



OVERC.O.M.E.

Cross-border cOoperation
in Managing Emergency



Co-funded by
the European Union

**INTERNATIONAL OUTLINE
of the
OPERATING GUIDELINES
to Improve Coordination and Cooperation**



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Section 0

0.1 OVERC.O.M.E. Project

OVERC.O.M.E. project has been funded by the European Union Mechanism of Civil Protection (UCPM) under the Call UCPM – 2022 – PP . It has been implemented by a consortium of Italian and French end-users: the Italian National Fire and Rescue Service (CNVVF), the French Departmental Fire and Rescue Service of Savoie (SDIS73), together with the International CBRNE Institute (ICI) of Belgium. The coordinator of the project is the CNVVF. One of the objectives of the project is to improve the quality of CBRN operations, enhancing the coordination to take the “right decision” and facilitating the interoperability toward a “Team Europe” approach as well as to Improve the cooperation for any type of general joint Intervention at the border.

Thus, OVERC.O.M.E. intends to improve current tools, covering the lack of procedures and standard operational forms in CBRN, to harmonise the type of data useful to the coordination of an emergency and facilitate the flow of information to respond to the operational needs, especially when more than one country is involved. The project takes into consideration the standard international model actually used in USAR operations (INSARAG Guidelines 2020) which is intended to be the leverage to improve standardisation in CBRN scope, applying a methodology that comes from USAR operations as a possible model. The project will test the CBRN forms and the CBRN procedures during two exercises in 2024 to enhance mutual cooperation in a scenario simulating an intervention at the border between Italy and France and will enhance the already available data management system in USAR operations, named “Prometheus” that could also be used by the teams during a CBRN emergency.

In the frame of protocols of cross border cooperation (CBC) already existing between the Ministries of the Interior of France and Italy signed in 2007, OVERC.O.M.E. is also aimed at enhancing a virtual operational room between Turin (Italy) and Chambéry (France) to improve operations at the border and make it as a model for other borders’ joint action. Thus, S.O.F.I.A. which stands for Operational Room France Italy Alpine Arch (Sala Operativa Francia Italia Arco Alpino/Salle Opérationnelle France Italie Arc Alpin) is developed In the frame of OVERC.O.M.E. to facilitate the coordination of cross-border interventions in terms of: a) correct classification of an event; b) unambiguous address; c) standard acronyms for equipment and resources; d) translation on real time of additional information.

At the end of the project Prometheus will be therefore enhanced for CBRN (for full coordination for all the phases) and for general interventions in the frame of S.O.F.I.A. (for the alert phase).

0.2 The International Outline of the Operating Guidelines

The purpose of this document, that starts from the Operating Guidelines, is to reach several types of international stakeholders sharing the main elements of the intervention procedures in cross-border CBRN scenarios that are described in detail in the document called “Operating Guidelines to Improve Coordination and Cooperation”.

0.3 S.O.F.I.A: (Operational Room France Italy Alpine Arch)

The aim of S.O.F.I.A. is facilitating the exchange of resources and information among Fire Departments from different states that have to cooperate in general transborder interventions. Toward this aim, the following sections and internal tools have been designed and implemented in S.O.F.I.A.:

- an Alert System which, following the opening of an intervention, sends out a double notification: a phone pre-recorded message in the language of the recipient and an e-mail to the mailing list and phone numbers configured in the system;
- a chat between two Fire Departments involved with simultaneous translation is also present in the System;
- a Log-book that automatically records the actions in S.O.F.I.A. with the possibility to insert manually logs and that permit to track the intervention and responsibilities;
- a map area with competences areas that permit to identify the event location and through it the involved Fire Departments;
- function of dispatch of a specific resource is possible starting from the request form and vehicles and teams are sent according to the request form and availability.

RETURN TO THE LIST OF INTERVENTIONS

1

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Support request

Nature of the Intervention

Operational units involved

Specific equipment request

Destination

New intervention - Support request

Intervention address

Date and time
Tuesday, 28 Jan 2025 13:44:14

Neighbouring country 1

Neighbouring country 2

City

Location

Address

Telephone number

GPS coordinates

SELECT LOCATION

Headquarter that received the call

☐ Torino
 ☐ SDIS-73
 ☐ Direzione Regionale Piemonte
 ☐ Test

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Support request

Nature of the Intervention

Operational units involved

Specific equipment request

Destination

New intervention - Nature of the Intervention

☐ Fire

☐ Forest
☐ Accommodation/Housing
☐ Light vehicles
☐ Heavy goods vehicles
☐ Industrial building
☐ Local/machinery/ski lifts
☐ Train
☐ Explosion

☐ Accident

☐ Motorcycle
☐ Car
☐ Heavy vehicles
☐ Dangerous chemicals involved
☐ Train
☐ Aircraft
☐ On the road
☐ Off the road
☐ In water
☐ In tunnel
☐ In the escarpment

☐ Rescue of persons

☐ In the mountains
☐ On snow/ice
☐ In water
☐ In avalanche

☐ Other types

☐ Landslide
☐ Flood
☐ Missing person search
☐ Release of dangerous substances
☐ Building collapse with people involved

☐ NBCR

☐ NR
☐ B
☐ C
☐ Explosive
☐ Altra richiesta specifica
☐ Malicious Act

Notes

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Support request

Nature of the Intervention

Operational units involved

Specific equipment request

Destination

New intervention - Operational units involved (Italy)

☐ Rescue team
☐ CRA/SUB
☐ PCA
☐ SAPR
☐ Medical Rescue

☐ USAR
☐ MMT
☐ AIB
☐ TAS

☐ SAF
☐ ACP
☐ SNOW
☐ IIR

☐ NBCR

☐ Detection and identification
☐ Sampling
☐ Hazmat containment
☐ Decontamination first

☐ NBCR
☐ Population protection
☐ Pollution recovery
☐ Decontamination population

☐ Analysis and identification
☐ Modelling
☐ Lab analysis

Units request

☐ Rescue team
☐ CRA/SUB
☐ PCA
☐ SAPR
☐ Medical Rescue

☐ USAR
☐ MMT
☐ AIB
☐ TAS

☐ SAF
☐ ACP
☐ SNOW
☐ IIR

☐ NBCR

☐ Detection and identification
☐ Sampling
☐ Hazmat containment
☐ Decontamination first

☐ NBCR
☐ Population protection
☐ Pollution recovery
☐ Decontamination population

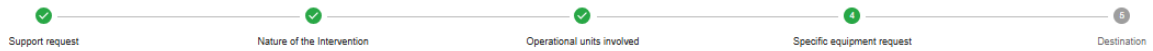
☐ Analysis and identification
☐ Modelling
☐ Lab analysis

Units request

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← RETURN TO THE LIST OF INTERVENTIONS



New intervention - Specific equipment request (Italy)

☐ APS	— 0 +	☐ ABP	— 0 +	☐ Carro autorespiratori	— 0 +
☐ ACT/BOSC	— 0 +	☐ APS bimodale	— 0 +	☐ Polisoccorso	— 0 +
☐ AG	— 0 +	☐ AS	— 0 +	☐ CA/BARCA	— 0 +
☐ Drago/elicottero	— 0 +	☐ AF/PCA – UCL	— 0 +	☐ AF/BCR	— 0 +
☐ AF/USAR	— 0 +	☐ Carro luci	— 0 +	☐ AF/LOG	— 0 +
☐ BUS	— 0 +	☐ RI/MP	— 0 +	☐ MMT	— 0 +

Specific equipment request

New intervention - Specific equipment request (France)

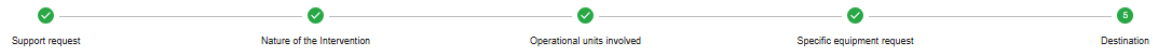
☐ APS	— 0 +	☐ ABP	— 0 +	☐ Carro autorespiratori	— 0 +
☐ ACT/BOSC	— 0 +	☐ APS bimodale	— 0 +	☐ Polisoccorso	— 0 +
☐ AG	— 0 +	☐ AS	— 0 +	☐ CA/BARCA	— 0 +
☐ Drago/elicottero	— 0 +	☐ AF/PCA – UCL	— 0 +	☐ AF/BCR	— 0 +
☐ AF/USAR	— 0 +	☐ Carro luci	— 0 +	☐ AF/LOG	— 0 +
☐ BUS	— 0 +	☐ RI/MP	— 0 +	☐ MMT	— 0 +

Specific equipment request

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New intervention - Destination

Jurisdiction country

Jurisdiction country ▼

Headquarters

☐ Torino ▼
 ☐ SDIS-73 ▼
 ☐ Direzione Regionale Piemonte ▼
 ☐ Test ▼

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Details

Headquarter

Name Direzione Regionale Piemonte
Street Strada del Baroccholo, 71/73 - 10095 GRUGLIASCO (TO)
Country Italy

Contacts

[+ ADD A NEW EMAIL](#)

Email	Actions
dir.piemonte.sofia@gmail.com	

[+ TELEPHONE NUMBER](#)

Priority	Number	Description	Actions
1	900	sala operativa Dir. Piemonte	

Users

[+ ADD USER](#)

Name	Email	Actions
Alessio Daniele	alessio.daniele@vigilfuoco.it	

Country list

[+ ADD](#)

Country code	Language code	Actions
IT	it	
EN	en	
FR	fr	

S.O.F.I.A. is a multilingual platform realised during the project phase in English, French and Italian, which can be implemented also in other languages.

