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Training and educational material



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Executive Summary

The aim of the training and educational material presented in this deliverable report, **D6.6 Training Material**, is to facilitate the transfer of results of and knowledge gained during the course of the project to relevant target groups.

Dealing with cascading effects in crisis situations is a significant challenge to both emergency preparedness and response, as an escalating incident quickly can become extremely difficult for emergency services to handle. The aim of the CascEff project is to respond to this challenge by improving our understanding of cascading effects in crisis situations, resulting in enhanced analysis, preparations and response actions by first responders and other actors and disciplines involved in incident management. In this task, CascEff results are used to develop training material on a number of topics related to cascading effects and management of incidents with cascading effects.

Five separate but interlinked topics are covered by the training and educational material presented in this report:

- Cascading effects – what are they, and how can they be studied?
- Improved Incident Management – introducing a transdisciplinary approach to managing incidents with cascading effects
- The Incident Evolution Methodology – for modelling of cascading effect incidents
- Crisis Communication - News Media and Crisis Management, Guidelines for Effective Crisis Communication
- Exercise methodology – running exercises to raise awareness of cascading effects and/or to train the application of emergency plans taking into account cascading effects.

These topics reflect the CascEff project objectives: gaining a better understanding of cascading effects in crisis situations, the development of an Incident Evolution Methodology (IEM) and Tool (IET) for predicting past, present and future crisis evolution leading to cascading effects, the exploration of the impact of human activities in a crisis situation and the improvement of incident management for present and future threats. More specifically, the objectives in the creation of the training material were to optimize the level of impact and to facilitate the dissemination of project results to a wide range of recipients by providing recipients with a flexible, comprehensive and relevant material for teaching and self-studies.

In its' first chapter, this deliverable report introduces the training material, describes its usage and the reasoning behind its design and format. The main section of this report is dedicated to an overview of the topics covered in the CascEff training and educational material. The topic subjects are presented in order to provide the reader with an easily accessible synopsis of the content, followed by information on learning objectives, target group, format, expected study time and references to more detailed information provided by other project deliverables. This section of the report to a great extent corresponds to the presentation of and introduction to the training material on the CascEff website.

The material for the five presented training sessions is available for free usage on the CascEff project website, <http://www.casceff.eu>.



1 The training and educational material

1.1 Cascading effects

As systems, infrastructures and communities become more and more closely related and interdependent, cascading effects have emerged as an increasing societal risk. From the perspective of emergency response, the role of interdependencies between systems may not always immediately apparent. However, the potential interdependencies may result in a significantly higher impact of a relatively minor incident than was initially expected.

Cascading effects are described by Pescaroli and Alexander in the following manner¹: "Cascading effects are the dynamics present in disasters, in which the impact of a physical event or the development of an initial technological or human failure generates a sequence of events in human subsystems that result in physical, social or economic disruption."

In CascEff, the pedagogical definition of cascading effects has been stated as *"An incident can be said to feature cascading effects when a primary incident propagates resulting in overall consequences more severe than those of the primary incident"*.

An example of an incident involving cascading effects would be a power cut that affects telecommunications facilities, which in turn help to manage hydroelectric facilities or distribution centres remotely. Without these telecommunications facilities, efforts to restore power are hampered, which in turn prevents restoration of telecommunications, which consequently leads to difficulties in coordinating response. These higher degrees of interdependencies lead to an increasingly complex incident, implying that an initially small incident ultimately can have large and escalating consequences on life, property and the environment.

Complex systems which lack adequate response and recovery planning and capacity are particularly prone to experiencing cascading effects in dependent systems, both as a result of man-made threats as well as by natural hazards. Effects can impact both infrastructure and the general public, affect an extended geographical area and potentially extend across borders. In these instances, to prevent these escalating consequences, the incident management needs to be as efficient as possible and built on up to date information and a detailed understanding of the environment in which the incident is occurring.

