SBB – Event Database

Adaptation of Railway Infrastructure to Climate Change
Workshop, October 19 & 20 2010, Paris

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on behalf of Andreas Meyer, SBB
SBB Event Database & GIS

Systematic recording & analysis of natural hazards along railway lines

- SBB railway lines frequently are exposed to natural hazards
- Rockfall, debris flow, landslide, wind ....
- High level of surveillance & preservation of the slopes along the lines
Data recording using DERI NR

DERI NR - instrument to record and document natural hazards

- Central database
- Combination with historic data
- 2-step recording process:
  1. Registration of key data of an event & submission to specialist
  2. Full documentation by a specialist & evaluation
### Adaptation of Railway Infrastructure to Climate Change

**SBB Event Database & GIS**

- **ID:** 4-W-205
- **ESI Ergebnis Nr.:**
- **KLS Nr.:**
- **Erü Nr.:**
- **Anhänge in ESI:** 0
- **LKT Nr.:**

#### Details

- **Nachname:** Meier
- **Vorname:** Andreas
- **Pers. Nummer:** 067202
- **U-Nr.:** 067202

**Meldetext:**

- **Zugehörigkeit:** fremd
- **U-Nr.:**
- **Vorname:** Andreas

**Zeitpunkt**

- **Erfassungsdatum:** 2008-03-05 21:42
- **Beobachtungszeitpunkt:** 2008-03-05 15:42

**Raum & Ort**

- **Strecken-DFA-Nummer:** 100
- **Strecke (km):**
- **von:** 12.010
- **bis:** 12.050
- **Gleis Nr.:**
- **Lage zum Gelände:**
- **Betriebspunkt von:**
- **Betriebspunkt bis:**
- **Weitere nutzten Linien:**
- **Strecken DFA-Nummer:**
- **von:**
- **bis:**

**Basisinformation Ereignis**

- **Dringlichkeit:** nicht dringend/Ungeachtet
- **Ungewöhnlichkeit:** Ereignis im Allgemeinen
- **Auswirkung auf Betriebe:** kein
- **Ursache Kat. 1:** Steinschlag/Felsstück
- **Ursache Kat. 6:** Naturereignis
- **Ursache Kat. 2:**
- **Ursache Kat. 7:**
- **Ursache Kat. 3:**
- **Ursache Kat. 8:**
- **Beschreibung der Ungewöhnlichkeit:**

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**DERI NR**

**Graphical User IF**
Visualisation in WEB GIS

WEB GIS - Instrument to visualise data from DERI NR (after evaluation!)

- Queries about ice falls and avalanches at the Gotthard line
- Natural hazard maps modeled by SILVAPROTECT (Bafu).
- Comparison with previous recordings in the area
Visualization in WEB GIS
**Outlook**

- Develop into data base for evaluation of risk sites
- Inventory & condition of protective systems
- Risk data, hazard maps & protection targets
- Help to plan the appropriate measures
- Tools for spatial data analysis