

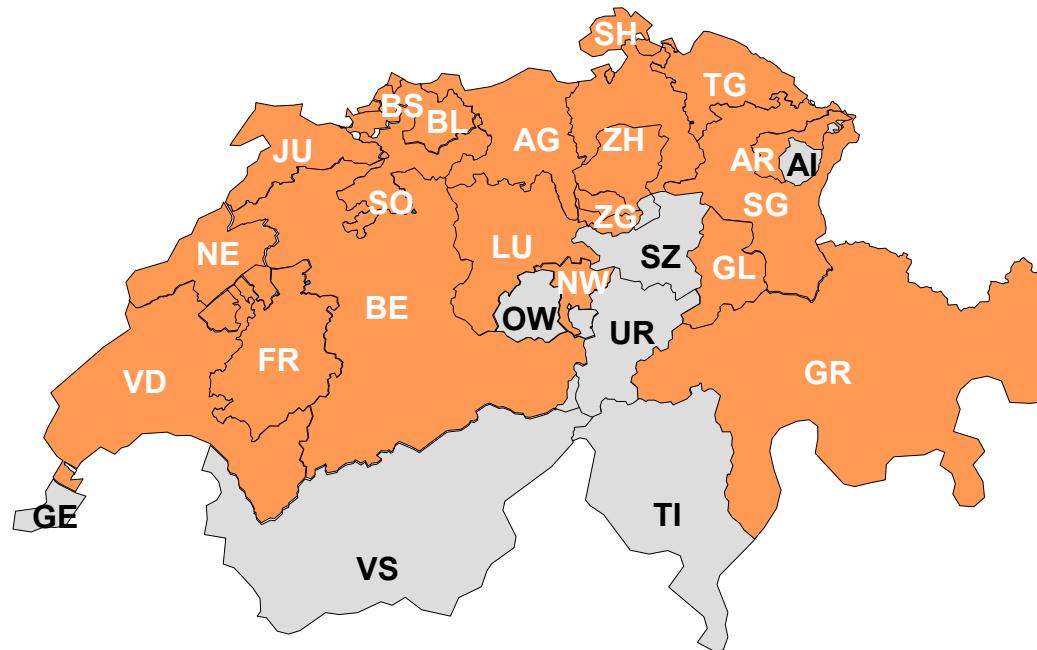


# *Public insurance companies for buildings in Switzerland*

*Olivier Lateltin*

*former Director of the Prevention Foundation PICB  
new Director of the Swiss Geological Survey, swisstopo*

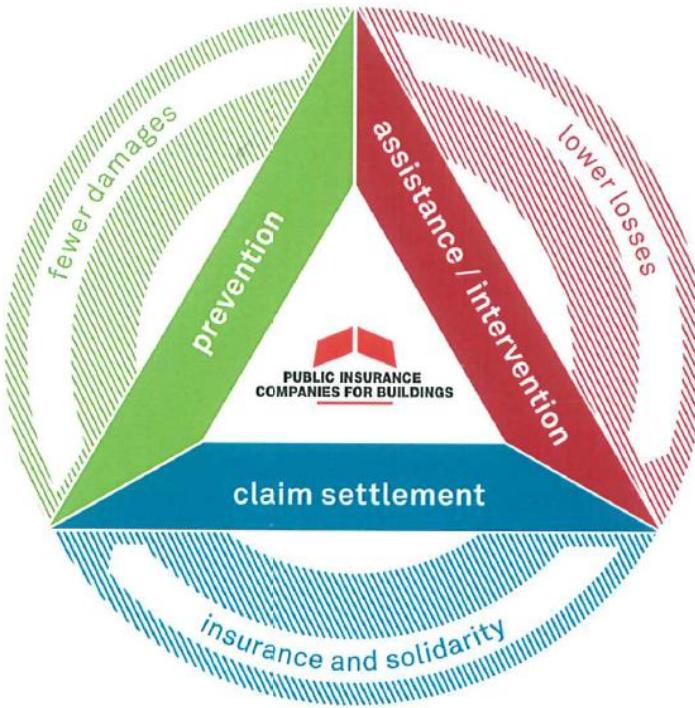
# *Coexistence of statutory insurance and compulsory insurance*



	Insured capital	Cantons
--	-----------------	---------

Public insurance company for buildings (PBI)	85 %	19
Private insurance company for buildings (PA)	15 %	7

# **PICB-System: „Insure and prevent“**



## ***Prevention - preparedness***

- Prevention of fires and natural disasters as sovereign preventing obligation (Fire-brigade)

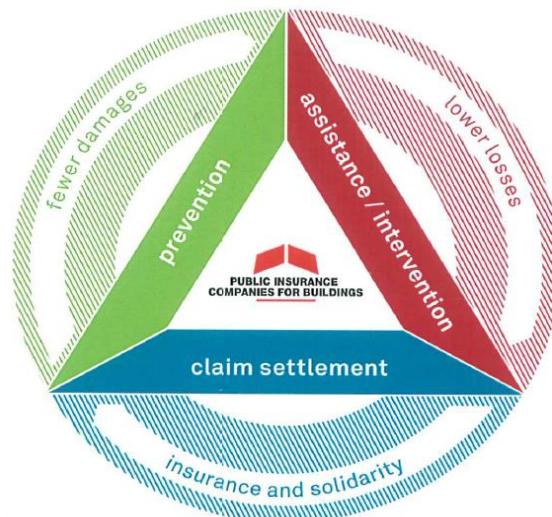
## ***Intervention – limiting extent of damage***

- Response and intervention als citizen obligation in case of fires and natural disasters-brigade (Fire-brigade)

## ***Insurance***

- Uniform, mandatory, complete and solidary insurance as national precaution for surviving

# ***PICB-System: „Insure and prevent“***



## **Facts and Figures 2010**

<b>Insured buildings</b>	<b>2,17 million</b>
<b>Insured capital</b>	<b>CHF 2011 billion</b>
<b>Net premium income</b>	<b>CHF 992 million</b>
<b>Fire loss</b>	<b>CHF 266 million</b>
<b>Elementary loss</b>	<b>CHF 429 million</b>
<b>Prevention</b>	<b>CHF 285 million</b>
<b>Premium rate</b>	<b>0.50 %</b>

