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Department of the Environment, Transport, Energy and Communications

Federal Office for the Environment FOEN

Addressing climate change and biodiversity at national level: the experience of Switzerland

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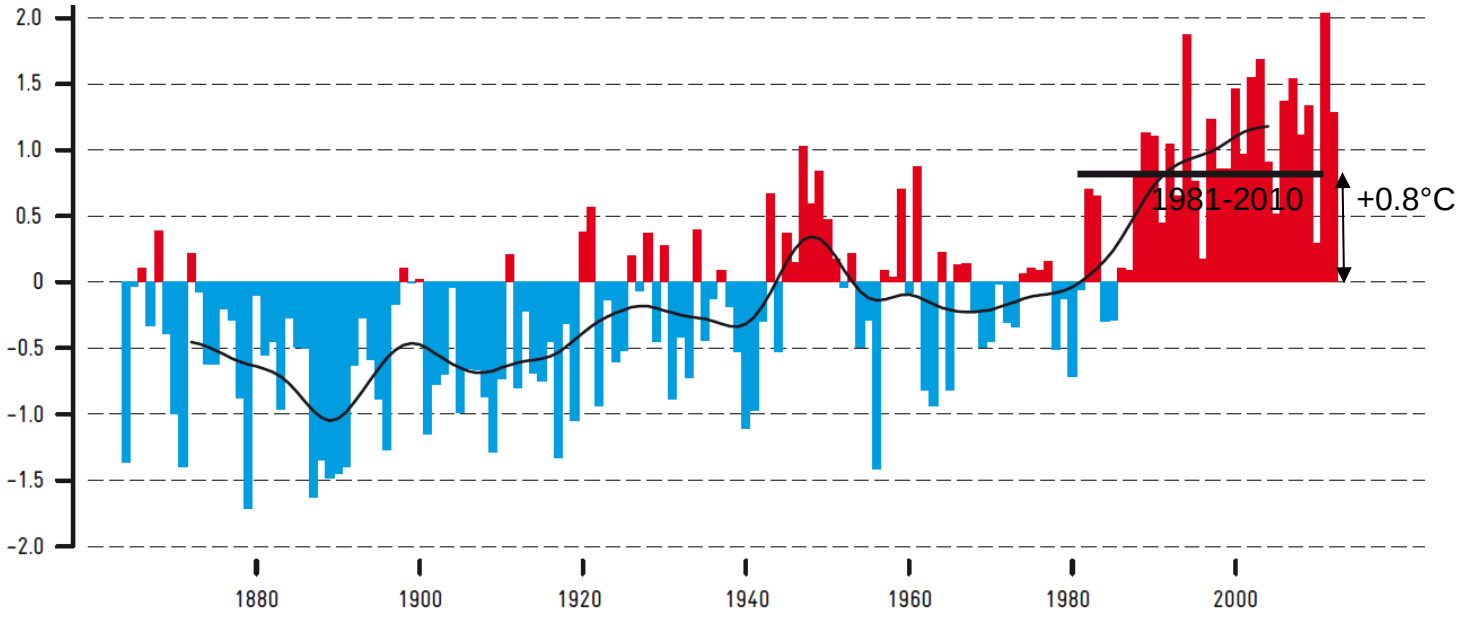
Climate change in Switzerland

