Swiss strategy to improve protection against natural hazards

a) Integrated disaster reduction approach

Addresses all hazards, vulnerabilities and risks, considers the disaster cycle, includes all stakeholders in the process, takes into account the principles of sustainability, is based on international solidarity

b) Hazards, vulnerabilities and risks

In-depth assessment of all prevailing hazards and of the respective vulnerabilities. Hazard maps and related products. Definition of protection goals (risk dialogue). Residual risks require special attention.

c) Disaster reduction mechanisms

An integrated disaster reduction approach equally addresses the three disaster reduction mechanisms of the disaster cycle:

(1) prevention/mitigation

(2) response

(3) recovery

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d) Stakeholder involvement, including affected people

Involve actors of many sectors and levels, local to national authorities, of private sector entities, particularly the insurance sector, civil society, regional organizations, the international community and the public. Involve people affected by natural disasters should commit into disaster risk reduction. A risk dialogue among all stakeholders including the affected populations increases the overall awareness

e) Sustainability of efforts

All activities in the field of disaster risk reduction obey the principles of sustainability

f) Solidarity

Natural disasters hit often unannounced and on such a scale that the local coping mechanisms may be overwhelmed. External assistance, when required, to those affected during the disasters, in response and recovery is important

Adaptation measures: Climate change, water and water management

Example: Flood Protection Strategy

- **Analysis and documentation of the existing danger**: Hazard maps serve as a basis for prevention measures.
- **Safeguard of the required space for flowing water**: Sufficient space for extreme quantities of runoff water simultaneously guarantees space for the ecological function of watercourses.
- **Integral action planning**: It is imperative that the principles of sustainability be taken into account for planning and organisational measures as well as for technical safety constructions.
- **Minimisation of damage:** Maintenance of watercourses (= maintaining the existing safety conditions) as well as measures for spatial planning (= preventing a rise in the potential for damage by keeping space free or restricting the use of space) are of paramount importance.
- **Emergency planning:** Good preparation (forecasting, alerting and mobile measures etc.) can minimise the ever present residual risks. In addition, insurances can help make damages bearable.
- **Flood protection as a federal task:** Interdisciplinary cooperation among experts from all areas and inclusion at a sufficiently early stage of the political authorities as well as the concerned population are a precondition for sustainable protection policies.

Agriculture: Coping with increasing temperature and decreasing precipitation

- Consideration of local agricultural production conditions (evaluation of orographic and soil characteristics, local climate and cultivation techniques)
- Selection of alternative crops, the selection of cultivars with a higher temperature tolerance, shifts in the sowing dates, and more irrigation
- Periodic reconsideration of adaptation measures will be essential
- However, adaptation options will also be influenced by political developments, especially the WTO regulations (e.g. open markets)
- Currently: Development of a National Adaptation Strategy including agriculture

Adaptation measures: Forests and Forestry

1. Addressing ecological imperatives through forestry
   - Selective felling only
   - Promotion of natural regeneration
   - Sustainable forest management including financial support for local communities for forest ecosystem services such as protection from avalanches and rock fall as well as biodiversity (2000–2003: CHF 57.8, 1996-1999: CHF 65.2 millions per year)
2. To maintain the vitality of forests, average annual subsidies of CHF 69.65 million were provided between 2000 and 2003 (CHF 51.5 million from 1996 to 1999) for the following measures
   - Pest control
   - Restoration of damaged forests
3. Conservation of the genetic resources of forests (CHF 1.5 million average annual subsidies for 2000–2003) using the following measures
   - Establishment of a national register of seed tree stands on the basis of internationally defined parameters.
   - Launching of a gene conservation network.
   - Creation of seed orchards to improve the supply of indigenous reproductive material.