



Decision analysis and risk management

Seminar: Lessons learned

HW5: Assessment of direct or indirect health impacts caused by the "Adaptation to climate change in Switzerland" strategy

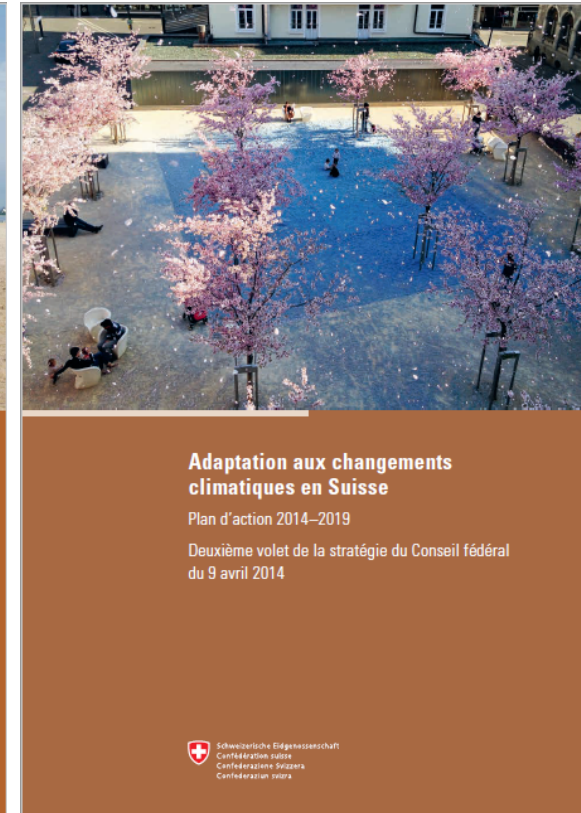
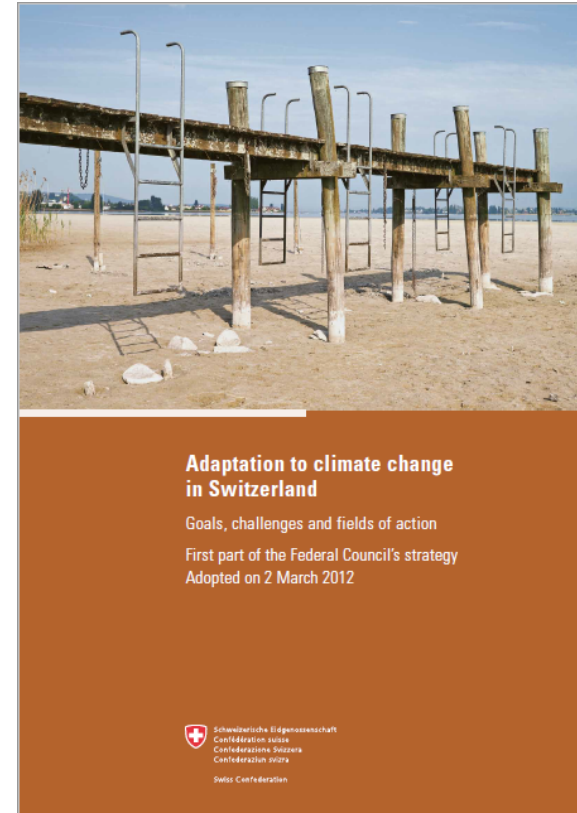
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Introduction

Homework 5 aim:

- Assessment of the direct and indirect health impacts caused by climate adaptation strategy
 - Discussion,
 - Identification and
 - Explanation of decisions and options
- Based on questions



1. Aims of the Switzerland's strategy (1/3)

- Create a framework for the course of action to adapt to climate changes in future
- Main challenges:
 - Greater heat stress (cities)
 - Increasing summer drought
 - Flooding
 - Decreasing slope stability
 - Rising snowline
 - Impaired quality of water, soil and air
 - Habitat change
 - Spread of harmful organisms, diseases, alien species



1. Aims of the Switzerland's strategy (2/3)

- Focus on adaptations to climate change in Switzerland – not on the climate changes with origin from outside
- Aim to make the most of opportunities arising from climate change
 - Minimizing the risks of climate change
 - Improving the adaptive capacity, economy and environment
- For the whole Switzerland – everyone would benefit
 - Benefits from sector specific actions are more sector specific



1. Aims of the Switzerland's strategy (3/3)

- Principles:
 - Principle of sustainability
 - Aim to involve the whole society
 - Build on existing strategies and not counteract them (i.e. reduction of greenhouse emissions)
 - Adaptations need to be based on scientific findings
 - Risk approach (analysis, evaluation and comparison of risks)
 - Uncertainties need to be considered
 - Adaptations strategies need to consider different timescales in different systems affected by the climate change
 - International exchange of knowledge
 - Regular evaluation of climate change adaptation advances
 - Adaptation to climate change is dynamic process – adaptation strategies need to be regularly revised