# *A success story: „Fire protection“*



## **Building codes**

- 1 norme
- 18 directives

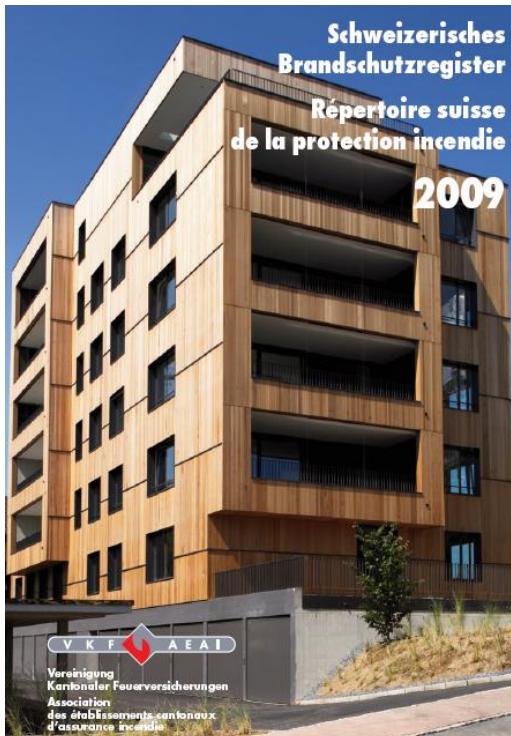
## **Technical notes**

- 14 explanations



## ***A success story: „Fire protection“***

### **Register of building materials and fire resistance**



**building materials:**

**3091 products**

**Technical furniture systems 2086 products**

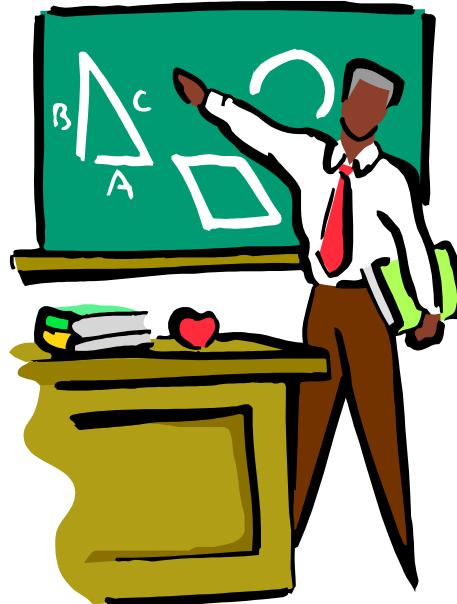
**Sprinklers**

**603 products**

- 1400 certificates per year**

# *A success story: „Fire protection“*

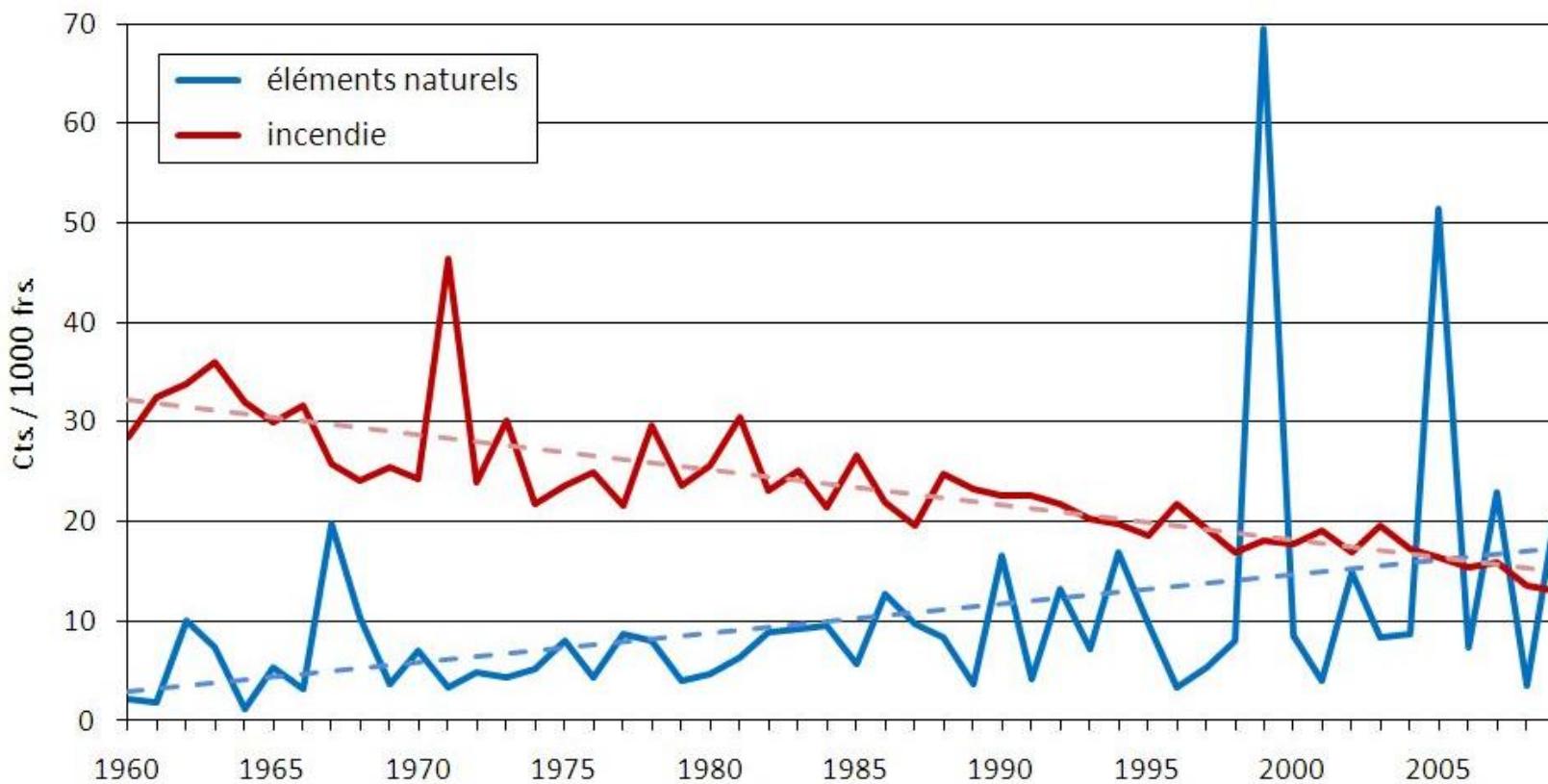
## Formation and training of experts in fire protection



