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3.2 CBRN Communication Scorecard

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The CBRN Communication Scorecard is a tool to facilitate preparedness for crisis communication in the cases of CBRN terrorism incidents. In the introduction the development of the scorecard is explained. In the next section a user guide is provided. As the role of communication experts in crisis management is not always clear, this is further explained in the last section. Finally, the scorecard itself is presented.

The development of the CBRN Communication Scorecard

The CBRN Crisis Communication Scorecard is an audit consisting of performance indicators, arranged according to the four phases of a CBRN terrorism crisis: preparedness, detection, response and recovery. Within each crisis phase it specifies communication tasks towards various stakeholder groups, including coordination of the communication within the organization and the response network, relations with news media, and communication with citizens who may be more or less directly involved in the crisis. Each task is measured by performance indicators. For each indicator, an explanation is provided and the assessment is done using scale measurement. The scorecard facilitates reflection on how crisis communication processes are initiated in the response network.

The aim of the scorecard is to offer a framework for evaluating and improving crisis communication, and assisting in communication planning. The CBRN Communication Scorecard describes critical factors in the communication of public authorities with such stakeholders as citizens, news media, and other response organizations before, during and after CBRN emergencies.

The scorecard also pays attention to the kind of cooperation in the crisis response network that is crucial in the successful management of complex crisis situations. The response organization network includes many organizations, such as rescue services, the police, health care, and various municipal and state officials. Alongside governmental organizations there are, for example, non-governmental organizations, such as the Red Cross, that have important tasks in crisis management.

The audit can be used to:
(1) assess preparedness,

- (2) evaluate exercises that focus on one of the phases, and
- (3) evaluate a real case situation to conclude lessons learned (Vos, Lund, Harro-Loit, & Reich, 2011).

The *first* use of the scorecard is for measuring crisis communication preparedness and testing the crisis communication plan in the home organization. Specifically, a quick check can be run on overall preparedness, or preparedness can be assessed for each phase by using all of the indicators.

A number of people within the same organization can fill in this part of the questionnaire individually. Differences of opinions can then be discussed in a subsequent meeting. This will result in the clarification of strong and weak points on the basis of which plans can be made for strengthening preparedness. Moreover, when several organizations participating in the same network use the audit, the results can be compared and jointly reflected on in a meeting where coordination is discussed. The assessment can also lead to additions to the existing crisis communication plans. The indicators on the scorecard can be used as a checklist to scrutinize the crisis plans of response organizations.

The *second* use of the tool is to score performance during an exercise. Such an exercise can be done by one organization or, preferably, include more actors in the response network. This audit usually concerns the detection and warning phase, and response phase. However, it is also possible (for example, in a separate exercise) to simulate the recovery phase.

The exercise, for example a simulation, can involve citizens and journalists, or possibly actors in these roles. The indicators can then be used to evaluate the exercise. The exercise can focus on how communication is integrated in a broader crisis management exercise, or how communication is coordinated within the response network.

The *third* use of the tool is to evaluate how an organization has responded in a recent real-life crisis event. This means looking back on all the phases of the crisis to facilitate learning within the organization or the broader response network.

In the evaluation of the crisis events, external experts and researchers can be brought in to critically review the crisis communication activities and their effects. In this case, all the phases of the document can be used to carefully reconstruct the events, identify where improvements could be made and what can be learned for communication in future cases.

For the CBRN Crisis Communication Scorecard, an educative approach has been chosen, the aim being to help crisis management and communication experts to clarify their tasks and the quality criteria related to communication during CBRN terrorism crises. This is why each indicator is accompanied by a thorough explanation. The content of the indicators has been derived from many scientific sources and expert interviews (Ruggiero & Vos, 2015).

The CBRN Communication Scorecard is a very detailed tool for communication management, comprising 52 performance indicators. The results are analyzed by comparing average scores with those of other organizations, in order to benchmark, or with outcomes of an earlier year, in order to see the

progress achieved. High scores indicate strong points and low scores indicate areas in need of improvement.

To analyze the outcomes, the results of the indicators are compiled in 25 groups of tasks. These, in turn, are fitted to the four phases of a crisis. The results can also be analyzed by target group, for which three categories are assigned: communication with (more or less directly involved) citizens, communication with the news media, and coordination within the response organization and network (see Table 36).

Table 1 Overview of the number of tasks and indicators per crisis phase

	Number of tasks:	Number of indicators:
<i>Phase 1:</i> Preparedness	7	19
<i>Phase 2:</i> Detection	4	8
<i>Phase 3:</i> Response	6	13
<i>Phase 4:</i> Recovery	8	12
Total	25	52

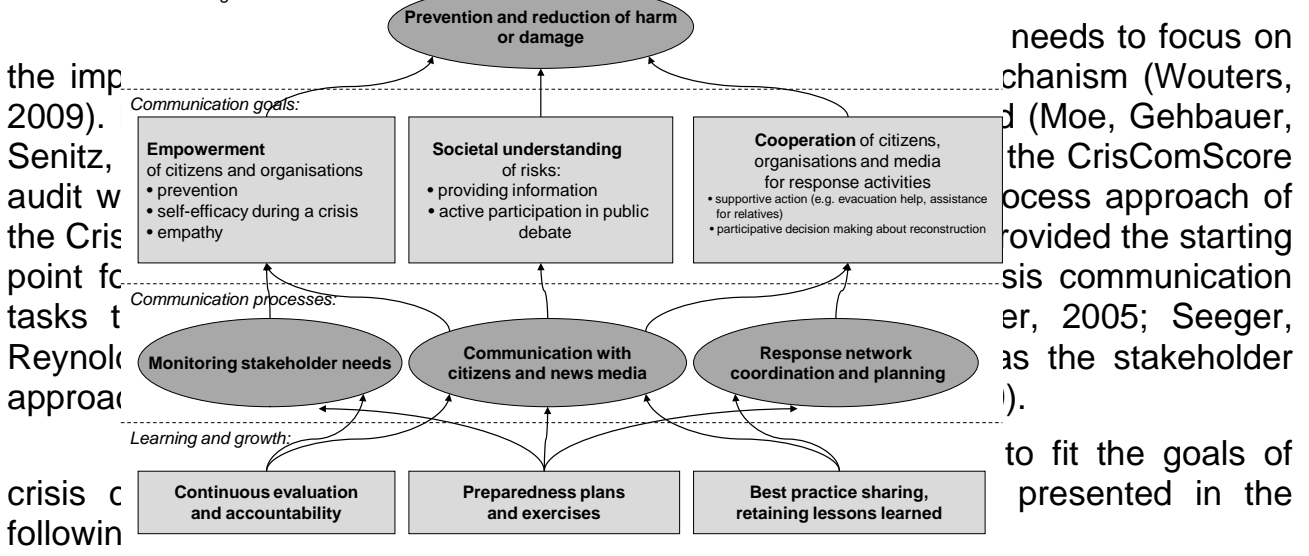
Each of the performance indicators is measured on a 5-point scale, as follows:

- 1 = This indicator is not taken cognizance of
- 2 = The importance has been recognized, but hardly any action is being taken
- 3 = We act on this to some extent but not systematically
- 4 = This is to a large extent a systematic part of the action
- 5 = This is fully a systematic part of the action
- 0 = Don't know, or this indicator is not relevant for our organization (not included when counting the average score of an indicator).

The scorecard can be used as a survey and filled in by the organization's communication experts and by general managers familiar with communication (self-assessment). If the scorecard is used as a survey, it is recommended to arrange a reflection meeting to discuss in more depth the average scores of the indicators. Self-assessment can be complemented with auditor assessment. The auditing can, for example, be conducted by an internal and an external expert, who may use interviews and gather facts and figures to back up their assessment. For example, if available, the results of real-life case evaluations of communication actions during earlier crises can be utilized.

An assessment of the key success factors reveals the strong and weak points in the organization's crisis communication and thus enables the allocation of resources to be prioritized. High-scoring indicators can be used to maintain the same quality level with less manpower through the use of practices developed for this purpose, allowing more time to be invested in new task areas with lower scores.

The CBRN Crisis Communication Scorecard has been inspired by the 'Balanced Scorecard' of Kaplan and Norton (Kaplan & Norton, 2001), which uses performance indicators, and by the self-assessment procedures introduced by the European Association of Quality Management. It is based on the general Crisis Communication Scorecard developed by JYU in CrisComScore, an earlier EU-funded project ("FP7/2007-2013, n° 217889," n.d.), and has now been tailored to CBRN terrorism crises. The results of the CATO research project, in particular the work package on communication, were utilized to tailor the indicators to CBRN terrorism.



