Differences between natural and technological disasters in terms of suddenness, power, destructiveness, predictability and low point of the event

In a study by Baum and colleagues (see source document for full reference), natural and technological disasters were compared in terms of their suddenness, power, destructiveness, predictability and low point of the event (Baum et al., 1983). The first important difference between such disasters is the familiarity of disasters while natural disasters were perceived as familiar to the majority of participants, technological disasters were not, since they have low frequency of occurrence (Baum et al., 1983). Regarding their suddenness and power, natural and technological disasters have been shown to be similar. Both types of disasters could be explained as sudden and powerful (Baum et al., 1983). When comparing their destructiveness, technological disasters often produce less visible threats (i.e. radiation exposure), which produce more chronic effects in people compared to the consequences of natural events, which are often immediately visible (Baum et al., 1983). The chronic effects observed after man-made disasters can be explained with the fact that man-made disasters usually do not have a clear low point. For example, if people believe that they were exposed to radiation, it will be associated with long-term concern regarding possible future diseases (Baum et al., 1983). Since the possible long term consequences of such events are unfamiliar and often unpredictable, people continue to live in a state of anxiety for a long period after a disaster has happened (Furedi, 2007). This long-term impact is particularly characteristic for the perceived risk of terrorism, which, alongside with being sudden and destructive, is also perceived as lacking rational explanation (Perry & Lindell, 2003).

Note: See source document for full reference.

Applicable to:

Stakeholders: Individual/collective memory, Local knowledge

Disaster Phases: Recovery, Prevention

Types of Actors Concerned: Non-active citizens, National civil protection body, Local authorities, Government

Hazards: Natural hazards, Man-made non-intentional hazards or emergency situations, Man-made intentional hazards

Recommendations:

- Develop risk assessments methodologies, which consider cultural factors, the manner in which people cognitively process information and which employ a gender perspective

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Source

Deliverable D4.1 "Mapping risk perception concepts in the context of disasters" (page 60)