This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement no. 832981

Deliverable D2.2

Report on the pre-exercise workshop with Practitioners

Due date of deliverable: 30/06/2020

Actual submission date: 12/03/2021

Charlotte Hall[1], Holly Carter[1], Irina Marsh[2], Mariano Zamorano[3], Richard Amlôt[1], and Dale Weston[1]

1: DH PHE 2: CBRNE LTD 3: ETICAS

Project details

Project acronym	PROACTIVE
Project full title	**PR**eparedness against CBRNE threats through c**O**mmon **A**pproaches between security pra**CTI**tioners and the **V**ulneranbl**E** civil society
Grant Agreement no.	832981
Call ID and Topic	H2020-SU-SEC-2018, Topic SU-FCT01-2018
Project Timeframe	01/05/2019 – 30/04/2022
Duration	36 Months
Coordinator	UIC – Grigore Havarneanu (havarneanu@uic.org)

Document details

Title	Report on the pre-exercise workshop with Practitioners
Work Package	WP2
Date of the document	12/03/2021
Version of the document	06
Responsible Partner	PHE
Reviewing Partners	CBRNE, UIC, ETICAS
Status of the document	Final
Dissemination level	Public

Document history

Revision	Date	Description
01	09/06/2020	First Draft
02	15/06/2020	Reviewed by CBRNE
03	18/06/2020	Reviewed by UIC
04	23/06/2020	Final Revision
05	30/06/2020	Final Version
06	12/03/2021	Update following mid-term periodic review

Consortium – List of partners

Partner no.	Short name	Name	Country
1	UIC	UNION INTERNATIONALE DES CHEMINS DE FER (COORDINATOR)	France
2	CBRNE	CBRNE LTD	UK
3	PPI	POPULATION PROTECTION INSTITUTE (MINISTRY OF THE INTERIOR OF THE CZECH REPUBLIC)	Czech Republic
4	DB	DEUTSCHE BAHN AG	Germany
6	UMU	UMEA UNIVERSITET	Sweden
7	DHPOL	DEUTSCHE HOCHSCHULE DER POLIZEI	Germany
8	RINISOFT	RINISOFT LTD	Bulgaria
9	WMP	WEST MIDLANDS POLICE AND CRIME COMMISSIONER	UK
10	ETICAS	ETICAS RESEARCH AND CONSULTING SL	Spain
11	SESU	STATE EMERGENCY SERVICE OF UKRAINE	Ukraine
12	PHE	DEPARTMENT OF HEALTH	UK
13	SPL	STATE POLICE OF LATVIA	Latvia
14	AGS	AN GARDA SÍOCHÁNA – NATIONAL POLICE FORCE IRELAND	Ireland
15	FFI	FORSVARETS FORSKNINGSINSTITUTT	Norway
16	NPH	KOMENDA GŁÓWNA POLICJI	Poland

Executive summary

The following deliverable reports on the Pre-Exercise Workshop held with PSAB members as part of WP2 – Engagement of Law Enforcement Agencies and other Practitioners. In line with the requirements of D2.2, this deliverable collates all work associated with PSAB members active involvement prior to the joint exercises taking place (WP6).

PSAB active involvement consisted of:

1) Taking part in focus groups centred around providing feedback on the systematic reviews conducted as part of WP1, specifically D1.1 (a systematic review of academic literature relating to public perceptions of pre-incident preparedness, and during-incident response (e.g., management strategies), for CBRNe events) and D1.2 (a review of guidance documents which facilitated insight into current policy and practice relating to CBRNe incident management, strategies for communicating with the public and the impact of current policy and practice on vulnerable populations). Members were asked to identify any gaps within the reviews and consider the appropriateness of the conclusions drawn.

2) Taking part in a Delphi based study to enable expert consensus on recommendations for best policy and practice in relation to CBRNe events (which emerged from D1.1, D1.2, D1.3, PSAB feedback during the focus groups, or were proposed by the Consortium at PM2). This study required participation in two surveys and attendance at a Pre-Exercise Workshop held for Practitioners, EU LEAs and Policy Makers.

This workshop provided a first step in understanding practitioners' initial perceptions of evidence-based recommendations. Consensus was reached on 32 recommendations that will inform both: a) the toolkit development, and; b) the planned PROACTIVE exercises, whilst being representative of the interests, needs, and requirements of the cross-EU PROACTIVE project stakeholders.

Further involvement of PSAB members is planned and ongoing throughout several work packages within PROACTIVE to ensure that the materials, tools, methods, and learnings developed are continuously optimised for use by the law enforcement agencies and emergency responders for whom they are intended.

List of acronyms

Acronym	Definition
PSAB	Practitioner Stakeholder Advisory Board
LEA	Law Enforcement Agencies
D	Deliverable
WP	Work Package
CBRNe	Chemical, Biological, Radiological, Nuclear and explosive
PM	Project Meeting
EU	European Union
SOP	Standard Operating Procedure

Table of Contents

1. INTRODUCTION

By way of background, two systematic reviews were carried out as part of WP1. These focused on: 1) academic literature relating to public perceptions of pre-incident preparedness, and during-incident response (e.g., management strategies), for CBRNe events (D1.1; Hall et al, 2019), and; 2) a review of guidance documents which facilitated insight into current policy and practice relating to CBRNe incident management, strategies for communicating with the public and the impact of current policy and practice on vulnerable populations (D1.2; Davidson, Weston, Amlôt & Carter, 2019). A final synthesis document was also produced, presenting key outcomes and clear recommendations from the two reviews (D1.3; Hall, Weston, Long, O'Sullivan, Amlôt & Carter, 2020).

Work within Task 2.2 sought to ensure that the recommendations and outcomes presented in D1.3 were appropriate and fit for purpose. To do this, Task 2.2 involved members of the PSAB providing iterative reviews of the systematic review deliverable outcomes, specifically concerning any gaps they could identify within the reviews and the appropriateness of the conclusions drawn. This objective was achieved through the conduct of a three-stage Delphi study (Crawford, Mackway-Jones, Russell, & Carley, 2004), which involved focus groups, surveys and an online virtual workshop led by PHE. Furthermore, as per Task 6.2, the pre-exercise workshop also involved the discussion of draft exercise scenarios, with a focus on determining the feasibility, suitability, and relevance of potential scenarios.

This deliverable provides a comprehensive overview of the work which has been carried out as part of Task 2.2, culminating in the pre-exercise workshop with members of the PSAB (i.e. practitioners, EU LEAs and policy makers) held via Zoom teleconferencing software on the 19th of March 2020.

Although an overview of all aspects of the PSAB workshop are reported herein, the scenario development work conducted prior to, and during this workshop will be fully reported separately as part of D6.2.

2. ENGAGEMENT WITH PRACTITIONERS, EU LEAS AND POLICY MAKERS – DELPHI STUDY PHASES 1 AND 2

2.1. Methodology

A Delphi-based study was conducted (e.g., Crawford et al., 2004) to allow the consortium to reach a point where consensus regarding the relative importance of recommendations derived from D1.1 and D1.2 was achieved amongst key stakeholders (i.e. the PSAB).

The Delphi process typically involves three stages (e.g., Crawford et al, 2004). The first stage is recruiting Subject Matter Experts (e.g., practitioners) to develop a series of ideas or statements relating to the target context. The second stage involves collating statements based on the outcomes from stage one and circulating these to all members of the panel who then indicate their agreement with each statement using a scale; this allows a level of consensus to be reached around the different

statements. The third stage involves discussion among subject matter experts of any statements for which consensus has not been reached. There is then an opportunity to evaluate these previously unagreed statements for a second time. The final statements which have reached unanimous agreement then reflect only the recommendations deemed unanimously important amongst key stakeholders.

This Delphi process was led by PHE and consisted of three stages:

1. The first stage involved recruiting Subject Matter Experts (e.g., practitioners) from the PSAB to evaluate and discuss the key recommendations presented in D1.1 and D1.2 alongside any other potential recommendations that the experts believed were not covered by the deliverables. The criteria and the procedures used to recruit the participants in the survey followed the guidance set by D10.1: *H – Requirement no 1: The procedures and criteria that will be used to identify/recruit the research participants.* This stage was completed by conducting focus groups (which took place on the 12th of February 2020) in which PSAB members discussed the outcomes of the two reviews from PROACTIVE WP1 (see next section). The recommendations from D1.1 and D1.2 and any potential recommendations made by attendees at the focus groups were subsequently collated for stage two.

2. The second stage involved collating all recommendations either: taken from D1.1, D.1.2, D1.3, proposed by the PSAB during the focus groups, or proposed by the Consortium during PM2, and inputting these into an online survey (using the SelectSurvey programme). The survey, containing 37 recommendations, was subsequently circulated to all PSAB members who then indicated, using a seven-point scale, how much they agreed that each recommendation was important for policy and practice (strongly disagree to strongly agree). All statements that reached unanimous agreement (by indication of slightly agree, agree or strongly agree by participating PSAB members) were considered approved and were removed from the next stage of the process.

