Workshop: Regional Climate Risk Resilience
Fostering Resilience to Remote Geo-Hazards

Climate Risk Resilience – Switzerland's Experience at Home and in Development Cooperation Abroad

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Flash flood 7 August 2002

Causes:

Glacial changes; glacial lake outburst → flash flood

Consequences:

28 persons killed

Many houses destroyed or heavily damaged

Glyssibach, Brienz, Switzerland

Debris flow 23 August 2005

Causes:

Rainfall of > 300 mm in 3 days
Landslide → debris flow

Consequences:

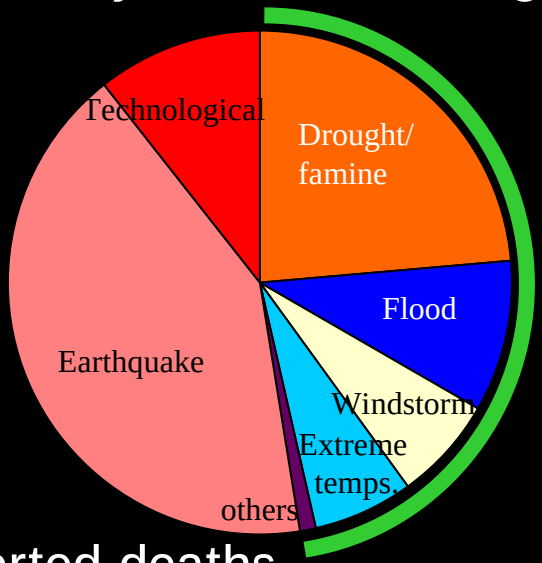
2 persons killed

30 houses destroyed or heavily damaged

How have these two events be seen in a global context?

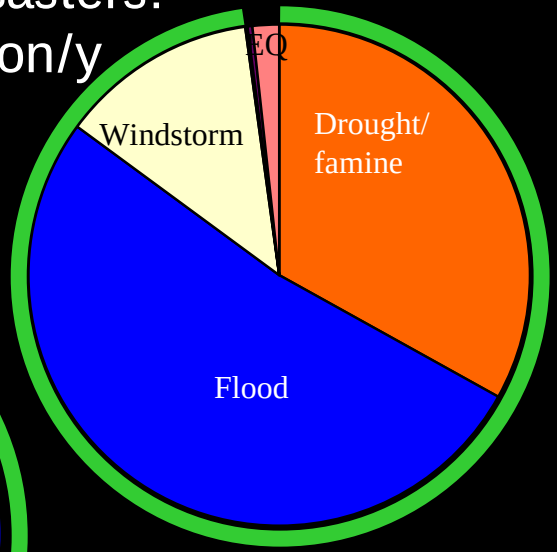
Relevance of climate for DRR

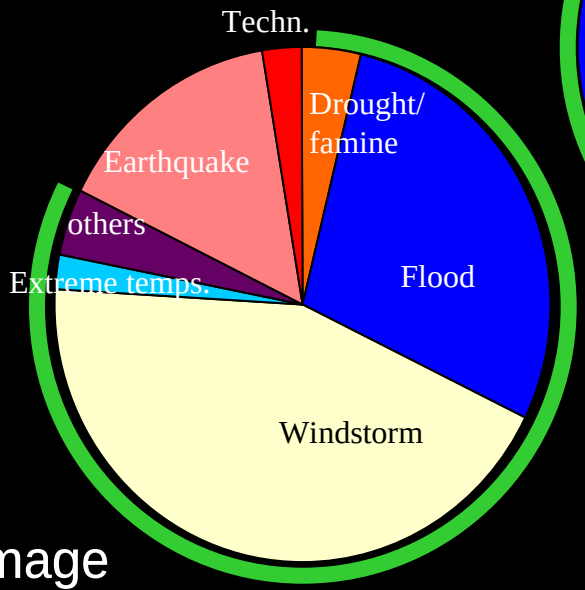
Causes of disasters 1996 – 2005;
green: hydro-meteorological