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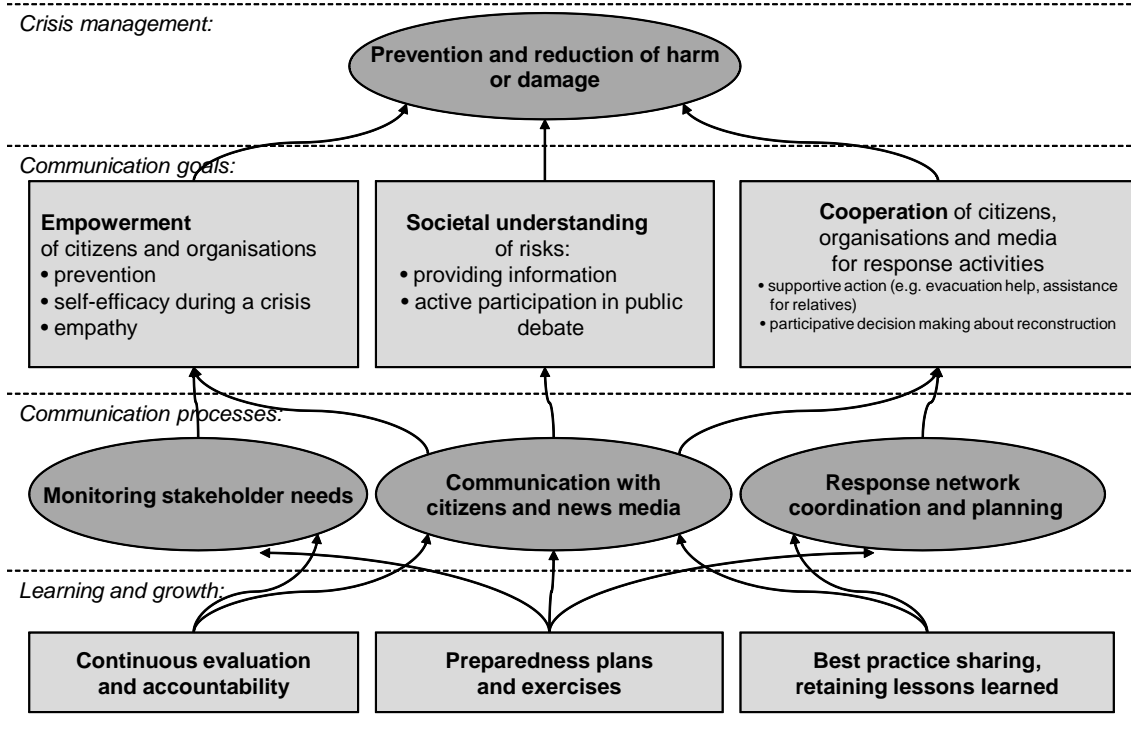


Figure 1 Strategy map for crisis communication supporting crisis management by public organizations (Palttala & Vos, 2012)

ommunication goals of empowerment, societal understanding and cooperation contribute to crisis management. They are realized through communication processes, including monitoring, interaction with stakeholders and coordination in the response network. This, in turn, can be facilitated by evaluation, planning and sharing best practices (Palttala & Vos, 2012).

When customising the tool for CBRN terrorism communication, the specific challenges if these types of crises needed to be taken into account. For this purpose several studies were undertaken. Terrorism crises evoke complex emotions that call for sense-making, may bring unexpected public behaviour, test trust and credibility, and require attention for ethics in the discourse, whereas CBRN aspects add further challenges owing to the high diversity of these crises, the uncertainties involved, the lack of clear boundaries, the lack of public knowledge, and the very diverse needs of public groups that need to be met (Ruggiero & Vos, 2013).

CBRN terrorism crisis management requires a multidisciplinary effort. Within crisis management teams and their diverse competences, the role of communication experts is not always fully understood. The section below aims at contributing to a fuller understanding of this professional group, as it would also facilitate organizations working with the CBRN Communication Scorecard. Therefore, to better explain the role of communication experts in CBRN terrorism crisis management, the communication literature was further investigated.

Clarifying the role of communication experts in CBRN terrorism crises

The CBRN Communication Scorecard as a strategic tool is designed to improve communication in the various phases of a crisis. The scorecard can assist both in communication planning and preparedness for communication in emergencies. As the scorecard addresses critical factors in the communication of public authorities with stakeholders, it also forms a useful tool to evaluate decision making processes during emergency exercises. Communication as a facilitator of cooperation within the response network and with various stakeholders is crucial for the successful management of crises.

Together, the scorecard indicators show how communication contributes to crisis management by response organizations and clarify the role of crisis communication experts within response organizations. In the following sections, this is further explained in relation to each of the four crisis phases of preparedness, detection and warning, crisis response, and recovery and evaluation.

Improving preparedness

In the CBRN Communication Scorecard, communication is seen as implemented by communication experts, assuming that the roles and competences of communication experts are clarified and developed in contact with response managers. From the decision making point of view, this requires that communication experts take part in strategic crisis management as a competent team with expertise in CBRN issues able to operate and conduct crisis

communication. Communication experts in general preparedness can contribute to crisis management and decision making—with more or less decision making power—in several ways (Reber & Berger, 2006). They should ensure that communication plans and strategies cover a range of crisis scenarios, keeping an open view, as crises typically develop in unexpected directions. They can also monitor the organizational environment and stakeholders on a daily basis. Earlier plans can be updated regularly, as, for example, when new citizen groups emerge that need to be included in crisis planning. Plans should also be updated to match with those of other key participants in the response network.

The responsibilities of communication experts during crises need to be clear. Efficient communication also builds on, and in that sense calls for, transparent decision making in the crisis response network. In turn, communication experts can provide advice to ensure that decision making is transparent enough for the whole response network to cooperate and work efficiently. This contributes to internal communication in the network and enhances the interconnectedness of the different organizations participating in response activities.

As not all actions can be foreseen in planning scenarios, the quality of the collaboration itself is vital for being able to coproduce response and recovery solutions. This concerns improving preparedness for such collaborative processes and related decision making within response organizations and within the network of the response organizations involved. The network can be seen to include various governmental organizations and non-governmental organizations, but also civil society groups along with private organizations such as critical infrastructure companies. The actors comprising the network should be (re)defined for different levels (local, national, or international) and types of crisis situations. In this way, organizations will be better prepared to respond to crises and will not need to spend so much effort clarifying the communicative actions needed for a particular crisis, as would be where proper preparedness is lacking.

Preparing to arrange communication facilities and information exchange in a timely and in an effective manner is regarded as one of the most important tasks of communication experts before and during crises. This entails that these experts have a good understanding of the management and communication processes both inside the organization and with its publics (Meng, Berger, Gower, & Heyman, 2012). One important aspect of this is to ensure that the needs of the news media and other stakeholders are recognized when planning, for example, co-located work spaces of risk experts and communication personnel. Next to having access to the situational picture and being included in decision making roles, proximity to the operating centre in crises is crucial to ensure better communication across the response network, news media and public groups. When preparing communication channels, for example, for crisis website and social media use, the role of communication is to enable multichannel communication and other points of interconnection with news media, civil society groups and individual citizens.

Crisis situations call for flexible and timely decision making and communication. Often, crises involve multiple organizations that may need to coordinate activities and that can join a decision making table. Communication experts may bring in information gathered by their monitoring activities and provide

advice on, for example, crowd sourcing and expectations of public groups. These also includes the diverse views of the public on, for example, risk perception and trust in the authorities, and may relate to ethical decision making and communication (Kang, Berger, & Shin, 2012). In general, communication experts can have a variety of roles related to decision-making processes. For example, as liaison officers and spokespersons in media relations, website and social media editors, facilitators of meeting points and platforms with civil society actors and individual citizens, and as monitors of communication ongoing in the news and social media. Communication experts also often advise and educate others in the response network in communication with stakeholders when unfamiliar problems are encountered that need creative problem solving.

In the preparedness phase, communication is undertaken that will facilitate smooth operations in the later phases of a crisis. This focuses on building relations and mapping contacts, and arranging procedures and means for the exchange of information. Knowing the key stakeholder groups, risk perceptions and media use is also a crucial part of cooperative decision making in crises. The CBRN scorecard acknowledges that organizations should be able to identify what public groups are involved and how they seek, share and receive risk information. Communication experts in this process can ensure that this information is acknowledged and the views of public groups are taken into account (Saini & Plowman, 2008) in decision making as well as in the communication itself during crises.

It has been acknowledged that people trust some sources more than others. Communication experts need to monitor and evaluate what sources, media and style of communication are valued as trustworthy regarding risk and crisis management decisions. This facilitates better decisions on communication strategies and, consequently extends the reach of important public groups, which is an important goal (Werder & Holtzhausen, 2009). Emergency response organizations also need trusted and credible spokespersons. Managers and politically responsible persons, for example a chief of police, mayor or minister, are often trained for such roles and assisted by communication experts, while in some cases communication experts themselves are also considered a trustworthy and credible spokesperson.