3. For the third stage of the Delphi study, any recommendations for which consensus had not been reached during stage 2 were discussed during the PSAB Workshop. During this discussion, each of the remaining recommendations was discussed in turn with workshop attendees providing their thoughts on the reasons why they did or did not think they were important. Following this discussion, workshop attendees completed a final SelectSurvey focusing on the remaining recommendations to arrive at a final list of recommendations for which consensus could and could not be reached.

This process ensured that the recommendations and outcomes are fit for purpose and can feed into both: a) the toolkit development (WP2), and; b) the planned PROACTIVE exercises (WP6), whilst representing the diverse interests, needs, and requirements of the cross-EU PROACTIVE project stakeholders.

2.1.1. Ethics

The Delphi process was conducted by PHE whose research activities are carried out within the framework of national and European data protection guidelines for security research. Therefore, all data was handled securely in line with the national data protection legislation of the United Kingdom and the General Data Protection Regulation (GDPR) of the European Union.

Prior to the focus groups, participants were contacted via email, which included an information sheet containing details about the study. Before completing the online questionnaires (post focus groups), the participant further electronically agreed to an informed consent form. The survey was also approved for sending by the PROACTIVE ethics officer, following the protocol reflected in D8.3, (Ethics briefing pack). Moreover, D8.3 and D10.1 (Recruitment) requirements were observed to establish and implement the selection and informed consent protocols. This includes confirming all participants' voluntariness and decisional capacity, establishing safeguards to ensure respect for their privacy rights, including treating their data according to the standards reflected in D7.4.

Within PHE there is no requirement to seek ethical approval for public involvement or stakeholder involvement exercises. Given this, internal approval prior to the Delphi study and associated workshop was not required. Explicit consent forms for the purpose of stakeholder engagement and related activities are typically not required within PHE. However, the organisation adheres to GDPR and UK Data Protection regulations; therefore, all collected data is stored securely in PHE filing cabinets or on protected servers, which applies to both the focus groups and the online questionnaire. All staff are trained in information governance and ethical conduct. Additionally, as most of the involved staff members are Psychologists who adhere to the British Psychological Society ethical guidelines[1].

2.2. Delphi Process Stage 1 – Focus Groups

Focus groups were held online via teleconference using Skype for Business and were hosted by PHE. 18 PSAB members from 10 organisations took part in the focus groups (further details can be found in Table 1).

Table 1: PSAB members who attended the Focus Groups (Stage 1)

Organisation	Number of Attendees	Country	Type
Einsatzgruppe BIO des Robert Koch Instituts	1	Germany	First Responder
NFCC - National Fire Chiefs Council National Resilience Deputy Lead for CBRNE	1	UK	LEA
PKP (Polskie Linie Kolejowe)	1	Poland	Rail Experts

[1] This includes the "Code of Human Research Ethics" (2014). Available at https://www.bps.org.uk/sites/www.bps.org.uk/files/Policy/Policy%20-%20Files/BPS%20Code%20of%20Human%20Research%20Ethics.pdf

TH Koln (Institute of Rescue Engineering and Civil Protection)	1	Germany	CBRNe Expert
NS (Nederlandse Spoorwegen)	1	The Netherlands	Rails experts
Basque Police Ertzainte	1	Spain	LEA
Spanish National Police	1	Spain	First Responder
Greek Police	1	Greece	First Responder & CBRNe Expert
Université Catholique de Louvain	1	Belgium	CBRNe Expert
Turkish State Railways Transport Joint Stock Company	9	Turkey	Rail Experts

Although two focus groups were held (one to discuss D1.1 and D1.2), in the interests of expediency and acknowledging the time pressures faced by members of the PSAB, these were conducted as part of one single teleconference meeting. Meeting attendees were provided with D1.1 and D1.2 ahead of the focus groups and were provided with a brief overview of the relevant deliverable at the start of the two respective focus groups. Discussions were centred around providing feedback on these documents, including: what could be improved, what was not perceived as effective, and what current gaps (in research and practice) were apparent within the recommendations. Participants were asked to provide their general thoughts and feedback and were then specifically asked for their opinion on any missing or additional recommendations. This process was repeated for both D1.1 and D1.2. Participants were finally asked whether they had any general comments. A summary of the key discussion points is presented in the subsequent sections. The full minutes of the focus groups can be found in Appendix A.

2.2.1. D1.1 Missing Recommendations or Additional Recommendations (Pre-Incident Information)

- One respondent indicated that it would be beneficial to come up with a sample scenario, so all countries can present their own procedures for CBRNe events and these can be compared. This would allow more usable and generalisable recommendations to be developed. It was also highlighted that although the study only focuses on the public, staff should also be considered, especially from the railway sector.

- One attendee was not sure that providing information would provoke a sense of fear amongst the public. This attendee remarked that any information provided should be easy to understand, and we should also provide this information, so to not provide a sense of fear.

2.2.2. D1.1 Missing Recommendations of Additional Recommendations (During Incident Communication)

- One respondent indicated that there need to be recommendations relating to communicating with a handful of people, in comparison to communicating with hundreds of people. Through practical trials it has been shown that you can provide one-on-one communication with around 30 people, but anything more than that results in people that cannot understand or hear instructions. Communicating with large numbers of people is highly different to communicating with a handful of people.

- One respondent indicated that communication recommendations should also be provided for people phoning up for advice in comparison to communication at the scene. Two things can happen: a call operator can provide advice; and the information provided by the public can be passed on to first responders and emergency crews.

2.2.3. D1.1 General Thoughts and Feedback

- One respondent noted that it would be beneficial to identify who the recommendation is addressed to in terms of stakeholders. For example, in Germany there are many stakeholders (e.g. public and private organisations and societies), so it would be useful to know who recommendations are targeting.

- One respondent stated that education is a key consideration for when there is an outbreak. Politicians cannot aim to try to make people calm and quiet but instead should be taking decisions to minimise the risk. Officials will need risk managing tools [to deal with events] as they cannot make the decisions as a one off; risk must be minimised across the response.

- One attendee stated that it is important to provide as much information as possible before an incident. Providing people with information will not make them worry unnecessarily, it will help them to know what actions to take. Therefore education, particularly around risks and preventative behaviour, plays a very important role (e.g. Ebola, or, where a town or city is located where there is a chemical facility or nuclear reactor). If people are provided with information concerning what to do in advance, this could reduce their anxiety and worry.

- One general question was raised concerning whose role it is to inform the public about CBRNe events. For example, in the case of railways, it has been suggested that it is not for railways to inform people about CBRNe events, as the role of railways is to provide transport for people. So it is useful to consider who should be responsible for communicating this information to the public.

- There was consensus that pre-incident information is important, but it was noted that it is often difficult to engage clinicians with the material as they are so busy. Results from studies suggest that clinicians are interested in the possibility of providing pre-incident information, but it is not high up on their priority list, and they also need to know who to talk to about it. Consideration therefore needs to be given as to how best to disseminate information to parties that do not have the time to engage with it.

- One respondent indicated that information concerning self-help and helping others would be beneficial. Some practical decontamination trials carried out recently suggest that there is

different information that should be given to a person if they are looking after a child, in comparison to those just looking after themselves (i.e. you need to keep yourselves safe while doing so).

2.2.4. D1.2 General Thoughts and Feedback

- One respondent indicated that the recommendations are very general, and now it is more a question of how they can be implemented, e.g. maybe a checklist of guidelines, or a concrete procedure. It may also be good to categorise the recommendations, e.g. human factors, or strategic planning.

- One respondent believed it would not be possible to have harmonised recommendations, as they still have to rely on national policy and recommendations, which vary from one state to another. A way forward may be to implement generalised procedures (instead of harmonised recommendations) compared across different countries (e.g. timing of decontamination). Ultimately, recommendations should be generalised, and key points should be established, as harmonisation would be too difficult.

- One respondent noted that while respect should be paid to cultural differences (as suggested in D1.2), it is also necessary to be mindful of differences in health care systems, and responsibilities that differ between and within countries. If specific guidance is required, it may be challenging to balance this with the need to harmonise guidance across countries.

- One respondent indicated that all procedures mentioned in the review, regardless of country, are essentially starting with the expectation that an incident will involve casualties, survivors and deaths. The respondent suggested that the first part of the incident is missing as elements of preparedness are not included. It is important to be prepared to quickly respond to any incidents that occur. The respondent further suggested that all countries should aim to be proactive and should not have to have casualties present to create action; it is important to protect people before the incidents occur (e.g. using project COUNTERFOG which details 'washing the air' of contamination).

