on a map. This type of information is usually provided by the relevant authorities and used mainly for planning a technical intervention. This level of detail is not usually necessary for RASB interventions.



Figure 9: Example of a site-specific hazard map¹⁰⁵

The National Society or ICRC delegation should use all the data and maps made available in order to create a multi-hazard map that conveys the extent of the risk from weapon contamination for both Movement staff and the civilian population in affected areas.

HOW HAZARD MAPPING CAN INFORM RISK AWARENESS AND SAFER BEHAVIOUR

Hazard maps should be used in the risk-assessment process, as they show the relative location of weapon-contamination hazards. This information is vital when planning risk-mitigation measures and other operations. Hazard maps can also be used as a visual aid in the RASB interventions. The confirmed presence of the weapon-contamination hazards shown on hazard maps can make the risk more credible and relevant to the audience. They also clearly show both staff and the local population the general location of hazardous areas; this is where people need to be most alert and adopt safe behaviour (as promoted in the RASB messages). Hazard maps are also a good starting point for identifying safe routes as part of community risk-mitigation plans; this can be a good joint activity under RASB interventions.

PERIODIC REVIEW OF MAPS

The information contained by hazard maps is only accurate at the time it was gathered. In other words, hazard maps are only representative of known hazards at one particular point in time. They can quickly become outdated, particularly in times of conflict and other situations of violence, and they should never be relied upon as the sole means of hazard information. They are best used as an initial guide, which should be updated periodically as new information is gathered on the hazards.

¹⁰⁵ This map is for illustrative purposes only and does not represent actual contamination.

ANNEX E: COMMUNICATION CHANNELS

ONE-WAY COMMUNICATION

In the early stages of a conflict or other situation of violence, the fastest type of RASB intervention – i.e. providing people with information on the risks of weapon contamination and how to minimize them – is one-way communication. The one-way communication channels described below are the main ways that can be used to raise awareness of the risks and promote safer behaviour. Although the channels are one-way in nature, the recipients should be able to respond to the message and given guidance on action they can take. This can be done by providing a website, an internet chat forum or social media platform, a telephone hotline or a physical location to get more information and/or to report on weapon contamination and its impact. This links one-way communication with two-way communication channels, which are described in the following section. One-way communication channels fall into several categories, and the list below is not exhaustive. Risk-awareness and safer-behaviour messages can be transmitted through all of these channels.

Broadcast

Broadcast media refer to radio, TV and online broadcast programmes. RASB messages can be delivered as news items or public service announcements, or they can be woven into other programmes, such as documentaries, stories and dramas. All of these will require working with the broadcaster to ensure appropriate safety messages are conveyed. This is an effective way of reaching a wider audience. Local radio and TV stations may actually reach more of the target audience than national media, as they broadcast in the appropriate languages and any paid advertisements or information spots will usually be cheaper. It is also important to consider the differences between the listening and viewing patterns of men, women and children. In order to reach as much of the target audiences as possible, the broadcasts should be scheduled at various times in view of their work and school schedules and other times when they will be busy. It is also important to take into account the special needs of some viewers, such as those with a hearing or visual impairment.

Broadcast media can also be a way to air dialogue on an issue, as both TV and radio have on-air group discussions, call-in programmes and debates. ICRC or National Society staff can use these to present or discuss weapon-contamination issues, and members of the public can contribute via email, SMS, social media or telephone. This can be a good way to both spread safety messages and start people talking about this issue in the public domain, which may give some people the encouragement they need to adopt safe behaviour.

Print

Print media include newspapers and magazines (across a broad range of topics). RASB messages can be delivered as news items, human interest features, letters to the editor, interviews or advertisements, or they can be woven into fictional stories. Print media also include stand-alone ‘small media’ – such as brochures, flyers or comics – that are purpose-written and address RASB and/or other safety messages. Small media encompasses both printed materials aimed at Movement staff and volunteers and materials developed for weapon-affected people and communities. When dealing with any form of print media, it will be necessary to work with the editor to ensure that the safety messages are appropriate.