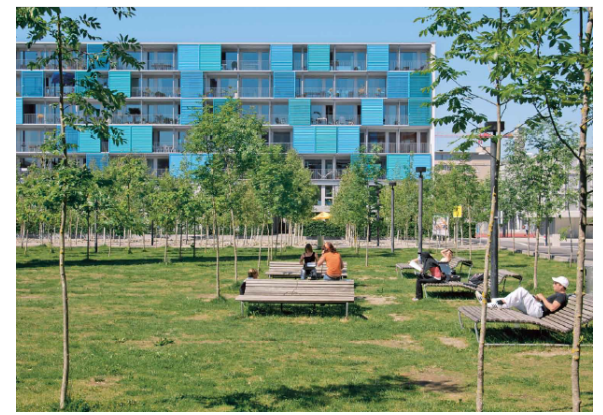
2. Actions needed (1/2)

- Strategy implementation by federal offices
- Actions for realization include cooperation of Federal Office for the Environment (FOEN), the Confederation, Cantons and private individuals:
 - FOEN will draft first action plan of adaptation strategy
 - Improvement of knowledge (climate scenarios – modelling etc.)
 - Achievement of adaptations aims in different sectors – 9 sectors defined:
 - water management, natural hazards management, agriculture, forestry, energy, tourism, biodiversity management, health, spatial development
 - Cooperation between sectors (supervised by FOEN)
 - Evaluation of needed funding
 - Coordination at the institutional levels of Cantons and Confederation
 - Evaluation of success, regular reviews of achieved goals
 - Strategy development



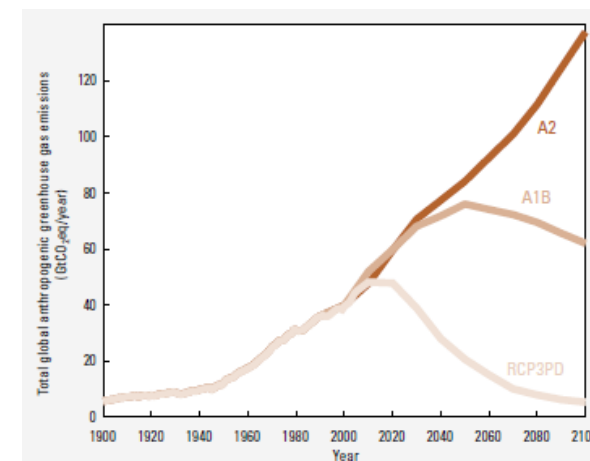
2. Actions needed (2/2)

- Sector specific actions (some examples):
 - Water management - develop new policies for water storage/water distribution, regionalize wastewater treatment
 - Natural hazards management - develop and improve the methods for identification of natural hazard processes
 - Agriculture - take measures to prevent erosion, nutrient leaching and to reduce soil compaction
 - Forestry - prevent major bark beetles outbreaks to avoid damage
 - Energy - secure the hydropower contribution to maintain security and supply
 - Tourism - safeguard and develop winter sports
 - Biodiversity management - identify climate-sensitive species and reduce loss of genetic diversity
 - Health - be prepared for the heatwaves according to risk degree and raise awareness
 - Spatial development - create green spaces



3. Decisions needed to enable actions (1/2)

- Consider responsibilities of different stakeholders
- Need for good knowledge transfer between Confederation, Cantons, municipalities and towns
- Close collaboration with EU, especially with neighboring countries must be maintained
- Include needed resources in financial plans (at all levels)
- No legislative action needed for main action measures
- To raise awareness - Change Adaptation Information Platform and Climate Change Adaptation Pilot Program (managed by FOEN and others)
- Need for realistic estimates of climate change effects
 - Regional scenarios need good spatial resolution
- Development of good monitoring system



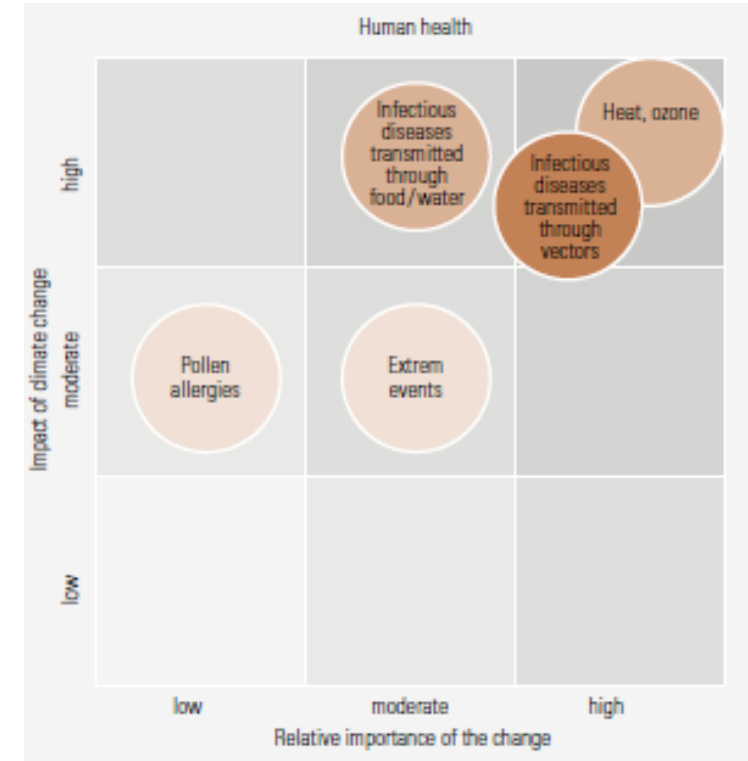
3. Decisions needed to enable actions (2/2)