- at cantonal level
- at communal level

# *A success story: high reduction of fire losses to buildings!*

Losses to buildings caused by natural hazards and fire in the 19 Cantonal Public Insurance for Buildings in centimes pro 1'000 insured swiss francs





# Natural hazards covered by insurance

Floods



Erosion



Debris flows



Landslides



Rockfalls



Snow avalanches





# Natural hazards covered by insurance

Storm



Hail



Heavy rains



Snow load



Thunder



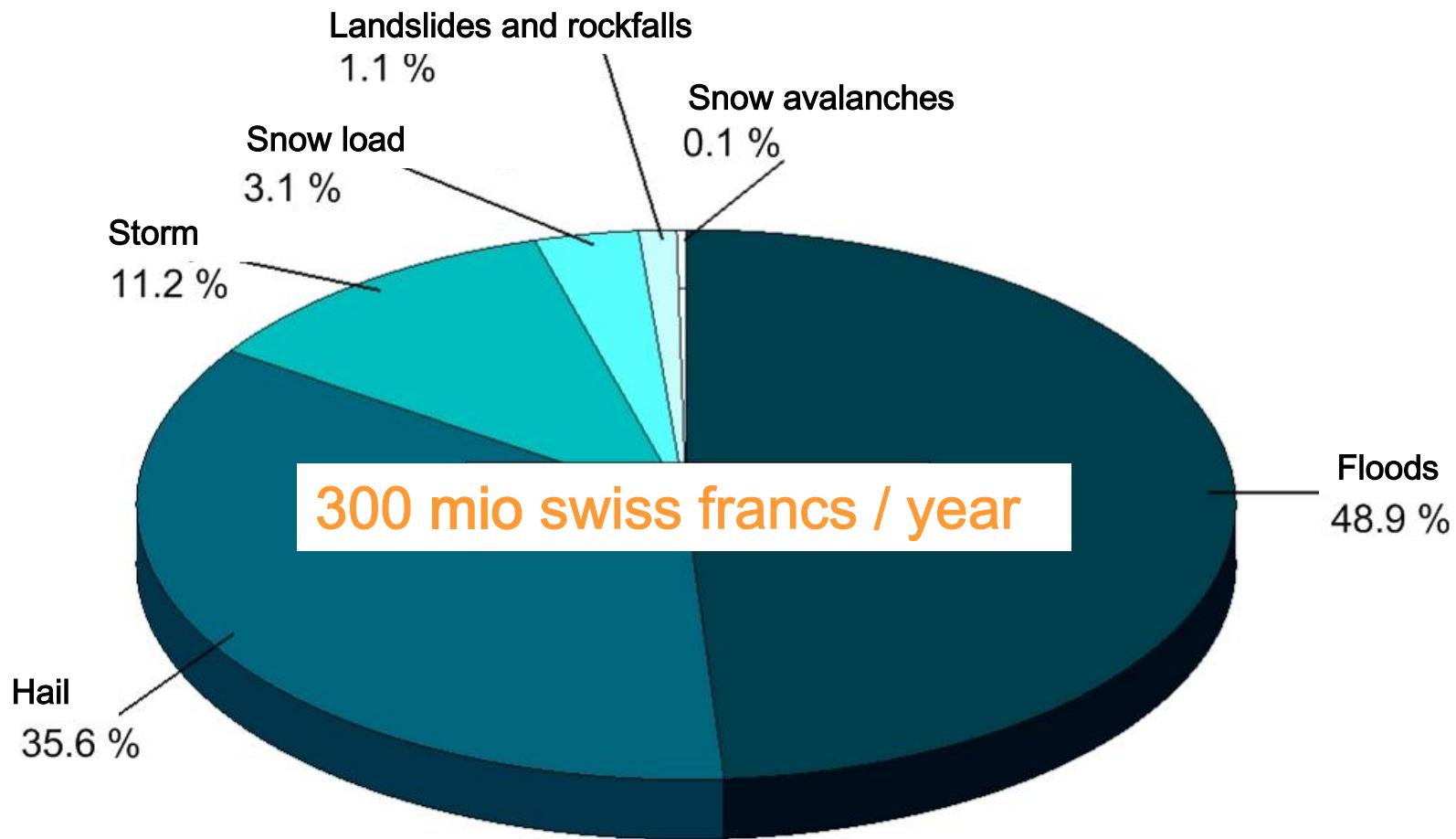


# Earthquakes are not covered by insurance

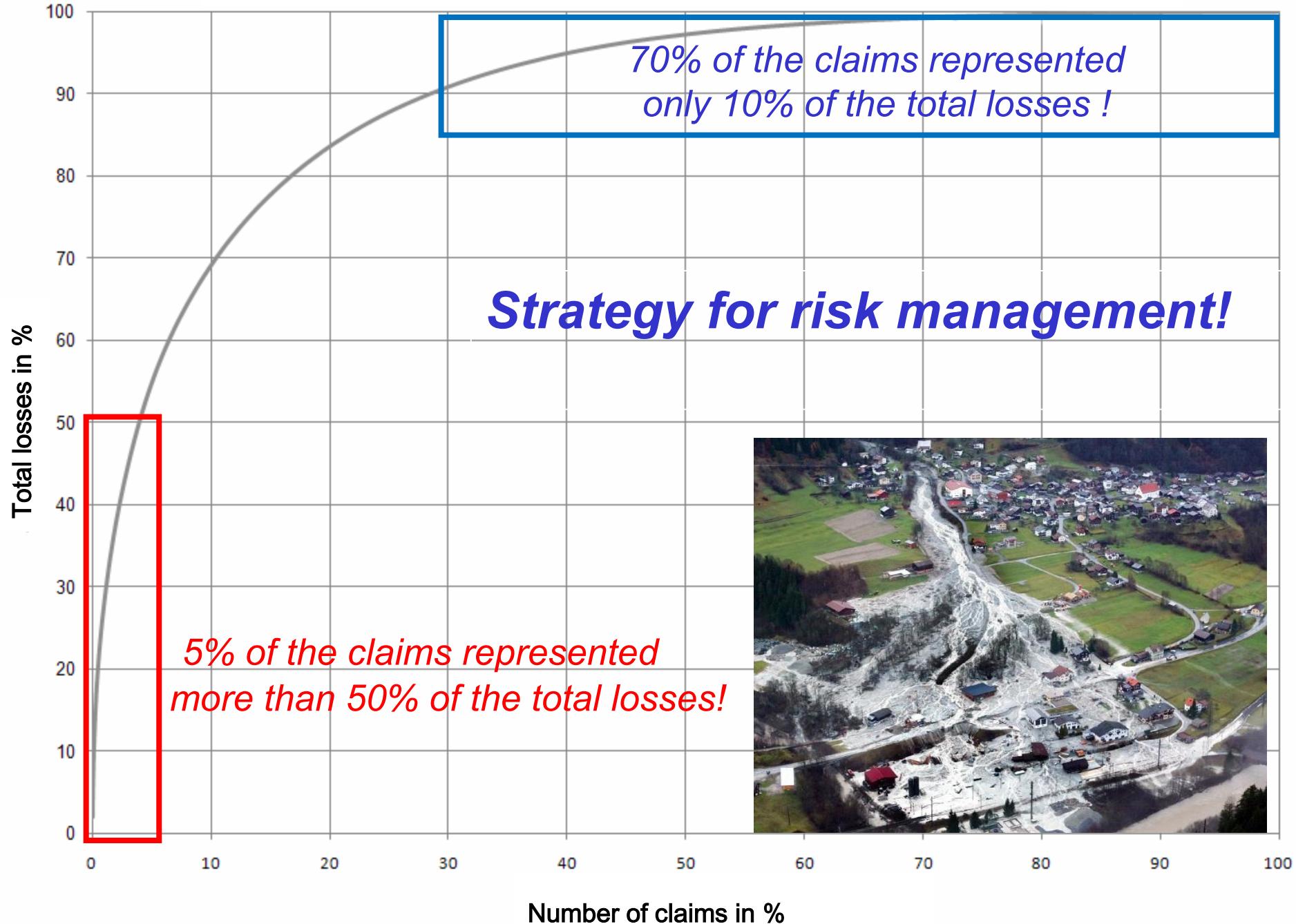


# **Losses to buildings caused by natural hazards**

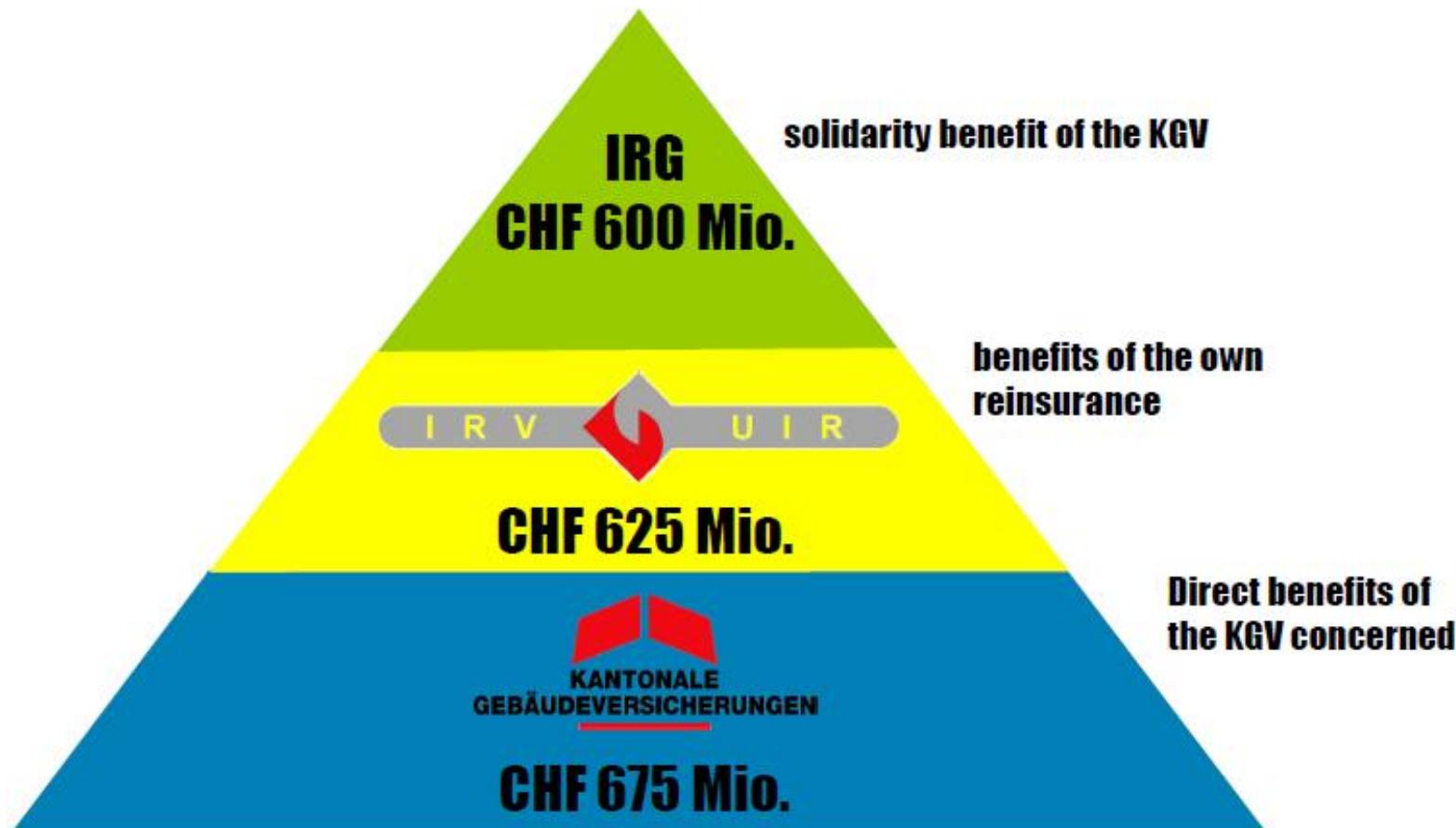
**in the 19 Cantonal Public Insurance Companies for Buildings 2000-2009**