The operator, after logging in, will view the pages in his/her own language.

Following an event, the operations room opens an emergency on S.O.F.I.A. platform, enters the human and instrumental resources sent and, if necessary, requests the operations room of the neighbouring country to send personnel and vehicles in support.

The login on the platform takes place with personal credentials so to track of the activities carried out, reported in a logbook.

With regard to CBRN interventions, these are detailed in two special areas in order to specify the nature of the intervention and the type of CBRN resource sent or requested.

A dedicated tutorial will be available at the end of OVERC.O.M.E. project at the following link: <https://prometheusproject.eu> section OVERC.O.M.E.

0.4 Prometheus CBRN

Prometheus is a Management System for the coordination of complex emergencies, aimed at information management and resource coordination.

Non-volatile information (e.g. radio or telephone), conveyed through digital forms, re-consultable, visible to all actors and in real time.

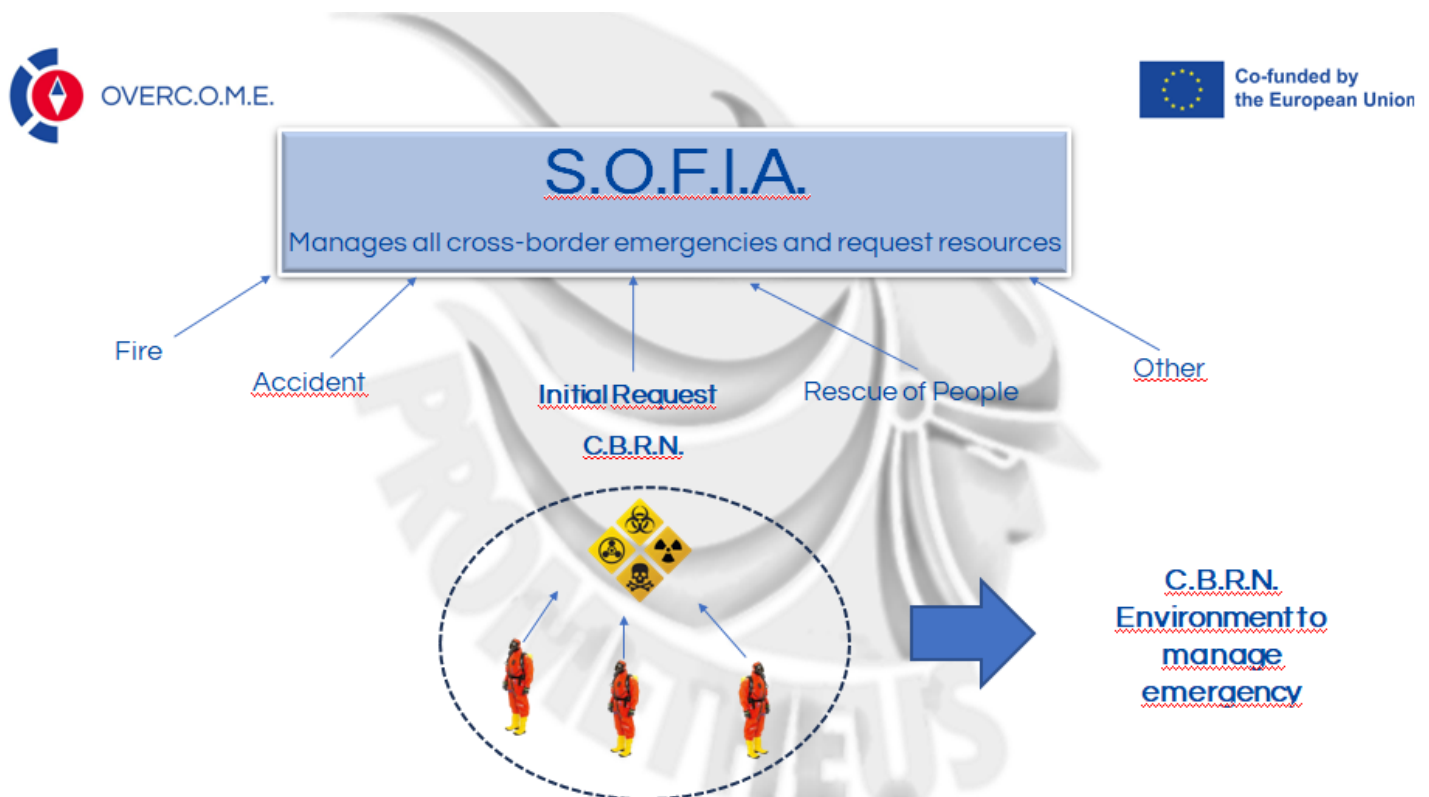
Display of deployed and deployable resources throughout the scenario with advanced map support.

Possibility of sharing general information via an internal Cloud.

The user who connects to Prometheus sees 3 access buttons, respectively to the USAR area, the CBRN area and the SOFIA area.

Access to one or more areas of the system depends on the user's account type.

If a CBRN intervention, opened immediately on SOFIA, is configured as a relevant intervention that cannot be managed with the present functions alone, an Emergency can be opened in the Specific CBRN area (Prometheus CBRN).



In detail, the following functions are present within the CBRN area:

- Management of all CBRN Activities;
- CBRN Teams Management;
- Cartography management;
- Assignment of CBRN teams to work areas;
- Data collection from the affected area;
- Cartographic evolution;
- Logistical requests;
- Situation Reports;
- Witness interviews;
- Injuries management;

- Automatic and manual logbook.

A dedicated tutorial will be available at the end of OVERC.O.M.E. project at the following link:
<https://prometheusproject.eu> section OVERC.O.M.E.

0.5 interconnection between S.O.F.I.A. and Prometheus

As mentioned above, if a CBRN intervention, opened immediately on S.O.F.I.A, is a relevant intervention that cannot be managed with the present functions alone, an Emergency in the specific CBRN area (Prometheus NBCR) can be opened.

It is configured as a hypothesis for the use of the systems, that the management of the CBRN event through the use of Prometheus CBRN, is carried out by the Command Post (CP) set up in the vicinity of the event while the request for further resources between neighbouring states is made through S.O.F.I.A. managed directly by the Operations Rooms of the countries involved.

0.6 Terms and definitions

Cross Border Event: a civil protection event occurring in a 20-25 km range from state border, relating to scenarios not exceeding 24/48h. It can be indirect or direct event and is assumed that the involvement of cross-border resources compared to domestic resources is more effective in terms of the protection of people, goods and environment.

CBRN event: an event that involve a chemical, biological, nuclear, radiological scenario

Cross Border intervention: a Cross border and CBRN event

Control Room involved: Control room located in the nation where the emergency scenario is running

Neighbouring Control room: Control room located in the neighbouring country where the emergency scenario is not running

0.7 Acronyms

BoO	Base of Operation
CBRN	Chemical Biological Radiological Nuclear
CP	Command Post
CNVVF	Corpo Nazionale Vigili del Fuoco
CWA	Chemical Warfare Agent
ERCC	Emergency Response Coordination Centre
HAZ-MAT	Hazardous Material
GC/MS	Gas Chromatography-Mass Spectrometry
GPS	Global Positioning System
ICS	Incident Command System
ICT	Industrial Toxic Chemical Compounds
INSARAG	International Search And Rescue Advisory Group
LEMA	Local Emergency Management Authority

PPE	Personal protective equipment
SAR	Search and Rescue
USAR	Urban Search and Rescue
VOC	Volatile Organic Compound
SOFIA	Operational Room France Italy Alpine Arch
SPME	Solid Phase Micro Extraction

Section 1 – Actors

The aim of this section is to identify the actors that can be involved during a cross-border emergency followed by their description, functions and competences.