1.2 CascEff – the project

Dealing with cascading effects in crisis situations is a significant challenge to both emergency preparedness and response, as an escalating incident quickly can become extremely difficult for emergency services to handle. The aim of the CascEff project is to respond to this challenge by improving our understanding of cascading effects in crisis situations, resulting in enhanced analysis, preparations and response actions by first responders and other actors and disciplines involved in incident management².

¹ Pescaroli, Gianluca and David Alexander, "A definition of cascading disasters and cascading effects: Going beyond the 'toppling dominoes' metaphor", Planet@Risk, Vol. 3, No. 1, 2015.

² CascEff deliverable 6.9 Project vision and approach, August 2016



In order to achieve this ambition, the research and development within the CascEff project was structured around four objectives:

1. **To gain a better understanding of cascading effect in crisis situations** by the identification of initiators, dependencies and key decision points in complex systems.
2. **To develop an Incident Evolution Methodology (IEM) and Tool (IET)** for predicting past, present and future crisis evolution leading to cascading effects. The knowledge of initiators, dependencies and key decision points provided input for the development of an IEM, and a corresponding web based IET that facilitates the use and implementation of the IEM.
3. **To explore the impact of human activities in a crisis situation.** CascEff studied the impact of human activities in a crisis, specifically in relation to incident response tactics and crisis communication.
4. **To improve incident management for present and future threats.** The aim of the IEM / IET is to support improved incident management by providing an open methodology for understanding and modelling cascading effects in an emerging incident. The tools provide guidance during planning as well as the response phase, and enhanced the decision-making process of first responders by providing guidance in:
 - identifying potential cascading effects;
 - identifying key decision points in which the cascade can be broken;
 - enabling prioritization of decisions and resources.

1.3 The training material

1.3.1 Course structure and design

The objective of the training material presented in this deliverable is to facilitate the transfer of knowledge gained within the CascEff project to the community of emergency managers and related disciplines. In this task, CascEff results are used to develop training material on a number of topics related to cascading effects and management of incidents with cascading effects. As a first step, project outputs were reviewed and evaluated from the perspective of their recipients.

This resulted in the identification of five separate but interlinked topics to be covered by the training material:

- Cascading effects – what are they, and how can they be studied?
- Improved Incident Management – introducing a transdisciplinary approach to managing incidents with cascading effects
- The Incident Evolution Methodology – for modelling of cascading effect incidents
- Crisis Communication - News Media and Crisis Management, Guidelines for Effective Crisis Communication
- Exercise methodology – running exercises to raise awareness of cascading effects and/or to train the application of emergency plans taking into account cascading effects.

Following this, the primary target group(s) for the various topics were elaborated, and the format of the training topics designed to reflect their content and the interests and expected



qualifications of the recipients. This has resulted in an intentional mix of formats, reflecting the different topics and their content.

In order to reinforce dissemination and impact of project results, much of the documentation library is aimed at instructors and teachers, providing them with material for teaching and discussion. However, all the material is also suitable for self-studies and accessible to all interested parties for free. In order to guarantee accessibility, the training and educational material is presented in a CascEff online library on the CascEff website³.

1.3.2 Format

For the majority of the presented topics, instructors and teachers within the field of crisis and emergency management are provided with knowledge documents and corresponding teaching material in the CascEff online library. As a rule, the material consists of an elaborated text document, instructing the reader on the specific topic chosen. This knowledge document is complemented by a descriptive power point presentation, facilitating the design of lessons and courses as well as the transfer of knowledge to target groups. To facilitate this, the subchapters are designed to match the headings of the presentation slides.

In this manner, the CascEff library makes it possible for parties to incorporate the information and material into their educational programs. The instructor can choose to use only one or several topics or even sections of the topic, and in that manner adapt the material to the teaching situation at hand. This flexibility creates an opportunity for instructors to engage staff, trainees/students or their own publics, thus extending the range of potential learners that could benefit from these lessons. The visual teaching aids (i.e. the power point presentations) can be used both as formal teaching material, but also for a quick overview and summary of the topic. For one of the most central themes; learnings on improved incident management; a visual power point presentation and recorded voice over has been prepared in order to facilitate maximum dissemination of the topic.