2.2.5. D1.2 Missing Recommendations or Additional Recommendations

- One respondent indicated that, in the case of a terrorist attack, procedures such as evacuation may not start immediately (as Police will check if the terrorist is still near the victims first, for example) and procedures will be delayed (e.g. until decontamination is ready and available). Nothing can be ready immediately. They suggested that it may therefore make sense to educate the public to understand that procedures may be delayed and explain why this is the case. It was also noted that first responders are also members of the population, they are just better prepared. Regardless of preparation they may also be very stressed, afraid to be contaminated, concerned about making mistakes, and worried about their own loved ones. They will also be under pressure due to being in a position of responsibility. It may therefore not be necessary to separate responders from the general population.

2.2.6. General Comments in relation to either D1.1 or D1.2

- One attendee added that it would be helpful to provide information on how to distinguish fake news, i.e. which sources are correct, and which are not.

Information extracted from these focus groups was collated and used to both inform D1.3, and to create additional recommendations which were to be evaluated by the PSAB as part of Phases 2 and 3 of the Delphi process.

2.3. Delphi Process Phase 2 – Online Survey

As per the methodology outlined above, all recommendations were collected from: D1.1, D1.2, the revised recommendations presented in D1.3 (based on the focus group discussions), other recommendations proposed by the PSAB during the focus groups, and other recommendations proposed by the Consortium during PM2. Duplicates or recommendations with the same purpose/outcome were removed which resulted in 37 final recommendations (detailed in Appendix B). These 37 recommendations were subsequently collated together in an online survey (using the SelectSurvey programme) and circulated to all PSAB members.

PSAB members were asked to complete the survey by indicating, using a seven-point scale (strongly disagree to strongly agree), how much they agreed that each recommendation was important for policy and practice (see section 2.1 for more detail on the methodology).

15 PSAB members completed the survey and the results are presented in Figure 1.

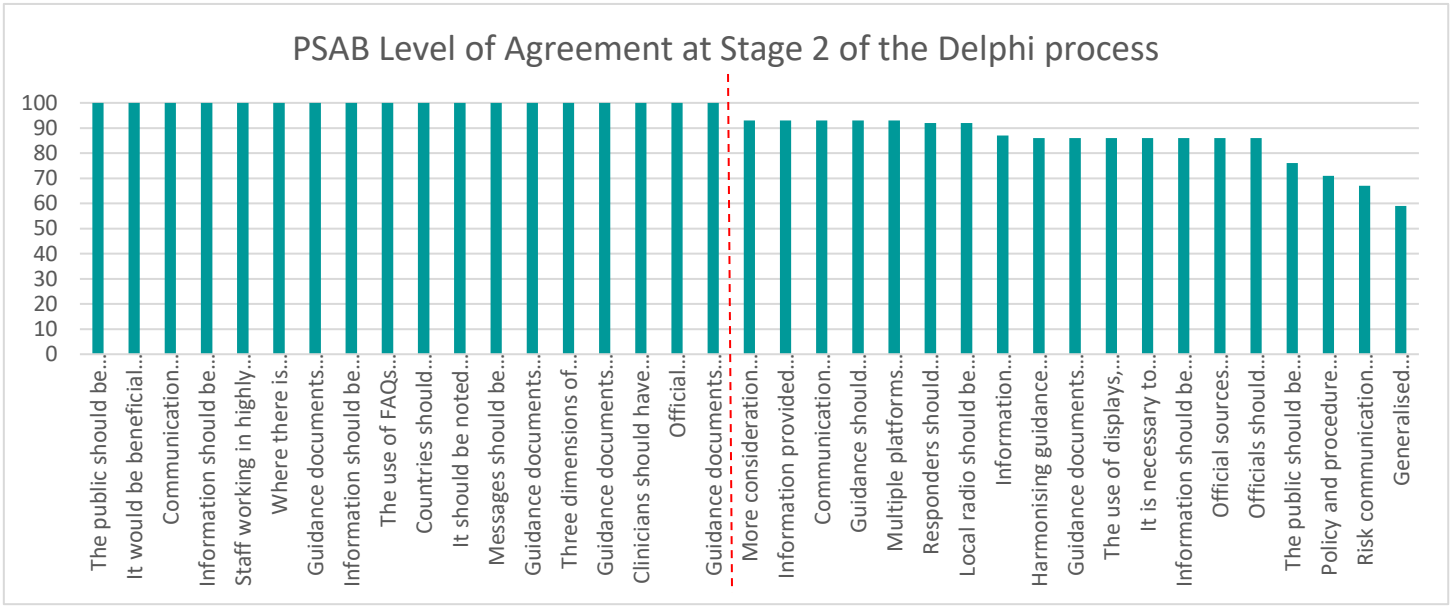

Figure 1: PSAB level of agreement at Stage 2 of the Delphi Process. Note: Dashed red line illustrates consensus cut off point; n = 15.

Responses were collated to provide an overview of the number of participants who agreed that each individual statement was important (measured as a response of slightly agree, agree or strongly

agree). As can be seen in Table 2, 18 statements were universally viewed as important by all participants. These were subsequently considered approved and were removed from the next stage of the process. The remaining items were retained for discussion as part of the PSAB workshop detailed in the next section.

Table 2: Statements which reached consensus regarding their importance at Stage 2 of the Delphi study

Recommendations
The public should be educated on who to turn to for support and further information in the event of an incident.
It would be beneficial to prepare pro-active social media campaigns and get people to know where to go for good information during events.
Communication should: 1) inform the public about loved ones' whereabouts in relation to family, friends and pets; 2) provide information about active police and security efforts to apprehend terrorists; 3) provide information on the importance of complying with instruction (including health specific information to address public health concerns; 4) and be delivered by a credible spokesperson (e.g. local resources, hazard groups and health departments).
Information should be available on how to distinguish fake news, i.e. which sources are correct, and which are not.
Staff working in highly public places (i.e. railway stations) should be educated on CBRNe preparedness.
Where there is increased risk (e.g. where a town or city is located where there is a chemical facility or nuclear reactor), people should receive in advance what to do in the case of a CBRNe incident, which will reduce anxiety and worry.
Guidance documents should provide evidence-based advice on communicating with the public which can be followed by authorities in the event of a CBRNe incident.
Information should be provided in multiple languages, pictographic form, and sign language.
The use of FAQs should be incorporated into communication efforts to reduce stress on authorities.

Recommendations
Countries should compare their CBRNe procedures with one another to enable a 'best practice' blanket approach to CBRNe incidents. This could also be done through the creation of sample scenarios for each type of incident.
It should be noted who the recommendation is addressed to in terms of stakeholders.
Messages should be pitched at an appropriate level (in terms of language and complexity).
Guidance documents should seek to be uniform in instruction, particularly when released in the same country.
Three dimensions of disaster communication should be used when creating pre-incident information (strategic, contextual and personal).
Guidance documents and SOPs should inform responders about the needs of vulnerable groups and include plans for dealing with such groups in the case of a CBRNe incident.
Clinicians should have time allocated to be educated about CBRNe events, to allow them to appropriately engage with the material.
Official communication should be honest, empathic, assertive and reliable.
Guidance documents should provide evidence-based advice about likely public behaviour, emphasising that the way in which practitioners manage an incident will affect the way in which members of the public behave.

3. PRE-EXERCISE WORKSHOP WITH PRACTITIONERS, EU LEAS, AND POLICY MAKERS - OVERVIEW

The pre-exercise workshop with members of the PSAB (i.e. practitioners, EU LEAs and policy makers) took place on the 19th of March 2020 online using the platform Zoom. The primary purpose of the workshop was to ensure that the recommendations and outcomes from WP1 would represent the diverse interests, needs and requirements of the cross-EU PROACTIVE project stakeholders.

3.1. Workshop Attendees

A full list of workshop attendee organisations and Consortium representatives who attended the Pre-Exercise Workshop can be found in Table 3.