# Floods 18 - 26 of August 2005 in Switzerland



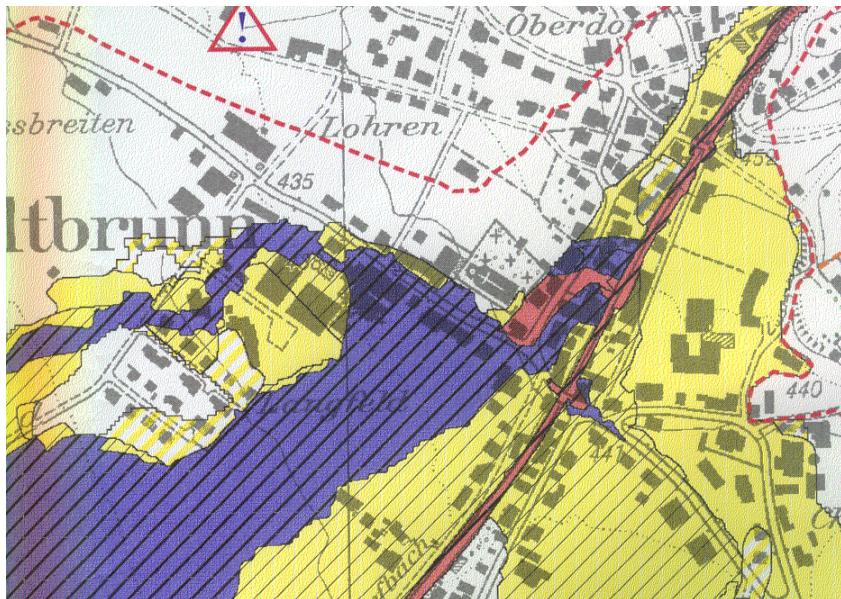
# Solidarity system of public insurers damages 1999/2005: CHF 1'900 Millions



# What about prevention ?



# Land-use planning



**Land-use planning**  
**Hazard maps**

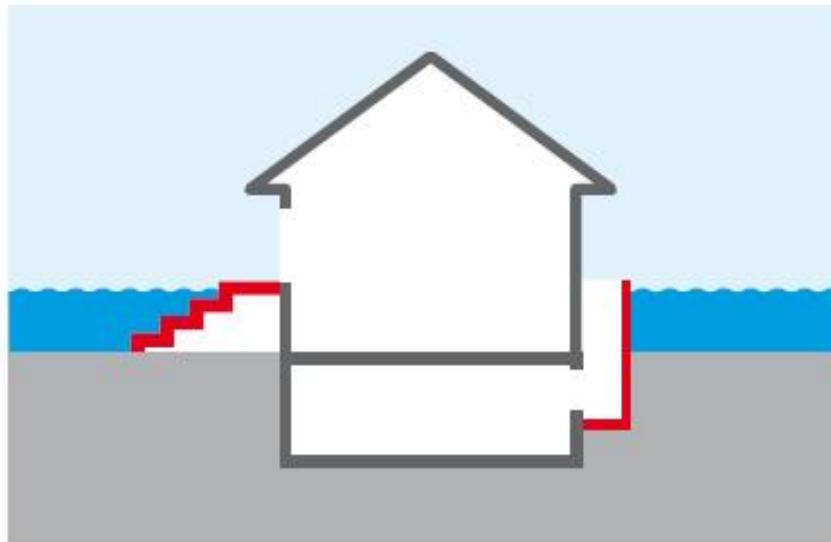
**Urban planning**  
**Construction permit**

**Public insurance companies for building PIBC**

*Hazard maps: financial contribution*

*Construction permit: Consultation and recommendation*

# Protective measures



**State of the art/building codes**

**Protective measures**

**Insurance**

**owner responsibility**

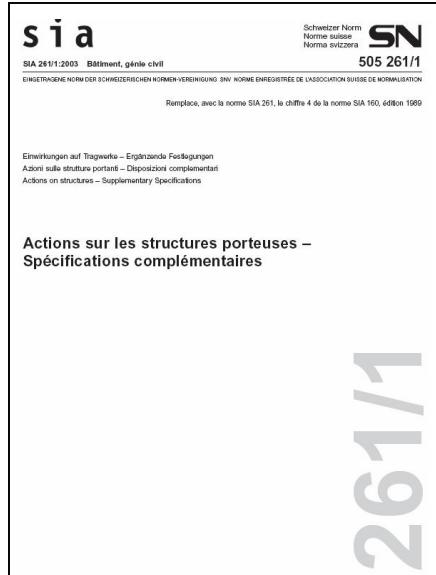
## Public insurance companies for buildings PIBC

*New buildings: construction permit – estimation and exclusions*

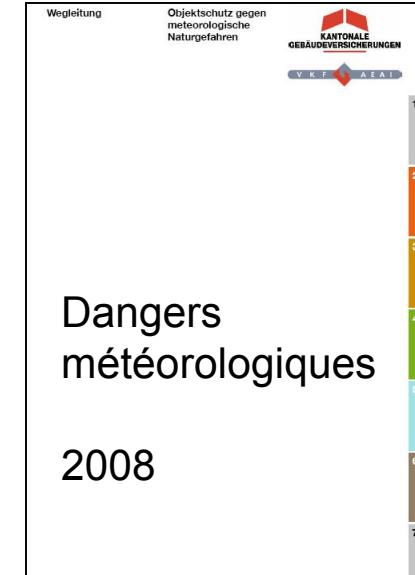
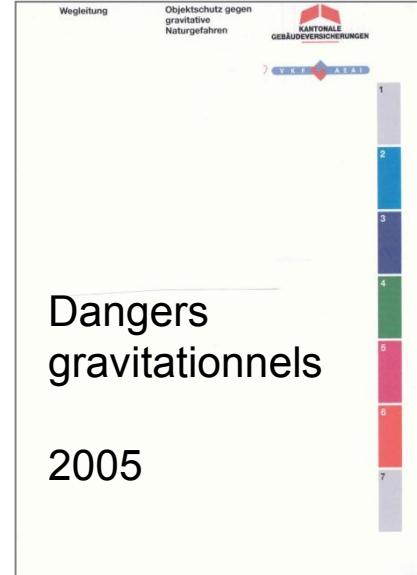
*Existing buildings: estimation – prescription – exclusions*