Naturally, this material is also available and suitable for self-study.

1.3.3 Target group

Some of the training topics are likely to be of a more general interest for interested citizens, researchers and students of any discipline, e.g. the training material on cascading effects and communication issues. Other topics, such as the material covering exercise methodology, are designed with a more specific primary target group in mind, in this case individuals or groups who are responsible for exercises within an organization (such as lectures at universities or other institutes of higher learning, professional trainers and researchers). On the whole, recipients with a background in or with a good understanding of risk management, emergency response planning and preparation, will find the training material beneficial and instructive. In the following chapters, the training material topics will be described in greater detail, including their intended target group and suggested level of preexistent knowledge.

³ <http://casceff.eu/>



1.3.4 How to use the material

The training and educational material consists of separate, but interconnected topics or themes, that can be studied or taught individually or as course. Our suggestion is for the reader to start by getting an overview of the topic by first studying the topic on “Cascading effects”. The following two topics build on this introduction by presenting effects on and recommendations for improved incident management, and the application of the Incident Evolution Methodology in order to facilitate consistent risk management of complex systems.

The next topic, providing guidelines on effective crisis communication, as well as the final topic on the design of an exercise methodology for studying incidents with cascading effects are to a greater extent stand-alone topics.

For self-studies, our suggestion is to focus on the knowledge documents, using the presentational material as support and summary. For teaching or informative purposes, the material can be adapted to the level of experience of the recipients and their focus of interest. To facilitate this, subchapters are designed to match the headings of the presentation slides.

When using the material as instructive or informative material, at all times refer to the CascEff project as source and use the CascEff logo.



2 Cascading effects – what are they and how do they affect society?

2.1.1 The lesson

The first lesson focuses on explaining what cascading effects are, how previous events involving cascading effects can be studied, and what the consequences of cascading effect can be. This is important as a basis for better understanding of the nature, processes and patterns of cascading effects and how to respond to these events.

2.1.2 What topics will be covered?

The lesson will cover the following topics:

- What are cascading effects?
- How can previous events involving cascading effects be studied?
- Which past events involving cascading events can be interesting to learn from?
- What can we learn about cascading effects from past events?

2.1.3 Learning objectives

This lesson summarises findings drawn from analyses of past events involving cascading effects and the intended learning outcomes (ILOs) are:

- to increase understanding of cascading effects;
- to give an overview of how past events involving cascading effects can be studied;
- to increase understanding about what can be learned about past events involving cascading effects, and specifically, how cascading effects can affect society.

2.1.4 Who does this lesson target?

This lesson is useful for anyone who wants to know more about cascading effects, for example how they can be defined and conceptually illustrated, and how they affect society. Moreover, the lesson is useful to persons who wants to gain insights into how cascading effects from past events can be studied. For those who are particularly interested in this aspect, readers are given references to more detailed descriptions of cascading effects can be systematically studied. The lesson is a useful introduction to the topic to practitioners as well as researchers, and requires no specific background knowledge of the topic. The slides can be used by university teachers or trainers in courses directed towards practitioners, such as emergency services or infrastructure operators.

2.1.5 About the lesson

The lesson is composed by descriptive slides (ppt file) and a supporting text document. The sub-chapter numbers used in the text file are the same as used in the slides. The text includes Discussion points that can be used as a basis for reflection and/or group discussion. Estimated study time amounts to 1 hour for the text, excluding activities. These are estimated to require an additional hour.

The lesson has been developed by Dr Alexander Cedergren and Dr Jonas Johansson, Lund University, Sweden. They are developed based on results from work package 2, tasks 2.1-2.3, which can be used for readers who are interested in further details about the topic.