Communication experts are usually assigned to analyze the risk perceptions and the related information needs of public groups. Monitoring provides information on how different citizen groups see risks. Several factors shape perceptions, and hence communication experts' insights concerning different social contexts can bring valuable information to the decision-making table. The monitoring of news media content and social media also helps to evaluate what kind of questions, concerns and misperceptions different groups have. Communication expertise is of value when insights gained from monitoring and crowdsourcing need to be interpreted for decision making by the response organization. In addition, communication experts are responsible for information dissemination following the decision making, even if others are responsible for the risk data gathering.

The role of online communication and social media has grown not only in crisis response and recovery, but also in preparation for various crises. This involves connecting with public initiatives to promote risk awareness and

collaborative educational activities. Preparing for risks also means prioritization of the risks to be managed. A participative approach to such decision making can include public input.

Bringing public input to the decision-making table is no simple task, but in a democratic society it is important to do so, and send a signal to the public that its voice is heard in risk prioritization processes. In such processes, knowledge of ways of working and interests of the news media and key journalists is also useful. Similarly, organizations need to be prepared for media relations in later crisis events and be able to connect fast with the news media. One indicator included in the CBRN Communication Scorecard, for example, addresses the need for the media database and channels to be kept up-to-date and maintained by communication experts. The hectic pace and huge scale of some crises hardly allow for establishing and documenting new media relations.

Enhancing detection and warning

When crisis mode is activated, the response network needs to act fast. As mentioned in one indicator in the CBRN scorecard, “at this point the procedures need to be clear regarding who sets matters in motion and how”. At this point, the communication function also needs to be on high alert. Inside the response organization, information about the initial organizational measures is now actively shared. Key warning messages are formulated and communicated. As the type of crisis affects who to reach in what ways and via what communication channels, communication experts have to bring this information to the decision-making table and possibly acknowledge that in a particular crisis some communication channels might lack reach, for example owing to power outages. Depending on proposed actions, for example intended evacuations, communication experts can also clarify the possible reactions of different publics and help ensure that diversity is taken into account, along with ethical procedures (Place, 2010). From the decision-making point of view, this kind of information might be needed to reach as many of the relevant stakeholders and public groups as possible.

During the detection and warning phase, information received from public groups is important, for example in the case of crowdsourcing. Communication experts can map the different public groups and address their concerns. As, in this phase, coherent and consistent communication is needed, communication experts should also ensure that the interconnections between the actors function so that these criteria can be met; coordination can include, for example, links on the relevant websites, and the use of similar hashtags and retweeting among key response organizations. Specific additional information that certain public groups might need should also be considered in the decision-making process and communicated.

It is also necessary to monitor if the decisions made and instructions issued reached people involved and met their needs (Ruggiero & Vos, 2014). This can be measured by analyzing the gap between advised and observed behaviour. Media monitoring of the effect of the decisions disseminated is important not only for communication but for the whole response organization. Monitoring discovers and

enables possible misperceptions in the news and social media to be corrected via the organization's own channels. It also shows the needs of public groups as these are portrayed in the news and social media. The technical details of a particular CBRN risk may be misunderstood, and hence the decisions made may need clarification or more detailed information may be required.

Spokespeople and mediated communication messages need to avoid jargon and be as clear as possible. At this point, the decision-making process should be made as transparent as possible to demonstrate that the organization is clear about its own responsibilities, is reliable in its motives and actions, and is disseminating information as fully and accurately as possible (Streifel, Beebe, Veil, & Sellnow, 2006).

Cooperating and assisting in the crisis response

During the crisis, information needs to be exchanged among all the groups involved in the response activities. As stated in one of the indicators in the CBRN scorecard, "not just the decisions taken but also the reasons why and how they were communicated should be shared". From the communication perspective, this means active cooperation with those responsible for decision making. Communication experts can also coordinate their communication activities with those of other organizations and ensure that the communication strategy is in line with the actions of the emergency management.

In crisis response, communication activities should aim to increase understanding of the crisis and related risks in the current situation. However, communication experts should not concentrate solely on 'materializing' the decisions of the response network (Ashcraft, Kuhn, & Cooren, 2009). From the organizational decision-making standpoint, they should also concentrate on explaining, if possible, the information that the response network has used in making its decisions. This includes relevant uncertainties and possible consequences the response network might encounter. In addition, possible delayed effects can be addressed, as some of the beneficial effects of the measures taken may not be immediately recognizable.

Decisions during the response phase may give rise to questions and misinterpretation among citizens. These need monitoring, and questions and misinterpretations must be addressed as soon as possible. Incorrect rumours should also be addressed. Communication experts in this phase have many different responsibilities and need to use multiple communication channels when communicating with the public groups affected by the crisis, and also with those less directly affected, as the latter may, for example, be in social media interaction with the first group.

Depending on the hazardous substances involved and how they spread, it may be difficult to map target groups. For example, hazardous materials may show up in different places and over a longer period of time. Uncertainty could also prevail for some time about the materials involved, and the cause and consequences of the crisis. In addition, the public may have little knowledge about the substances in question and therefore about how to reduce the risks involved. In

some CBRN crises, for example those involving infectious diseases, there may be much pressure on hospitals so that the priorities in the measures taken will need to be carefully explained. Depending on the cause of the threat, there may be a risk of repetition, such as in the case of a terrorism crisis where the perpetrator has not yet been apprehended or because of possible copycat behaviour. All of this needs to be taken into account in the communication with the public (Ruggiero & Vos, 2013).

Public groups and news media relations during crises demand immediate or at least timely acknowledgement. Communication services, for example in the case of international communication, often need to be available around the clock, thereby requiring a three-shift rotation of experts in various roles, exchanging insights with each other and with those of a later shift. This calls for a large group of communication experts trained for crisis situations. This need may be met by pooling expertise with similar organizations that are not involved in the crisis. During this stage, communication experts find themselves more often in the role of spokespersons or a voice for relaying the decisions made by the organization (Huebner, Varey, & Wood, 2008), but mostly they will continue in the task of assisting the managers who function as spokespersons.

Public groups and media on the crisis site will also be interested in the progress of the response activities and the decisions related to these and what lies behind them. Communication experts are thus seen as accountable disseminators who can help in this process (Mayr & Siri, 2010). The response organization needs to be able to concentrate on saving lives and reducing harm. In communication, not only facts known are made public, but uncertainties in the reality of the situation can also be addressed. People can also be asked to help, for example, by posting photographs of damage on a platform. Or, if the crisis situation continues and new risks evolve, they can assist by sharing signs of ongoing risks.

Supporting and facilitating recovery and evaluation

In the recovery phase, other actors may participate in the response network, for example building and insurance companies. Collaboration across the network and the coordination of communication with citizens and other stakeholders needs to be redefined. Communication experts gather information and monitor news and social media to see what matters might be hampering the recovery process. They also promote collaboration and continued attention for recovery activities.

Communication experts need to ensure and support participative decision making on the recovery goals and process. All the public groups that are directly involved should have a broad understanding of what has happened and what options exist for recovery. Public groups want to feel that they and their needs have been acknowledged in the decision making process. In this process, communication experts can advise and support decision makers in arranging how the involved public can have a voice, such as in face-to-face meetings and possibly by supporting media platforms.

Communication experts can also facilitate meeting points and platforms for public groups to express their feelings and provide feedback about the decision making process during and after the crisis. One major activity for learning is

evaluation of the communication carried out during the crisis, as addressed in one indicator on the CBRN Communication Scorecard: “Communication in the individual organization and with other participants in the response network is evaluated”. Evaluation of the decision making communication is also needed, both at the organizational and network level. This will facilitate organizational learning for use in future crises and enhance cooperation with other organizations. In this way the effectiveness of decision making also can be improved.

After the crisis, evaluation and learning can be supported by communication activities. This includes coming to terms with what has happened, the crisis and its consequences, facilitating the learning of lessons and feedback on the mitigation process. This is also the time, within the response network and within each organization, to analyze look back on the decision making and operational process, and draw conclusions for future events. Some policies and actions based on the decisions made during the crisis might initially have been supported but subsequently criticized. Communication experts can facilitate an open-minded discussion of the organization’s actions (Fleisher, 2002). This is not easy, as many may be eager to get back to normal life, and prefer to forget rather than reflect on the crisis event.

The response organization should also be willing to discuss its decision making process with the media if necessary. At this juncture, communication experts should support the organization and emphasize transparency. Mistakes that have been made need to lead to lessons learned for the future. Sometimes public evaluations are harsh, as crises can have devastating consequences and expectations of authorities may be high. Therefore, the motivation of the responders should also be kept in mind. Communication experts should also critically monitor their own actions during a crisis with an eye to improvements. In sum, communication experts should develop the response organizations’ communicative preparedness, response and evaluation processes and not just concentrate on designing external communication activities or disseminating messages (Benn, Todd, & Pendleton, 2010).



