

Political, Psychological and legal aspects of early warning systems in alpine regions.



Monitoring system Gaschiera
(Jäger/Hübl, 2004)

Anker Extensometer Luftemp. Niederschlag	
	250 [hN]
	245
	240
	235



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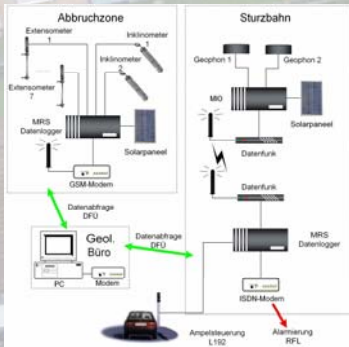




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Definition

Early warning systems are facilities appropriate to recognise natural hazards **intime** in order to set of an **automatic** warning or alarm that lead to appropriate measures in order to **prevent** or reduce possible damage.





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range of application in Austria

- # rivers
- # torrents
- # mass movements

- # avalanches?
- # earthquakes?

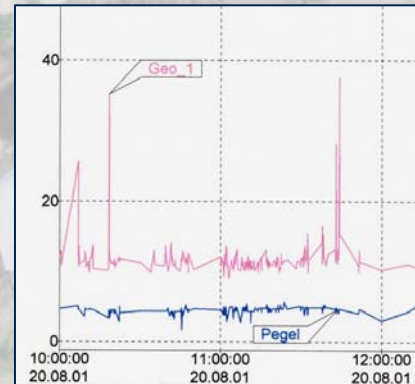
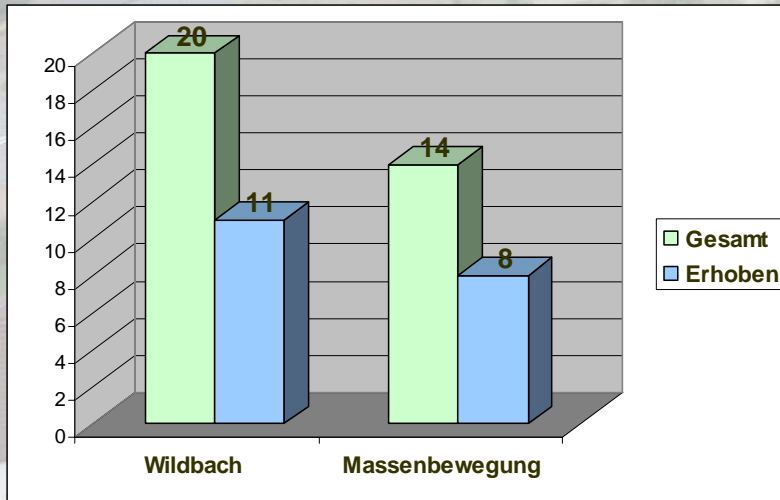


Task Force status report 2004

34 systems currently in operation

- 20 torrents
- 14 mass movements

Severall „conventional“ early warning using water-level measurement at big rivers (Danube, Rhine etc)





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What politics want

What early warning systems (EWS) can do

1. **Fast solutions**
2. **Safe solutions (immediate protection)**
3. **Long lasting solutions (low level maintenance wanted)**
4. **Compromises**
5. **Cheap solutions**

1. **EWS can be to be a fast solution**
2. **EWS can be immediate protection**
3. **No long time experience (high level maintenance required)**
4. **Compromises can be reached easier**
5. **EWS are cheap, compared to technical measures**



Legal aspects

- # Legislation widely unclear
 - competence (federal – provincial government)
 - Licensing requirements and orders, official permits?
 - Definition of threshold values (official liability?)
 - Technical equipment, warranty (legally) warranty (contractual), liability



Psychological aspects

- **Internal based**
 - Number of false alarms
 - Trust of the people
 - long wind needed in peaceful times

- **External based**
 - Increase of „disaster-news“
 - experts vs. Public opinion, private experts
 - Disaster half-life period
 - Emergency measures



Consequences

- # How can we limit or eliminate false alarms?
- # How can we create trust in such systems?
- # How can we keep up that trust?

- # Communication, PR
- # Test alarms
- # Handing over responsibility



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Outlook

To do list

- # Improving the technical standard and reliability of EWS → limiting false alarms
- # Connecting the current stand alone systems.
- # Work out technical guidelines in order to create a state of the art
- # Get more information to the people.





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*„It is not enough to put
thumbscrews on nature.*

*One has to understand
when she testifies“*

(Arthur Schopenhauer)

Thank you for your attention!

