

MASS EVACUATION

Report on the exchange of European Experts from 25 to 28 October in The Hague (The Netherlands)

By Eric Peuch

Fire and Rescue Head Officer in Charente-Maritime (France)

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The Dutch session on the issue of coastal flooding was the second event of the exchange of experts initiated by Great Britain in 2011. The Dutch Department of Public Safety and Justice organized a meeting from October 22 to 26 with the participation of several representatives from the four member countries of the Program (GB, Netherlands, Iceland, France) and the two observer countries (Germany, Poland). The British delegation consisted of four people representing the Prime Minister's Cabinet Office and the counties of Lincolnshire and Kent, the German delegation was composed of two officers of the Fire and Rescue Department of Hamburg, a representative of the THW and a Federal agent. Iceland and Poland were both represented by Police Officers. The Permanent Delegate of the United States to the European Commission for Civil Protection was invited to join the meeting, as was a guest from Australia's Victoria State Emergency Services. The Netherlands were the organizers and assured all the presentations were high-level and of a strategic interest.

The program:

It was varied and comprehensive, it included:

- Informative Presentations
- Workshops Groups
- Field Visits

Content:

Despite the session being based on mass evacuations, much was devoted to the organization of planning and crisis management in the Netherlands.

The organization:

Accommodation and logistics were perfect and allowed continuous and undisturbed work sessions.

The objectives:

The first purpose was to present the organization, the methods and the means of the Netherlands used for disaster management, but the organizers had been looking forward an exchange of good practices being undertaken throughout the seminar. Thus the strengths and weaknesses of the Dutch system were regularly identified, as did the best practices from the invited countries.

The visits:

The first visit was devoted to the crisis management center, particularly modern, well equipped in communication and multimedia. One floor of the Department allows handling a crisis in the long run. There is a decision making room which will accommodate a dozen people, a control room with operators facing a wall of images and located on semicircular platforms, meeting rooms and rest rooms. The anti-terrorism room is a radio wave-proof room designed on the basis of the 'Faraday Cage'.

The second visit took place near Rotterdam in the spectacular storm surge barrier at Maeslant. This monumental installation, with a greater weight than the Eiffel Tower, can mechanically block the entry of the major commercial port in Holland and is able to "break" a tidal wave, or to contain a

sudden rise in the sea level up to 5 meters. For the first time in its history, on November 9, 2007, its doors were closed while facing violent sea storm.

Basic elements for the defense of the country

Two-thirds of the Netherlands can be flooded either by overflowing rivers (Rhine, Meuse), or by a sea surge following dam breaks, or by both, including rainfalls. These areas of polders are located between -2 and - 7 meters below the sea level where urbanization is very high, especially in the middle part of the coast. The inhabitants have been kept protected from the sea and rivers by dikes since the middle Ages but the defense framework is improving following each flood.

Life below sea level:

Although a general breakdown of dams throughout the country is unlikely, worst-case scenario including the combination of one or more breaches of the same area plus an important contribution from river flooding threatens more than 4 million people simultaneously and cannot be excluded. A flood disaster in 1953 happened when a storm followed by a marine flooding caused 1835 fatalities and submerged 150 000 ha. Victims were also recorded in England (especially in Lincolnshire and Essex) and Belgium. The disaster gave rise to the launch of the plan "Delta", a vast improvement program including long-term protection of the country against flooding. Also a great national project is to expand the Meuse and the Rhine beds. Global warming and the loss of level of some polders by subsidence of peat lands (½ cm / year) significantly increase the threat.

A variety of flooding scenarios:

There are a variety of scenarios that range from the most likely (a breach in a dike protecting a remote village), to the more unlikely, but conceivable, such as the flooding of an entire region as a result of a series of breaches. More recently the Netherlands had to deal with significant internal flooding but not of a catastrophic nature. So no mass evacuation plan was ever put into action. The lack of reference also poses operational problems for national who cannot count on any local feedback to assess the plans.

Is evacuation the only operational response?

Evacuation has been recently designated by the Dutch Parliament as a priority in terms of research and development. Several departments are working on the precautionary evacuation of people, and first of all the Ministry of Security and Justice. Holland is known abroad to favor this type of action for the protection of its populations. The French participant pointed out that during the storm "Xynthia" in Vendee and Charente-Maritime (France), the recurring question of journalists to the authorities in charge of the crisis was "why did not you evacuate? Understand: "...as the Netherlands would have done? ".

A broader concept:

Evacuation should not be considered as the miracle solution. The exchange of experts confirmed that mass evacuation cannot be the only alternative because it is difficult to implement. Evacuation does not automatically mean a long distance displacement of population. Thus, the word "Evacuation" does not necessarily include a large mass displacement. It seems much more relevant to consider

evacuation to reduce the vulnerability of people to any type of displacement. Following are several definitions of the evacuation. They are all taken into account by the Dutch Authorities:

1. Preventive large-scale displacement organized from west to east;
2. The use of refuge areas located above the likely level of flooding;
3. securing people in high rise buildings designed or not designed for that purpose;
4. preventive safety setting in one's own premises or work life.

The use of one or other solutions lies in the connection between the anticipation of the event (alert) and the number of people to evacuate. It is obvious that the higher the population at risk is important, in number and quality, earlier must be the warning.