Reported deaths
from all disasters:
93'000/y

Reported persons affected
by all disasters:
250 million/y

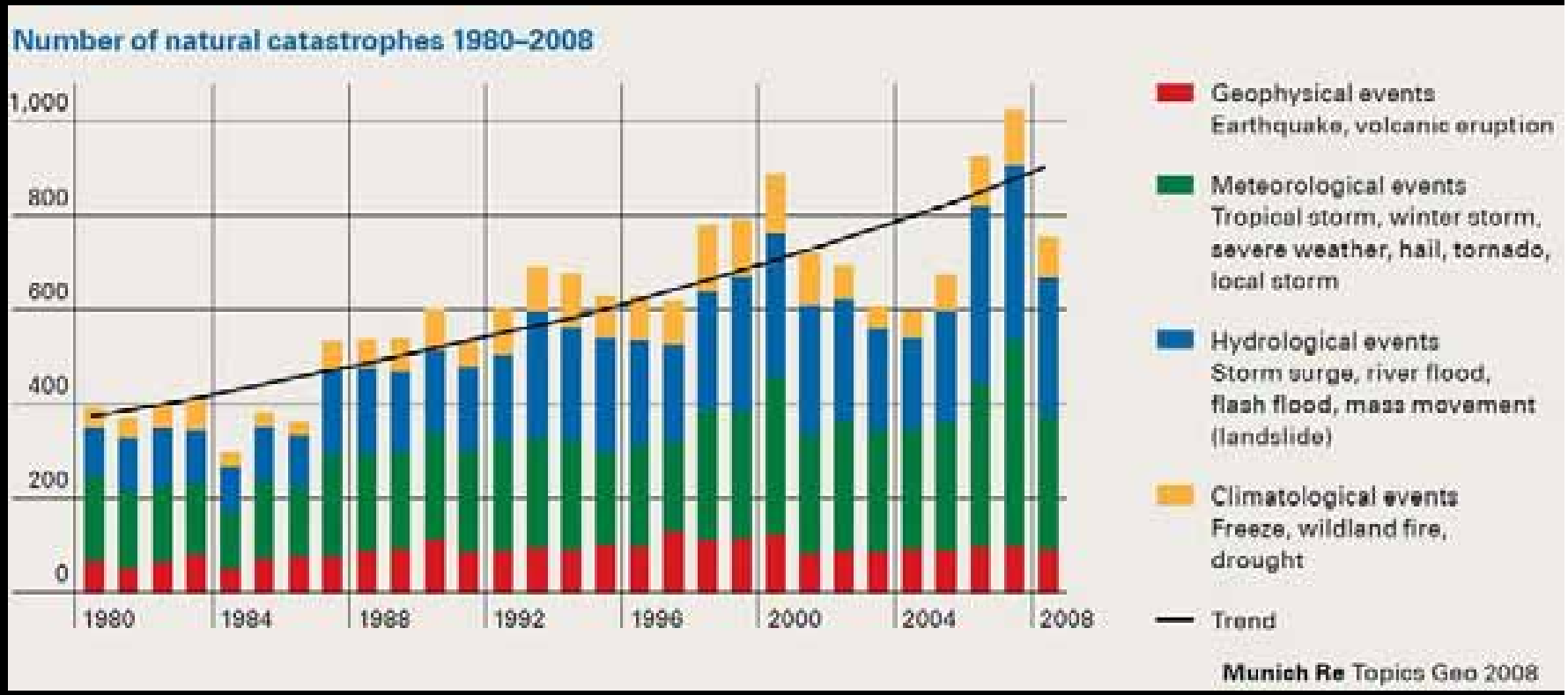




Estimated damage
by all disaster: $ 75 billion/y

IFRC: WDR 2006

Development of "natural" disasters



+/- stable number of geophysical events (red)
strong increase in hydro-meteorological events

This global trend is also observed in Switzerland; floods were most relevant for a dramatic increase of damage

Climate risk resilience

What does **resilience** mean for those two cases?

ISDR definition:

... the ability of the community to resist, absorb and recover from the effects of a climate-induced event ...

means for rehabilitation and reconstruction

prevention (avoid), mitigation (reduce)

preparedness for better response

Climate risk resilience: challenges and needs

What challenges and needs we have to consider as (development) agencies to improve resilience?

1. to understand nature and its changes (assessments and monitoring at the appropriate level)
2. to understand people's perception, capacities and needs
3. to integrate (climate) risks into local planning processes
4. to prove effectiveness of DRR (= increased safety)