Table 3: Pre-Exercise Workshop Attendees

Organisation	Type	Country
VIA Rail Canada	Rail Expert	Canada
National Public Health Centre	CBRN Specialist	Lithuania
National Fire Chiefs Council (NFCC) National Resilience - CBRN Capability	LEA	UK
Hellenic Ministry of National Defence	LEA	Greece
INERIS (National institute for Industrial Environment and Risks)	Rail Experts	France
Polish State Railways (PKP SA)	Rail Experts	Poland
Polskie Koleje PaÅ stwowe S.A.	Rail Experts	Poland
National Resilience	CBRN Specialist	UK
CNVVF - Italian Firefighters Corp	LEA	Italy
I4-Flame OU (LLC)	LEA	Estonia
Fire Department of Dortmund	Exercise Leader	Germany
ENEA	Project manager	Italy
Universita Cattolica del Sacro Cuore	Medical Responders	Italy
TH Köln	CBRN Specialist	Germany
Spanish National Police	LEA	Spain
University (IHU-DIPAE)	Scientific/Technical Officer - MAG of PROACTIVE project	Greece
SAFE	CBRN Specialist	Italy
Europol	LEA	Netherlands
CBRNE Ltd	Consortium	United Kingdom
DHPol	Consortium	Germany
ETICAS Research and Consulting	Consortium	Spain
European CBRNE center, Umea University	Consortium	Sweden
Norwegian Defence Research Establishment	Consortium	Norway
Public Health England	Consortium	United Kingdom
SPL	Consortium	Latvia
The State Emergency Service of Ukraine	Consortium	Ukraine
UIC	Consortium	France
Umeå University	Consortium	Sweden
WMP	Consortium	UK
Rinisoft Limited	Consortium	Bulgaria
Population Protection Institute	Consortium	Czech Republic

3.2. Agenda

The workshop started at 10:00am and ended at 15:45pm CET. The agenda is shown in Table 4.

Table 4: Pre-Exercise Workshop Agenda

Time	Session	Lead
10:00-10:15	Welcome and Introduction to PROACTIVE	UIC & DHPol
10:15-10:30	Introduction to the Delphi Study: Human Factor Analysis	PHE
10:30-12:00	Delphi study, Recommendations for Mitigation and Management of CBRNe Terrorism	PHE
13:15-14:15	Lunch	ALL
14:15-15:00	Involvement of PSAB members in the next PROACTIVE activities	DHPol, PPI, CBRNe
15:00-15:30	CBRNe Presentations	IBZ, SAFE, NPHC
15:30-15:45	Debriefing the Delphi Study	PHE

4. PRE-EXERCISE WORKSHOP WITH PRACTITIONERS, EU LEAS, AND POLICY MAKERS – DELPHI STUDY PHASE 3

In the following sections we provide a thorough account of the PSAB workshop activities relating specifically to the requirements of Task 2.2. (i.e., completion of the Delphi Study).

4.1. Introduction to the Delphi Study

This section of the workshop began with a summary of the Delphi study process and the aims of the workshop. It provided a recap of Stages 1 and 2 of the Delphi process (see sections 2.2 and 2.3). Results from the first survey were fed back to PSAB members, and all statements which had reached unanimous agreement were presented (Figure 1 was presented to the PSAB during the workshop). Participants were also re-introduced to recommendations where agreement was not unanimously

achieved, and discussion of these points formed the bulk of the Delphi study activities at the workshop.

4.2. Delphi Study, Recommendations for Mitigation and Management of CBRNe terrorism

PSAB members were asked to discuss recommendations where agreement had not been unanimously achieved. These recommendations had been grouped into five categories (for ease of discussion) by PHE. Categories were: guidance (e.g. generalised procedures and methods should be created across different countries, as harmonisation would be too hard to achieve); information dissemination (e.g. risk communication cannot assume a scientifically ignorant public, and institutions should not exaggerate the superiority of their knowledge and judgment); public knowledge (e.g. the public should be educated on how a CBRNe incident may play out, e.g. procedures may be delayed); communication with the public (e.g. communication should aim to reduce anxiety by providing information to enhance self-efficacy); and incident management (e.g. Officials should consider the use of risk managing tools to assist in their management of an incident). Table 5 provides information on how the remaining recommendations were categorised.

4.2.1. Communication Recommendations

The recommendations include two categories that specifically refer to communication during incidents and emergencies: Information Dissemination and Communication with the Public.

The recommendations outlined for Dissemination of information refer to a mixture of on-site and off-site communication however a lot of them are appropriate for both scenarios. This means they can be applied while communicating with different target groups who are involved in an incident to varying degrees, such as casualties on-site, their relatives or members of the public. On the other hand, Communication with the Public are primarily targeted at the general population, i.e. individuals who are off-site. Further refinement of these recommendations will occur throughout the development, conduct, and iterative evaluation of the exercises conducted and reported in WP6. These are therefore to be considered as initial recommendations that are undergoing continual development throughout the PROACTIVE project.

Table 5: Groups of recommendations discussed by the PSAB during the Pre-Exercise Workshop

Recommendation	Grouping
Generalised procedures and methods should be created across different countries, as harmonisation would be too hard to achieve.	Guidance
Policy and procedure for the management of CBRNe incidents should remain culturally appropriate and be respectful	
Guidance documents should provide evidence-based advice on strategies to increase public compliance in the event of a CBRNe incident.	

Recommendation	Grouping
Harmonising guidance documents across countries is important (e.g. by sharing best practice across the EU incorporated with local adaptation, uniformity could be achieved), perhaps agreement at policy making level is required.	
Guidance should consider individual countries operation methods, i.e. health care system structure, cultural differences.	
Risk communication cannot assume a scientifically ignorant public, and institutions should not exaggerate the superiority of their knowledge and judgment.	Information Dissemination
Information should be available in writing (i.e. print form), where possible, using non-complex language.	
Local radio should be used to disseminate information.	
Multiple platforms should be used to communicate with the public, with consistent information being provided across platforms.	
Information provided by authorities should be pre-planned, where applicable, to ensure prioritisation and consistency, provide uniformity and advocate cohesion.	
The public should be educated on how a CBRNe incident may play out, e.g. procedures may be delayed.	Public Knowledge
The use of displays, simulations, and online games should be used to engage the public and educate them in CBRNe matters.	
Information campaigns and education to build CBRNe public knowledge should be implemented.	
Official sources should communicate honestly and accurately in detailing risks associated with an incident, as this will allow the public to make an informed decision as to whether they wish to comply with official instruction or recommended behaviour.	Communication with the Public

Recommendation	Grouping
It is necessary to establish whose duty it is to inform the public of CBRNe events, and who should be responsible in communicating during incident information.	
Communication should aim to reduce anxiety, by providing information to enhance self-efficacy.	
Officials should consider the use of risk managing tools to assist in their management of an incident.	Incident management
More consideration should be given to developing policy and procedures to assist those with mobility issues (e.g. relating to service animals and essential mobility aids) during CBRNe incidents.	

4.2.2. Discussion

This section details the key points made by the PSAB during the discussion of recommendations for which there was no consensus. Feedback relating to each recommendation, where applicable, is paired with the recommendation marked in italic font.

4.2.1.1 Guidance

"Generalised procedures and method should be created across different countries, as harmonisation would be too hard to achieve".

Discussion with the PSAB members revealed that there was concern regarding the wording of the recommendations. Conversation revolved around the terminology used, i.e. 'generalisation', 'harmonisation' and 'standardisation' of procedure and policy. There was a need for these terms to be defined in a 'real-life', practical context. Furthermore, some PSAB members suggested that it might be difficult, or even impossible, to harmonise or standardise recommendations across countries; some PSAB members also stated that even generalising procedures across the same country or state could be difficult. However, it would be desirable, helpful and educational to share methods and procedures.

"Policy and procedure for the management of CBRNe incidents should remain culturally appropriate and be respectful of religion and religious values".

PSAB members agreed that it was important for communication to consider cultural and religious values. However, in the event of a CBRNe incident, it was stressed that the need to rapidly provide critical care to those who need it (e.g. during decontamination), and the time restraints and

practicality of the situation, will mean it is not always possible for cultural or religious values or needs to be met.

"Guidance documents should provide evidence-based advice on strategies to increase public compliance in the event of a CBRNe incident."

Eight PSAB members fully agreed with this statement, no other members provided feedback.

"Harmonising guidance documents across countries is important (e.g. by sharing best practice across the EU incorporated with local adaptation, uniformity could be achieved), perhaps agreement at policy making level is required".

"Guidance should consider individual countries operation methods, i.e. health care system structure, cultural differences".

These two recommendations were discussed together as they are similar in focus. PSAB members agreed that being able to share best practice across countries is desirable. Again, there were concerns regarding the wording of the recommendation. Some PSAB members wanted to replace the word 'harmonisation' with 'standardisation', whereas some believed that standardisation as a term was too restrictive. Ultimately, there was agreement that standardisation of procedures is beneficial, and practical issues such as allowing procedure to be applied cross-nations (e.g., where there are variations in culture or health care structures) could be overcome with the establishment of sufficient flexibility in application.

4.2.1.2 Information dissemination

"Risk communication cannot assume a scientifically ignorant public, and institutions should not exaggerate the superiority of their knowledge and judgement".

When discussing this recommendation, many PSAB members believed that there should be methods put in place to ensure that the public are able to distinguish fake news sources from official news sources. This point is already covered by the following recommendation: "Information should be available on how to distinguish fake news, i.e. which sources are correct, and which are not", which had already received unanimous agreement. One PSAB member stated that it was important for official sources to be respected and viewed as knowledgeable, as there must be public confidence in communication from official sources. However, it was also stated that it is not always appropriate to use scientific language when communicating with the public; explaining and defining scientific terms or background to the public could be unnecessary and may become confusing. Therefore, the sources providing the information must be viewed as knowledgeable and be respected by the public, but they must also communicate clearly and concisely.