This section, in the Operating Guidelines, has been divided into four parts:

- A– describing all the possible actors involved during a CBRN event during a cross-border emergency;
- B - specific terms of references for the International Liaison Officer and the interaction with the Command Post;
- C - description of the head of reinforcement team and head of the sector during a cross-border emergency;
- D –brief description of the actors interacting using S.O.F.I.A., Prometheus CBRN and both of them.

Part A

CONTROL ROOMS

This paragraph includes the description of the activities according to different phases:

PREPAREDNESS

- Inform neighbouring control room about resources available in case of event; usual general consideration, not each day;
- Check communication reliability and availability between all the actors involved according to specific procedures to agree and plan with the counterpart (e.g. 1 time a month to test reliability of communication systems).

RESPONSE – MOBILIZATION

Control Room involved:

- Receives the distress call and collects all the information necessary to define the scenario;
- In case of event, transfers the alert/warning state to neighbouring control room;
- In case of event, transfers the alert/warning state to government agencies and to hierarchical structures superior;
- Sends request form to mobilize cross-border resources to superior hierarchical structures;
- Received the authorization from superior hierarchical structures, sends the resource request form to neighbouring control room;
- Sends liaison officer to support incoming cross-border resources;
- Shares the useful information about the scenario to neighbouring control room in order to take on the external resources.

Neighbouring control room:

- In case of cross-border event, receives the alert/warning state from the control room involved, confirming resources availability and reliability;
- In case of event transfers the alert/warning state to government agencies and to superior hierarchical structures;
- Sends the request form to superior hierarchical structures to mobilize cross-border resources;
- Received the authorization from the superior hierarchical structures, notifies the resources mobilization to involved control room;
- Sends the Factsheet form of the incoming human resources and capabilities to dispatch to the affected neighbouring country.

RECOVERY – DEMOBILIZATION – LESSONS LEARNED

- Notifies to government agencies and to neighbouring control room the end of operations;
- Notifies external resources mobilizations;
- Is involved in intervention debriefing.

EMERGENCY MANAGEMENT

This paragraph includes the description of the activities according to different phases:

PREPAREDNESS

- plans activities and revise, if needed, emergency plans;
- joins regular meetings in order to update bilateral procedures/agreements;
- organises joint training according to the needs and manage the procurement activities to upgrade and maintain tools and equipment;

RESPONSE – MOBILIZATION

- in case of possible cross-border event is informed by the involved control room and decides if it is necessary the request of external resources;
- establish the necessary resources;
- manages the emergency scenario and coordinates all the resources involved (internal and cross border);
- implements operational action plan, logbook, report plan and information management plan;
- organizes and manages operational meetings (e.g. debriefing meetings and reports);
- establishes communication modalities;
- mobilizes resources;

RECOVERY – DEMOBILIZATION – LESSONS LEARNED

- defines the end of operations and informs the control room;
- manages operation debriefing.

LIAISON OFFICERS OF THE CBRN TEAM

This paragraph includes a brief description of the cases in which a CBRN team liaison officer may be deployed.

Responders, alerted by his/her control room, dispatched to the affected State. L.O. of the CBRN Team acts as reference for incoming cross border resources, manages operational and logistic needs and facilitate communications with the host nation affected by the emergency, supervising information exchange and making coordination smooth.

POLICE

This paragraph includes a brief description of the its role during a CBRN event.

Located in safe area, it patrols the scenario's area and carries out Its own procedures in compliance with what established by fire fighters and governmental agencies.

MEDICAL EMERGENCY UNITS

This paragraph includes a brief description of the their role during a CBRN event.

Acquired the necessary information, they identify the available resources to respond properly. The staff in site intervene if required in safety conditions under fire fighters' instructions. They wear proper PPE (Personal Protective Equipment) depending on the activity to perform within the scenario and properly addressed by responders

NATIONAL OPERATIONS CENTRE

This paragraph includes a brief description of the its role during a CBRN event. It collects information about the intervention, prepares communications at high strategic level. It monitors the necessary resources in order to provide additional specialist support. It validates important reinforcement also in relation with the ERCC (European Response Coordination Centre), if the magnitude of the event exceeds the national resources.

REGIONAL CONTROL ROOM if any

This paragraph includes a brief description of the its role during a CBRN event. It collects information about the intervention, prepares communications at a high level to inform CON/COGIC. It monitors the necessary resources in order to provide additional specialist support at a zonal/regional level

LOCAL, PROVINCIAL, NATIONAL CIVIL PROTECTION SYSTEM

This paragraph includes a brief description of the their role during a CBRN event. Gives operating and logistic support if required by the emergency management and performs activity in the medium and long term after the emergency (food supply, stockpiling of supplies vital to the affected population, psychological and counselling support, temporary schools, ...)

PREFECTURE if any

This paragraph includes a brief description of the its role during a CBRN event. Authorizes cross-border resources mobilization at the very moment of the request. If necessary, it declares the state of the emergency. It interfaces with neighbouring Prefecture in order to ensure the complete operability of the actors on site, facilitating the effectiveness of cross-border intervention.

FIRE DEPARTMENT

This paragraph includes the description of the activities according to different phases:

PREPAREDNESS

- plans activities;
- attends regular meetings in order to update bilateral procedures/agreements;
- assess training joint needs;
- guarantees vehicles and equipment availability and reliability;

RESPONSE – MOBILIZATION

- guarantees resources availability and reliability;

RECOVERY – DEMOBILIZATION – LESSONS LEARNED

- manages intervention debriefing.

Part B

The role of the Liaison Officer and the Command Post

The aim of this section is to describe the role of the Liaison officers and the functions of the Command Post within the framework of a cross-border emergency where the affected country activates, depending on the level of the emergency, a Host Nation Support (HNS) Cell.

To ensure proper HNS in case of a disaster, the affected country should consider setting up/integrating national arrangements to allow international emergency support.

The suggestion of the paragraph is that emergency management actors should be identified and made aware of their responsibility in the different phases of HNS especially such as:

- preparation of country briefings and initial orders for incoming teams;
- identification and training of liaison officers (LO) to join the incoming team;
- setting-up and training of HNS team/cell providing logistical support and facilitating custom and border crossing procedures;
- setting-up of a Command Post where the Incident Commander manage the on-going emergency and deliver briefing to incoming teams, dispatching them on-site;
- closure of the emergency gathering all the relevant information to inform key-role actors in order to quickly get to the recovery phase.

Finally, the emergency management should receive proper hand-over procedures after demobilization of teams requested by the affected country.

Inside the Operating Guidelines, an important role is suggested to the L.O. OF THE CBRN TEAM that can be described as follows:

ROLE OF THE L.O. OF THE CBRN TEAM

The Liaison Officer (LO) is a responder that acts as a reference for the team of the other State involved, in order to manage operational and logistic needs, facilitates communications between the two parts involved in the emergency (the one affected and the one assisting) and decision making between the two parts, supervising information exchange, harmonize the actions from different actors and make coordination smooth.

LO. of the CBRN Team main tasks:

- assisting the Team Leader on command team operations ;
- ensuring coordination of teams facilitating the decision making process within, for instance, the Command Post;
- monitor of progress of the CBRN capacity results and outputs to refer to the Team Leader and the Host Nation LO;
- facilitate and find solutions on specific issues raised during deployment (i.e. logistics, procurement, political, bottlenecks in implementation, project management compliance, etc.);
- communicate clear instructions to team members in order to to fulfil the CBRN mission;
- obtain and coordinate space, furniture, equipment, and internal and external

communications for the CBRN emergency on-going;

- take and keep contact with the Liaison officer in charge of other nations, taking part in meetings, for instance, at the Command Post office;
- provide status reporting of team activities with respect to the program plan or schedule;
- filling of all relevant documentation about the mission requested;
- collect team logistic and operational needs, if the CBRN mission gets prolonged;
- update his own control room and organization from the beginning to the end of the mission, also using proper software and applications.