Assessment and monitoring

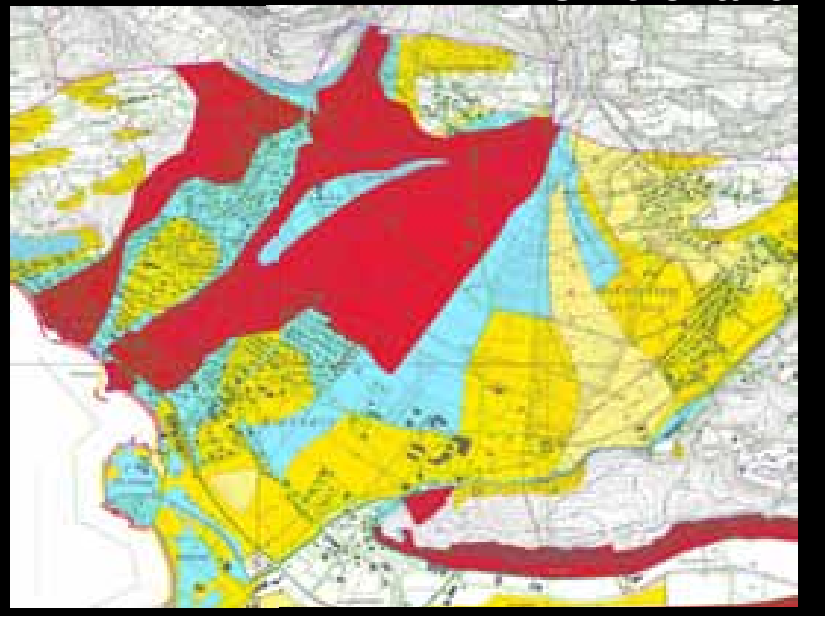
- to invest in knowledge:
  what can occur? consider climate change scenarios, surcharge
- to invest in know-how:
  how to assess/monitor?

www.keepbanderabeautiful.org/climate-change.jpg

Hazard + risk maps at local level:

Pakistan

Switzerland



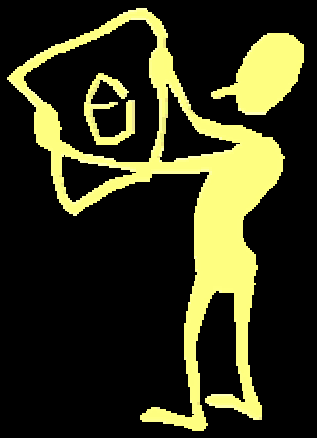
People's perception, capacities, needs

People, households and local communities have their own perception of risks and climate change; and they have their own view on how to resist, absorb and recover.

- to understand people's perception
- to build on local knowledge, including local tradition
- to initiate a risk dialogue

Local planning processes

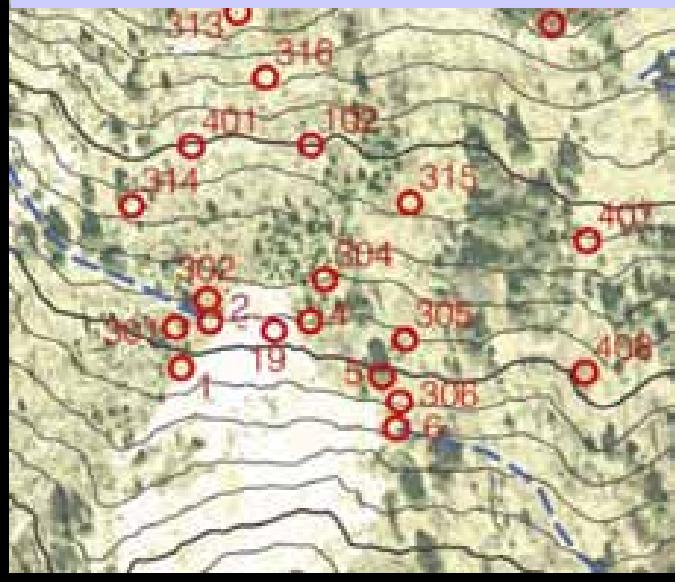
Natural hazards can be effectively avoided or mitigated in an early planning stage



- Integration of assessment and monitoring results into local planning processes → flow of information.
- Risk-conscious land-use planning at local level
  →robust systems, easy to handle, capable to manage a surcharge case.

Splitting wedge in avalanche path

Monitoring points of a major landslide, threatening an Alpine town → emergency services



Effectiveness of DRR

More and more agencies request effective and efficient use of funds for DRR.

- for the agencies:
  to prove the effectiveness of DRR
  = increased safety
  through e.g. CBA (cost-benefit analysis)

- for beneficiaries:
  to provide direct incentives, because increased safety is not tangible!

The ford reduces damage, and improves access for local inhabitants (Georgia).

Assessment tools, like:

CRiSTAL

Community-based Risk Screening Tool – Adaptation and Livelihoods

Concluding remarks

- to understand nature
  (climate induced hazards)
- to understand people
  (perception and local knowledge)
- to understand the system
  (DRR, CCA, NRM)
- to understand agencies' needs
  (effectiveness)

Thank you!