The CBRN Communication Scorecard

The tool consists of several parts, all of which mention communication tasks and specify indicators for each. The first part facilitates assessment of the Preparedness of the organisation for crisis communication in CBRN incidents. The second part concerns preparations for the Warning Phase, the third relates to Crisis Response when the situation is at its peak, and the last part, Reconstruction and Evaluation, focuses on actions when the situation has calmed down.

3.2.1 Phase 1: Preparedness

STAKEHOLDER	COMMUNICATION TASK	PERFORMANCE INDICATOR	SCALE
RESPONSE ORGANISATION AND NETWORK	<p>1.1 Improving preparedness in the organisation and in the network of response organisations</p>	<p>1.1.1 Communication plans and strategies for C, B, R and N scenarios are developed within individual organisations as well as with other participants in the response network.</p> <p><i>Explanation: Communication plans need to be developed for the organisation in question. However, it is not enough that individual organisations have crisis communication plans; such plans should be synchronized to match the plans of the other key participants in the network. Communication plans and strategies should cover scenarios, such as food poisoning, pandemics, or an attack onto a nuclear power plant or a chemical factory. They can take into account the possibility of a hoax, the lethality of the material involved, the area and duration of contamination, infectiousness, criminal investigation and risk for repetition.</i></p>	<p>1 = This indicator is not taken cognizance of 2 = The importance has been recognized, but hardly any action is being taken 3 = We act on this to some extent but not systematically 4 = This is to a large extent a systematic part of the action 5 = This is fully a systematic part of the action 0 = Don't know, or this indicator is not relevant for our organisation</p> <p>1 2 3 4 5 0</p> <p>Open space for comments:</p>

		<p>1.1.2 The responsibilities and tasks of communication experts in relation to response management in the organisation and within the response network are clearly laid down.</p> <p><i>Explanation: The roles and competencies of communication experts are clarified together with response managers. This requires a communication expert in the crisis command centre who takes part in strategic crisis management, a competent team with expertise in CBRN issues to operate and conduct crisis communication, and the possibility to build up a backup team for communication tasks when needed, e.g. for monitoring and web updating during crises. Competence profiles can be established for communication experts working with journalists, the social media, web editors, call centre coordinators, etc.</i></p>	<p>1 2 3 4 5 0</p> <p>Open space for comments:</p>
		<p>1.1.3 Agreements are made regarding coordination in the network of public response organisations, including responsibilities for communication.</p> <p><i>Explanation: In order to cooperate efficiently, the communication responsibilities, depending on the kind of scenario (C, B, R or N), of the organisations involved should be transparent to others in the network. As CBRN incidents may have wide implications, 'up scaling' to a national level is likely and procedures should be clear, as also should procedures for international cooperation. It should be established who are involved during the different crisis phases in coordinating communication, as this may change from the early to later phases. CBRN crises call for broad network activities, including specialised agencies next to rescue services, police, defence and health care. Agreements among public organisations may also concern when specific crisis facilities are to be used, such as a national crisis website or call centre.</i></p>	<p>1 2 3 4 5 0</p> <p>Open space for comments:</p>

		<p>1.1.4 Local organisations, national special interest groups, institutions and companies, are stimulated to draw up their own crisis communication plans and exercises and include more severe hazards like CBRN risks within an all hazard approach.</p> <p><i>Explanation: An all-hazard approach is recommended rather than a focus on CBRN in particular, unless the region has specific risks in this area (e.g. a nuclear power plant). This also helps prevent information overload. It should be clear which other groups outside the response network should be included in the preparedness activities or encouraged to formulate their own crisis communication plans and exercises, e.g. schools which may need to act in loco parentis during an evacuation or sheltering-in-place, homes for the elderly, and (e.g., infrastructure) companies. Agreements on cooperation in a crisis situation should be discussed. National interest groups, such as associations of disabled people, can clarify needs of specific groups.</i></p>	1 2 3 4 5 0 Open space for comments:
	<p>1.2. Improving facilities and the availability of trained manpower</p>	<p>1.2.1 Communication facilities for alerts and information exchange with public groups and within the response network are arranged in a timely and effective manner.</p> <p><i>Explanation: For communication with different publics, facilities are arranged that include alert systems (e.g. sirens and cell broadcasts), media relations and social media interventions. Crisis websites and call centres for citizens need enough capacity. Co-located work spaces facilitate cooperation between scientists and communication experts. Communication between the crisis command centre and the crisis site, as well as among the response network partners has been arranged to be independent from public telephone systems. Moreover, there should be preparedness for a potential power outage.</i></p> <p><i>Multi-channel approaches, including social media and linked web pages, have been developed. Facilities have been created to simultaneously post messages on different social media platforms. Joint media strategies, such as the use of joint hashtags and re-tweeting, have been discussed within the organisation and across the response network. Preparations for social media monitoring have been made, including, e.g. a monitoring tool and analysts to interpret the results.</i></p>	1 2 3 4 5 0 Open space for comments:

		<p>1.2.2 The pooling of communication expertise is arranged and there is enough manpower for each communication task.</p> <p><i>Explanation: The pooling of communication expertise is needed in major crises, including communication experts of similar organisations. In addition, a specialised support group can be set up to be brought in with specific areas of expertise, e.g. on C, B, R or N, terrorism, health, or mental health in the case of incidents that are expected to evoke high levels of anxiety among public groups. It should be ensured that there is sufficient manpower for a three-shift 24-hour operation in the event of a major and long-lasting emergency.</i></p>	<p>1 2 3 4 5 0</p> <p>Open space for comments:</p>
		<p>1.2.3 Training for communication expertise and skills is offered for all personnel involved.</p> <p><i>Explanation: Continuous education for communication should be provided so that different competence profiles are developed both for communication experts and managers. Different competences are needed for, e.g. spokespersons, website editors, call centre officers, and those who monitor the online and traditional media. Moreover, training is needed for potential non-traditional roles, and creative problem solving is encouraged. Communication training is also provided for the leadership, whose role in CBRN crises is often important, and key staff members. Subject expertise needs attention as well.</i></p>	<p>1 2 3 4 5 0</p> <p>Open space for comments:</p>
	<p>1.3. Improving information exchange and exercises on crisis communication activities in the organisation and within the response network</p>	<p>1.3.1 Knowledge of the responsibilities of other parties, persons to be contacted, procedures and means for the exchange of information in the organisation and within the response network is established in advance.</p> <p><i>Explanation: Exchange of information should be arranged to gain familiarity with the organisation's partners so that it is not only after a crisis has occurred that they meet each other. For example, formal and informal professional, inter-organisational and cross-sector networks can improve cooperation and coordination prior to crises. As CBRN incidents may have cross-border implications, international cooperation also needs to be developed. Information exchange procedures are established so that everybody knows whom to contact and how in the case of a crisis, and how information will be shared about the decisions made and the reasons for them. This includes a communication system for internal reporting and exchange between (overlapping) shifts.</i></p>	<p>1 2 3 4 5 0</p> <p>Open space for comments:</p>

		<p>1.3.2 Crisis exercises emphasizing communication are conducted regularly and across internal and external organisational boundaries covering CBRN scenarios.</p> <p><i>Explanation: Exercises in advance enable the practising of roles and tasks as well as coordination of the communication within an individual organisation and between the response organisations, covering cooperation between multiple parties, e.g. from science-making to policy-making and emergency response. These exercises can be undertaken for the different crisis phases, together with other (specialised) national or international authorities, depending on the crisis type, and input by citizens and media should also be simulated. A thorough evaluation should be conducted, for which later phases of this scorecard can be used. Attention also needs to be paid to flexibility as situations evolve.</i></p>	<p>1 2 3 4 5 0</p> <p>Open space for comments:</p>
CITIZENS	<p>1.4 Knowing the public groups and their use of media</p>	<p>1.4.1 The various public groups are identified according to how they seek and receive information about risks.</p> <p><i>Explanation: Organisations should be prepared to do an actor analysis to clarify which public groups are involved and how they seek, share and receive risk information. Different public groups may be involved depending on the incident, e.g. whether it concerns a C, B, R or an N scenario. People use different communication channels and react differently to information according to their experience of risks and crises and their cultural background while media use also changes over time. Risk groups should be known, including vulnerable people (e.g. children, elderly, pregnant, disabled), and those needing special attention regarding communication, such as transient populations and immigrants.</i></p>	<p>1 2 3 4 5 0</p> <p>Open space for comments:</p>