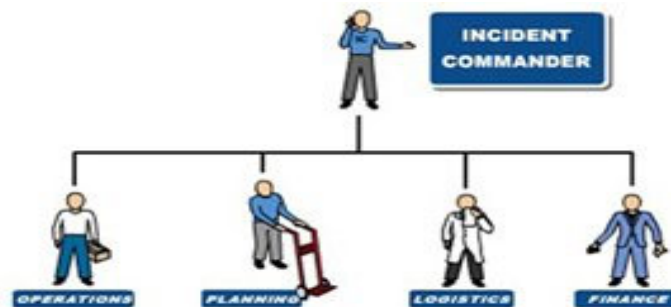
LO. of the CBRN Team skills and capabilities:

- Trained and informed on HNS system;
- Skilled on CBRN;
- Language skills;
- IT skills (e.g. SOFIA and PROMETHEUS knowledge);
- Preferably trained and informed on EUCP Mechanism.

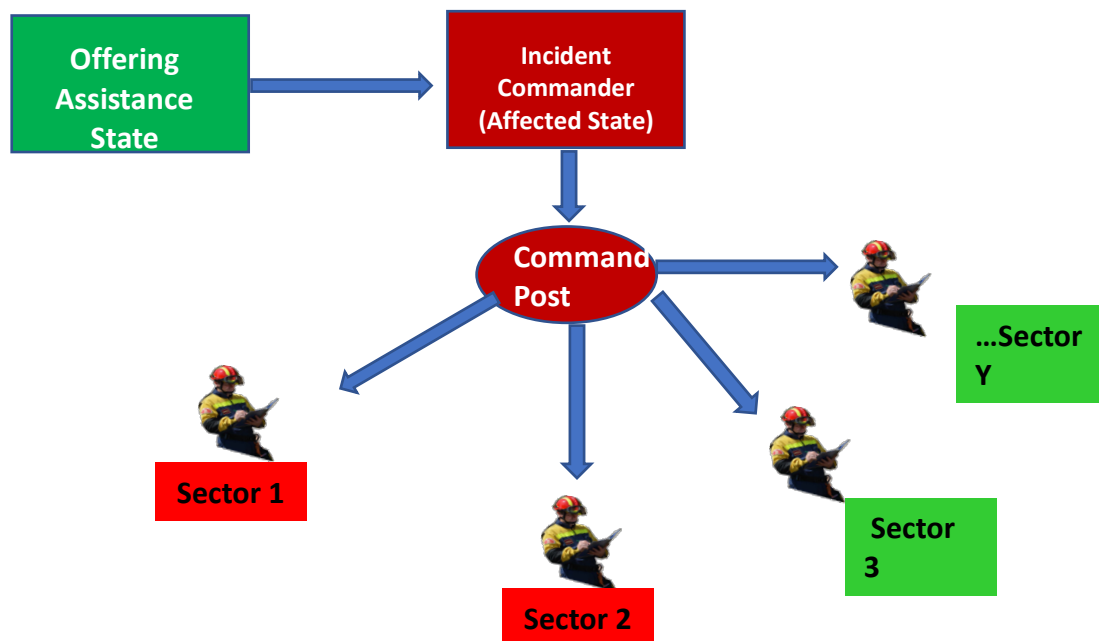
The role of the Command Post is also described in the Operating Guidelines mainly with reference to the interaction with the LO of the CBRN Team and the Incident Commander. Some details are given in the following tables:

CP – Command Post

The Command Post is in charge of administrative, planning (collect and analyse information, foreseen future situation, share information), command (give orders and follow the achievement of the tasks) and logistic functions following the internal specific procedures of the affected country (e.g. ICS system), where the LO of the CBRN Team has an important role in supporting the incoming teams.



The command post has the task to collect data and report to its own hierarchy, to disseminate information to media. In addition, the CP has got a specific role in a multi-agency activities where, during an emergency, has to identify, address, dispatch and monitor "ad-hoc" resources.



The Command Post may not be established in any emergency event because a certain number of human and logistical resources are required in a short time. For this reason, emergency could be classified referring to event's magnitude, and in order to define the kind of response, this could be classified, for example, as follow:

- basic/light: CP is not strictly required, CP's functions are in charge to the emergency coordinator;
- intermediate/medium: CP is mandatory and the affected State L.O. of the CBRN Team is

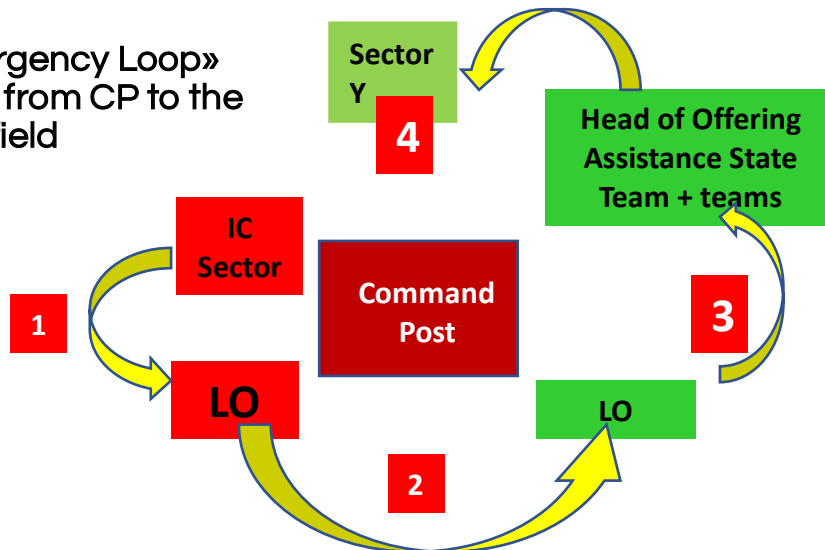
part of it, sharing information between the Support State Team and CP;

- advanced/heavy: Different Command Posts could be present, dividing the area in different sectors.

Once the CP is established, it is important to define how the information is conveyed to the teams employed in the field and, vice versa, how the on-field teams can report to the Command Post, avoiding communication errors as much as possible.

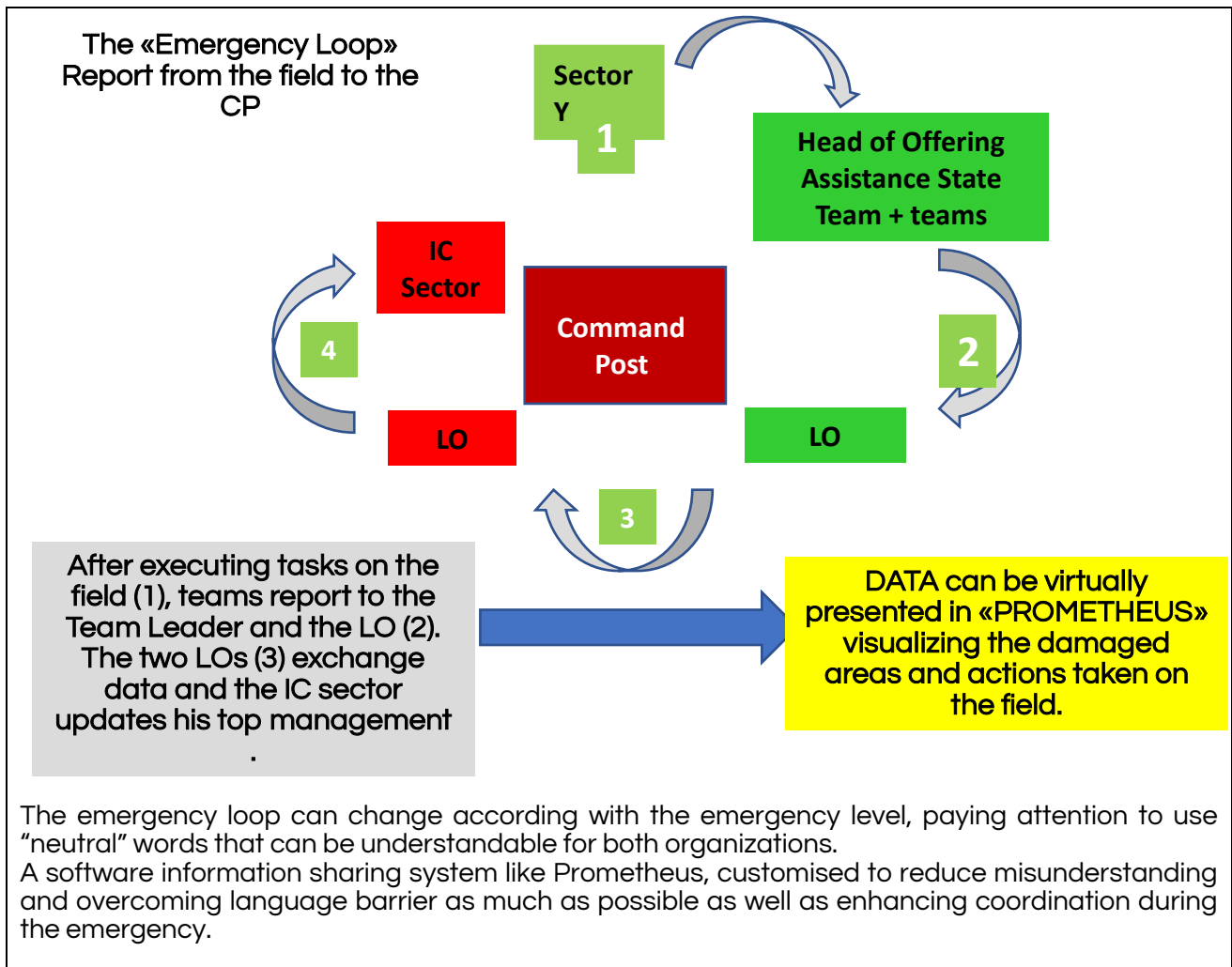
In order to achieve this point and obtain a standardization of communication, it should be used an "emergency loop" method, as shown in the following schemes:

The «Emergency Loop» Information from CP to the field



How Offering State receives tasks, instructions:
initial briefing (1) «translated» to the LO (2) communicated to teams (3) and dispatched on-site (4)

After point 4, a new «loop» can start...depending on the scenario evolution and mitigation actions



Part C

The head of reinforcement team and the head of the sector during a crossborder emergency

Another important aspect described in the Operating Guidelines is the role of what can be called as “head of the reinforcement team”, such role can ensure optimal collaboration and coordination between the rescue teams of the State affected by the emergency event and the rescue teams from the neighbouring State, it is appropriate that the foreign team is correctly inserted within the existing chain of command. In fact, each State has its own response structure with respect to emergencies that may occur, in order to guarantee an appropriate intervention taking into account the magnitude of the event, the vulnerability of the area and the resources available. This also allows for the optimal transmission of information, organisation of operations and the establishment of an appropriate chain of command. This “arrangement” permits to have a fluid, secure and reproducible organization of command on an intervention site. Typically the chain of command adopted is of a pyramidal type and the response system is of a modular type, increasing with respect to the magnitude of the event or vulnerability of the area.



In the event of a cross-border emergency, the liaison officer of the affected state will be responsible for ensuring the inclusion of the cross-border team within the response scheme as well as the correct transmission of information, with reference to the emergency loop previously described.

The sharing of country intervention schemes can be useful in the case of cross-border interventions.

Part D

Actors interacting with S.O.F.I.A., Prometheus CBRN and both of them

S.O.F.I.A. is dedicated to the staff of the operational room of the Department/Commands/Countries involved. After logging in with a personal account, the control room opens a new intervention when an event occurs in an area close to the border between two States. The communication exchange as well as the alerts can be also merely informative therefore not generating a request of support.

The activation of the CBRN area in Prometheus is decided by the Department/Command when a significant transborder event occurs and the management goes beyond S.O.F.I.A. tasks.

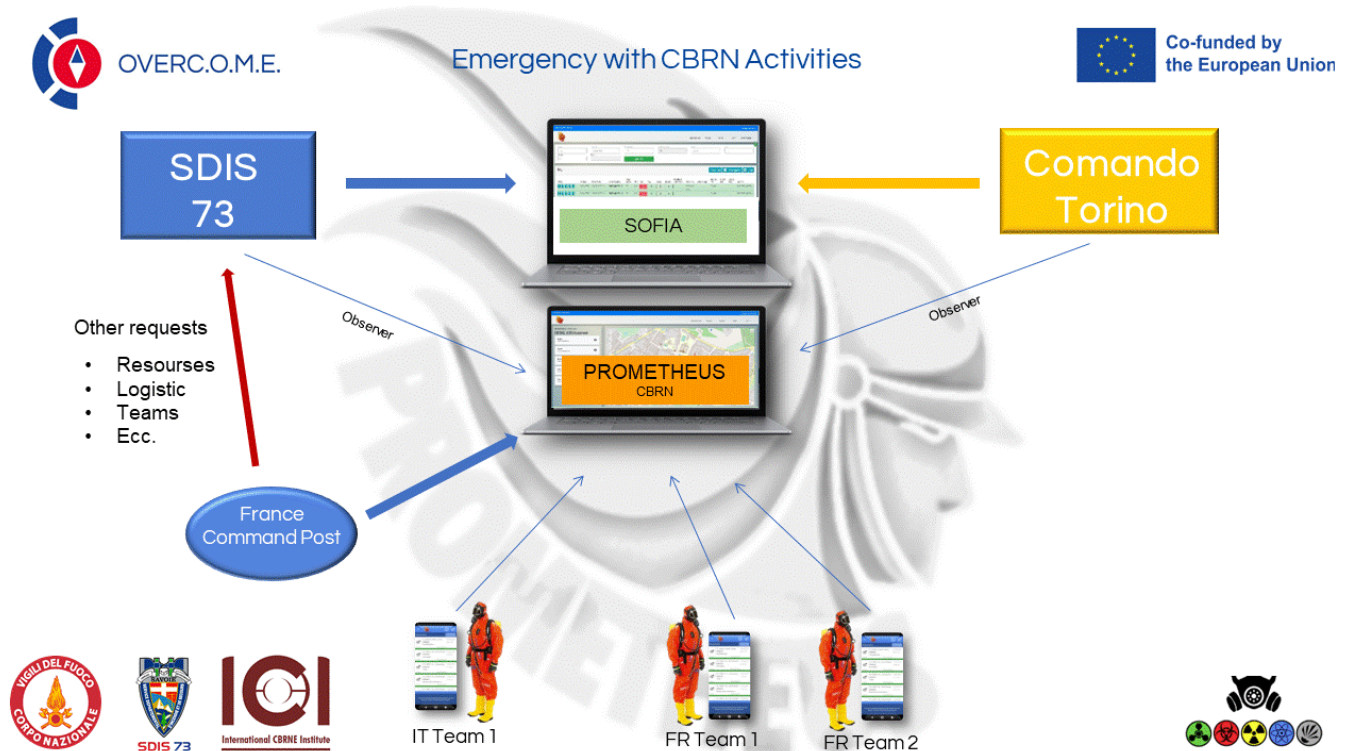
The management of the area is under the established Command Post (CP), which can be created virtually until the on-site coordination resources reach the area.

The operators manage the teams arriving or already on site according to their characteristics, under the instructions of the CP manager, assign tasks and analyse the information arriving in Prometheus from the assigned teams by filling in forms in the app.

The operators request new resources through the operations room of the competent Department/Command/country to carry out the intervention.

It remains the prerogative of the operations room of the competent Department/Command to communicate and make requests to the peer entity of the other State involved through S.O.F.I.A.

