# Mid- and long-term analysis of catastrophic events in Hungary using environmental justice as framework

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**Abstract**

Catastrophic events are occurrences which selectively impact people's everyday life through direct or indirect processes. The visible effects of these different events are seems to be obvious, but invisible impacts may occur only in mid- and long-term within societies, economy or the ecosystem. Catastrophes may cause depopulation, forced resettlement or economic depression in the affected area. However these causes are not affecting different groups of people equally and in the same way. The changes in their everyday environment - may that refer on built or natural environment - due to some unexpected natural or industrial catastrophe, and the afterward intervention may be unequal and unfair. This raises the question of environmental justice.
The presentation tends to introduce three different case studies from Hungary about the flood-affected rural villages along the river Tisza, the red mud-spill affected settlements in Central Transdanubia Region north to Lake Balaton, and a transitional urban and rural fringe area in Szeged metropolitan area, the second biggest regional centre in Hungary hit by inland excess water. The paper questions the main characteristics of the above mentioned events focusing on three key ideas: fear, information and subjective satisfaction. (1) Are the locals fear from the possibility of another catastrophe, do they feel deprived in their everyday life due to the event? Were the affected people informed about the occurrences and the post-catastrophe processes (2a)? Were they involved in the decision making process (2b)? How do they judge their own health state and socio-economic status within their neighbourhood, community and Hungary, and is it related to the catastrophic event (3)? In some cases the key points were supplemented with an additional aspect, the minority-issue. When it was relevant the research also examined the involvement or the deprivation of the largest Hungarian minority group, the Roma, asking if the Roma people are more affected by these events than other groups, or is income the differentiating factor (4)?

The presentation examines the case studies in a post-socialist context, criticising the neoliberal idea of Rawlsian justice-theory highlighting the importance of participatory planning and involvement of the locals during and after the catastrophe. The study uses empirical data of five survey results conducted in 2011, 2013, 2015 with the population of 1244. The research unit was the household, according to the socio-geographic features of the territories and aware of the spatial extent of the examined catastrophes every study area had systematic or quota-based survey method. Statistical data analysis was made on the data, focusing on the key ideas of information, fear and satisfaction principal component method was applied

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and decision-trees were made to conclude the impacts of the catastrophes.
The results show that there is a determinative fault line between the directly and indirectly affected people. People are more likely to feel safe after the events, mentioning and repeating a common proverb: "Lightning never strikes in the same place twice". They do not fear the place where they live, despite their friends or relatives tend to think their beloved ones live in dangerous places. Even the study areas are different in terms of socio-economic, geographic features and the experienced catastrophe, there are similarities in the intervention process, shaping procedural injustices through lack of information and involvement. The people did not, or at least only a few exceptional groups have the possibility to participate in the decision making processes. The people of the study area are partly satisfied with their life after the catastrophe, Roma and poor people seems to suffer greater losses, than other groups which proves environmental injustices.

**Keywords:** environmental injustice, catastrophe, spatial justice, flood, red mud spill, inland excess water