		<p>1.4.2 It is known which sources and intermediaries the various public groups consider reliable in the case of C, B, R and N events.</p> <p><i>Explanation: People will trust some sources more than others and this will influence the 'communication climate'. A message that is received from a trustworthy channel is accorded greater credibility. Trust in sources differs among public groups, and across crisis types, and can be affected by rumours, e.g. spread on the Internet. Trust in the source affects people's willingness to follow instructions given. For example, immigrant groups or associations of disabled people need to be involved as credible intermediaries to reach specific groups. In the case of a bio-threat, health professionals may be considered the most trustworthy source.</i></p>	<p>1 2 3 4 5 0</p> <p>Open space for comments:</p>
	<p>1.5 Monitoring of risk perception and general public understanding of risks</p>	<p>1.5.1 Regularly, different monitoring tasks are arranged to analyse risk perception and the related information needs of public groups.</p> <p><i>Explanation: Perceptions play a big role in CBRN events, as they are considered feared and are generally not previously experienced by publics, and thus unknown to them. Monitoring provides information on how groups of citizens see risks. Perceptions may differ according to the scenario and material in question (C, B, R or N). Moreover, perceptions may be shaped by several cultural and contextual as well as socio-demographic and socio-economic and psychosocial factors. Surveys can be conducted (bi)annually to chart developments, along with continuous monitoring of news and social media content to learn what kinds of questions, concerns and possible misperceptions people may have. The results need to be interpreted and explained to others in the response organisation(s). Even where gathering these data is the task of another organisation, the responsibility nevertheless remains for internally disseminating the information and making sure that it is sufficient.</i></p>	<p>1 2 3 4 5 0</p> <p>Open space for comments:</p>

1.6 Contribution to general public preparedness and prevention	<p>1.6.1 Different means of communication are used to educate and instruct people on how to be prepared for diverse risks and to support prevention.</p> <p><i>Explanation: Information on CBRN materials needs to be integrated in general preparedness campaigns. Educational approaches concerning CBRN substances are recommended, for example through incorporation into school programmes, to help people better understand what, e.g. infections and radiation are. Care should be taken to avoid propagating fear, generalizations, stereotypes and stigma when communicating to publics about terrorism. Counter-narratives and prevention of radicalisation may gain attention, for example, by involving intermediaries and citizen initiatives.</i></p>	1 2 3 4 5 0 Open space for comments:
	<p>1.6.2 Preparedness includes online communication and active social media accounts.</p> <p><i>Explanation: A multi-platform approach includes social media posts that arouse attention and link to a dedicated website with more complete background information. By providing interesting preparedness information, people are invited to follow the organisation's social media account, creating opportunities for fast information exchange in the case of crises. Similarly, one can subscribe to service apps, e.g. for localised crisis warnings. Crisis websites are easy to find, for example, a national crisis website that when there is no ongoing crisis offers content related to general preparedness, using an integral all-hazard approach. Websites of different response organisations can link to the national website and to each other. Tweets can be embedded in crisis websites and public input included by, e.g. retweeting.</i></p>	1 2 3 4 5 0 Open space for comments:
	<p>1.6.3 Educational background information is available but actively promoted only in the case of a CBRN threat.</p> <p><i>Explanation: Clear background information leads to a better understanding and motivates people to act as advised, and thus needs to be available, e.g. online. This includes, for example, educative materials about hazardous substances and how they are transmitted, signs and symptoms of infection or exposure, and preventive measures. Complex terms, such as shelter-in-place, need to be simplified. The aim is to increase awareness and understanding of CBRN materials among public groups.</i></p>	1 2 3 4 5 0 Open space for comments:

NEWS MEDIA	1.7 Establishing cooperation with news media and journalists for deployment in crisis situations	<p>1.7.1 The various news media and key journalists are known.</p> <p><i>Explanation: It is known what the main news media are, on both the national and regional level. Names and specialist areas of journalists working in public and commercial channels are listed, including those specialised in CBRN issues, so that they are available also at the location of the incident, and e.g. in print in the event of power outages. Relations with journalists are regular. An up-to-date media database is maintained along with email lists to enable the various categories of the media to be reached without delay. Preparedness for dealing with international media may be needed for CBRN incidents.</i></p>	1 2 3 4 5 0	Open space for comments:
		<p>1.7.2 Preparedness information concerning CBRN risks and measures is provided to the media in an all-hazard approach.</p> <p><i>Explanation: As CBRN incidents are low-probability high-impact risks, an all-hazard approach is suitable. Educational information about CBRN materials, integrated into the context of broader preparedness can be offered to the media. Knowledge of CBRN materials is generally low, e.g. understanding of how different infections are transmitted, or that iodine in the case of radiation incidents should only be taken if so indicated by the authorities.</i></p>	1 2 3 4 5 0	Open space for comments:
		<p>1.7.3 Media coverage on CBRN risks is followed and analysed.</p> <p><i>Explanation: Monitoring is done to discover and actively correct possible misperceptions in the media via the organisation's own channels, but also to determine the needs of public groups as portrayed in the news. The technical details of CBRN risks may be misunderstood and need clarification. Preparations are made to facilitate 24/7 intensive monitoring when needed.</i></p>	1 2 3 4 5 0	Open space for comments:

		<p>1.7.4 Cooperation with the news media, focusing on the interests of citizens and protecting victim privacy, is initiated.</p> <p><i>Explanation: Guidelines for public notification and ethical reporting are provided. The organisation develops procedures to protect victims and families, in the event of a crisis, from overwhelming media attention. A dialogue with journalists is established in pursuit of the organisation's objective of finding a balance between the need to report an incident and the requirements of official investigations. Protocols regarding communication on sensitive topics are discussed. Matters for discussion include, for instance, avoiding creating generalizations when explaining the possible causes of terrorism or drawing attention to a criminal act that may lead to the copying by others of the same violent behaviour, and avoiding sensationalist reporting, including publishing pictures that could induce panic or harm victims' privacy.</i></p>	<p>1 2 3 4 5 0</p> <p>Open space for comments:</p>
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3.2.2 Phase 2. Detection and warning

STAKEHOLDER	COMMUNICATION TASK	PERFORMANCE INDICATOR	SCALE 1 = This indicator is not taken cognizance of 2 = The importance has been recognized, but hardly any action is being taken 3 = We act on this to some extent but not systematically 4 = This is to a large extent a systematic part of the action 5 = This is fully a systematic part of the action 0 = Don't know, or this indicator is not relevant for our organisation
RESPONSE ORGANISATION AND NETWORK	2.1 Information exchange and coordination in the organisation and within the response network	2.1.1 Crisis mode is activated within the organisation and response network. <i>Explanation: To be able to act fast, procedures need to be clear regarding who sets matters in motion and how. Crisis communication personnel need to be informed by internal alerts and on-duty arrangements, including communication experts with CBRN expertise. In the case of incidents with possible cross-border implications, relevant bodies in neighbouring countries or international organisations need to be involved. A warning message may also come from abroad, and a period of uncertainty may exist when the nature of the threat, e.g. an infectious disease and how it is transmitted, is unclear.</i>	1 2 3 4 5 0 Open space for comments:
		2.1.2 Within the organisation, the warning and all information about the initial organisational measures are actively shared. This includes consulting and informing other participants in the response network when formulating key warning messages. <i>Explanation: In the warning phase, it is important to operationalise network cooperation so that there is an exchange of current activities beyond the organisational and, in the case of a large incident, national boundaries. This ensures that the key warning messages issued by the different response organisations are consistent. Contradictory messages create confusion among publics, hinder rescue operations and lessen trust towards response organisations.</i>	1 2 3 4 5 0 Open space for comments:

CITIZENS	<p>2.2 Targeting and distribution of warning messages</p>	<p>2.2.1 Multiple channels for public warnings are used, including both news media (press and broadcasting) and direct channels of communication.</p> <p><i>Explanation: Procedures for public notification are followed, and warnings are sent to publics via multiple communication channels, the aim being to reach as many as possible of the targeted public groups through channels they use and sources they trust. Crisis type (C, B, R or N) may also affect the distribution of warning messages; in the case of a radiological incident, for example, to avoid people unnecessarily opening their windows, the use of loudspeakers is not recommended. In choosing media, attention should also be paid to reaching risk groups and vulnerable populations (e.g. the handicapped and elderly). Special groups (e.g. tourists and speakers of minority languages) can be addressed in other languages or via intermediaries. Ways to reach people abroad may also be needed.</i></p>	<p>1</p> <p>2</p> <p>3</p> <p>4</p> <p>5</p> <p>0</p> <p>Open space for comments:</p>
	<p>2.2.2 The core content of the warning is the same for everyone, while more information can be found online or by phone; for some specific public groups, additional information will be given directly.</p> <p><i>Explanation: Public information must be coherent. Consistency can also be ensured by issuing information from a single, trusted authority throughout the crisis, while it is just as important that other organizations actively link to this source. Depending on the crisis type (C, B, R or N), people need information on, e.g. health issues, including self-protection and protection of their family members, and risk to and symptoms of exposure. The diversity of the public groups can be addressed, for example, by including additional information on the topic in the case of transient groups, such as event visitors and tourists who do not know the area they are in very well. It is taken into account that people may receive the warning in various locations, e.g. not necessarily when at home with their family but also when travelling or at work. Priority is given to those who are directly affected, also taking into account risk groups and the needs of the wider audiences. A website should be provided with a well-known address and linked through other related web pages. A phone number, such as a crisis call centre number where people can obtain more information should also be available. When the lines are busy, a tape-recorded message should at least give the currently available information. Inquiries in social media should also be answered.</i></p>	<p>1</p> <p>2</p> <p>3</p> <p>4</p> <p>5</p> <p>0</p> <p>Open space for comments:</p>	

