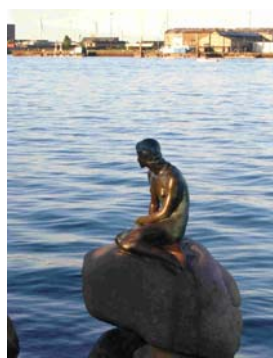


Workshop 1 : Prevention Naestved (Denmark) 26th-27th May 2005



The first SETRIC workshop was held on the 26th-27th May 2005 in Naestved, Denmark. The topic of this workshop was **prevention**. In this issue, you will find a summary of each presentation. More details appear on the website <http://www.setric.org>.

Background and theoretical approach

Emerging risks in the 21st Century

Jacob Madsen, City of Naestved
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As an introduction to this first workshop on prevention, Jacob Madsen presented the conclusions of the OECD report "Emerging risks in the 21st Century".

"Large-scale disasters of the past few years – such as the terrorist attack of September 11th, 2001, the appearance of previously unknown infectious diseases, unusually extensive floodings in large parts of Europe, devastating bushfires in Australia and violent ice storms in Canada – have brought home to OECD governments the realisation that something new is happening."

The report points out that *"Preparing to deal effectively with the hugely complex threats of the 21st century is a major challenge for decision makers in government and the private*

sector alike, and one that needs to be addressed as a matter of urgency".

The main OECD conclusions and recommendations are :

- To adopt a new policy approach to risk management,
- To develop synergies between the public and private sectors,
- To inform and involve stakeholders and the general public,
- To strengthen international co-operation,
- To make better use of technological potential and enhance research efforts.

The report gives some definitions of assessment, prevention and mitigation.

*"Risk **assessment** consists in identifying and evaluating each step of a trajectory – from the origins of a hazard to its final consequences for a given system. It is an essential element for deciding whether and how risk needs to be avoided, reduced or accepted. Both as a scientific process and as input for decision making, assessment of merging systemic risks faces a number of challenges"*.

*"Risk **prevention** and **mitigation** aim at preventing accidents and disasters, or at reducing their consequences before they occur. This can be achieved by :*

- *protecting systems and reducing their vulnerability to specific hazards on the one hand, and*
- *by improving the way society handles risk through an enhancement of its safety culture on the other"*.

The report stresses how important it is to learn from disasters : *"In the aftermath of a disaster, the attention of the public and the media are at their highest point. A unique window of opportunity then opens for improving the knowledge of new risks, for overcoming inertia and resistance in order to improve the assessment and management of risk, and for avoiding the recurrence of similar disasters"*.

(source : report from OECD, 2003)



Crisis preparedness in cities : from perception to prevention

Finn Frandsen and Winni Johansen
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A survey was carried out in Denmark in 2003 in order to investigate the crisis-preparedness of private companies and public authorities. The survey dealt with :

- Crisis perception and experience (beliefs, types, definitions, organizational culture),
- Crisis management (management activities before, during, and after a crisis),
- Crisis communication (types of both internal and external crisis communication, communication channels, message types, media management).

456 companies were contacted, with a response rate of 35 percent. 295 public authorities were contacted, with a response rate of 46 percent.

Findings

There is no significant variation in the way that municipalities and private companies **perceive crisis** : both think that crises cause damage to stakeholders, threaten the very existence of the organization, and are handled improperly by the management. There is a significant difference of opinion as to whether crises lead to negative media coverage: 14% of municipalities believe so, as opposed to 45% of companies.

Concerning the **perceived consequences of crises**, the results show that the public authorities are less interested in media and stakeholder analyses – which might reflect a lack of interest in more detailed knowledge about the people the authorities will communicate with. Prevention strategies could be an integrated part of City branding.

Crisis preparedness is more formalized in municipalities than in companies : most municipalities have a crisis plan (93.4% versus 66.9% for companies), a formally nominated crisis manager (74.6% versus 59%) and a permanent crisis team (55.7% versus 38%).