3 Transdisciplinarity for improved incident management

3.1.1 The lesson

This training material summarizes the lessons learnt from the CascEff project on how to improve current incident management practices. The lesson recommends to take the current multidisciplinary practices for emergency planning and incident response to a higher level - that of transdisciplinarity – and explains why and how transdisciplinarity can improve incident management.

Transdisciplinarity, as an approach to incident management, to better address current incident management practices and challenges in case of large scale events, involving possible or real cascading effects can be based on a more systems thinking and transdisciplinary approach.

A transdisciplinary approach to incident management looks at all relevant aspects of the event from a holistic perspective while considering all systems involved: originating as well as impacted. This adds a cognitive and operational level to current multidisciplinary practices of incident management by taking into account links between the relevant processes (institutional, risk management: prevention, preparedness, response, recovery). Furthermore, this approach also takes into consideration synergies between the different actors involved in terms of responsibilities, means and available information.

A systems thinking-based transdisciplinary approach provides more insight in all relevant aspects of incident management with cascading effects and allows for an improved, more sound and efficient incident management.

The CascEff Incident Evolution Methodology and Tool are examples of a transdisciplinary methodology and instrument, providing a substantial contribution to the improvement of current incident management practices.

3.1.2 What topics will be covered?

In this lesson, the added value of a transdisciplinary approach is explained, based on:

- an explanation of the main characteristics of incidents and the corresponding challenges of incident management;
- a discussion of the need to restore the links between different systems and their actors due to the current fragmentation of information, means and responsibilities: (exchange of information, collaboration, etc.)
- a demonstration of the added value of a transdisciplinary approach and introduction to the CascEff Incident Evolution Methodology and Tool (IEM/IET) as an example of a transdisciplinary methodology and instrument.



3.1.3 Learning objectives

The overall objective of the lesson is to create awareness of opportunities for current incident management practices, especially for incidents with cascading effects.

Specific subobjectives of this lesson include:

- insight in characteristics of incidents as well as the typology of incidents (routine operations, large scale, incidents with cascading effects);
- insight in links between processes that are often dealt with separately, such as institutional frameworks for public safety and security, the complete risk management process, links and interactions between subprocesses dealing with prevention, preparedness, response and recovery;
- areas for improvement from a transdisciplinary perspective, including synergies, links, centralisation of information for more insight and oversight;
- the role of a transdisciplinary methodology and tool such as the IET, in striving to improve the current multidisciplinary incident management practices.

3.1.4 Who does this lesson target?

The targeted audience for this lesson is all actors of first response and other disciplines involved in incident management.

The reference target group is the profile of the participants of the Campus Vesta Post Graduate Course on Disaster management: civil servants working for competent authorities, operational and management staff from fire fighting services, police, urgent medical care units, specialised corpses such as civil protection, defence, water management, hazmat experts, etc.

3.1.5 About the lesson

The lesson consists of a visual power point presentation and recorded voice over, explaining the visuals. The aim of this format is to achieve a wide impact due to its scope and accessibility. It is a stand alone training module, free to be used.

No specific preliminary qualifications are required for this lesson. However, basic knowledge of civil security, emergency planning and incident management is an advantage, and the CascEff training material topic 1 is a suitable introduction to the concept of cascading effects. The Incident Evolution Methodology is described in further detail in the following topic.

References are made to more background information on the CascEff project, the CascEff results: Incident Evolution Methodology and Tool and on the specific Deliverables related to the topics covered, such as CascEff D1.5: *Recommendations for improved incident management*.

Duration of the lesson is +/- 10 minutes.

The content for the training material was developed by dr. Kathleen Van Heuverswyn, research coordinator at Campus Vesta (BE). The PWP presentation was developed by Tom Bellens, PushtoTalk.



4 The Incident Evolution Methodology

4.1.1 The lesson

The training material for this topic explains the CascEff methodology for modelling of cascading effect incidents. The objective of this methodology is to define cascade order, time and space aspects of the propagation, as well as helping the user to identify key decision points where the cascade could be broken with a maximal impact.