# Protective measures

**State of the art  
building codes**



**Protective measures  
Recommendations PIBC**

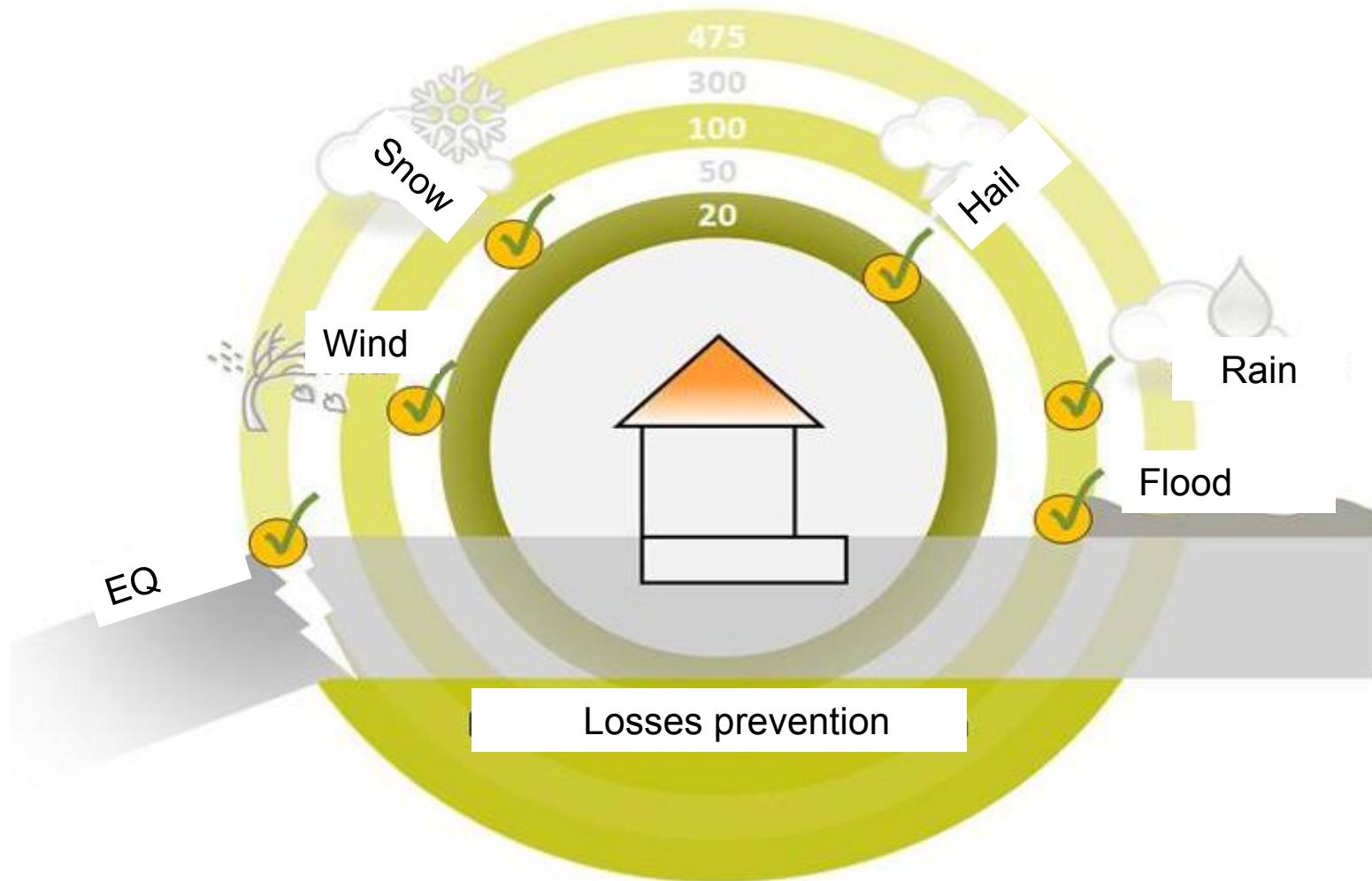


**Flyers for  
owners**



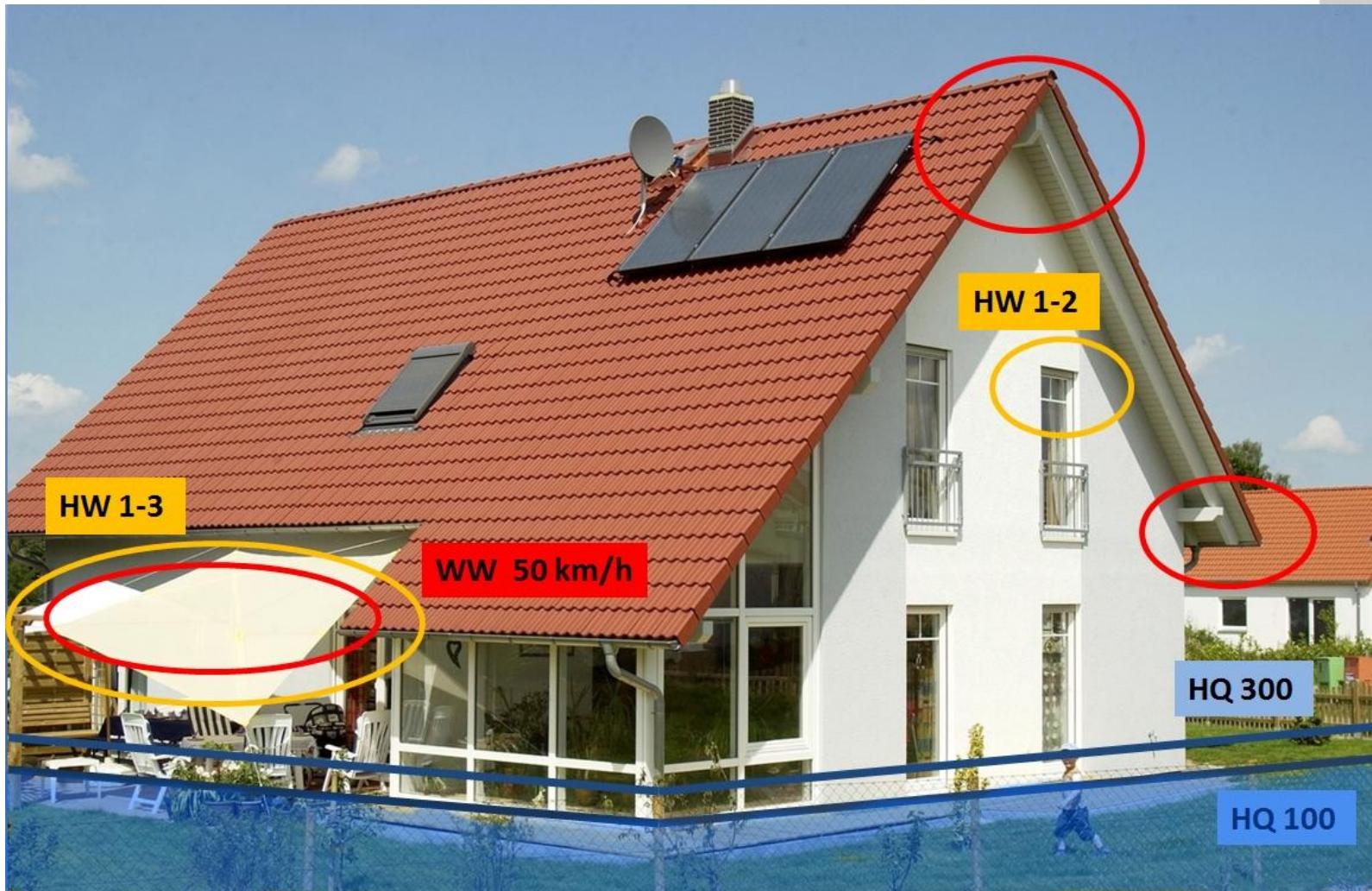
**Public insurance companies for buildings PIBC**  
**Recommendations:** *natural hazards*  
**Training:** *architects, engineers*