Challenges

Crisis are "multiple realities" : they can be defined and typologized in many ways (in terms of the nature and intensity of the crisis for

example), they are often very complex and dynamic, and they often give rise to multiple, if not divergent perceptions of the situation. Crises are culturally and politically defined events and processes : they arouse strong emotional responses.

Crisis management is complex and dynamic. It requires strategic planning (prescriptive approach), but also diagnosis and improvisation (it is necessary to adapt the crisis plan during the crisis).

Crisis communication, too, is complex and dynamic : what to say, when and how? It needs to be instructed, adjusted (psychological crisis help) and internalized (image and reputation).

Before the crisis	1) Signal detection 2) Crisis prevention 3) Crisis preparation
During the crisis	1) Crisis framing 2) Crisis containment 3) Crisis recovery
After the crisis	1) Evaluation 2) Organizational learning 3) Post-crisis actions

*Prevention strategies : a three-staged model
(source: Coombs, 1999)*

How do the public understand, respond to and react towards communication given by the authorities during crisis

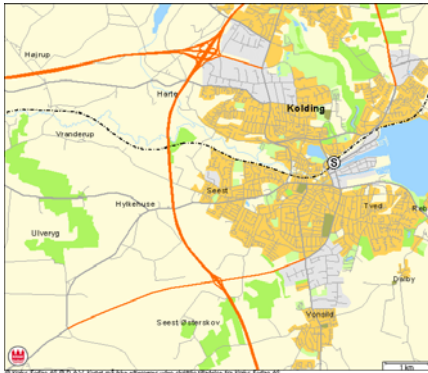
Nina Blom Andersen
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The topic of the presentation is a preliminary and demarcated analysis from a current research project with the working title "*Emergency management during major accidents and serious events. Construction of meaning in the communication between authorities, the public and the press*". This is a research project that was commissioned and also funded by the Danish Emergency Management Agency (DEMA).



The presentation concerns the accident in Kolding on the 3rd of November 2004, where a warehouse containing almost 300 tons of net explosive material / 1200 tons of fireworks was set on fire when a box of fireworks was accidentally dropped. In this particular case, communication between the authorities, the press and the public was essential in order to prevent people from being hurt.

The fire escalated from 2.02 pm till 5.45 pm. During this period, the crisis became more and more severe. The authorities faced the task of evacuating 2000 people in a radius of 1 kilometre from the warehouse.



How did the residents in the area experience the afternoon?

During a crisis, peoples' understanding of danger and their reaction to it can vary greatly. In the case of Kolding, it seems that people reacted in relation to their own previous understandings of the risk of living close to the warehouse and not in relation to the warnings and messages given by the authorities. Furthermore, it seems that peoples' previous understandings related to the authorities' risk assessment. One way or the other, people either agreed or disagreed with the assurances given by the authorities.

At this point in the research project, it seems that, when facing a crisis where a large number of people have to be warned about a danger, the authorities have to be aware that people react on previous understandings and not just on the warnings given in the current situation. This complicates the authorities' task, but is an essential aspect to take into consideration when preventing a huge number of people from a certain danger.

The research project is a three-year study and will finish in the fall of 2007.

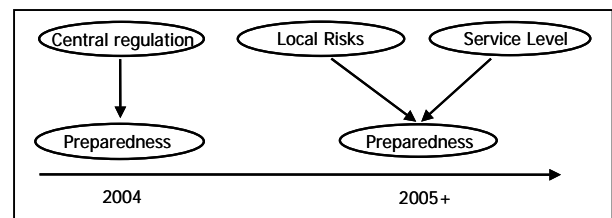
Best Practices from Cities

Risk management within municipal fire and rescue services

Martin Reland, Danish Emergency Management Agency (DEMA)

Rescue preparedness implies preventing, reducing and remedying any damage inflicted on people, property and the environment by accidents and disasters.

Until now, local preparedness was controlled at a national level. But recently, a political decision stated that local authorities should have a greater say in the organization/dimensioning of local risk management actions on the basis of local risk assessment rather than on detailed regulations imposed by central government. Following this decision, risk management organization fell under local regulations as opposed to central government regulations.