RASB messages can be printed in other forms as well, such as posters, billboards and murals, and distributed at information stands/desks. Messages delivered through print media, which combine text and pictures, must take into account the level of literacy

in the country or within the target groups. Research shows that it is always better to display positive messages (i.e. the type of safe behaviour to be encouraged) than negative ones (i.e. the type of safe behaviour to be discouraged) or ones containing shocking images. Where the print media is to be distributed to target groups, an effort should be made to identify the most effective distribution method.

Product messaging

Product messaging means including simple RASB messages on paper products such as schoolbooks or calendars and non-paper items such as pencils, rulers, satchels, backpacks, key rings, torches and other useful items that people will use or keep at hand. The messages can include basic information as well as telephone numbers (where people can get further information or give feedback).

Website/blog/online media platforms

RASB messages can be disseminated on ICRC or National Society websites or blogs or on other organizations' websites. They can also be posted on one-way social media, such as YouTube. These messages should include a share function allowing people to share them with their network.

SMS messaging

SMS messaging can be an effective way of communicating RASB messages with a large number of people in the event of an emergency. It requires advance agreements with the mobile network operators and should be used only occasionally in specific circumstances, e.g. where the immediate dissemination of safety information can save lives. One example would be to establish a system of auto-send messages that are received when approaching an antenna located near a weapon-contaminated area. SMS messaging can become two-way communication if it is managed (i.e. if someone replies to the original SMS and the reply is read and acted upon).

TWO/MULTI-WAY COMMUNICATION

With two-way communication, the target audience's point of view can be taken into account when RASB interventions are designed and implemented, and relevant and trustworthy feedback can be obtained during the monitoring and review processes. However, the organization must plan and be prepared to receive and respond to the information it gets from the target groups. Higher-tech two-way channels of communication, such as social media and messaging apps, may result in large quantities of data from many different sources. This can overwhelm organizations, increase the risk that they will fail to respect users' privacy, and frustrate members of local communities who may not find their questions, feedback or complaints acknowledged and/or addressed.¹⁰⁶

Direct presentation

Meetings, presentations, trainings and workshops hosted and/or delivered by the ICRC, National Societies and the IFRC for their own staff and volunteers as well as for partner organizations and affected communities can be a very effective way of raising awareness and promoting safer behaviour. Where a forum for this type of extended dialogue exists, there is a greater chance of the safer behaviour being practised. These formats also encourage the exchange of ideas and the development of solutions that will facilitate safer behaviour through broader Movement assistance.

¹⁰⁶ ICRC, The Engine Room and Block Party, *Humanitarian Futures for Messaging Apps: Understanding the Opportunities and Risks for Humanitarian Action*, ICRC, The Engine Room and Block Party, Geneva, January 2017.

Community partners

This approach is based on working with representatives of the affected communities to design RASB messages and materials that they can disseminate to affected people through their own regular two-way communication channels or with the support of the Movement. Community partners could include, for example, religious leaders, police officers, school teachers, workplace representatives, humanitarian workers, local theatre/drama groups and individual volunteers. In some cases, engagement may be on an ad hoc, location-by-location basis; in others, it can be more formalized, such as through the police and school system and on a province-wide or even national scale. It is important for the community partners chosen to be trusted and accessible to all members of the community and to be considered a credible source of information. Ideally, the community partner would welcome this initiative; alternatively, where appropriate, the community partner could be paid as part of the cash-for-work activities run for members of the civilian population who can no longer carry out their livelihoods as a result of weapon contamination.

Messages and materials should be developed in conjunction with the community partners, who should also be trained as trainers and provided with materials as needed. In emergency situations that require the use of existing material, the community partners should confirm the relevance of the messages. If the community partners are already sending out RASB messages, Movement staff can provide input on whether the messages are appropriate and consistent. They can also help to coordinate the work to optimize the geographical coverage and avoid a duplication of effort. If the community partner is a public official, such as a teacher or policeman, more formal agreements may be required.