"Information should be available in writing (i.e. print form), where possible, using non-complex language".

Discussion centred around ensuring the information was accessible for all members of the public, particularly in relation to language (e.g. released in additional languages) and the importance of developing methods to overcome communication difficulties (e.g. using pictograms).

"Local radio should be used to disseminate information".

"Multiple platforms should be used to communicate with the public, with consistent information being provided across platforms"

"Information provided by authorities should be pre-planned, where applicable, to ensure prioritisation and consistency, provide uniformity and advocate cohesion. "

PSAB members agreed with these recommendations and provided only limited comments, including: it cannot be assumed that internet will be available during the incident and methods should be put in place to ensure that those who are not computer literate are still able to access the information, and; that the current increase in smart technology could be used to provide safety instructions when necessary.

4.2.1.3 Public Knowledge

"The public should be educated on how a CBRNe incident may play out, e.g. procedures may be delayed. "

"The use of displays, simulations and online games should be used to engage the public and educate them in CBRNe matters. "

"Information campaigns and education to build CBRNe public knowledge should be implemented. "

Four PSAB members agreed with all recommendations relating to public knowledge. There was agreement that the public should be educated in how to handle a CBRNe incident (with reference to work being carried out to educate the public in relation to the COVID-19 pandemic). Indeed, one PSAB member reasoned that if the public are educated in CBRNe incidents they will be able to react in an appropriate way. However, there was also worry that over-education could have negative effects. For example: how much pre-incident information can be circulated, or how sensitive topics (including loss of life) could be explained, without creating unnecessary anxiety. From a policing perspective, concerns around the detrimental effects of revealing information regarding how attacks are handled for counter terrorism was discussed. Finally, there was also conversation regarding the potential for embedding risk awareness in the national curriculum, thus creating a norm for society to learn public awareness in relation to enhanced incidents.

4.2.1.4 Communication with the Public

"Official sources should communicate honestly and accurately in detailing risks associated with an incident, as this will allow the public to make an informed decision as to whether they wish to comply with official instruction or recommended behaviour. "

"It is necessary to establish whose duty it is to inform the public of CBRNe events, and who should be responsible in communicating during incident information. "

"Communication should aim to reduce anxiety, by providing information to enhance self-efficacy. "

Five members of the PSAB agreed with all of the above recommendations. Unrelated to these recommendations, there was interest in how 'the current climate' [COVID-19 pandemic] has resulted in parties across Europe collaborating to enhance best practice. The ability to recognise incidents at an early time point was also advocated, as this would enable cultural factors to be taken into consideration and advice to be embedded in education systems.

4.2.1.5 Incident Management

"Officials should consider the use of risk managing tools to assist in their management of an incident. "

"More consideration should be given to developing policy and procedures to assist those with mobility issues (e.g. relating to service animals and essential mobility aids) during CBRNe incidents. "

Recommendations relating to incident management saw agreement without discussion from six PSAB members. It was concluded that overcoming mobility issues during a CBRNe incident should be considered and marked as a priority, as it has become evident in the current climate (i.e., COVID-19) how willing people are to help one another. One PSAB member explicitly mentioned the lack of consideration in current policy and practice for support animals (e.g. guide dogs). It was stated that it is necessary to ascertain who has responsibility for treating these animals in the event of an enhanced incident (e.g. a chemical spill), and policy and practice should be developed to inform first responders as to how best to manage this issue.

4.2.3. Survey Completion

At the end of the discussion, the PSAB were asked to complete a second survey which provided an opportunity for the PSAB members to re-evaluate their level of agreement with any recommendations which had not previously reached consensus on agreement. Results from this survey are presented in the following section.

4.3. Debriefing of the Delphi Study

12 PSAB members had completed the second survey. The percentage of agreement reached for each item is graphically represented in Figure 2.

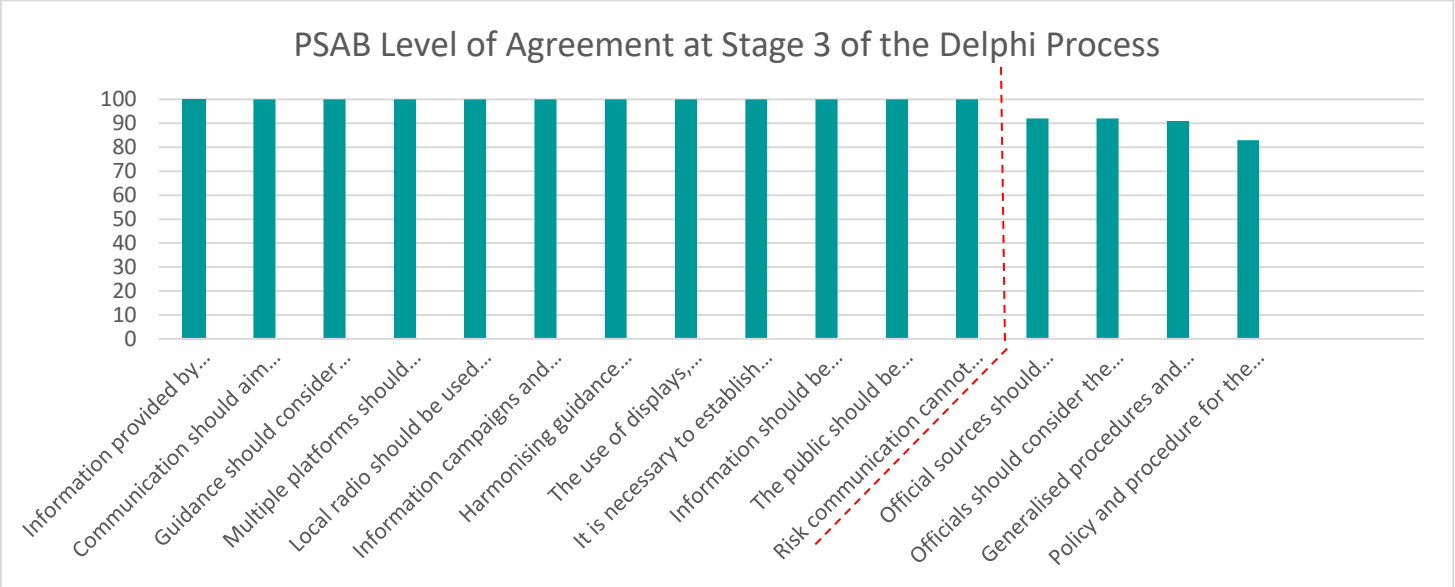

Figure 2: PSAB level of agreement at Stage 3 of the Delphi Process. Note: Dashed red line illustrates consensus cut off point; n = 12

As per Figure 2, following the workshop discussions unanimous agreement was reached on 15 of the remaining recommendations. Only four recommendations had still not reached unanimous agreement by this stage, these were:

- Official sources should communicate honestly and accurately in detailing risks associated with an incident, as this will allow the public to make an informed decision as to whether they wish to comply with official instruction or recommended behaviour;
- Officials should consider the use of risk managing tools to assist in their management of an incident;
- Policy and procedure for the management of CBRNe incidents should remain culturally appropriate and be respectful of religion and religious values;
- Generalised procedures and methods should be created across different countries, as harmonisation would be too hard to achieve.

These recommendations will not be removed from the WP1 outputs, as this illustrates the iterative process informed by practitioners, EU LEAs and policy makers. However, these four recommendations will not be used to inform further work within PROACTIVE.

5. PRE-EXERCISE WORKSHOP WITH PRACTITIONERS, EU LEAS, AND POLICY MAKERS – OTHER ACTIVITIES

This section details the other activities that were conducted as part of the pre-exercise workshop.

5.1. Scenario Discussion

This section was an opportunity to gain further Stakeholder engagement with example scenarios which could be used to inform WP6. Task 6.2 is led by PHE and aims to specify the scenarios which will be deployed as part of the exercises carried out throughout later tasks in WP6 (i.e. 6.3, 6.4 and 6.5). Following the creation of draft scenarios, based on the aims of the PROACTIVE project and in consultation with the PSAB, this pre-exercise workshop session aimed to determine the feasibility, suitability and relevance of potential scenarios for LEAs and policy makers across EU countries.

Further detail concerning this session and other scenario development activities will be presented in full within D6.2

5.2. Involvement of PSAB members in the next PROACTIVE activities

This section of the Workshop was used to inform PSAB members of upcoming activities that require their involvement and provide an update on the progress of several key tasks in which PSAB members are involved.

