

Risk Management of Extreme River Floods

Vulnerability Aspects

- a during the Event Perspective of the Elbe Flood August 2002 -

Introduction

Flood events like at the Elbe in 2002 showed the vulnerability of our society represented by huge damage. Unprepared acting made the situation even worse.

Evaluation of vulnerable areas and public hazards becomes a major task in order to **react during the event**.

Aspects of Vulnerability

Vulnerability is a characteristic of a system that describes its potential to be harmed.

Monetary Value

Cost of reconstruction and its compensation.



Source: SMI

Capability

Insurance to recover, but cultural goods of world heritage absolutely unique!



Source: LFUG

Traffic Infrastructure

Destroyed traffic ways have negative consequences for regional economy, even if not hit directly.



Source: DB AG

Public infrastructure

Hospitals, parks, schools, sports and cultural institutions closed for months



Source: Mann

Reaction



Source: SMI

Coordination of volunteers in clear responsibility of police, army and government. Warning, protection and evacuation as integrated parts of alarm plans.

Pollution

Oily carpets from damaged cars and gas stations covered flooded areas. Free swimming feces and waste caused danger of epidemics.

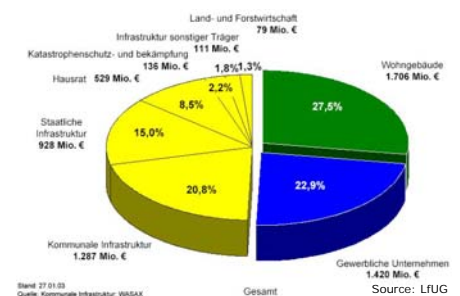
Danger for Health & Life



Source: Munich Re

Life and health of people is the highest not calculable value.

Conclusion



Stand: 27.01.03
Quelle: Kommune Infrastruktur, WASAX
Übersicht: Erhebung der Schadenskosten durch die Ressorts

21 persons died
110 persons injured
≈ 6.500 Mio € needed to recover all damage (Saxony)

How to reduce this damage?

Damage evaluation during the event is the fundamental base for an appropriate acting within the event and the preparedness (e.g. floodriskmaps) for the next event.