Using risk assessment is not something completely new but in the future, local risk assessment will be a systematic bottom-up process using common terminologies and tools and the management of risks will include preventive and operational measures.

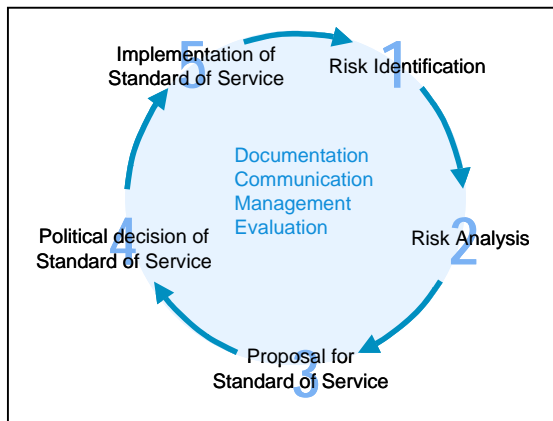
A Local authority has to identify and analyse local risks, in order to determine the service level of the municipal fire and rescue service (organization, activity, dimensioning and equipment). The dimensioning plan is elaborated at a local level, and is submitted to DEMA.

Within this process, local authorities have the overall responsibility of ensuring and verifying the rescue preparedness of the municipality.



This new organisation allows a flexible dimensioning (of crew and equipment), and a flexible use of rescue preparedness in other municipal tasks and activities. Furthermore, there is a better dialogue and co-operation between rescue services and business, residential areas and municipal institutions. The prioritising of prevention efforts has been strengthened, such as a think tank for defining preventive actions and operations.

Within this organization, the role of DEMA focuses on risk management within municipal fire and rescue services, experience and knowledge gathering, communication (handbook and guides, recording of events), supervision and counselling.



A pilot project at a local level in Vejle

Ole Borch, City of Vejle (DK)

As indicated above, since a political decision in 2002, local preparedness has been determined by local regulations rather than by central government. It is based on local risk assessment, approved by the local government and screened by the central authorities.

The first phase of local risk assessment is **risk identification**. Information is collected in coordination with relevant partners.

The main sources of information are local statistics and reports, emergency and environmental plans, information on traffic, electricity, water, gas and sewage systems, etc.

Relevant partners are transport and environmental authorities, local technical authorities, electricity, gas and water suppliers, etc.



Mobile Communication Unit from DEMA

The second phase, **risk analysis**, consists of :

- Analysis of scenarios : activities with fire or environmental hazards, infrastructure, residential and rural areas, public buildings, etc.
- Analysis of capacity : scenario and situation on the arrival of the fire brigade, required tasks to be performed, sequence of events, prevention initiatives, matrix of frequencies and consequences.
- Analysis of prevention capacity : required tactics for incident relief, required human and physical resources to comply with required tactics, ability to maintain tactical capability with simultaneous incidents, support and back-up.

In conclusion, moving responsibility from a central to a local level presents several advantages : local information and motivation will be increased, the whole process contributes to an in-depth local knowledge of a much higher level, and the link between the services performed and the allocated funds will be more visible.



Forest Fire Prevention Activities

Elio Michelini, Nicoletta Ratini
City of Bologna (I)

In the summer and during dry seasons, the risk of fires represents a severe threat for woods and forests. During the higher risk period, the Municipality, in agreement with the Province of Bologna, the Emilia-Romagna Region and a volunteer group, organises monitoring, fire alarm and intervention services. Throughout the year, information initiatives on forest fire prevention, addressed particularly to schools, are organized.



Therefore Civil Protection intervention becomes really effective when it is the result of the co-operation between citizens and Institutional Bodies, as well as when it can rely on a sizeable number of appropriately trained and well - equipped organized volunteers.

In 1999 the Municipality of Bologna, the Province and the Emilia-Romagna Region put into action the first forest fire prevention master plan.

Observation points were defined. Based on the Emergency Plan of the Bologna Province, 18 observation points were established, 7 of which are in the city of Bologna.

Training standards for volunteers were defined.