First, DHPol discussed two upcoming studies: 1) a qualitative comparative study (the proposed methodology was shared with PSAB members) and, 2) a quantitative standardized survey (information guidance and data protection plans were shared with PSAB members). Both surveys were designed for LEAs in CBRNe preparedness and response and were to be disseminated to PSAB members for completion in due course.

Secondly, PPI provided an update on task 2.4 (involving the identification and analysis of SOPs that are important for a successful coordinated response to CBRNe threats). Currently, SOPs currently in use have been identified within WP1 (D1.2, D2.2 and D2.3). Further documents are available (from Czech national resources and German SOPs translated by DHPol), and during this session, PPI also asked PSAB members to follow up and provide any relevant material if possible.

The last session was held by CBRNE Ltd and concerned WP6 (which involves joint exercises, evaluation and tool validation). Objectives of the work package were discussed, as were considerations to be taken into account when arranging the first field exercise (i.e. cultural differences and joint exercise methodology). PSAB members were informed about previous planning meetings which have shaped the parameters for the exercise. As current plans stand, the exercise is scheduled to take place in 2021 (as a one-day exercise) in Rieti, Italy. It will be two hours long and will involve approximately 35 Civil Society participants (of which 15% will be classified as vulnerable participants). The scenario that will be played out is a terrorist attack on a railway, and special effects will include smoke and pyrotechnics. CBRNe Ltd informed the PSAB of the 'PSAB Core Group' comprised of PSAB members who have agreed to commit to participation in the project. The PSAB Core Group are from a range of organisations, including LEAs, firefighters, CBRNe consultancies

and rail companies. CBRNe Ltd also asked for PSAB volunteers who are willing to travel and engage in online surveys.

5.3. CBRNe Project Presentations

Four brief presentations lasting around ten minutes each were given to PSAB members on related ongoing EU funded CBRNe projects, these included: BULLSEYE, TRANSTUN, RESIST and Healthy Gateways.

5.3.1. BULLSEYE

BULLSEYE is an EU funded project which has the objective to prepare EU emergency services for a chemical or biological terrorist attack (Bullseye Project, 2020). The project has a duration of 36 months and is scheduled to last until 31/03/2022. The objectives of the project are to: educate first responders across all EU member states on how to: prevent; detect; respond efficiently to, and; successfully mitigate, terrorist attacks which use CBRN agents and explosives (Bullseye Project, 2020).

The project has two key goals: 1) to advocate harmonised procedures for chemical and biological hazards for: non-specialist police, emergency medical services, fire fighters and civil protection, specialist police, military, forensics and laboratories; 2) to improve training facilities and curriculum for explosive detection dogs (Bullseye Project, 2020).

5.3.2. TRANSTUN

TRANSTUN (TRANSnational TUNnel Operational CBRN Risk Mitigation) is an EU funded project which addresses the risk of chemical events in EU cross-border tunnels (Transnational Tunnel Operational CBRN Risk Mitigation, 2020). The project began in October 2019 and is scheduled to last until May 2020. TRANSTUN specifically aims to: 1) improve the ability of operators and emergency responders to prepare for and respond to CBRN threats in cross-border road tunnels; 2) develop a set of common operational guidelines; 3) test these guidelines in a live scenario at a major EU cross-border tunnel (TRANSTUN, 2020).

5.3.3. RESIST

RESIST (REsilience Support for critical Infrastructures' through Standardised Training of CBRN) is an EU funded project which aims to improve both: preparedness to, and time taken to respond to, critical infrastructures in the event of a CBRN incident (RESIST, 2020). RESIST's specific aims are to: "agree on an updated operational categorisation of CBRNe events; agree on a standardised training curriculum and intervention package for operators and incident commanders, and; transfer CBRNe competencies to operators to allow effective communication with first responders (through a training programme and field exercises" (RESIST, 2020).

5.3.4. Healthy Gateways

Healthy Gateways joint action is an EU funded project which addresses preparedness and action (response capacities) at points of entry (i.e. ports, airports and ground crossings; EU Healthy Gateways Joint Action, 2020). The project began in May 2018 and has a duration of 36 months. This

project aims to improve action and response to infectious disease transmission at cross border points of entry.

Key outcomes will consist of: “guidelines and catalogues of best practice that will be implemented at an operational level by Member State Health authorities, and; engagement with online and in-person training on managing events at points of entry (i.e. infections, chemicals or environmental threats) that will be provided at both the national and local level” (EU Healthy Gateways Joint Action, 2020).

6. SUMMARY, CONCLUSIONS AND NEXT STEPS

This deliverable reported on the Pre-Exercise Workshop held with PSAB members as part of WP2 – Engagement of LEAs and other Practitioners. In line with the requirements of D2.2, this deliverable collated all work associated with PSAB members active involvement prior to the joint exercises taking place (WP6).

Work within Task 2.2 sought to ensure that the recommendations and outcomes presented in D1.3 were appropriate and fit for purpose. This objective was met through active involvement of PSAB members, providing iterative review of the systematic review deliverables (D1.1, D1.2) with a particular focus on identifying gaps and determining the appropriateness of conclusions drawn (i.e. recommendations and statements for best policy and practice prior to and during CBRNe incidents).

A three stage Delphi based study was conducted to facilitate the PROACTIVE consortium’s understanding of the importance of each proposed recommendation (37 in total at Stage 1). This process involved focus groups, surveys and an online Pre-Exercise workshop and resulted in consensus on the perceived importance of 33 recommendations (shown in Appendix C). Four recommendations did not reach unanimous agreement. These recommendations will not be removed from the WP1 outputs as this illustrates the iterative development process informed by practitioners, EU LEAs and policy makers. However, they will not be used to inform T2.4, WP5 or WP6. A final list of agreed recommendations can be found in Appendix C.

6.1. Next Steps

As per Task 6.2, the pre-exercise workshop also involved the discussion of draft exercise scenarios, with a focus on determining the feasibility, suitability, and relevance of potential scenarios. Although an overview of all aspects of the PSAB workshop are reported herein, the scenario development work conducted prior to, and during this workshop will be fully reported separately as part of D6.2.

The recommendations presented in this report will inform the development of the pre-incident public information materials (WP5) that will be tested and refined as part of the field exercises (WP6).

More generally, there will be continual reflection on the recommendation and methodologies, culminating in more complete and specified recommendations by the end of the project. This workshop forms part of an iterative process shaping the tools and exercises with ongoing input by stakeholders, and it provides the first step in understanding practitioners’ initial perceptions of

evidence-based recommendations. This workshop is not intended as the only piece of involvement of PSAB members in the development of the work plan for the PROACTIVE project. Indeed, further involvement of PSAB members is planned and ongoing throughout several work packages within PROACTIVE. Specifically, practitioner stakeholders have been involved in the identification and analysis of standard operating procedures and tools as part of Task 2.4 (including the conduct of a stakeholder engagement workshop) and Task 1.2. Furthermore, PSAB members are included in all engagement pieces from WP4 (Toolkit for LEAs and security policy makers). For example, a Virtual Tabletop and Incident Led Discussion focused on advancing understanding regarding awareness of the needs of vulnerable groups and identifying gaps for future learning and action was conducted on 25 February 2021 under WP4 and further engagement activities will be organised before the three actual field exercises. Lastly, practitioner agencies will be closely involved in the design, running, and evaluation of all exercises reported within WP6; this will allow for clear and iterative learning to be applied throughout the exercise programme and will help specify how procedures could become more fit for the purpose of CBRNe preparedness and response.

By knitting engagement throughout the majority of PROACTIVE WPs in this way it can be ensured that the materials, tools, methods, and learnings developed throughout the PROACTIVE project are optimised for use by the law enforcement agencies and emergency responders for whom they are intended. This ongoing PSAB and practitioner involvement will be reported in the relevant deliverables associated with the WPs in which the engagement occurs.

7. REFERENCES

Bullseye Project. (2020). [online] Available at: <https://www.bullseyeproject.eu/> [Accessed 18 May 2020].

Crawford, I. W. F., Mackway-Jones, K., Russell, D. R., & Carley, S. D. (2004). Delphi based consensus study into planning for chemical incidents. Emergency medicine journal, 21(1), 24-28.

Davidson, L., Weston, D., Amlôt, R, and Carter, H., (2019). Findings from systematic review of current policy for mitigation and management of CBRNe terrorism. PROACTIVE. Deliverable 1.2.

Hall, C., Weston, D., Long, F., O'Sullivan, F., Amlôt, R, and Carter, H., (2020). Guidelines and Recommendations for Mitigation and Management of CBRNe Terrorism. PROACTIVE. Deliverable 1.3.

Hall. C., et al., (2019) Findings from Systematic Review of Public Perceptions and Responses. PROACTIVE. Deliverable 1.1.