Integrating RASB into the school system

The strategy of incorporating RASB into the school system and curriculum is most common among countries facing a widespread and protracted weapon-contamination problem that may afflict successive generations. The country may be prone to conflict or burdened with potential CBRN hazards, or it may be in a post-conflict situation marked by extensive landmines and explosive remnants of war. This method, designed to reach a very large number of children, is appropriate in countries where the national government has accepted that weapon contamination may be a long-term problem. The information and how it is delivered should be tailored to different age groups. RASB could be a stand-alone subject, an extra-curricular activity or part of a curriculum on life skills or the social environment. In some cases, it may be appropriate to include it as an extra-curricular activity in schools rather than to build it into the curriculum (changes to which often require a time-consuming approval process). A child-to-child approach may also be useful in order to reach younger or female siblings who may not attend school.¹⁰⁷

Telephone hotlines

Telephone hotlines are used for calls and possibly SMS if mobile phones are involved. They are permanently manned and meant to receive calls or messages concerning either organization-specific issues, applicable to the entire National Society, or subject-specific issues, such as weapon contamination. The hotline should be promoted in all one-way communications, making clear in what circumstances the hotline should be used and what the expected response should be.

¹⁰⁷ Adapted from: United Nations, IMAS 12.10, *Mine/ERW Risk Education*, 2nd edition, UN, New York, 1 April 2010 (Amendment 2, June 2013). This document is accompanied by a series of 12 best-practice guidebooks for MRE programmes and projects.

Smartphone/two-way messaging applications

Smartphones are increasingly prevalent around the world and, in times of conflict, are often the most important communication tool available. Messaging apps include WhatsApp, Viber and WeChat, where text and video can be shared. These apps were primarily designed for private communications between individuals or small groups, whereas social media networks such as Twitter and Facebook allow users to broadcast content to large numbers of personal contacts or followers. Yet the line between social media and messaging apps is becoming increasingly blurred, as platforms like Twitter and Instagram adopt person-to-person chat features and messaging apps allow users to broadcast information to large groups.¹⁰⁸

It would be worth collaborating directly with messaging-app companies to support RASB initiatives and allow the two-way communication of RASB information to take place. Posters, brochures, aide-memoires, games and photos can be used to support smartphone apps (as well as direct presentations and TV or radio spots).

Social media

Social media platforms such as Facebook and Twitter can be used through the organization's existing accounts (or through new accounts if the organization doesn't have any or if accounts dedicated to weapon contamination are required). These accounts can be actively promoted via other one-way communication channels to get new followers. They can be used by a National Society to share RASB messages and, more broadly, to share powerful images, messages, videos or event announcements. The aim should be to start a dialogue on weapon risks among the target groups (plus others locally, nationally or even globally) and to develop self-assist risk-reduction strategies without, however, exposing themselves to danger by discussing sensitive topics in a public forum. By moderating or actively contributing to the accounts, Movement colleagues can assess requirements, share messages and help to develop risk-reduction measures. Detailed information on the use of social media to effectively engage people affected by crises is provided in a recent publication of the ICRC, the IFRC and OCHA.¹⁰⁹

¹⁰⁸ See note 1 above.

¹⁰⁹ ICRC, IFRC, OCHA, *How to use social media to better engage people affected by crises*, ICRC, IFRC, OCHA, Geneva, September 2017.