Heavy and detrimental road traffic:

Traffic conditions are usually very difficult during peak hours in the major industrial and commercial metropolis (Rotterdam), business centers (The Hague) or near the capital city (Amsterdam) making solution n°1 very difficult to be implemented. Despite difficulty, extensive studies have been launched in Holland through a legal framework of contingency planning involving multiple services or administrations. Requisitioning the highways, traffic management of vehicular movement from West to East is subject to specific planning. It is based on the centralized management of highways from a command post via:

- Specific lighted signs;
- neutralization of exits;
- pre-defined routes.

However, many parameters are likely to disturb or even block the implementation of the plan:

- mechanical failures,
- failures of gasoline refueling stations,
- number of police officers available,
- militaries or auxiliaries to be mobilized,
- will of users to turn back as soon as possible;
- uncontrolled spontaneous self-evacuations;
- supply and care of the "refugees of the road"

Heterogeneous populations:

The situation is clear: mass evacuation is highly difficult to implement. In the case of a real emergency, it is likely to be limited to certain sectors. It will be doubled by preventive local rescuing and by vertical evacuation. Threatened populations must be identified and clearly localized. Choices will certainly be made, particularly with respect to populations at risk. The support to the vulnerable

people is often necessary, but the emergency services cannot disperse. The role of local level (municipalities) in this issue seems very important although few data elements have been given on the prioritization of emergency during the session. The research launched by British coastal counties and municipalities are significant, as are the Local Communities Safety Plans in France. The ability of a part of the population to ensure its own protection is particularly positive but must be managed, particularly through specific actions to be launched for the education of the public.

The emergency evacuation: a challenge for the emergency services:

We defined as an emergency evacuation, the relocation and the support of able bodied people surrounded by water with no specific means of survival. This issue received little detailed attention during the meeting. However, knowing that the vertical escape to safety should temporarily shelter thousands of people in urban flooded areas, the question of the involvement of emergency services to evacuate office tower or overcrowded housing deserves to be asked. The organization and capabilities of emergency services has not been addressed during the conference but it is a challenge for the rescue services that will surely carry out selective evacuation. This aspect was highlighted by German colleagues who also drew attention to the dangers of the flow of evacuees blocking the incoming reinforcements. UK colleagues raised a significant concern about the apparent lack of public health planning for a "no evacuation" strategy where the population may be left in hazardous flood environments for some days. However, the dispatching of foreign rescuers by international bi-lateral agreement or by the MIC, has been treated through a specific communication.

The individual care: a societal issue:

Public education and development of its ability can be handled individually, by families or neighborhoods. It is fundamental to the fulfillment of an evacuation and been a concern in municipal and regional level. Participants from Great Britain have largely contributed to the discussion as far this objective has been clearly identified as a priority in Lincolnshire. Also people's confidence in the authorities providing advice or guidance encourages rapid evacuations. French colleague pointed out the necessary involvement of the Police and Rescue services as soon as the first measures have been taken, for the population to trust in them. German colleagues emphasized the need to give clear instructions to the emergency services and noted that the foreign reinforcements might encounter difficulties in communication. Icelandic participants expressed the effectiveness of the close relations maintained by the local police with the inhabitants of volcanic areas and / or earthquake; it has been already experienced several times at the time of real volcanic eruptions.

The three decision-making levels:

Emphasis was placed by the organizers of the symposium on the continuing commitment of the national level in emergency planning and in its search for best practices. Dutch researchers and experts have led the conference by presenting their work. The spectrum goes far beyond the issues of evacuation. Multidisciplinary and exchange of information between Dutch officials was seen by participants as exemplary. In addition, during the debriefing session, all participants stressed the need for representation of the local and regional level in the process of crisis management. They are in their opinion the major elements for the response as and operational or provisional point of view. There are several Holland "defense areas" whose number will soon be reduced to six for the sake of consistency. These areas have the power to organize the response to a disaster, but their role has been addressed primarily in their function to inform the central level. Participants pointed out the

danger to organize all decision-making at national level. The French administrative organization has been quoted as a reliable alternative, leaving the initiative to the mayors and to the préfets with the support of the National Defense Directorate. However, the small geographical size of the Netherlands - when compared to Germany or France, the huge challenge posed by marine flooding in this country settled below the sea level, will take a crisis much more quickly to a national dimension.

Taking “details” into account:

A discussion was launched on the necessity of national exercises, concluding a national exercise is useful only if intermediate exercises had been held before and if the weaknesses had been identified and considered. German and French officials reiterated that the feedback field was particularly important to improve the schedule of pacification. The example of the British national exercise "Watermark 2011", which tested the national coordination and the operational capacity of over 200 local places in the country, are significant to the consideration of all levels.

As such, the next two sessions to be held in Iceland and France will focus on the real events of 2010: the eruption of Eyjafjöll and the tidal surge in Charente-Maritime and Vendée during the storm Xynthia.

Conclusion:

This second session for the exchange of expert has been rich for several reasons:

- Feedback of experience within a common operational framework;
- cultural differences were real assets through many additional comments;
- fraternal and unambiguous human exchanges.

The rigor and the efficiency of the Dutch organization have to be highlighted. The exchange will obviously become richer and richer from one session to another. The points that were not addressed in the Netherlands will be developed in Iceland and France as the flexibility of programs is a reality.

The exchange cycle will end in June 2012. It is clear there is the need to organize a final meeting after the end of the four sessions in the fall of 2012 in order to draw a document as a synthesis.