Healthy Gateways Joint Action (2020). EU HEALTHY GATEWAYS JOINT ACTION PREPAREDNESS AND ACTION AT POINTS OF ENTRY (PORTS, AIRPORTS, GROUND CROSSINGS). [online] Available at: <https://www.healthygateways.eu/> [Accessed 18 May 2020].

RESIST (2020, March. 19) *Resilience Support for critical Infrastructure's through Standardised Training on CBRN* [Workshop session]. PROACTIVE Workshop with Practitioners, EU LEAs and Policy Makers, held online using Zoom.

RESIST Project (2020). Resilient Transport Infrastructure To Extreme Events. [online] Available at: <http://www.resistproject.eu/> [Accessed 18 May 2020].

Transnational Tunnel Operational CBRN Risk Mitigation. (2020) [online] Available at: <https://transtun-project.eu/> [Accessed 18 May 2020].

TRANSTUN (2020, March. 19) *TRANSnational TUNnel Operational CBRN Risk Mitigation* [Workshop session]. PROACTIVE Workshop with Practitioners, EU LEAs and Policy Makers, held online using Zoom.

8. APPENDICES

8.1. Appendix A: Focus Group Minutes

Summary

This on-line conference call compromised of the two PSAB focus groups (one relating to D1.1 and one relating to D1.2) associated with the D2.2 workshop taking place in Münster on the 19th of March. The meeting was to ascertain feedback on the recommendations provided in D1.1 and D1.2 (i.e. if the recommendations were supported, if there were any identifiable gaps, and if there were any additional recommendations to be included). The call was audio recorded, and the file will be deleted following the acceptance of the minutes, following circulation, to all included parties. The minutes are recorded below, comments provided by participants are anonymous.

Minutes

1. DW greeted participants and presented the purpose of the meeting, which took the form of three stages.
    a. A summary and conclusion of D1.2 and asked for feedback on proposed recommendations.
    b. A summary and conclusion of D1.1 and asked feedback on proposed recommendations.
    c. General comments in relation to either review and recommendations.
2. HC provided a summary and conclusion of D1.2.

D1.2 presented a review of guidance documents relating to CBRNe incident management to facilitate insight into: (i) current policy and practice in the preparation for and management of CBRNe terrorism in different organisations and across different countries; (ii) current guidance and strategies for communicating with members of the public about CBRNe preparation and management; and (iii) the impact of current policy and practice in the preparation for and management of CBRNe terrorism on members of vulnerable groups. This review of guidance, SOPs and policy documents demonstrated that there is a need for guidance and policy to be updated across Europe to reflect the importance of recognising psychosocial aspects of CBRNe response. In addition, there are worrying discrepancies in advice in guidance documents both within and between countries, therefore highlighting a need for these discrepancies to be reviewed and updated to ensure consistency in response. From the review carried out in D1.2, recommendations were compiled to optimise and harmonise guidance and policy documents which relate to CBRNe incidents.

3. HC then asked PSAB members for their feedback on the 1.2 recommendations. Comments and discussions are summarised below.

    a. One respondent indicated that the recommendations are very general, and now it is more of a question of how this can be implemented, e.g. maybe a checklist of guidelines, or a concrete procedure. It may also be good to categorise them, e.g. human factors, or strategic planning.

    b. One responded believed it is too idealistic to wish to have harmonised recommendations, as they still have to rely on national policy as recommendations

depend from one state to another. A way forward may be to implement generalised procedures (instead of harmonised recommendations) compared across different countries (e.g. timing of decontamination). Ultimately, it should be generalised, and points should be established, as points would be too hard to harmonise.

c. One respondent noted that despite D1.2 detailing that respect should be paid to cultural differences, it is also necessary to be mindful of differences in health care systems, and different responsibilities for other counties (especially across the same country). If we want to have specific guidance, it is quite tricky to strike a balance between this and establishing harmonisation across countries.

d. One respondent indicated that, all procedures mentioned in the review regardless of country, are essentially starting with the expectation that you will have casualties, survivors and deaths. We are missing the first part of the whole episode by missing elements of preparedness. We should all be prepared to quickly respond to any incidents we have. I would suggest that all countries should aim to be proactive and should not have to have casualties present to create action. We need to protect people before the incidents occur (e.g. using project COUNTERFOG which details 'washing the air' of contamination).

4. HC asked for opinion on missing recommendations (gaps), or additional recommendations under 1.2.

   a. One respondent indicated that, in the case of a terrorist attack, procedures such as evacuation may not start immediately (as, e.g. Police will check if the terrorist is still near the victims) and procedures will be delayed (e.g. until decontamination is ready and available). Nothing can be ready immediately. Maybe it makes sense to educate the public on the sense that procedures may be delayed. Secondly, first responders are also essentially the population, they are just better prepared. Regardless of preparation they are also very stressed, afraid to be contaminated and concerned about making mistakes. They are also under pressure due to a position of responsibility and they will still worry about their families. Maybe separating responders from the general population is not necessary.

5. HC thanked participants for their contributions.

6. DW provided a summary and conclusion of D1.1 and asked feedback on proposed recommendations.

D1.1 presented the findings from a review of academic literature relating to public perceptions of pre-incident preparedness, and during-incident response (e.g., management strategies), for CBRNe events (including terrorism). The review concludes that: the general public's current understanding of CBRNe prevention and management strategies is very low; factors associated with effective pre-incident communication included the use of non-complex language, dissemination across multiple platforms, delivery using a credible source, and incorporation of psychological constructs that aim to reduce threat and anxiety; factors which have the potential for increasing willingness to engage in pre-incident and preparedness information, included: demographics, prior knowledge and

psychosocial factors; factors which have the potential to increase compliance with official instruction during an incident, included: trust; provision of information; emotional responses; efficacy; and relationships. Recommendations were compiled for both: communicating during an incident (including the identification of factors which are associated with compliance) and delivering effective pre-incident information.

7. DW then asked PSAB members for their feedback on the 1.1 pre-incident recommendations. Comments and discussions are summaries below.
    a. One general remark, it would be beneficial to note who the recommendation is addressed to in terms of stakeholders. In Germany there are many stakeholders (e.g. public and private organisations and societies), who would it be addressed to?

    b. One individual agreed that education is a key point in this matter as when there is an outbreak (e.g. Ebola, it was brought to Spain and was passed onto one of the nurses caring for a patient in quarantine. She had a dog and it was a real nightmare public decision about whether the dog had to be sacrificed or not, and the people were not aware of the risk that they were managing. If it had spread and there had been more cases, it would have been out of control and people were not aware). Politicians cannot aim to just try to make people calm and quiet but instead should be taking decisions to minimise the risk. Officials will need risk managing tools [to deal with events] as they cannot make the decisions as a one off, they must minimise the risk in the overall scenario and the overall problem.

    c. DW agreed: pre-incident information should not necessarily by reassuring, it should be a risk acknowledgement and what behaviour and information exists to respond.

    d. One attendee agreed that it is indeed good to provide as much information as possible before an incident. In relation to Recommendation 6, it is not always bad to be worried, worry comes when people are not informed enough - but when they are informed they just know what to do. Therefore, education plays a very important part here, and what kinds of risks could be there, e.g. Ebola, where a town or city is located where there is a chemical facility or nuclear reactor. People can receive in advance what to do, which will reduce anxiety and worry.

    e. One general remark, who is going to inform the public about CBRNe events. For example, with railways, some say frequently that it is not our task to inform people about this, our basic task is to carry out transport for people. So, who should be mainly responsible in communicating this information to the public?

    f. DW agreed: ownership of disseminating information should be established to prevent diffusion of responsibility.

    g. Broad consensus was apparent as pre-incident information is important, but it is a struggle to engage clinicians with the material as they are so busy and not interested. Results from studies have indicated that when you talk to clinicians they are interested, but it is not high up on their priority list. They also need to know who to talk to. How helpful is it to disseminate all information to all parties if they do not have the time to consider it?

h. DW agreed and presented the idea that you would want to aim to see pre-incident information in training (e.g. PSHE in UK schools).

i. By instant message: participant agreed with the recommendations.

j. There are so many other issues (e.g. COVID-19), that everyone is struggling to manage the time.

k. One respondent indicated that information on self-help and helping others would be beneficial. We had some practical trials recently to do with decontamination where there is different information you must give if a person is looking after a child, in comparison to those just looking after themselves (i.e. you need to keep yourselves safe while doing so).

8. DW asked for opinion on missing recommendations (gaps), or additional recommendations under 1.1 pre-incident information.

    a. One respondent indicated that we need to come up with a sample scenario, so all countries can present their own procedures for CBRNe events so that we can compare them. With the result, we can achieve a more usable and generalisable recommendation. We also think that the study only focuses on the public, but I think staff should also be considered, especially from the railway sector.

    b. One attendee was not sure that providing information would provide a sense of fear amongst the public. This attendee remarked that the provided information should be easy to understand, and we should also provide this information, so to not provide a sense of fear.