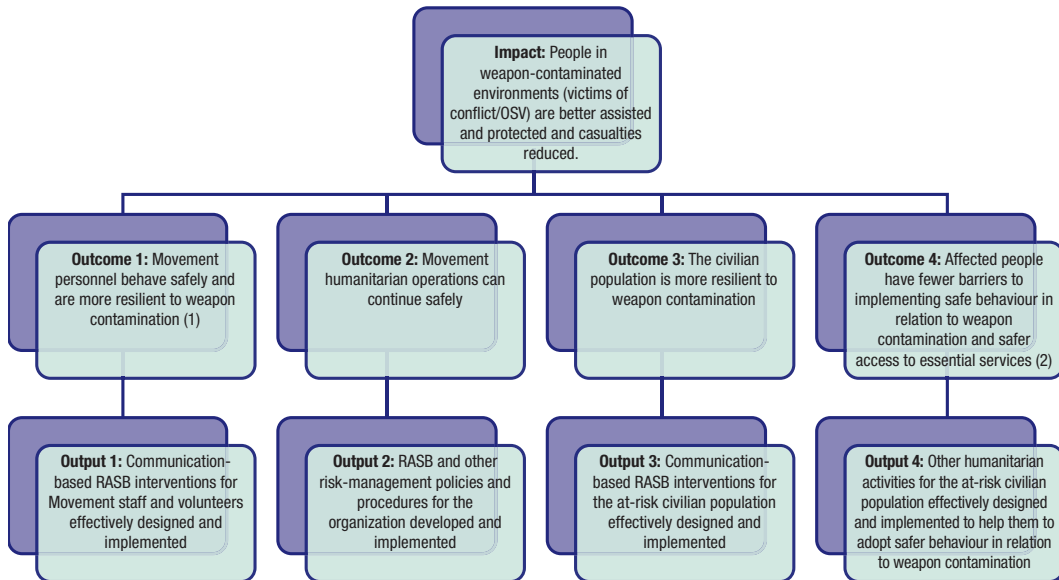
ANNEX F: BARRIERS TO BEHAVIOUR CHANGE AND STRATEGIES TO OVERCOME THEM¹¹⁰

	BARRIER	HOW TO ANALYSE IF THE BARRIER EXISTS	RASB STRATEGIES TO OVERCOME BARRIERS TO BEHAVIOUR CHANGE
1	Lack of awareness of the risk	Assess people's existing level of awareness of the risk.	Raise awareness that the risk exists, focusing on severity and susceptibility.
2	Perceived susceptibility to the risk	Explore what people believe is the risk to themselves and their families from weapon contamination.	Raise awareness that the risk exists, and use discussions of people's own behaviour patterns and examples of previous incidents to focus on their own susceptibility to the risk.
3	Perceived severity of the risk	Ask whether people feel that the presence of weapon contamination and the risk of harm are serious.	Raise awareness that the risk exists, focusing on people's susceptibility and the severity of previous incidents – using examples – not only of the immediate medical impact but the longer-term socio-economic impact.
4	Perceived efficacy of the recommended behaviour	Ask if people believe that the recommended safer behaviour will actually mitigate the risk.	Provide examples that show that the recommended behaviour will mitigate the risk.
5	Perceived divine will/fate	Ask if people believe that there are specific times that it is God's will or fate that someone will be injured, i.e. nothing that they can do themselves will make any difference.	Work with religious leaders to spread the message that God expects us to look after ourselves, that we disrespect Him if we do not, and that it is NOT His will for injuries to happen.
6	Perceived self-efficacy	An individual's perception of or confidence in their ability to perform the recommended behaviour. Ask what things are needed for the person to overcome the barriers to safer behaviour and to adopt the types of behaviour being promoted.	Raise individuals' confidence that they can perform the behaviour being promoted and/or provide the assistance they need to avoid the risk.
7	Perceived social acceptability of the recommended behaviour (subjective norms)	Ask people what others think they should do to stay safe. Ask who may have an opinion about the target group's practices and who influences them. What do their friends and family think?	Find out who people are likely to comply with, and work with those influencers to try to change the local norms and influence the behaviour of the target population.
8	Positive and negative aspects of the recommended behaviour	Ask if people can think of any positive or negative attributes concerning the promoted behaviour.	To promote safe behaviour, highlight the positive attributes in your messages and seek to help people overcome the negative attributes.
9	Cues for action	Ask if it's difficult for people to remember to do the recommended action/behaviour or how to do it, and what might help them remember.	Develop communications aimed at convincing individuals to behave safely.