An example of the flow of communication between two departments, one French and one Italian, is as follows:

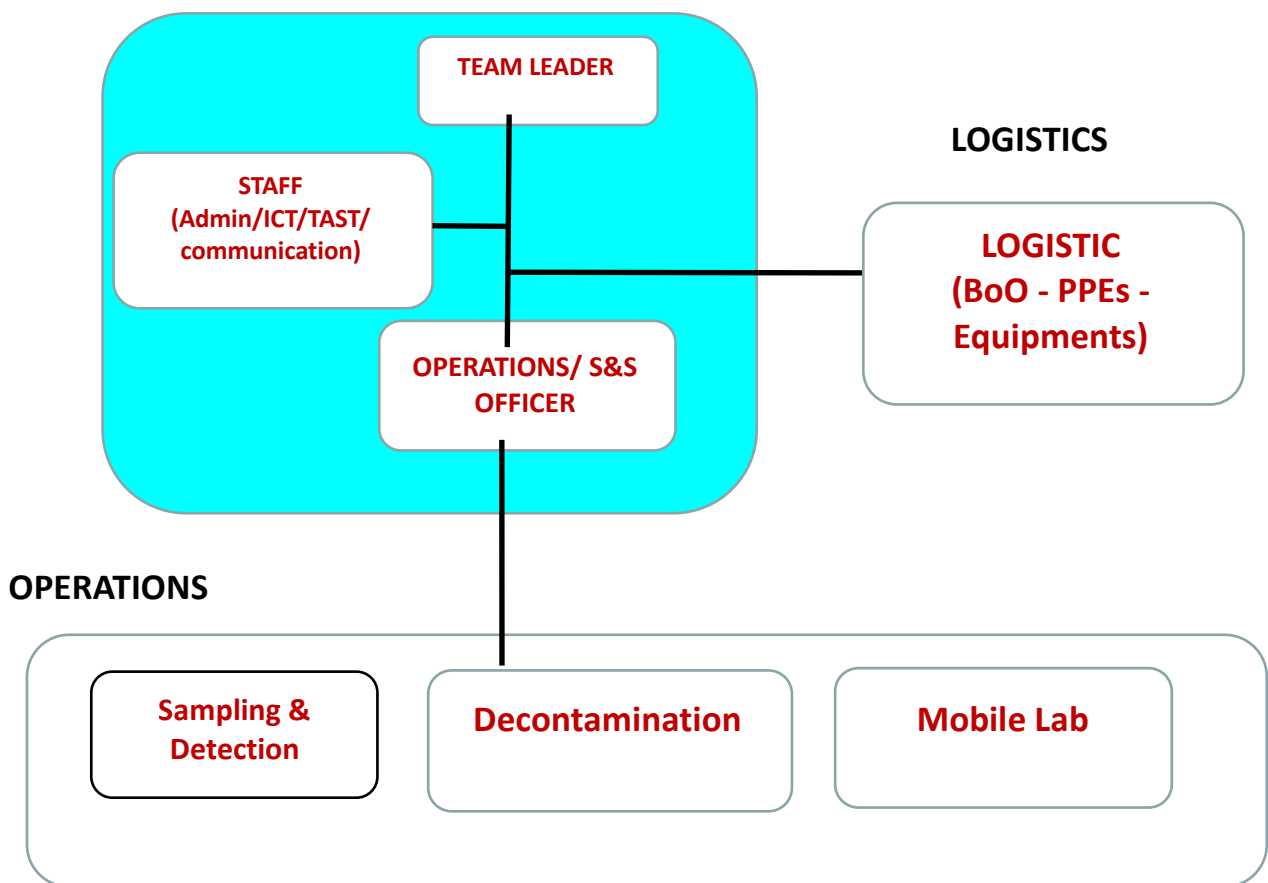


Section 2 – Team Composition, Equipment and Tools

The aim of this section is to identify the minimum level necessary for CBRN teams. Similar training and similar device provided to teams can produce a good response level in case of working 'together' during emergency.

A possible distribution of tasks within a team for a cross-border emergency intervention is the one indicated in the following diagram:

MANAGEMENT



The numerical consistency of the team can vary depending on the type of scenario. Logistics may or may not also be present depending on the scenario envisaged by the cross-border emergency and the assumptions of its duration.

The team also has the possibility of setting up a coordination centre for the intervention in order to guarantee the following functions:

- Coordination of intervention teams (local operations room);
- Daily report of the progress of the intervention activity;
- Collection of all analysis reports and modeling/forecasting activities;
- Information management activities;

- Management of relations with the media.

In the list below, we define proper equipment and tools, updated with the “state-of-the-art” involved during a transborder emergency:

- TRAINING ACTIVITIES
- PREPARDNESS
- RESPONSE
- SAMPLING
- DETECTION
- MODELING
- DECONTAMINATION
- STABILISATION – RECOVERY.

2.1 Training activities

This paragraph describes how is important to be able to achieve mutual knowledge between the teams in order to allow them to work together. For this reason it is important to identify activities and results that can be achieved through training activities.

Below is a list of possible activities:

- Training activities on equipment and tools to use during a cross-border intervention;
- Updating of the equipment available during the annual meeting;
- Perform almost one exercise per year to test a cross-border scenario.

While the results of the training activity should be as follows:

- Perform how to analyze and communicate results;
- Update on results management (phase 3 operational).

2.2 Preparedness

This paragraph describes what the preparation phase includes and all activities related to the preparation of the team, in a context where a possible cross-border emergency could occur:

- Activation mode among two or more Countries;
- Methods of information about the type of event possibly using management data software presented here in these guidelines and specific training to handle softwares;
- Methods of direct contact between the emergency manager and the team leader of the intervention team;
- Access routes to the intervention area in a cross-border scenario;

- Knowledge of the territory and its criticalities/risk situations.

2.3 Response

This paragraph describes the activities present during a CBRN response phase:

- Reconnaissance and zoning;
 - CBRN Detection and monitoring;
 - CBRN Sampling;
 - CBRN Analysis and identification;
 - Modelling (dispersion) in case, for instance, of a chemical release;
 - Population protection when a CBRN event occurs;
 - Fight and react against the effects of the CBRN event.
-
- Decontamination people and mass decontamination (in the very first stage of the emergency, then to delegate to the Health service). Some countries have some differences on who is delegated to provide mass decontamination (First responders, health service, identified organization defined on specific agreement/protocol) .
Furthermore, it is essential to keep Public registration on decontaminated, sorted victims and the following addressing to hospital(s), previously informing interested hospital(s).
-
- Protection and Decontamination of responders.

Finally, with regard to law enforcement/investigation, some countries provide this service to police forces and first responders can facilitate and support certain activities such as the preservation of evidence.

2.4 Sampling

This paragraph describes one of the main CBRN capabilities: sampling, that is useful for field and laboratory analyzes with the aim of detecting CBRN materials. The information that need to be described is: the composition of the sampling team and related tasks, the coding to be used for the samples, the instrumentation supplied with the sampling team and the sampling procedure which might be different from the organisation of the emergency service.

2.5 Detection

This paragraph describes how the detection activity is very often accompanied by sampling, both because some field instruments supplied to the staff require a sample for their use, and to carry out any more accurate analyses at the chemical laboratory, as well as a matter of repeatability of the test.

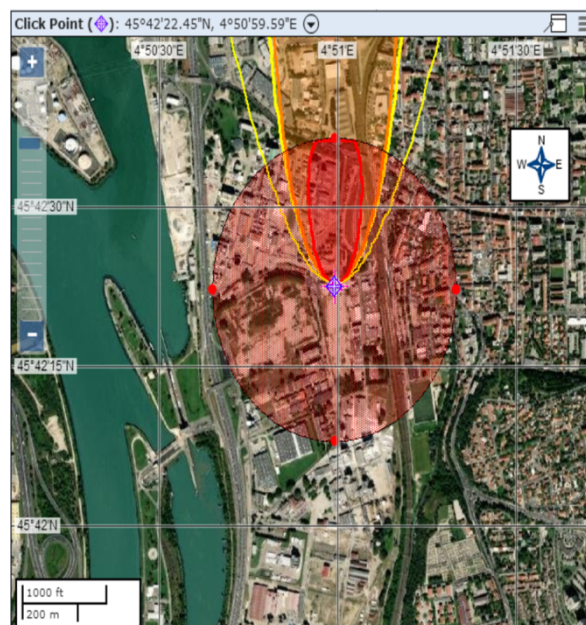
The Operating Guidelines enter into the detailed description of the sampling and detection team's composition and related tasks and equipment supplied to the support team.

The Operating Guidelines also suggest that for a more correct and complete instrumental measurement campaign, before carrying out each survey, it is necessary to make a measurement of the meteorological values (wind direction and intensity, temperature and atmospheric pressure).

2.6 Modeling

This paragraph describes the modelling activity that is preparatory to the activity related to the protection of operators and the population. It allows you to make a simulation of the scenario forecast and is particularly useful in cases of relevant scenarios capable of generating spillovers on large portions of territories. In addition, the forecasting system can also be used in the case of scenarios that present significant environmental risks.