2.3 Issuing instructions to public groups and monitoring reactions	<p>2.3.1 Warning messages should:</p> <ul style="list-style-type: none"> - stand out to attract attention - give clear, simple and practical instructions for action to reduce the likelihood of harm - include advice on how to find more information - encourage people to contact persons who might not know of the warning (especially vulnerable groups, such as elderly, or disabled people) - be available in the languages needed <p><i>Explanation: Warnings should be noticeable and clearly phrased as alerts. Availability of translators needs to be arranged also outside office hours. People should be able to take action in a timely manner according to the instructions given. Messages should be short and important instructions repeated, e.g. references to time and place. It should also be stated what to do rather than what not to do, unless taking the wrong action could harm people. In the case of C or RN scenarios, people need information on health care and evacuation, and in the case of a B scenario, information on, e.g. symptoms, incubation time and how to prevent transmission of the disease. Animals, pets and livestock may need attention too. It is also important to mention where more information can be found, e.g. on a web page. As social networks are effective sources of information, people can be encouraged to communicate with neighbours and relatives. For some groups, e.g. foreigners, such social networks might be the dominant source of information.</i></p>	1 2 3 4 5 0 Open space for comments:
	<p>2.3.2 The effect of warning messages is checked.</p> <p><i>Explanation: It is important to monitor that all public groups have been reached, citizens' need for information is met, instructions are understood, and people act accordingly, e.g. they are able to evacuate, conduct self-triage and seek medical treatment when needed. Gaps between advised and real behaviour need to be identified, e.g. to avoid people needlessly rushing to hospitals. In situations in which the warning phase is relatively long, e.g. a slowly developing pandemic, this can be done throughout this phase by observation in the field and monitoring of traditional and social media (identify hashtags and influentials to follow). When the warning phase is short, how people react to the warning should at least be checked. Insight into reactions is needed to direct later communication.</i></p>	1 2 3 4 5 0 Open space for comments:

NEWS MEDIA	<p>2.4 Informing the news media</p>	<p>2.4.1 Warning messages to the news media:</p> <ul style="list-style-type: none"> – are provided to all news media, as timely as to citizens – provide clear information and instructions – give background information about the warning in a clear and open way. <p><i>Explanation: Message content should be consistent with the information given directly to public groups and any instructions issued should be clear, simple and practical, and in language easy to understand. Difficult terms, such as 'shelter-in-place' or 'prophylaxis', and other technical jargon should be avoided. Essential facts to be given are place and time, and where to find more information. The purpose is to empower citizens so as to prevent further damage. Transparency in giving background information is important, as this demonstrates that the response organisation is reliable in its motives and actions, and clear about its own responsibilities.</i></p>	<p>1</p> <p>2</p> <p>3</p> <p>4</p> <p>5</p> <p>0</p> <p>Open space for comments:</p>
		<p>2.4.2 Media coverage related to the warning is monitored and analysed.</p> <p><i>Explanation: Monitoring should be arranged to discover possible misperceptions about the warning in the media and correct these using the response organisation's own channels, and also to see what needs of public groups are mentioned in the news.</i></p>	<p>1</p> <p>2</p> <p>3</p> <p>4</p> <p>5</p> <p>0</p> <p>Open space for comments:</p>

3.2.3 Phase 3. Crisis response (Emergency)

STAKEHOLDER	COMMUNICATION TASK	PERFORMANCE INDICATOR	SCALE 1 = This indicator is not taken cognizance of 2 = The importance has been recognized, but hardly any action is being taken 3 = We act on this to some extent but not systematically 4 = This is to a large extent a systematic part of the action 5 = This is fully a systematic part of the action 0 = Don't know, or this indicator is not relevant for our organisation
RESPONSE ORGANISATION AND NETWORK	3.1 Assist cooperation in the organisation and within the response network	3.1.1 Information is actively exchanged in the organisation, including between work shifts. <i>Explanation: Information needs to be exchanged among all the groups involved in the response activities. Where work is done in shifts, not just the decisions taken but the reasons why and how they were communicated should also be shared. An updated log of press relations and other communication activities should be kept, e.g. through a shared information system.</i>	1 2 3 4 5 0 Open space for comments:
		3.1.2 Information is exchanged actively within the response network, including coordination of how the communication tasks are handled throughout the crisis. <i>Explanation: It is very important that information be exchanged about actions taken, so that the organisations in the response network can make informed decisions and know how their counterparts are proceeding in communicating with the media and citizens. In major crises, exchange of information with the network's international partners must also be ensured. The allocation of communication-related tasks in the organisation and between other participants in the response network must be clear. Coordination serves consistency in communication and is of high importance in complex CBRN crises with a broad response network. When the organisations in the network communicate with the media and citizens along similar lines, coordinating their statements, this prevents misunderstandings and balances resources. If problems of cooperation with other response organisations occur, action should be taken to solve them.</i>	1 2 3 4 5 0 Open space for comments:

CITIZENS	<p>3.2 Instructions on how to prevent further damage</p>	<p>3.2.1 Information issued to citizens is continuously updated.</p> <p><i>Explanation: Instructive information provided via call centres, web pages and social media must be constantly updated and drafted as clearly as possible, in order to prevent further damage, e.g. the transmission of an infectious disease. Instructions should be short, with repetition of important guidelines, and issued separately from background information and emotional messages. The most recent information should be the easiest to find.</i></p>	<p>1</p> <p>2</p> <p>3</p> <p>4</p> <p>5</p> <p>0</p> <p>Open space for comments:</p>
	<p>3.2.2 All public groups, including vulnerable groups, have access to information, and citizens are encouraged to use their social networks.</p> <p><i>Explanation: The diversity of public groups should be taken into account by using various channels of communication. In CBRN crises, the need for continuous adaptation of the targeting of information is pressing, as boundaries of time and safe zones may not be clear and can change according to, e.g. weather conditions. Circles of those more or less involved can be identified. In CBRN crises, both the directly and indirectly affected need attention. Whereas people in an affected area, e.g. where there is chemical pollution, are likely to have contacts, possibly through social media with those further away, it is important to ensure that indirectly involved publics are not left without information. Personal networks function as an effective information source through which the messages of response organisations can also be distributed. Persons who might not be reached by the official information channels can then receive information via their social networks, families and friends.</i></p>	<p>1</p> <p>2</p> <p>3</p> <p>4</p> <p>5</p> <p>0</p> <p>Open space for comments:</p>	

	3.3 Clarifying the situation to help public groups to cope with the situation	<p>3.3.1 The communication activities aim at increasing understanding of the crisis and its circumstances and demonstrating empathy on the part of official spokespeople with the public groups affected by the crisis.</p> <p><i>Explanation: The situation should be clarified on the basis of the available information in order to increase general understanding about the situation, its duration, severity and likely consequences, including uncertainties. It should be explained that as CBRN materials can have delayed effects and their detection may take time, changes are possible in the information initially provided. A balance is needed between an open yet cautious discourse, as there should be enough and not too much information given actively, while more details can be made available online, such as symptoms of particular diseases. In cases where information is withheld due to forensic or security concerns, the rationale for this should be explained to people. Empathy and emotionally supportive communication can help to overcome the uncertainty and stress provoked by terrorism, and assist psychological recovery. The feeling of safety of people needs to be addressed. Possible stress or anger on the part of certain involved groups should also be taken into consideration, and a channel or a forum where people can express their feelings and ask questions should be provided.</i></p>	1 2 3 4 5 0	Open space for comments:
	<p>3.3.2 Special attention is given to provide information and support for those directly affected by the emergency.</p> <p><i>Explanation: Contact persons should be appointed to serve victims and families. Professional support and post-trauma care should be offered where needed. This also applies to the crisis management employees, who should be protected from media attention and, e.g. assisted in visiting the emergency location. Online systems such as Google Person Finder or Red Cross victim finder can be utilized.</i></p>	1 2 3 4 5 0	Open space for comments:	