Operational radio points were increased. Presently, we have 4 radio points all connected. The radio points are guarded 24 hours a day by volunteers and civil protection attendants. The volunteers' radio point is equipped with radios which operate on all frequencies used during emergencies, as well as on the typical Civil Protection frequencies.

Volunteers have been equipped with: computers with cartographic programs amongst other items, binoculars with a compass, GPS (Global Positioning System) and, most importantly, fire equipment.



Volunteers' education and training

The main goal of education is to improve the organization and the efficiency of the volunteers.

Regional Civil Protection prearranged a specific educational programme, with courses for reconnaissance, overseeing, sighting, advanced courses for foremen, technical operative training, and periodical refresher courses.

Volunteers can access the OBLIGATORY educational courses if they are members of Volunteer Associations, and if they are found fit at a specific health examination.

After attending the courses, and following an exam with one part on theory and two parts on practical aspects, they obtain a certificate of technical fitness and an identification and qualification card.



Taking into account the flooding risk of buildings

Véronique Le Gall, City of Paris (F)
Veronique.legall@paris.fr

The Department of Heritage and Architecture of the City of Paris currently maintains the municipal public buildings: schools, crèches, sport centres, museums, accounting altogether for about 1,700 buildings.



A project has been initiated in order to assess the impact of a major rise in the water level of the river Seine on municipal equipment. The biggest flood so far recorded in Paris happened in 1910. In the event of a flood of the size of that of 1910, 300 buildings would be affected at ground or underground levels and 368 others would suffer a power supply failure.

Indeed the City of Paris has taken preventive measures which intend to limit the overflowing of the river Seine in the event of a rise in the water level. However it is necessary to make preparations for a possible flood of the buildings and take appropriate measures, so that they can be re-opened as soon as possible after the crisis.

The first aim is to limit the damage caused by a flood (by moving archives or works of art out of floodable premises) and to close the building in the best possible conditions.

Therefore a procedure referred to as "building shutdown" has been elaborated (a building is shutdown as soon as the power supply is cut off). This procedure describes actions to be taken when closing the buildings. For example, it lists instructions for emptying the cellars, draining the water pipes, and removing

sensitive equipment located at the underground level of the building (burners of boiler rooms, power distribution equipment).

This procedure was thoroughly tested during the summer of 2003 in a small school. The results of this trial have enabled us to better adjust equipment and human resource needs.

The Paris weak signals and early warning system

Didier Dely, City of Paris (F)
Didier.dely@paris.fr

The analysis of problems encountered during past crises in Paris has led the City of Paris crisis management team to set up a double system to detect weak signals and collect early warning information :

- The Paris Crises indicators observatory (OIC : Observatoire des Indicateurs de Crise)
- The weak signals detection network (REDESIP : Réseau de détection des signaux précoces)

The goal of the OIC is to gather technical data from all the City of Paris departments, to cross-match and analyse them in order to forecast abnormal situations.

The REDESIP is a network of municipal experts able to receive weak signal notifications directly from on-line city staff in local sites (schools, kindergartens, sports halls...), to analyse their relevance and to decide whether or not to warn the Mayor of a potential crisis.

These systems are currently being tested.



Example of a ground collapse in a school in Paris, where weak signals have been ignored



Violent weather : forecasting and informing

Søren Brodersen, Danish Meteorological Institute, sb@dmi.dk

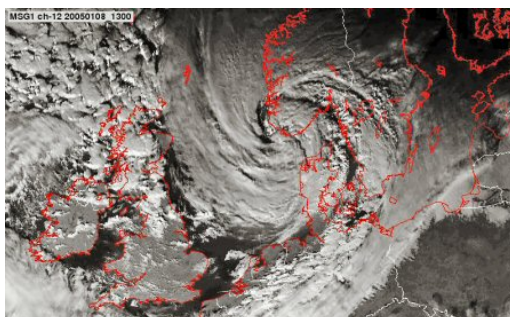
The Danish Meteorological Institute (DMI) provides warnings regarding violent weather, snow, heavy rain, storm surges, road weather conditions and other important weather related topics.