The Incident Evolution Methodology (IEM) builds on training topic 1 (cascading effects) and provides the user with a systematic approach to model cascading effects between systems. Through the application of the methodology, a risk based approach for emergency response planning and preparation enables consistent risk management of complex systems. The model used allows the user to predict cascade orders based on system vulnerabilities and mitigation measures. The methodology also provides an objective approach towards identifying which points in the cascade should be considered in order to break the cascade with a maximal effect.

This training is of interest to emergency planners and incident commanders. Complimentary to existing incident management tools and models, the IEM provides you with a methodology specifically focused on predicting effects of an incident over time based on objective risk data. It enables the decision makers to identify the key decision points which have a maximum effect on reduction of impact of cascading effects both in the preparedness and response phases of emergency management. This leads to better and quantifiable decisions in risk management of complex systems.

4.1.2 What topics will be covered?

- Schematic presentation of cascading effects and its terminology.
- What are the 6 steps of the incident evolution methodology?
- How to apply the incident evolution methodology to a real-world case.

4.1.3 Learning objectives

Upon completion of this training the student will be able to define systems as well as system properties relevant to cascading effects, define dependencies between systems, cascade timelines, geographic reach and system impacts. The user will be able to provide decision makers with an objective suggestion on what are the best points to break the cascade and maximize impact reduction of an incident.

This requires that the data on systems and their vulnerabilities, protection measures and potential impacts are provided to the student. This data should be available in risk analysis studies and other risk modelling tools such as fire, flood and toxic release modelling.

4.1.4 Who does this lesson target?

This training is intended for emergency response planners and incident commanders with a good understanding of risk management, emergency response planning and preparation.

4.1.5 About the lesson

The estimated study time is 3 hours, including exercises. The training material focuses on a comprehensive power point-presentation presenting the incident evolution methodology, supported by quick reference cards for use during exercises and the application of the methodology in practice. The detailed instruction on the methodology is provided in the D4.2



report '*Methodology for creating a model of an incident with cascading effects for future threats*', also available in the training material documentation.

This training material is related to training lesson 1 on Cascading Effects. The methodology can be used in conjunction with training lesson 2 on improved incident management methodology. It was developed by Cornelia van Hunnik and Xavier Criel of Safety Centre Europe, Clement Judek and Abla-Mimi Edjossan-Sossou of Université de Lorraine.



5 Effective Crisis Communication

5.1.1 The lesson

The training material for this topic is organized in two lessons:

- Lesson 1: News Media and Crisis Management
- Lesson 2: Guidelines for Effective Crisis Communication.

The first lesson “News Media and Crisis Management” focuses on the role of the news media during crisis situations with cascading effects. Therefore, this lesson is useful because it provides information and support reflection about ways in which the news media specifically can be incorporated into successful strategies of disaster management.

The second lesson “Guidelines for Effective Crisis Communication” focuses on strategies for effective crisis communication. This lesson is relevant because it provides information and support reflection about comprehensive approaches to mediated communication for effective disaster management.

5.1.2 What topics will be covered?

The first Lesson develops around the following main topics:

- Traditional media in disasters
- Information Flows in Crises

For the first main topic, this lesson explores the role of traditional media in disasters in general, and its changes over time, and it links to issues of citizen engagement. For the second main topic, the lesson explores the role of traditional media during the different stages of a disaster, and within *the wider informative flows* that can shape communication at those times. Therefore, this part of the lesson also links to issues related to social media. A third section in this lesson, entitled “Examples and Contextualisation” focuses on case studies, to encourage the contextualisation of the knowledge about news media and information flows related to disasters.

The second lesson covers the following main topics:

- Elements of crisis management and strategy for communication
- Guidelines for managing communication related to crisis situations

For the first main topic, this lesson unpacks and examines the elements of strategies for communication related to disasters, in particular objects (what needs to be managed), subjects (with whom to manage, and what kind of media), functions, and stages of communication management (before, during, after a crisis), and factors affecting this communication, also proposing an insight into practices that brought those elements together in successful ways.