Each CBRN team has dedicated software that can generate case predictions of chemical and radioactive releases with identification of isodose levels.



The paragraph describes several modeling software and some of them are able to relate to Prometheus CBRN software.

ANALYSIS

The analysis activity is conducted within the chemical/radiological laboratory and it is also described in this paragraph where the need to use these laboratories repeatedly to carry out field measurements arises. If it is necessary to carry out specific investigations or if the contaminant is not detectable through field equipment. The laboratory can be mobile (following the intervention teams) or fixed.

All the details of the analysis times and technologies used need to be described in detail inside this section.

2.7 Decontamination

The paragraph that describes decontamination, illustrates how decontamination allows to limit the exposure of people and prevents from limiting contaminated areas to red zones only. It therefore represents a fundamental activity in the field of CBRN intervention.

The details on how decontamination is carried out with different techniques in both the chemical and radiological fields need to be illustrated.

Moreover, it is important to take into consideration that decontamination procedures can be applied to personnel, vehicles and instrumentation and in general to everything that is introduced for the need to intervene within the red zone.

Radiological decontamination of responders

"Radioactive contamination" means the spreading of a radioactive substance in the form of dust, particulate matter, liquid, gas or vapour into an environment or on a surface or matrix or finally on an individual. In an operational situation where there is the presence of radioactive material, contamination of personnel, vehicles, equipment may occur; When radiation sources in the environment are sealed, contamination generally does not occur. The demarcation of the red zone includes contaminated areas.

Anyone leaving the "red zone" as well as any material, object or vehicle must normally be monitored for contamination control; Depending on the outcome of the monitoring, decontamination may or may not be carried out.



Chemical decontamination of responders

"Chemical contamination" refers to the spreading of a chemical in the form of dust, particulate matter, liquid, gas or vapour into an environment or surface or matrix or finally onto an individual. In an operational situation where there is the presence of chemical material, contamination of personnel, vehicles,

equipment may occur; When radiation sources in the environment are sealed radiations generally does not occur. The demarcation of the red zone includes contaminated areas.

Anyone leaving the "red zone" as well as any material, object or vehicle that is taken out of the red zone must normally be monitored for contamination control; Depending on the outcome of the monitoring, decontamination may or may not be carried out.

Mass decontamination

Indeed, as surprising as it may seem, the problem of the complete care of a large number of infected people is relatively recent. This need to be taken into account and for this reason is described in the Operating Guidelines.

2.8 Stabilisation - Recovery

This paragraph describes that the missions of the emergency services do not include returning to normal. They are simply about securing and stabilizing a situation in order to allow the action of the building and environmental decontamination services.

It is important to take into account that however, after emergency, equipment and specific instruments requires ordinary or extraordinary maintenance.

It is opportune to consider also the adequacy of specific tools and equipment and to change them if are not proper for the emergency.

Section 3 - Operational Phases

This section describes, starting from possible scenarios, aspects and phases to consider during trans-border emergencies that are the following:

- Preparedness;
- Response;
- Recovery;
- Mitigation/Lessons Learned.

3.1 Preparedness

This paragraph describes the time frame of operational stages between the end of a rescue mission or emergency and the start of a new one.

During preparedness, the CBRN personnel undertake all the actions aimed to ensure the state of maximum preparation and readiness for deployment or get dispatched in case of an emergency activation.

In this paragraph the Operating Guidelines describe good practices to be applied between neighbouring countries such as that each country informs the neighboring control room about the resources that are available in case of cross-border event. Moreover, it could be foreseen the possibility to have a communication check about all the actors that can be involved in case of activation.

Within this framework, the importance of training and exercises should be taken into consideration in order to get familiar with activities and procedures, as well as operating methods for cross-border working teams with expertise in certain areas.

3.2 Response

This paragraph describes the difficulty of recognising that a CBRN incident has occurred or could occur and the consequent chain of actions.

The Operating Guidelines illustrate what are the possible informing activities such as: malicious acts, intelligence agencies, public and emergency service control rooms.

The Operating Guidelines also describe possible activities to ensure an effective response, such as: the involved Control Room will get in contact with the neighboring country in case it is possible a cross-border intervention. First responders will take advantage of pre-determined risk information contained in operational response plans, labeling of hazardous substances and transportation containers, if the incident covers this situation and, later on the spot, will observe signs and symptoms from victims, animals, plants or the environment; this to better evaluate the occurring scenario.

In the Operating Guidelines more details are given on how the emergency scene should be isolated to mitigate any consequences. Actually, effective "Hot-warm-cold zones" managements required to control

access to and from the incident scene, control the movement of contaminated or not contaminated victims, provide working methods for responders and contain the release of any substances.

Saving of life is the first priority of all responding agencies. Contamination of victims/casualties must be considered as part of the initial assessment and an effective method for rescue, decontamination and medical treatment must be provided. The provision of timely warnings and/or evacuation of the public where appropriate, may also contribute to the saving lives by reducing the risk of exposure.

Following the immediate operational response, specialist advice should be sought to assist with consequence management. This may include hazard identification or confirmation, establishing levels of contamination.

In case of cross-border CBRN event, the support team could be involved in essential activities as follows:

- Saving people in a CBRN environment (if there are people still involved);
- Reconnaissance and zoning;
- CBRN Sampling;
- CBRN detection (hand-held or stand-off devices);
- CBRN Analysis (field laboratory or fixed one);
- Containment of dangerous substance spills and further transfer in vessels (if needed);
- Chemical and Radiological Dispersion modeling and prediction;
- CBRN Decontamination and support for people and mass decon.

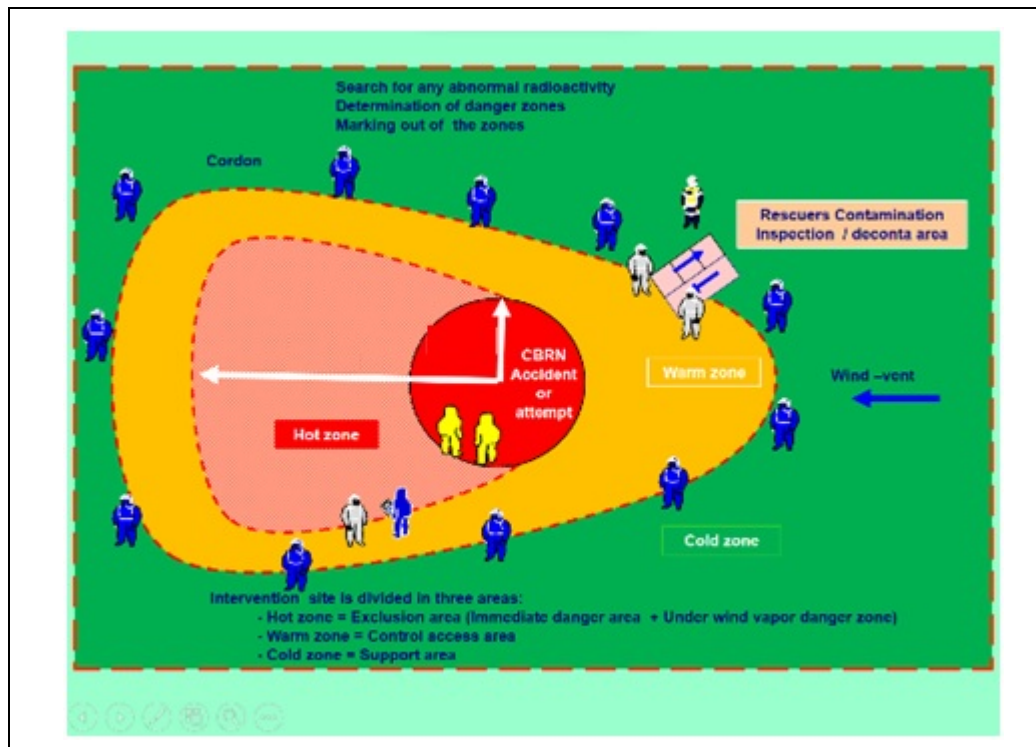
Results from previous actions could provide information about treatment of casualties, how to better define contaminated areas and provide forecast/prevision activities, in the very first moment of emergency, to help Authorities for the decision making-process.

ZONING

Zoning is the first procedure to perform once the on-field teams arrive at the scenario and the scope is the delimitation of dangerous areas in order to protect people and first responders themselves.