3.4 Continuous monitoring of needs and perceptions of public groups	<p>3.4.1 The needs and perceptions of public groups are monitored and analysed, which also entails following the debate on the crisis and related issues in social media.</p> <p><i>Explanation: In CBRN crises, there is a heightened need for monitoring, as fears and misperceptions may lead people to place themselves in greater danger than that posed by the initial incident. Monitoring should be done by analysing questions asked at the crisis communication call centre, content of social media, and, e.g. results of fast surveys and so forth. Attention is also paid to foreign language speakers and risk groups, such as pregnant or elderly people. The results of such monitoring help clarify what requires attention regarding information needs, behaviour and sense making. The results of monitoring are not used for communication purposes alone, but also for crisis management.</i></p>	1 2 3 4 5 0 Open space for comments:
	<p>3.4.2 Questions and misinterpretations are identified and addressed.</p> <p><i>Explanation: When performing monitoring, existing questions and misunderstandings should be listed so that they can be addressed via direct communication means and media relations. Incorrect rumours should also be addressed, and reactions mediated, e.g. by participation in social media.</i></p>	1 2 3 4 5 0 Open space for comments:
3.5 Direct means of communication	<p>3.5.1 Means for direct communication with diverse public groups are used by the organisation, including a crisis website, social media and a call centre with sufficient and competent manpower to provide public information.</p> <p><i>Explanation: Information centres need to be built up immediately after a crisis erupts. Communication should not be a mere one-way distribution of messages but also facilitate individual information seeking. This includes well-known, updated and easy-to-find websites, social media accounts, and call centres for questions by the public. In addition, targeted communication with, e.g. risk groups in face-to-face meetings and communication via intermediaries may also be needed. Sufficient and well-trained staff should be arranged for direct communication tasks, while pooling of expertise, within the organisation and with similar organisations in the region, can be used to ensure the availability of enough communication expertise now that the need for this is at its peak.</i></p>	1 2 3 4 5 0 Open space for comments:

NEWS MEDIA	3.6 Designated crisis agency spokespeople and services for journalists	<p>3.6.1 A 24-hour media service and sufficient trained manpower deal with questions from the press also at the crisis site.</p> <p><i>Explanation: In a time of crisis, a round-the-clock service is needed to answer questions from the press and inform journalists about the development of the situation. People dealing with the media should be trained specifically for this purpose. A large number of (international) journalists may be interested. In the case of localised threats, e.g. in C or R incidents, communication experts also need to be available in the vicinity of the crisis site (when possible). The requirements of official investigations should be met and, if needed, explained. Providing enough information about rescue activities may help distract attention away from terrorism and violent acts that can lead to copy-cat behaviour by others. People's health and safety should be the priority.</i></p>	1 2 3 4 5 0	Open space for comments:
		<p>3.6.2 When providing media services near to the crisis site, it is current practice that the organisation protects the victims and their families from intrusions on their privacy and overwhelming media attention.</p> <p><i>Explanation: Media officers at the crisis site should provide information and point out suitable sites for filming and photographing. They should give instructions (e.g. through the police) about where the media are allowed to go and where not, the aim being to ensure that, while reporters are able to do their job, the privacy of (the family of) victims is not unnecessarily invaded, investigations and rescue work are not hindered, and the safety of the reporters is ensured.</i></p>	1 2 3 4 5 0	

		<p>3.6.3 Official spokespeople explain emergency management activities and show empathy with those affected by the crisis.</p> <p><i>Explanation: The response organisation should clarify the crisis situation and describe the crisis management operations (how the situation is being dealt with), including those in charge. In taking care of its media relations in this phase, the organisation should aim at prioritizing saving lives and reducing harm. It is important to relate to what is known and not yet known. To prevent further damage, the content should be consistent with the instructions given directly to citizens. If press conferences are broadcast live, the spokespeople, next to journalists, address many citizens at the same time; a long row of formal representatives behind a table may not be what is called for. Spokespeople explain the measures taken, but also give meaning to what has happened by stating how they interpret the situation. Leadership is important in CBRN incidents. The prime minister or a mayor, for example, shows empathy with those affected and facilitates sense-making by giving voice to the core values of the society. Providing non-specific reassurance and overstating the risk should be avoided. Regarding ethics, generalisations and stigma when referring to the causes of terrorism should be avoided. Experts will be available to provide detailed, trustworthy technical information in language that is easy to understand.</i></p>	<p>1 2 3 4 5 0 Open space for comments:</p>
		<p>3.6.4 The media coverage of the crisis is continuously monitored and analysed, so that further explanations can be provided.</p> <p><i>Explanation: Media reports should be scanned in order to spot and correct possible misperceptions and to see what needs of public groups are described in the media. CBRN incidents comprise many technical details, and possible misrepresentations or unclear presentations may increase anxiety. Response organisations may need to further clarify the picture of the situation through media contacts and direct means of communication.</i></p>	<p>1 2 3 4 5 0 Open space for comments:</p>

3.3.4 Phase 4. Recovery and Evaluation

STAKEHOLDER	COMMUNICATION TASK	PERFORMANCE INDICATOR	SCALE 1 = This indicator is not taken cognizance of 2 = The importance has been recognized, but hardly any action is being taken 3 = We act on this to some extent but not systematically 4 = This is to a large extent a systematic part of the action 5 = This is fully a systematic part of the action 0 = Don't know, or this indicator is not relevant for our organisation
RESPONSE ORGANISATION AND NETWORK	4.1 Stimulating cooperation and coordination in the organisation and within the response network	4.1.1 Information exchange and coordination of current tasks in the organisation and within the response network support the recovery effort. <i>Explanation: Different organisations may become involved at this stage, including, e.g. builders and insurance companies. As the health effects could be long-lasting, the role of health organisations remains important. Although the composition of the response network, leadership and responsibilities changes during a crisis, exchange of information must be ensured so that people remain committed to the recovery process. The response organisations need a shared understanding of the factors that could hamper recovery. Moreover, all key institutions should have participatory mechanisms through which to involve the general public, along with affected groups and organisations, in the recovery effort.</i>	1 2 3 4 5 0 Open space for comments:
		4.1.2 Contacts in the organisation and cooperation with other participants in the response network are evaluated throughout the process to improve these where needed. <i>Explanation: In the case of CBRN incidents, coordination relates to many different organisations. If problems relating to cooperation within the organisation (between units) or with the other response organisations arise, remedial action should be taken. Step by step the crisis communication activities are transferred to the day-to-day organisation.</i>	1 2 3 4 5 0 Open space for comments:

	<p>4.2 Supporting evaluation and learning about communication in the organisation and within the response network</p>	<p>4.2.1 Communication in the individual organisation and with other participants in the response network, including any international institutions involved, is evaluated, and improved coordination of future crisis communication is initiated.</p> <p><i>Explanation: An evaluation of the existing communication is needed both at the organisational and network level, so that performance can be assessed and learning facilitated. Lessons learned should be seen as windows of opportunity for improvement. Documentation enables learning from others as well. Plans should be initiated that address concrete actions at certain phases of the crisis situation, e.g. by setting up an improvement team with members of selected organisations.</i></p>	<p>1 2 3 4 5 0</p> <p>Open space for comments:</p>
<p style="writing-mode: vertical-rl; transform: rotate(180deg);">CITIZENS</p>	<p>4.3 Instructions for recovery efforts</p>	<p>4.3.1 Clear instructions that enable citizens to recover their lives, homes and property, and stimulate people to contribute to the coordinated recovery efforts in the community, are provided.</p> <p><i>Explanation: After the response phase, one of the most important things in tasks of crisis communication is to help people regain control over their lives, by explaining how they can act to help themselves and their family in the post-emergency recovery, e.g. with insurance claims and facilities offered. CBRN events can have long-lasting effects, and people need to know, e.g. when it is safe to return to contaminated areas. Collective efforts are needed for recovery, and many people are willing to assist as a volunteer if they know how. This can be on the level of the individual household, neighbourhood, or region. In the aftermath of CBRN incidents, clear instructions and guidance are needed to ensure that volunteers are instructed and protected, e.g. know how to handle pollutants safely to avoid contamination or further harm. When a community has been disrupted by an emergency, it needs to get functioning again. This includes not only social activities but also, e.g. cleaning or re-building. When it takes a long time to recuperate from a crisis, it is important that the citizens and organisations involved stay motivated to support the reconstruction of, e.g. their neighbourhood; this is a task that can be done by, for instance, the municipality. Social media activities, sharing reconstruction experiences and needs, can enhance engagement.</i></p>	<p>1 2 3 4 5 0</p> <p>Open space for comments:</p>