9. DW asked for opinion on missing recommendations (gaps), or additional recommendations for D1.1 during incident communication.

    a. One respondent indicated that there needs to be recommendations relating to communicating with a handful of people, in comparison to communicating with hundreds of people. Through practical trials we have ascertained that you can provide 1 one on one communication with around 30 people; but anything more than that results in people that cannot understand or hear you, and it is highly different to communicating with a handful of people.

    b. One respondent indicated that communication recommendations should also be provided for people phoning up for advice in comparison to communication and the scene. Two things can happen: a call operator can provide advice; and the information provided by the public can be passed on to first responders and emergency crews.

10. DW opened the floor for general comments in relation to either review and recommendations.
    a. One attendee added that it would be helpful to provide information on how to distinguish fake news, i.e. which sources are correct, and which are not.

11. DW provided information on how this focus group would inform future work, i.e. the meeting in Münster, the online survey of recommendations and the Delphi study process.
12. SS provided information regarding the meeting in Münster and the capacity PROACTIVE has on funding attendees.
13. DW thanked the participants very much for their input. It was also asked of all participants to email either himself or SS to confirm that they were present within the conference call, and to list all names of those on the call.

Follow-up actions

- PSAB participants to email SS or DW to confirm their participation in this teleconference.

8.2. Appendix B: 37 Recommendations used at Stage 2

The public should be educated on who to turn to for support and further information in the event of an incident.

It would be beneficial to prepare pro-active social media campaigns and get people to know where to go for good information during events.

Communication should: 1) inform the public about loved ones' whereabouts in relation to family, friends and pets; 2) provide information about active police and security efforts to apprehend terrorists; 3) provide information on the importance of complying with instruction (including health specific information to address public health concerns; 4) and be delivered by a credible spokesperson (e.g. local resources, hazard groups and health departments).

Information should be available on how to distinguish fake news, i.e. which sources are correct, and which are not.

Staff working in highly public places (i.e. railway stations) should be educated on CBRNe preparedness.

Where there is increased risk (e.g. where a town or city is located where there is a chemical facility or nuclear reactor), people should receive in advance what to do in the case of a CBRNe incident, which will reduce anxiety and worry.

Guidance documents should provide evidence-based advice on communicating with the public which can be followed by authorities in the event of a CBRNe incident.

Information should be provided in multiple languages, pictographic form, and sign language.

The use of FAQs should be incorporated into communication efforts to reduce stress on authorities.

Countries should compare their CBRNe procedures with one another to enable a 'best practice' blanket approach to CBRNe incidents. This could also be done through the creation of sample scenarios for each type of incident.

It should be noted who the recommendation is addressed to in terms of stakeholders.

Messages should be pitched at an appropriate level (in terms of language and complexity).

Guidance documents should seek to be uniform in instruction, particularly when released in the same country.

Three dimensions of disaster communication should be used when creating pre-incident information (strategic, contextual and personal).

Guidance documents and SOPs should inform responders about the needs of vulnerable groups and include plans for dealing with such groups in the case of a CBRNe incident.

Clinicians should have time allocated to be educated about CBRNe events, to allow them to appropriately engage with the material.

Official communication should be honest, empathic, assertive and reliable.

Guidance documents should provide evidence-based advice about likely public behaviour, emphasising that the way in which practitioners manage an incident will affect the way in which members of the public behave.

More consideration should be given to developing policy and procedures to assist those with mobility issues (e.g. relating to service animals and essential mobility aids) during CBRNe incidents.

Information provided by authorities should be pre-planned, where applicable, to ensure prioritisation and consistency, provide uniformity and advocate cohesion.

Communication should aim to reduce anxiety, by providing information to enhance self-efficacy.

Guidance should consider individual countries operation methods, i.e. health care system structure, cultural differences.

Multiple platforms should be used to communicate with the public, with consistent information being provided across platforms.

Responders should communicate effectively (in-line with recommendations in the communication section, above) and demonstrate respect for public needs.

Local radio should be used to disseminate information.

Information campaigns and education to build CBRNe public knowledge should be implemented.

Harmonising guidance documents across countries is important (e.g. by sharing best practice across the EU incorporated with local adaptation, uniformity could be achieved), perhaps agreement at policy making level is required.

Guidance documents should provide evidence-based advice on strategies to increase public compliance in the event of a CBRNe incident.

The use of displays, simulations, and online games should be used to engage the public and educate them in CBRNe matters.

It is necessary to establish whose duty it is to inform the public of CBRNe events, and who should be responsible in communicating during incident information.

Information should be available in writing (i.e. print form), where possible, using non-complex language.

Official sources should communicate honestly and accurately in detailing risks associated with an incident, as this will allow the public to make an informed decision as to whether they wish to comply with official instruction or recommended behaviour.

Officials should consider the use of risk managing tools to assist in their management of an incident.

The public should be educated on how a CBRNe incident may play out, e.g. procedures may be delayed.

Policy and procedure for the management of CBRNe incidents should remain culturally appropriate and be respectful of religion and religious values.

Risk communication cannot assume a scientifically ignorant public, and institutions should not exaggerate the superiority of their knowledge and judgment.

Generalised procedures and method should be created across different countries, as harmonisation would be too hard to achieve.

8.3. Appendix C: Final List of Recommendations

Guidance documents should provide evidence-based advice on communicating with the public which can be followed by authorities in the event of a CBRNe incident.

More consideration should be given to developing policy and procedures to assist those with mobility issues (e.g. relating to service animals and essential mobility aids) during CBRNe incidents.

Information provided by authorities should be pre-planned, where applicable, to ensure prioritisation and consistency, provide uniformity and advocate cohesion.

Communication should aim to reduce anxiety, by providing information to enhance self-efficacy.

Guidance should consider individual countries operation methods, i.e. health care system structure, cultural differences.

Multiple platforms should be used to communicate with the public, with consistent information being provided across platforms.

Local radio should be used to disseminate information.

Information campaigns and education to build CBRNe public knowledge should be implemented.

Harmonising guidance documents across countries is important (e.g. by sharing best practice across the EU incorporated with local adaptation, uniformity could be achieved), perhaps agreement at policy making level is required.

The use of displays, simulations, and online games should be used to engage the public and educate them in CBRNe matters.

It is necessary to establish whose duty it is to inform the public of CBRNe events, and who should be responsible in communicating during incident information.

Information should be available in writing (i.e. print form), where possible, using non-complex language.

The public should be educated on how a CBRNe incident may play out, e.g. procedures may be delayed.

Risk communication cannot assume a scientifically ignorant public, and institutions should not exaggerate the superiority of their knowledge and judgment.

The public should be educated on who to turn to for support and further information in the event of an incident.

It would be beneficial to prepare pro-active social media campaigns and get people to know where to go for good information during events.

Communication should: 1) inform the public about loved ones' whereabouts in relation to family, friends and pets; 2) provide information about active police and security efforts to apprehend

terrorists; 3) provide information on the importance of complying with instruction (including health specific information to address public health concerns; 4) and be delivered by a credible spokesperson (e.g. local resources, hazard groups and health departments).

Information should be available on how to distinguish fake news, i.e. which sources are correct, and which are not.

Staff working in highly public places (i.e. railway stations) should be educated on CBRNe preparedness.

Where there is increased risk (e.g. where a town or city is located where there is a chemical facility or nuclear reactor), people should receive in advance what to do in the case of a CBRNe incident, which will reduce anxiety and worry.

Guidance documents should provide evidence-based advice on communicating with the public which can be followed by authorities in the event of a CBRNe incident.

Information should be provided in multiple languages, pictographic form, and sign language.

The use of FAQs should be incorporated into communication efforts to reduce stress on authorities.

Countries should compare their CBRNe procedures with one another to enable a 'best practice' blanket approach to CBRNe incidents. This could also be done through the creation of sample scenarios for each type of incident.

It should be noted who the recommendation is addressed to in terms of stakeholders.

Messages should be pitched at an appropriate level (in terms of language and complexity).

Guidance documents should seek to be uniform in instruction, particularly when released in the same country.

Three dimensions of disaster communication should be used when creating pre-incident information (strategic, contextual and personal).

Guidance documents and SOPs should inform responders about the needs of vulnerable groups and include plans for dealing with such groups in the case of a CBRNe incident.

Clinicians should have time allocated to be educated about CBRNe events, to allow them to appropriately engage with the material.

Official communication should be honest, empathic, assertive and reliable.

Guidance documents should provide evidence-based advice about likely public behaviour, emphasising that the way in which practitioners manage an incident will affect the way in which members of the public behave.