Greenhouse effects or not, the weather is more wet and windy than it was 30 years ago. The infrastructure is more vulnerable and the general population as well.

Early knowledge of weather situations is vital for emergency deployment, allocation and resource management. Forecasting is one aspect, the form and structure of information is another. What is violent weather? Who should be warned – and how? How should the information be given to the public?

Knowledge of road weather conditions is a major priority in Denmark. Supervision, prevention and proper deployment are key words and the web-based system “VejVejr” is the basic tool.



Scenario Game

Jeannette Viale, City of Naestved (Dk)

During the Naestved Workshop, in addition to the presentations, a best practice game was proposed, based on a scenario from Cologne. The scenario was based on a real accident with a train transporting dangerous goods.



We split up into 3 working groups to discuss what is or what should be the best practice in our city or country. The results from each working group were presented in a plenum at the end of the day.

The working groups were asked the following question: which issues do YOU think are the most important for the prevention of accidents with trains transporting dangerous goods”?

The 5 priorities of Working Group 1 were :

1. Introducing or fabricating risk maps for railways with dangerous trains
2. Ensuring collaboration between the relevant bodies for danger prevention at all levels
3. Identifying needs in terms of competence and efficient skills training
4. Ensuring means of evacuating the endangered zone
5. Establishing means of warning schools, Kindergartens etc.

The 5 priorities of Working Group 2 were :

1. Establishing a common understanding at all levels: what is risk and what is safety? What could happen?
2. Ensuring security zones between transport routes of dangerous goods and residential zones through urban regulations
3. Identifying types and means of communication with and to the citizens

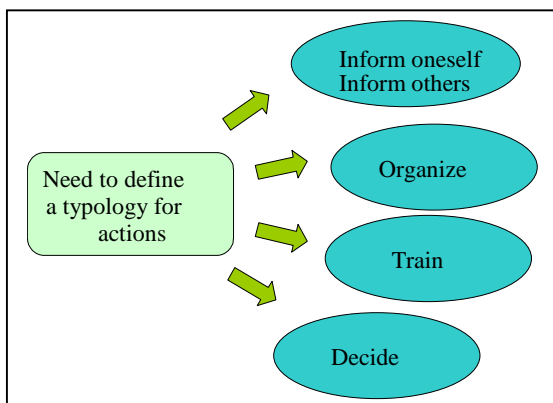
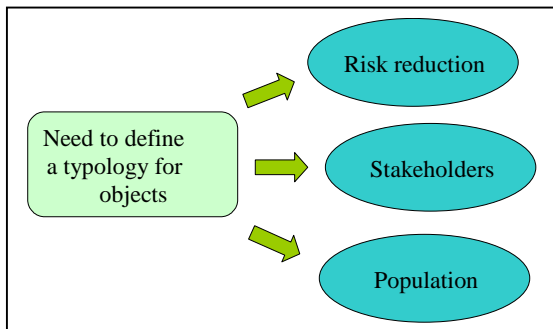


4. Ensuring contact with and information by the railway/train company
5. Influencing the technical safety aspects of dangerous transport

The 5 priorities of Working Group 3 were :

1. Influencing the amount of dangerous goods to be transported
2. Ensuring security zones between transport routes of dangerous goods and residential zones by urban regulations
3. Influencing the navigation of dangerous trains by ensuring security zones between transport routes of dangerous goods and residential zones by urban regulations
4. Ensuring collaboration between the relevant bodies for danger prevention at all levels
5. Identifying how to create the basic initiatives to promote a prevention culture in schools, institutions etc.

Analysis and conclusions



SETRIC Agenda

Kick-Off Conference

Saint-Augustin (DE), 24th-25th February 2005
thomas.rose@fit.fraunhofer.de

Workshop 1 : prevention

Naestved (DK), 26th-27th May 2005
viale@naeskom.dk

Workshop 2 : mitigation

Lyon (FR), 30th June – 1st July 2005
bernard.guezo@equipement.gouv.fr

Workshop 3 : response

Siena (IT), 6th – 7th October 2005
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<http://www.setric.org>