Mean annual temperature Switzerland 1864-2012

Deviation from mean temperature 1961-1990



Source: MeteoSwiss 2014

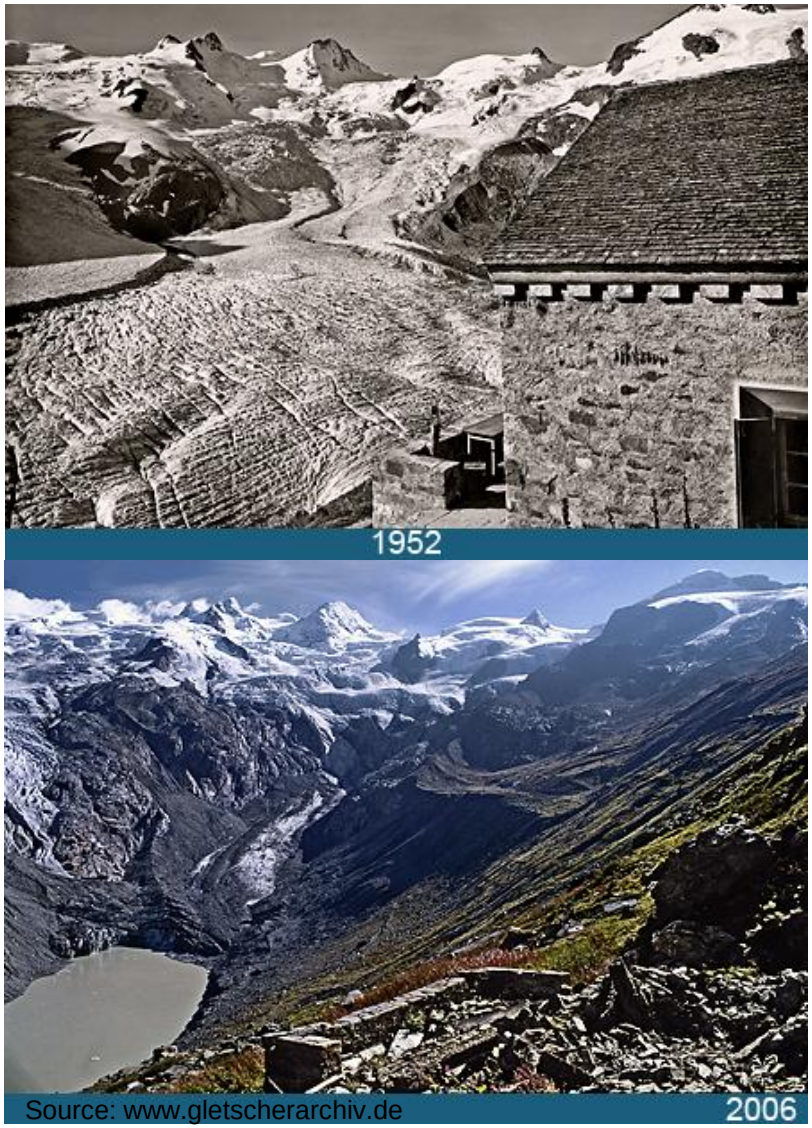
- Global average temperature: +0.85°C
- Switzerland: +1.5°C

Climate change in Switzerland

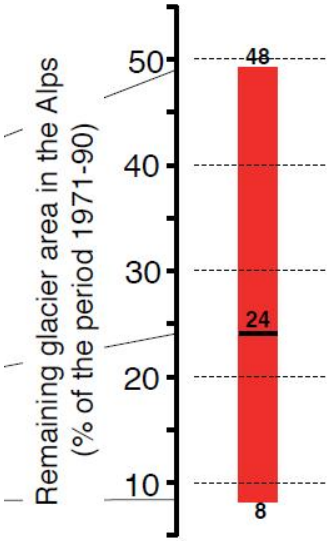
Impacts

Glaciers

Rosegg glacier (Grisons)



Scenario 2050:



Climate change in Switzerland
Impacts

Extreme events and natural hazards

Increasing frequency and intensity of

- heavy precipitation (winter)
- flood risk (winter and spring)
- slope instabilities, landslides, rockfalls
- heat waves
- droughts
- heavy storms

➢ increasing damage potential

Climate change in Switzerland
Impacts

Further examples:

- Extended vegetation period
- Enhanced production conditions for crop cultivation
- Destabilization of protection and production forests
- Migration of plant and animal species
- …