¹¹⁰ Adapted from The World Bank, *Theories of Behaviour Change*, The World Bank (CommGAP), Washington D.C., 2010: <http://documents.worldbank.org/curated/en/456261468164982535/Theories-of-behavior-change>, accessed 13 February 2019.

ANNEX G: MEASURING INCREASED RESILIENCE THROUGH BEHAVIOUR CHANGE

Example of a theory of change, along with outcome and output indicators



Assumptions:

1. The RASB message has been effectively communicated and understood.
2. The barriers to implementing safer behaviour have been effectively identified, and interventions to overcome those barriers have been designed.

The following list gives some examples of impact, outcome (or general objective) and output (or specific objective) indicators that may be used for measuring the success of RASB interventions in increasing the resilience of staff, operations and the civilian population to weapon contamination in line with the theory of change. These indicators, along with existing mechanisms (e.g. for reporting), should be adapted to each context.

IMPACT OR OUTCOME	INDICATORS	HOW TO MEASURE THEM (COMPARING BASELINE DATA WITH A 6- OR 12-MONTH TARGET)	DATA SOURCE
<p>Impact or General objective</p> <p>People in weapon-contaminated environments are better assisted and protected, and casualties are reduced</p>	<p>Change in the number of incidents and casualties from weapon contamination</p> <p>Change in the number of people benefitting from humanitarian assistance delivered by the organization</p> <p>Change in the number of people in weapon-contaminated areas identifying themselves as being more resilient</p>	<p>Change in the number of incidents and casualties from weapon contamination</p> <p>Change in the number of beneficiaries of ICRC or NS assistance in weapon-contaminated areas</p> <p>Change in the number of people in weapon-contaminated areas identifying themselves as more resilient</p> <p>Change in household incomes</p> <p>Change in school attendance</p>	<p>Data on civilian incidents (including those with negligible consequences) and casualties (verified where possible by the ICRC/NS or relevant authority)</p> <p>Data on incidents and casualties affecting ICRC, Federation and NS staff and volunteers</p> <p>Records from ICRC and NS humanitarian operations</p> <p>Community questionnaires, vulnerability and capacity assessments and other data (e.g. on livelihoods, health and education) that are recorded about the target communities</p>
<p>Outcome 1</p> <p>Movement staff and volunteers are more aware of the risk from weapon contamination, know how to behave safely and are more resilient to weapon contamination</p>	<p>Outcome indicator 1.1 Change in the staff and volunteers' knowledge/awareness of the risk of weapon contamination</p> <p>Outcome indicator 1.2 Change in staff and volunteers' behaviour in relation to the weapon-contamination hazard</p>	<p>Change in the % of staff and volunteers (when questioned) who are aware of the risk, know how to identify and avoid hazardous areas and know which behaviour to adopt to avoid or limit harm from weapon contamination</p> <p>Change in the staff and volunteers' level of knowledge of key elements of RASB, e.g. hazard identification and safe behaviour</p> <p>Change in the % of people identifying themselves and their colleagues as behaving more safely</p> <p>Change in observed behaviour (by others)</p>	<p>Comparing the results of questionnaires that identify people's level of risk awareness, conducted with a selected sample of staff, before an RASB intervention, immediately after the intervention, and 6-12 months after the intervention</p> <p>Results of interviews or questionnaires identifying people's behaviour, conducted with a selected sample of staff and volunteers, before an RASB intervention and 6-12 months after the intervention</p>
<p>Outcome 2</p> <p>Movement humanitarian operations are able to continue more safely</p>	<p>Outcome 2.1 Extent to which policies and procedures have been put in place in the organization to increase safe behaviour in relation to weapon contamination</p> <p>Outcome 2.1 Extent to which the policies and procedures have been understood and are being practised by staff and volunteers</p> <p>Outcome 2.2 Change in the number of operations that can proceed in weapon-contaminated areas (or change in the number of operations ended due to weapon contamination)</p>	<p>Change in the extent to which risk assessment and mitigation are integrated into existing organizational policies and procedures, and the development of new ones where necessary</p> <p>Change in the % of knowledge of the policies and procedures by staff and volunteers (looking at both how much is known and how many staff know it)</p> <p>Change in the number of operations proceeding in weapon-contaminated areas</p> <p>Change in number of operations ended due to weapon contamination</p>	<p>Organizational documentation and reports from staff surveys and/or training</p> <p>Interviews, questionnaires or focus group discussions with staff and volunteers</p> <p>Organizations' internal risk-assessment reports that identify weapon-contamination hazards, and operational reports (e.g. recording the number of humanitarian visits by Movement personnel to weapon-contaminated areas)</p>