Through the second main topic, the second lesson brings together knowledge about successful communication management, to provide a set of guidelines for effective strategies of communication during disasters.

5.1.3 Learning objectives

The general aim of the first lesson is to help trainees to understand the roles and dynamics of mediated communication related to disasters, and to reflect on how institutions and



organisations can approach the news media for a successful management of crises. By the end of the course, trainees should be able to:

- 1) explain the role of news media in information flows that emerge during stages of cascading disasters, and in particular:
- 2) describe the positive and negative effects of news media coverage upon the behaviour of citizens and communities that are vulnerable to cascading disasters;
- 3) explain how social media can supplement pre-existing media strategies deployed during stages of disasters;
- 4) identify the information flows between key stakeholders (including professional journalists, emergency managers and members of the public), that can inform a collaborative model of decision-making in pre and post disaster stages, and help build situational awareness during crisis situations.

The general aim of the second lesson is to help learners consider and understand the variety of actors, roles and dynamics, intervening in shaping communication during disasters, and to develop successful strategies of communication management during crises. Specifically, this lesson provides a structured platform for developing knowledge towards a communication mix implementable at all stages of an incident. By the end of the course, trainees should be able to:

- 1) explain the role of both social and news media in information flows that emerge at different stages of cascading disasters;
- 2) explain how both social and traditional media can be deployed to influence the behaviour of citizens during each stage of a cascading disaster;
- 3) identify strategic approaches to mediated communication that include all key stakeholders, based on a collaborative model of decision-making and increased situational awareness;
- 4) assess the ethical implications of using information crowdsourced via social media during such incidents.

5.1.4 Who does this lesson target?

These lessons have been shaped in order to be adapted to different specific content and context of learning and teaching. Their style guarantees that no special qualifications are required to approach the lessons, and individuals with different expertise or qualifications can benefit from this material. Therefore, target learners are first of all interested citizens and trainees of any discipline non-expert of EM. The lessons can be equally useful to EM practitioners and governmental personnel that may want to approach them for self-study or for reflexive sessions about their work. These lessons can also be adapted by instructors, educators, and educational institutions that wish to provide an active learning session about the topics covered. Teachers of schools and universities, and trainers working in non-governmental institutions, may find these lessons, and their activities, particularly useful to quickly engage their staff, trainees, or their own publics, with the topics covered, thus extending the range of potential learners that could benefit from these lessons.

5.1.5 About the lesson

Each lesson is composed by a report (word file), and slides (ppt file). Each lesson also includes activities, to be used to strengthen the achievement of its learning objectives. These activities are explained in the report, and they have their corresponding slides. The main elements of



the lesson for learners are highlighted in the text of the report (bold). The corresponding slides are usually based on these highlighted elements, as well as and images from the CascEff reports D3.4 and D3.3, and they are filled with notes for instructors.

Estimated study time for each of the two Lessons is 10 hours as a minimum requirement for an individual approach to the report, excluding the activities and/or interactive sessions. Activities are expected to take an additional 15 hours for each lesson. The activities, however, can be adapted to match different availabilities.

These Lessons were developed by Dr Giuliana Tiripelli and Dr Paul Reilly at the University of Sheffield in 2017.

The lesson “News Media and Crisis Management” reorganises the content of the CascEff report D3.4. The lesson “: Guidelines for Effective Crisis Communication” reorganises the content of the CascEff report D3.3. In the lessons, this content has been adapted to suit a wider readership. In particular, the lessons include new data and additional explanatory parts, while they avoid more specific details of analysis and research, which can still be found in D3.3 and D3.4.