For these reasons, hot, warm and cold zones are established to provide areas for functions as decontamination and support operations and to define the necessary protection in order to guarantee a safe access into the area.

The above-mentioned zones will be shaped regarding the wind conditions and the topography of the area. Entry points and the associated decontamination facilities as well as Command Post must be situated upwind. At these entry points, a clear boundary with standardized procedures for entering and leaving the exclusion zones including decontamination and registration of persons (accountability), vehicles and pieces of equipment have to be established.



CBRN SAMPLING

The Operating Guidelines describe the chemical, biological, radiological, and nuclear (CBRN) sample management. This process includes collection, packaging, transport, storage, transfer, accountability, and reporting associated with environmental samples related to CBRN hazards to inform decision makers for further CBRN operations, medical support and isolation of contaminated areas.

For this kind of activities, specific and standardized procedures are adopted and discussed in the Operating Guidelines.

CBRN DETECTION

One of the most important capabilities that can be performed is the CBRN field detection. This activity is carried out by operational personnel wearing the most appropriate PPE, depending on the type of event. Once the PPE has been donned, there are many field detectors that can be used by the team depending on whether the scenario is chemical, nuclear or radiological.

The Operating Guidelines analyze in details the instruments that can be used according with the CBRN event.

Furthermore, another important capability is the sampling, useful for field and laboratory analysis with the aim of detecting chemical and radiological agents, and in special cases also biological agents.

CBRN ANALYSIS

This analysis is performed in a CBRN field laboratory that, in case of transboundary emergency, could cooperate with another CBRN field laboratory.

Following an analysis of this type, it will be possible to identify qualitatively and quantitatively the chemical or biological or radiological substances present in the sample. This way, results can be shared to the National Authority of the affected country to better perform a decision-making process.

CONTAINMENT OF DANGEROUS SUBSTANCE SPILLS AND FURTHER TRANSFER IN VESSELS

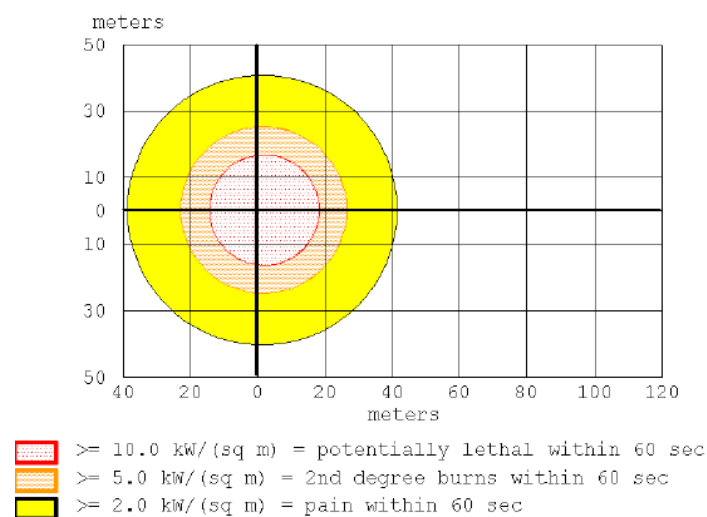
In case of incident with hazardous materials, responders have to manage events with the presence of dangerous substances on the road and railway, with the need to transfer the substances into special tanks or vessels for their safely subsequent movement. In this case, the material is fully identified with a proper labelling so the substance is very well acknowledged and responders with specific equipment can make the scenario safe by transferring the substance in a new vessel provided by the private transportation company.

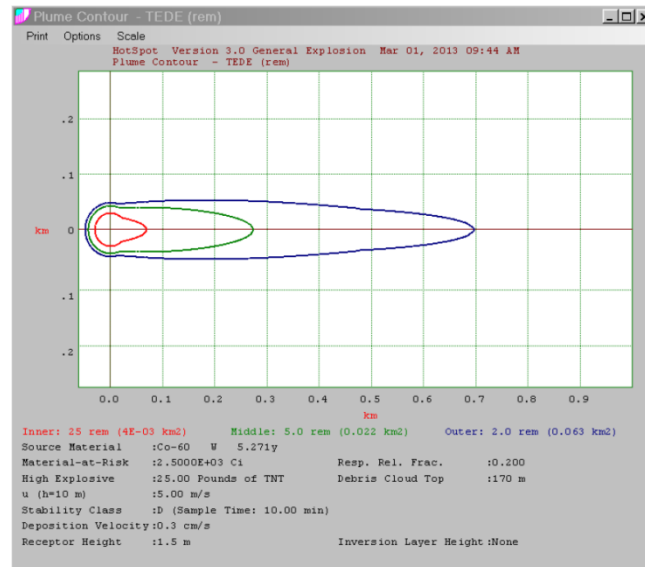
MODELLING AND PREDICTING CHEMICAL AND RADIOLOGICAL DISPERSION

Dispersion modelling is a powerful tool that can be used during operations to understand the evolution of the scenario with respect to hazardous materials and the consequences for responders and the population.

The results depend on the data that can be obtained from the area concerned, and in the early stages of operations, in most cases, there are a considerable number of uncertainties.

For these reasons, output models are not intended to provide a detailed description of the area involved, but a quick and reasonable result that can be used to develop a more effective strategy.





It is also possible to plot important sites around the CBRN incident and the effects on them, allowing an evaluation of the possible countermeasures to adopt.

CBRN Decontamination

A CBRN decontamination phase is conducted during a CBRN event response, where responders operate to mitigate the hazards of dangerous substances that can defile emergency operators.

It is a "step-by-step" process aimed to reduce contamination on responders to a specific safe level and to prevent the transfer of contamination outside the containment area.

The procedures used are based on field analysis of the hazard and risks involved. Field analysis consist of checking detection results to determine the general hazards, such as persistance, flammability and toxicity, and then evaluating the relative risk associated to the contaminants (for example, vapor versus liquid, blister versus nerve agents, radiological versus chemical and biological hazards).

A decontamination can be accomplished in several ways, depending on the hazard. Typically, it consists of a dry decontamination, such as adsorption, brushing and scraping, useful alternatives for physical radioactive contaminated particles or a wet decontamination in which the individual is flushed with water to remove or dilute the contaminant, considering the agent's reactivity with water and its solubility.

The decontamination team supervise the operations and assist the personnel to decontaminate their outer clothing from top to bottom, moving the contaminant toward the ground.

Mass CBRN Decontamination

Body decontamination is the removal and/or neutralization of a chemical, radioactive, biological or nuclear agent from the skin. It is done by moving, extracting or neutralizing the contamination in order to:

- prevent or reduce radiation poisoning or exposure: avoid internalization of contamination by reducing exposure time and concentration of the contaminant;
- avoid the transfer of contamination: avoid secondary contamination by transfer of contamination (protect contaminated victims, those involved, first responders and care teams, keep the hospital clean).

Decontamination aims to move, neutralize or destroy contaminants of all types in order to limit their toxic effects. Decontamination takes place in the controlled area before evacuation to the rear structures. All persons present must be decontaminated (or for the radioactive component, at least controlled). The Operating Guidelines describe in detail the types of decontamination.

3.3 Recovery

This paragraph describes the recovery activity that may or may not be carried out and planned by the competent bodies according to the indications of the rescuers (assessment of the damage and related impact).

Specialist advice and resources may also be required as part of the recovery management phase, including the provision of long-term health monitoring, psychological support, building and environmental decontamination, re-establishing public confidence and the return to normality.

3.4 Mitigation/Lessons Learnt

This paragraph illustrates how important it is to arrange a debriefing for all responders. It may be useful to provide psychological counselling for responders and, if necessary and depending on the scenario, long term health monitoring.

This paragraph also describes when the Operating Guidelines will be updated and following which activities.

Section 4–Standardised CBRN Forms

Four CBRN Forms have been drafted, tested, fine-tuned and delivered in digital format. These are the following:

1. Factsheet Form;
2. Sampling Form;
3. Detection Form;
4. First Responders' Decontamination Form.

At the end of the project, by March 2025, these Forms will be available at the following link:

<https://app.prometheusproject.eu> .

The image below is the login page to access the Forms In Prometheus System.



Username

Password

☐ Ricordami

LOGIN

[Password dimenticata?](#)