IMPACT OR OUTCOME	INDICATORS		HOW TO MEASURE THEM (COMPARING BASELINE DATA WITH A 6- OR 12-MONTH TARGET)	DATA SOURCE
<p>Outcome 3</p> <p>The civilian population is more aware of the risk from weapon contamination, knows how to behave safely, and is more resilient (i.e. is better able to prepare for, reduce the impact of, cope with and recover from the effects of weapon contamination)</p>	Outcome 3.1	Change in knowledge/ awareness of the risk of weapon contamination	Change in the % of people (when questioned) who are aware of the risk, know how to identify and avoid hazardous areas and know which behaviour to adopt in order to avoid or limit harm from weapon contamination	Comparing the results of questionnaires or surveys that identify people's level of risk awareness, conducted with a selected sample of staff, before an RASB intervention, immediately after the intervention and 6-12 months after the intervention
	Outcome 3.2	Change in people's behaviour in relation to the weapon-contamination hazards	<p>Change in the % of people who consider themselves or community members as behaving more safely</p> <p>Number or % of those communities surveyed that have stories of change</p> <p>Change in the number of risk mitigation plans in use in weapon-affected communities</p> <p>Change in the number of people reporting hazardous items or hazardous areas</p> <p>Change in the number of passive security measures that have been carried out by the organization or the affected community (with or without external assistance)</p>	<p>Results of KAP surveys identifying people's behaviour, conducted with a selected sample of the target population, before an RASB intervention and 6-12 months after the intervention</p> <p>Interviews or focus group discussions with a sample of the target population 6-12 months after the intervention</p> <p>Qualitative methods, such as success stories from a sample of the target population</p> <p>Number of calls to the reporting hotline (if such a mechanism and follow-up capacity is in place)</p> <p>Number of people applying protection measures and participating in the development of community risk-mitigation plans</p> <p>NS/ICRC interviews with local authorities, community representatives and other actors</p>