6 Exercise methodology

6.1.1 The lesson

The training material for this topic explains the preparation of a simulation or training exercise with the aim of raising awareness of cascading effects in the context of a crisis or an emergency situation. The objective of this methodology is to prepare, design and conduct the appropriate simulation regarding the expectations and objectives of the targeted organization.

The exercise methodology provides the potential trainer with key elements to help him/her develop the appropriate session regarding the concept of cascading effects. An important decision that the trainer needs to make is on the type of training objective, which can be either to train or to raise awareness. If a plan taking cascading effects into account already exists, the organizations aim might be to train its application, while, if such a plan does not exist, the organization would prefer raising awareness to a new phenomenon. Deciding upon the objective of the training is a crucial step since it will influence the whole preparation of the session, from the choice of the simulation type to the building of the scenario and the conduction of the session.

To support designing a session, the reader is provided with an insight on the preparation and the implementation process of the iCrisis™ simulation approach and may refer to it.

6.1.2 What topics will be covered?

- What is a crisis situation?
- What is the difference between an emergency situation and a crisis situation?
- How to prepare a simulation?
 - Set the objectives
 - Chose the adequate simulation type
 - Build the scenario
 - Design and conduct the simulation
- Presentation of iCrisis™ simulation approach set-up and conduction process

6.1.3 Learning objectives

This training material comprises three main learning objectives:

- Share the same definition of the main concepts

In this section, we focus on the need to share the same definitions for key concepts such as “cascading effects”; “crisis situation”; and “emergency situation”. The meaning of the words has a direct influence on the objectives for the training sessions, and therefore by extension on the type simulation to be chosen.

- Define the objectives of the session

The definition of the objectives is based on the expectations on the session. While dealing with the concept of cascading effects in a response phase, the trainer must identify whether there is a need for training and testing the application of a specific plan, or if there is a need to raise awareness as cascading effects are not fully taken into account in regular plans.

This training material focuses on the response phase which can be of two types:



- An already known situation, for which a specific plan has been prepared. This category of situations would be delineated as “**an emergency situation**” and is predicted to happen. In a training perspective, the trainees can be tested on their ability to apply a specific procedure.
 - A not yet known situation, for which no plan has been developed to cope with. This type of situation is called “**a crisis situation**”. During a crisis situation, responders must adapt themselves to cope with this unique and unexpected situation. In a training perspective, trainees can be sensitized to the fact that not every situation can be prepared, while there still is the need to cope with it. The training should thus be designed to raise awareness.
- Design and conduct a session that suits the objectives

The two first objectives of this session lead to the choice of the simulation type and its design through the scenario building. This session provides an overview of different simulation types and their added value regarding the defined objectives.

6.1.4 Who does this lesson target?

This lesson targets anyone who prepares training sessions, primarily for organizations. The organizer can either work for public organizations, private companies or universities. The lesson will train the organizer of a simulation to adapt the directive and design of the training session to the level of skills of the trainees and the organizational objective.

6.1.5 About the lesson

The lesson is composed by a text document that explains the lesson in details, and accompanying supporting slides for an oral presentation. An oral presentation would not be possible without previous knowledge of the lesson provided by the text document. For easy reference, the structure of the slide document is based on the text document.

In the text document for the training material, a number of scenarios selected within the CascEff project framework are suggested for use in exercises focusing on cascading effects. This reference library of scenarios is presented in detail in D5.1 ‘*Description of selected scenarios*’, which is also available in the training material documentation.

The text document also presents an example of the application of the methodology to the iCrisisTM simulation approach. This section’s purpose is to provide the reader with an example of an adaptation of the methodology in order to help him/her adapting to the chosen simulation approach.

The lesson can be given in 1 or 2 hours (depending on the audience and the level of detail). Extra practical activities can include for example «designing a simulation regarding a given objective». The time needed for these extra activities should be determined by the trainer.

The lesson has been developed by Clément Judek and Dr Abba Mimi Edjossan Sossou, University of Lorraine, France. They are mainly developed based on results from work package 1, work package 2 and work package 5.