# Actual safety targets according to building codes



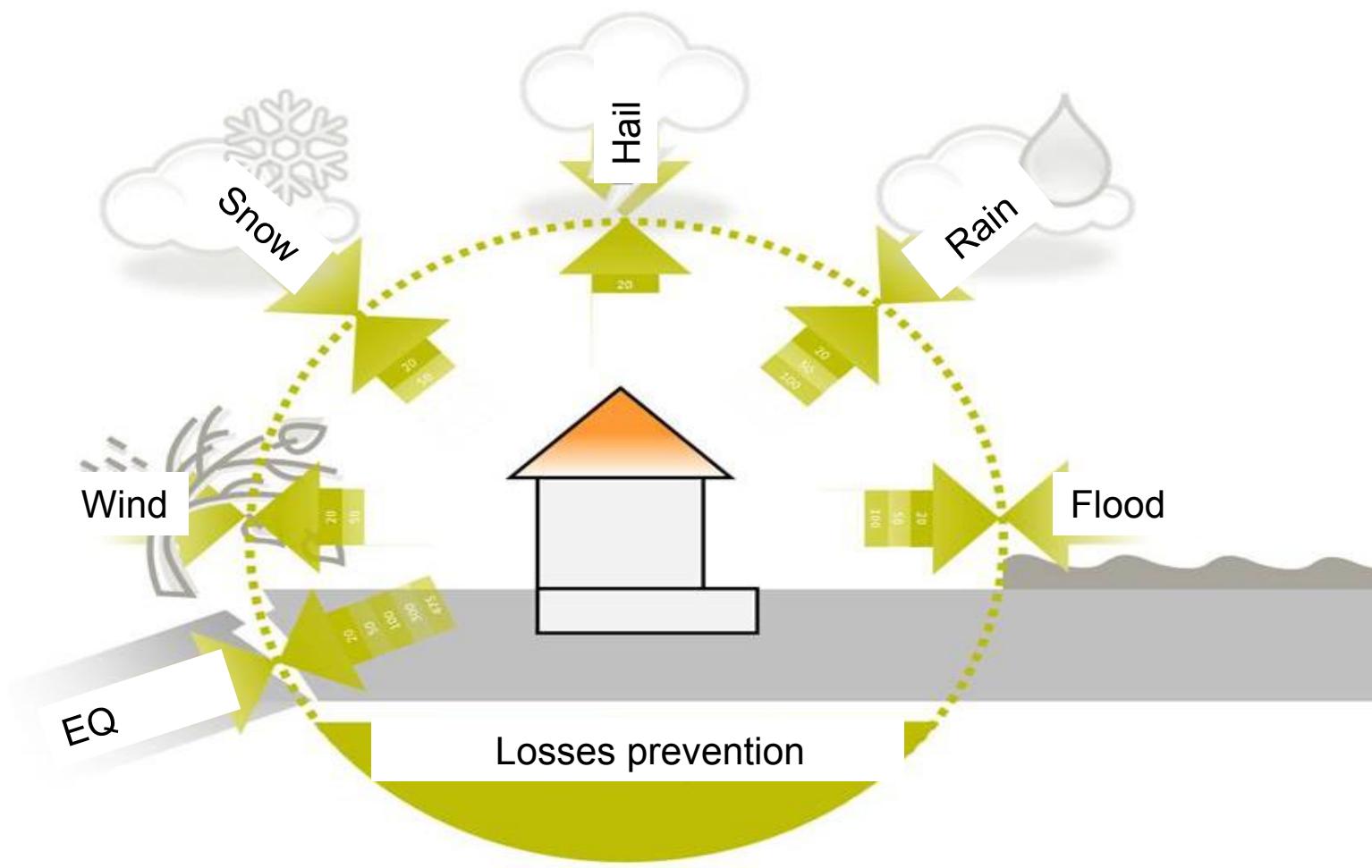


# Vulnerability of the building enveloppe



# Future safety targets for buildings

Les nouvelles constructions (y compris l'enveloppe du bâtiment) et celles qui font l'objet de transformations importantes doivent être dimensionnées en principe de manière à pouvoir supporter sans dommage les effets des dangers naturels d'une période de récurrence minimale de 50 ans. Pour certains événements et selon le genre d'affectation, les exigences sont plus sévères.



# Hail - Register of protection

Vous trouverez ici des matériaux résistants



[www.hagelregister.ch](http://www.hagelregister.ch)



Le Répertoire suisse de la protection contre la grêle sur Internet

## Résultat de la recherche

8 homologations correspondent aux critères de recherche indiqués.  
Les résultats 1 à 8 sont affichés.