- Decision makers:
 - Adaptation strategy coordinated by Interdepartmental Committee on Climate (IDA Climate) involving:
 - Federal Office for Spatial Development (ARE),
 - Federal Office for Civil Protection (FOCP),
 - Federal Office for the Environment (FOEN),
 - Federal Office of Public Health (FOPH),
 - Swiss Federal Office of Energy (SFOE),
 - Federal Office for Agriculture (FOAG),
 - Federal Veterinary Office (FVO),
 - Federal Finance Administration (FFA),
 - Federal Office for Meteorology and Climatology (MeteoSwiss) and
 - State Secretariat for Economic Affairs (SECO)
- Final decision making by federal and local governments

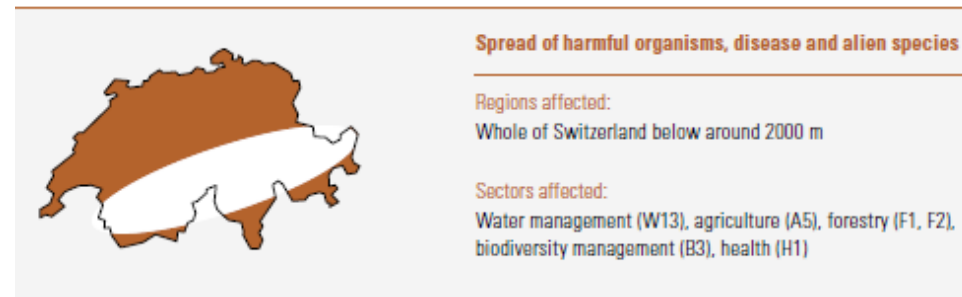


4. Health impacts (1/2)

- Actions taken will prevent or reduce effects of climate change on public health
- Aimed to avoid direct effects (targeting especially the most susceptible groups):
 - Heat stress
 - Cardiovascular problems
 - Respiratory problems
 - Prevent the spread of pathogens, pollutants, allergens etc.
- Indirect health impacts considered by actions in other sectors



4. Health impacts (2/2)



- Health impacts aimed for the entire population of Switzerland
 - Local actions may affect more locally
 - Actions done also by other countries can have a regional or even global impact
- Adaptation strategy does not consider health impacts as much as the impacts in other sectors
 - But it does identify interfaces between health and other sectors – showing that health impacts cannot be disregarded
- Strategy does not include specific actions (i.e. no actual cost-benefit analysis) but is planned to benefit all sectors
 - Usually prevention measures less costly than no actions at all – win-win in the long run



5. Question formulation

- How will the Swiss Confederation ensure that the actions taken in other sectors identified in the adaptation strategy will take into account direct/indirect health impacts?

6. Shared understanding

- The strategy did try to consider shared understanding principles – inclusion of different contributors. They also identified the needed improvements and future development.



Value & wider perspective of HW5

- Exercise assessment of a REAL adaptation strategy
- The questions helped in guiding the assessment and identify wanted results
 - Specific strategy may not consider all aspects included in the questions (eg. not enough detailed strategy)
- It is hard to evaluate a strategy only from one document (the rest being in other language)
- Nice to get to know an actual decision-making process (all the actors included in a real case)
- Some aspects of open assessment and co-creations considered in adaptation strategy (involvement of many stakeholders, transfer of knowledge etc.)





Thank you for your attention.

References

- Federal Office for the Environment (FOEN). 2012. Adaptation to climate change in Switzerland Goals, challenges and fields of action First part of the Federal Council's strategy Adopted on 2 March 2012. Available [here](#).
- Federal Office for the Environment (FOEN). 2014. Adaptation aux changements climatiques en Suisse. Plan d'action 2014–2019. Deuxième volet de la stratégie du Conseil fédéral du 9 avril 2014. Available [here](#).
- More info on the strategy: <http://climate-adapt.eea.europa.eu/countries-regions/countries/switzerland>