	<p>4.4 Stimulating a more accurate public understanding of the recovery process and ongoing risks</p>	<p>4.4.1 Communication about the crisis and its consequences is open, facilitates sense-making and encourages participation in decision-making about the plans for recovery.</p> <p><i>Explanation: Citizens, local communities and organisations should have a broad understanding of the recovery options and ongoing risks. They also need to be involved in decisions that have important consequences for them, e.g. plans about how a neighbourhood is to be rebuilt. Channels and means for people to express their feelings and concerns and participate in the recovery effort should be provided. Leaders can facilitate sense-making and the process of restoration.</i></p>	<p>1</p> <p>2</p> <p>3</p> <p>4</p> <p>5</p> <p>0</p> <p>Open space for comments:</p>
		<p>4.4.2 Information and care for those directly affected by the emergency is continued for as long as they need it.</p> <p><i>Explanation: Care, including professional help for victims and families should continue, depending on how serious matters are; for example, organizing memorial events in cooperation with the families involved. As CBRN crises may have far-reaching effects, wider audiences also need to be taken into account.</i></p>	<p>1</p> <p>2</p> <p>3</p> <p>4</p> <p>5</p> <p>0</p> <p>Open space for comments:</p>
	<p>4.5 Ongoing monitoring of needs and perceptions of public groups</p>	<p>4.5.1 Information needs and perceptions of publics concerning recovery are monitored and analysed.</p> <p><i>Explanation: Also in this phase, expectations should be met and questions addressed. Monitoring at this stage focuses on public support for the recovery activities of the response organisation and the active involvement of the public in the collective recovery effort. It also includes noting reactions in the traditional and social media and, e.g. the use of surveys.</i></p>	<p>1</p> <p>2</p> <p>3</p> <p>4</p> <p>5</p> <p>0</p> <p>Open space for comments:</p>

	<p>4.6 Supporting reflection</p>	<p>4.6.1 Public knowledge about what happened is increased, and public dialogue about the crisis situation and its causes and consequences is promoted to limit damage in similar cases in the future.</p> <p><i>Explanation: After recovery, while affected public groups may be eager to forget their recent difficulties, it is nevertheless important from a future perspective to look back on what has happened. Society needs to cope with similar crises in the future and discussion helps in developing preparedness. This may involve measures to be taken to prevent or limit such risks in the future. Leaders can help restore trust and faith in values which the crisis may have shaken, and establish a vision for future.</i></p>	<p>1 2 3 4 5 0</p> <p>Open space for comments:</p>
<p style="writing-mode: vertical-rl; transform: rotate(180deg);">NEWS MEDIA</p>	<p>4.7 Ongoing media relations</p>	<p>4.7.1 Media are encouraged to report about and to motivate the recovery effort, while empathy for those involved is present in information given to the news media.</p> <p><i>Explanation: Although the news value of the activities in this phase is not as high as in the emergency phase, recovery initiatives and decisions are nevertheless newsworthy, since paying attention to the recovery process motivates individuals to contribute to it. Cases could be cited that inspire citizens and organisations to continue their recovery efforts. Spokespeople should continue to show empathy with those affected in order to support psychological recovery. This also demonstrates that those affected have not been forgotten.</i></p>	<p>1 2 3 4 5 0</p> <p>Open space for comments:</p>
		<p>4.7.2 The organisation explains its role and responsibility regarding the recovery process.</p> <p><i>Explanation: The organisation must accept its responsibility and communicate about it. Organisations that caused or contributed to the crisis will be held accountable, but other response organisations may also encounter criticism regarding their performance in the response and recovery process. Organisational policies and actions of first responders are often supported in the first instance but later scrutinized more critically, with or without reason. This also needs attention in internal communication.</i></p>	<p>1 2 3 4 5 0</p> <p>Open space for comments:</p>

		<p>4.7.3 Media coverage on recovery is monitored and additional information provided when needed.</p> <p><i>Explanation: Monitoring of the organisation's own communication channels should be undertaken to discover and correct possible misperceptions about recovery activities and to see what needs of what public groups in this phase are reported in the news.</i></p>	<p>1 2 3 4 5 0</p> <p>Open space for comments:</p>
	<p>4.8 Evaluation with the media</p>	<p>4.8.1 Media relations are evaluated throughout the process to improve the cooperation where needed.</p> <p><i>Explanation: Where problems arise in cooperation between the organisation and the media, remedial action should be taken. Feedback must be noted, as the tone in which the media report the situation may indicate the state of relations between the two parties. In the case of CBRN incidents, relatively many foreign journalists may be involved, especially in the response phase. This cooperation also needs to be evaluated and learned from.</i></p>	<p>1 2 3 4 5 0</p> <p>Open space for comments:</p>

Author contributions

In this chapter the section “Clarifying the role of communication experts in CBRN terrorism crises” was written by Markus Mykänen and Marita Vos, while the other sections on the CBRN communication scorecard were by Aino Ruggiero, Marita Vos and Pauliina Palttala.

References

- Alpaslan, Z., Green, A., & Mitroff, I. (2009). Corporate governance in the context of crises: Towards a stakeholder theory of crisis management. *Journal of Contingencies and Crisis Management*, 17(1), 38–49.
- Ashcraft, K. L., Kuhn, T. R., & Cooren, F. (2009). Constitutional amendments: “Materializing” organizational communication. *Academy of Management Annals*, 3(1), 1–64.
- Benn, S., Todd, L., & Pendleton, J. (2010). Public relations leadership in corporate social responsibility. *Journal of Business Ethics*, 96(3), 403–423.
- Fleisher, C. S. (2002). Analysis and analytical tools for managing corporate public affairs. *Journal of Public Affairs*, 2(3), 167–172.
- FP7/2007-2013, n° 217889. (n.d.). Retrieved from www.crisiscommunication.fi/criscomscore/.
- Huebner, H., Varey, R., & Wood, L. (2008). The significance of communicating in enacting decisions. *Journal of Communication Management*, 12(3), 204–223.
- Kang, J., Berger, B. K., & Shin, H. (2012). Comparative study of American and Korean practitioners’ dissent with perceived unethical management decisions. *Public Relations Review*, 38(1), 147–149.
- Kaplan, R., & Norton, D. (2001). *The strategy-focused organization*. City: Harvard Business School Press.
- Mayr, K., & Siri, J. (2010). Management as a symbolizing construction? Re-Arranging the understanding of management. *Forum Qualitative Sozialforschung/Forum: Qualitative Social Research*, 11(3), 1–19.
- Meng, J., B.K., B., K.K., G., & Heyman, W. C. (2012). A test of excellent leadership in public relations: Key qualities, valuable sources, and distinctive leadership perceptions. *Journal of Public Relations Research*, 24(1), 18–36.
- Moe, T., Gehbauer, F., Senitz, S., & Mueller, M. (2007). Balanced scorecard for natural disaster management projects. *Disaster Prevention and Management*, 16(5), 785–806.
- Palttala, P., & Vos, M. (2011). Testing a methodology to improve organizational learning about crisis communication. *Journal of Communication Management*, 15(4), 314–331.
- Palttala, P., & Vos, M. (2012). Quality Indicators for Crisis Communication to Support Emergency Management by Public Authorities. *Journal of Contingencies and Crisis Management*, 20(1), 39–51.

- Place, K. R. (2010). A qualitative examination of public relations practitioner ethical decision making and the deontological theory of ethical issues management. *Journal of Mass Media Ethics*, 25(3), 226–245.
- Reber, B. H., & Berger, B. K. (2006). Finding influence: Examining the role of influence in public relations practice. *Journal of Communication Management*, 10(3), 235–249.
- Reynolds, B., & Seeger, M. (2005). Crisis and emergency risk communication as an integrative model. *Journal of Health Communication*, 10, 43–55.
- Ruggiero, A., & Vos, M. (2013). Terrorism Communication: Characteristics and Emerging Perspectives in the Scientific Literature 2002-2011. *Journal of Contingencies & Crisis Management*, 21(3), 153–166.
- Ruggiero, A., & Vos, M. (2014). Social media monitoring for crisis communication: process, methods and trends in the scientific literature. *Online Journal of Communication and Media Technologies*, 4(1), 103–130.
- Ruggiero, A. & Vos, M. (2015), Communication challenges in CBRN terrorism crises – expert perceptions. *Journal of Contingencies and Crisis Management*, 23(1).
- Saini, S., & Plowman, K. (2008). Effective communications in growing pre-IPO start-ups. *Journal of Promotion Management*, 13(3), 203–232.
- Seeger, M. W., Reynolds, B., & Sellnow, T. L. (2009). Crisis and emergency risk communication in health contexts: Applying the CDC model to pandemic influenza. In R. L. Heath & D. H. O’Hair (Eds.), *Handbook of Risk and Crisis Communication* (Routledge, pp. 493–506). New York.
- Streifel, R. A., Beebe, B. L., Veil, S. R., & Sellnow, T. L. (2006). Significant choice and crisis decision making: MeritCare’s public communication in the Fen–Phen Case. *Journal of Business Ethics*, 69(4), 389–397.
- Vos, M., Lund, R., Harro-Loit, H., & Reich, Z. (2011). *Developing a crisis communication scorecard: outcomes of an international research project 2008-2011*. University of Jyväskylä. Jyväskylä studies in humanities.
- Werder, K. P., & Holtzhausen, D. (2009). An analysis of the influence of public relations department leadership style on public relations strategy use and effectiveness. *Journal of Public Relations Research*, 21(4), 404–427.
- Wilson, T. D. (2000). Human Information Behavior. *Informing Science*, 3(2), 49–53.
- Wouters, M. (2009). A developmental approach to performance measures: Results from a longitudinal study. *European Management Journal*, 27, 64–78.