IMPACT OR OUTCOME	INDICATORS	HOW TO MEASURE THEM (COMPARING BASELINE DATA WITH A 6- OR 12-MONTH TARGET)	DATA SOURCE
<p>Outcome 4</p> <p>The civilian population has safe access to essential services (water, economic security, education, healthcare etc.), which were previously unavailable owing to the presence of weapon contamination</p>	<p>Outcome 4.1 Safer access to an income</p> <p>Outcome 4.2 Safer access to water</p> <p>Outcome 4.3 Safer access to health</p> <p>Outcome 4.4 Safer access to education</p>	<p>Change in the % of people who need to access hazardous areas for their livelihoods (number with new means of income)</p> <p>Change in either actual numbers or % of men, women, boys and girls who have safe access to clean water</p> <p>Change in either actual numbers or % of men, women, boys and girls with access to health facilities</p> <p>Change in either actual numbers or % of men, women, boys and girls attending school or university</p>	<p>Through interviews with community leaders and a sample of households, before an intervention, immediately after the intervention and 6-12 months after the intervention.</p> <p>Through interviews with community leaders, water and sanitation providers and a sample of households, before an intervention, immediately after the intervention and 6-12 months after the intervention.</p> <p>Through interviews with community leaders, hospitals and health clinics, and a sample of households, before an intervention, immediately after the intervention and 6-12 months after the intervention.</p> <p>Through interviews with community leaders, school administrators and, if needed, a sample of households, before an intervention, immediately after the intervention and 6-12 months after the intervention.</p>
Examples of Outputs	Indicators	How to measure them	Data source
<p>Output 1: Communication-based RASB interventions for Movement staff and volunteers designed and implemented</p>	<p>Change in number of staff/volunteers attending RASB training sessions/briefings</p> <p>Change in number of safety leaflets distributed to staff and volunteers</p>	<p>Record the job position and count attendees at trainings/briefings</p> <p>Record number of safety leaflets and other communication materials distributed</p>	<p>Training records</p> <p>Records of materials distributed</p>
<p>Output 2: Management committed to using a risk-management approach to dealing with weapon contamination</p>	<p>Change in Management commitment to RM</p> <p>Change in number of systems, policies and procedures that incorporate risk management for weapon contamination</p>	<p>Number of managers attending trainings and championing risk management</p> <p>Number of systems, policies and procedures changed and developed to incorporate risk management</p> <p>Change in number of risk assessments carried out prior to humanitarian operations</p>	<p>Management attendance and support of RASB interventions</p> <p>Records of organizational systems, policies and procedures</p>

Examples of Outputs	Indicators	How to measure them	Data source
Output 3: Communication-based RASB interventions for the at-risk civilian population designed and implemented	<p>Change in number of training sessions given</p> <p>Change in number of TV or radio spots broadcast</p> <p>Number of views/likes on social media platforms</p> <p>Number of leaflets, posters, billboards, etc. disseminated</p> <p>Number of men, women, boys and girls receiving the communication, etc.</p>	Count the numbers in the organizations' records	<p>Training records, administrative and logistics records, or communications monitoring records</p> <p>Feedback from broadcasting corporation on viewing or listening figures</p>
Output 4: Other humanitarian activities (specify as necessary, e.g. WeC technical support, income-generation support and provision of water, food, fuel) to mitigate the risk from weapon contamination	Number of other humanitarian activities conducted (e.g. number of water pipelines installed or income-generation projects begun, number of incident and victim data systems in place) and the number of people benefitting from them	Count the number of activities and beneficiaries in organizations' records	Reports from the ICRC, NS and other organizations




Please note that:

Data should always be disaggregated by age, gender and disability.

Indicators for other RASB-related outcomes and outputs that have not been included here could also be developed where appropriate. These could include, for example, cooperation and capacity-strengthening for designing RASB interventions, advocacy and communications surrounding the Movement's strategy, and the Movement's compliance with weapons-related treaties.

The ICRC helps people around the world affected by armed conflict and other violence, doing everything it can to protect their lives and dignity and to relieve their suffering, often with its Red Cross and Red Crescent partners. The organization also seeks to prevent hardship by promoting and strengthening humanitarian law and championing universal humanitarian principles. As the reference on international humanitarian law, it helps develop this body of law and works for its implementation.

People know they can rely on the ICRC to carry out a range of life-saving activities in conflict zones, including: supplying food, safe drinking water, sanitation and shelter; providing health care; and helping to reduce the danger of landmines and unexploded ordnance. It also reunites family members separated by conflict, and visits people who are detained to ensure they are treated properly. The organization works closely with communities to understand and meet their needs, using its experience and expertise to respond quickly and effectively, without taking sides.

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ICRC

International Committee of the Red Cross
19, avenue de la Paix
1202 Geneva, Switzerland
T +41 22 734 60 01
shop.icrc.org
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