01

### 0 RPG - Grêle (en préparation)

Désignation	Description	Classement	Requérant	no HPI	Validité
<b>13 Toiture - Panneaux en matière synthétique</b>					
PMMA S4P 32 sz Plexiglas Resist	Panneaux à âme quadruple en Plexiglas Resist S4P 32 (PMMA) résilients; Aspect: incolore; Dimensions [mm]: 1'200*1000; Epaisseur [mm]: 32; Masse volumique [g/cm <sup>3</sup> ]: 1.19	3	Röhm (Schweiz) GmbH Ruchstückstrasse 8 CH-8306 Brüttisellen	18444	2011

### 14 Toiture - Coupoles d'éclairage

PMMA (in.)/PC (aus.) Typ 2s 076076 po	Coupoles à deux couches; Aspect: transparent; Couche int.: PMMA, épaisseur [mm]: 2.0; Couche ext.: PC, épaisseur [mm]: 3.0; Dimensions [mm]: 760*760	3	Cupolux AG Allmendstrasse 5 CH-8027 Zürich 2	18439	2011
---	--	---	--	-------	------

### 17 Toiture - Vitraux

Drahtglas Verre armé	Composition selon indications du fabricant; Apparence du chant: brut; Dimensions [mm]: 1000*800; Epaisseur [mm]: 7.0; Masse volumique [g/cm <sup>3</sup> ]: 2.5	3	Glas Trösch AG Industriestrasse 29 CH-4922 Bützberg	18450	2011
-------------------------	---	---	---	-------	------

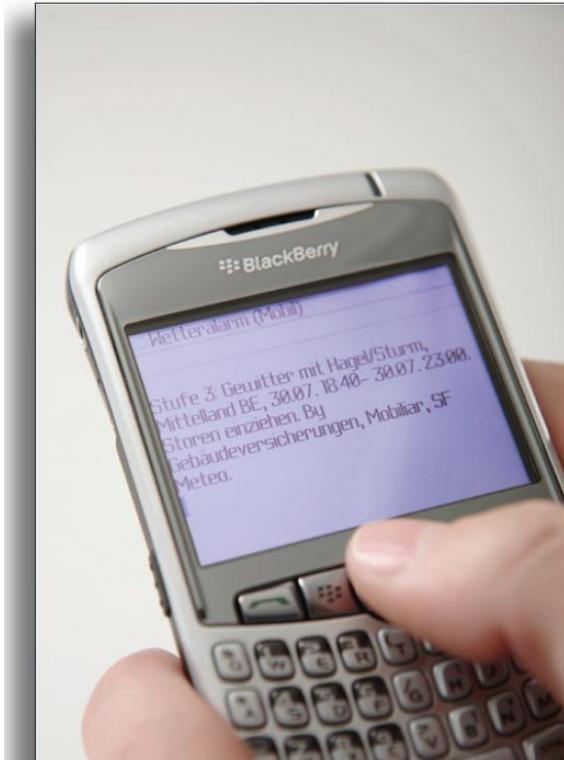


---

## Relevez les stores !

---

### Alarme-Météo vous prévient à temps



Faites-vous alerter par SMS lorsque des intempéries menacent. Vous pourrez alors relever vos stores à temps et prendre d'autres mesures. Ainsi, vous éviterez que la grêle n'endommage votre bâtiment. Alarme-Météo gratuite fournie par les Etablissements cantonaux d'assurance des bâtiments, SF Meteo et la Mobilière Suisse: [www.wetteralarm.ch](http://www.wetteralarm.ch)

Abonnez-vous à l'Alarme-Météo gratuite par SMS: START AM (NPA) au numéro 4666. Exemple pour la ville de St-Gall: START AM 9000



DEAL WITH THE CHALLENGES THAT YOU FACE!

## Reducing natural hazards with integrated, building-specific risk management

This is the goal of the nineteen Public Building Insurance Companies. They organise and promote natural hazard protection and intervention, guaranteeing good value natural hazard insurance for all buildings. Strategic projects in this wideranging operational field are defined, put out to public tender, coordinated and financed by the

**Prevention Foundation of the  
Public Building Insurance Companies**

## Register for hail impact resistant building materials

This register classifies the construction products for building envelopes as regards their hail resistance. As such, it is an aid to new building and renovation project planners. The register – at [www.hagelregister.ch](http://www.hagelregister.ch) – provides an overview of the hail resistance levels of materials normally used in building envelopes. The scientific bases for the register, which is in its initial implementation stage, were developed by the Foundation in the course of a variety of projects.



## Vulnerability of buildings to flooding

There is more flooding to come – that much is certain. The federal government requires of the cantons that they complete detailed mapping of natural hazards by 2011. Householders now need new tools to calculate the vulnerability of their houses to flooding in view of the known threat, and proactively to choose decision-making guidance on future protective measures. The project team is developing a software package that contributes to reducing flood damage through property protection measures.



You will find information on the projects at  
[www.praeventionsstiftung.ch](http://www.praeventionsstiftung.ch).

## Earthquakes and masonry

This project was based on the assumption that the vulnerability and displacement criteria used for Switzerland's stock of masonry buildings tended to overestimate the damage potential of earthquakes in the country. This hypothesis was confirmed: the resultant new vulnerability and displacement criteria allowed the damage potential to be reassessed, and so have had a corresponding effect on both the state of technology and reinsurance premiums.



## CAS – Protecting buildings against natural hazards

With the aim of guaranteeing that buildings are protected against gravitational and meteorological natural hazards, the CAS (Certificate of Advanced Studies) in «Protecting Buildings against Natural Hazards» communicates information through seminars, self-study and real examples. The courses from the universities of applied sciences in Burgdorf, Lucerne and Fribourg are aimed at architects, engineers and planners.

## Formation dans le domaine de la protection des bâtiments



### Haute école spécialisée

CAS sécurité  
parasismique

CAS protection  
incendie

MAS risk  
engineering

**CAS protection des  
bâtiments contre les  
dangers naturels**

### Formation professionnelle supérieure

Expert en protection  
incendie DF

Spécialiste en  
protection des  
bâtiments contre les  
dangers naturels

Spécialiste en  
protection incendie  
BF

### Certificat AEAI

Applicateur de  
peintures  
intumescentes

Spécialiste en  
installations  
d'extinction à eau

Spécialiste en  
installations de  
détection d'incendie

Chargé de sécurité  
protection incendie  
AEAI

Spécialiste en  
protection extérieure  
contre la foudre

### Formation professionnelle initiale

Formation continue à des fins professionnelles dans le  
domaine de la protection des bâtiments



Cornel  
Quinto

# Insurance Systems in Times of Climate Change

Insurance of buildings against  
natural hazards



Springer

Schulthess §