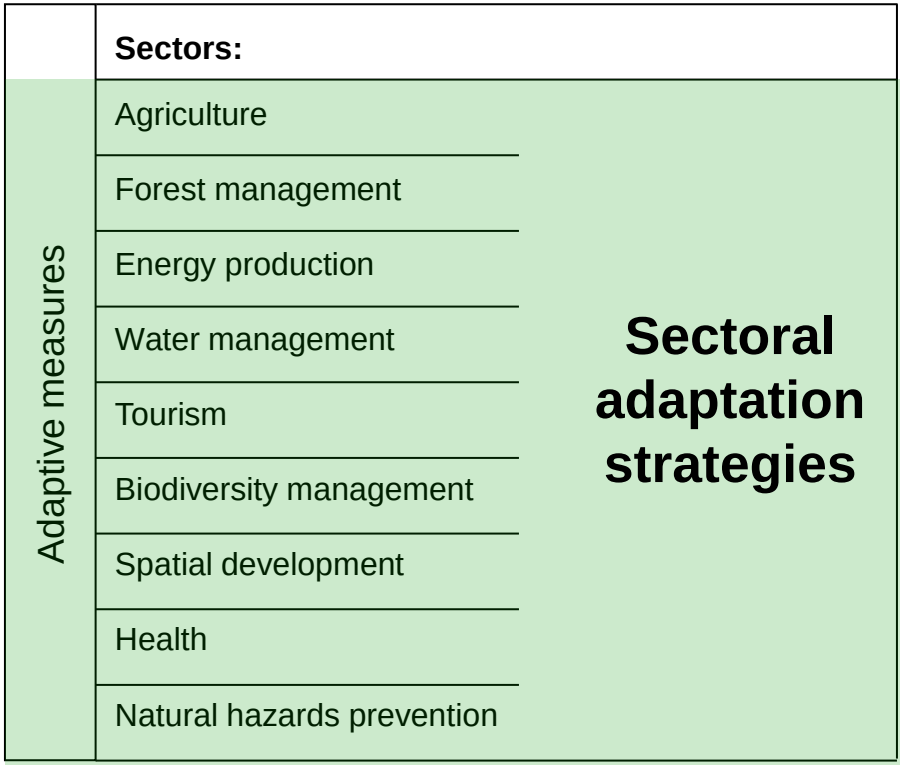


The Swiss adaptation strategy
Objectives

1. Seize the opportunities provided by climate change
2. Minimise the risks of climate change, protect the population and the livelihood base
3. Increase the adaptive capacity of all resources

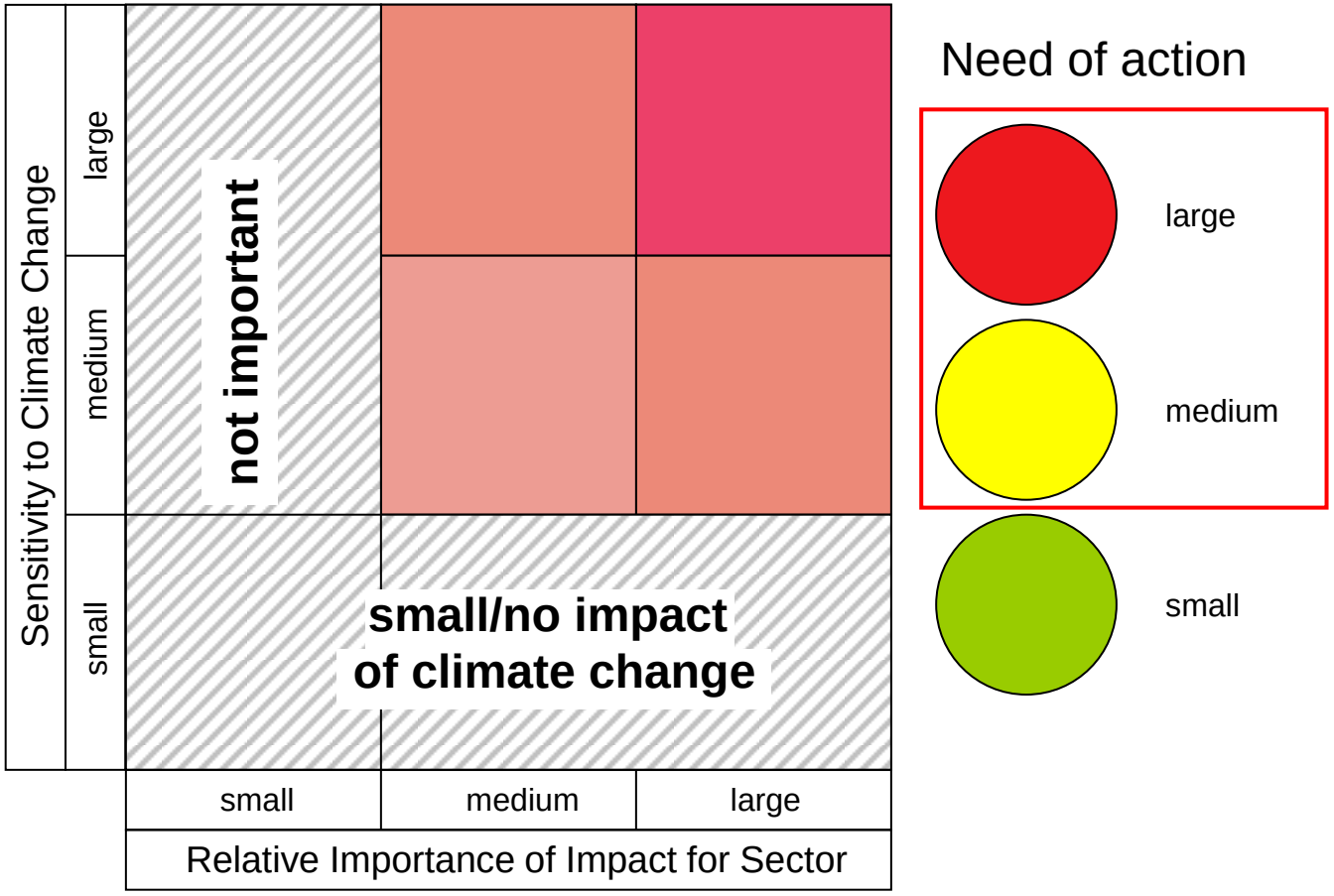


The Swiss adaptation strategy
Important sectors



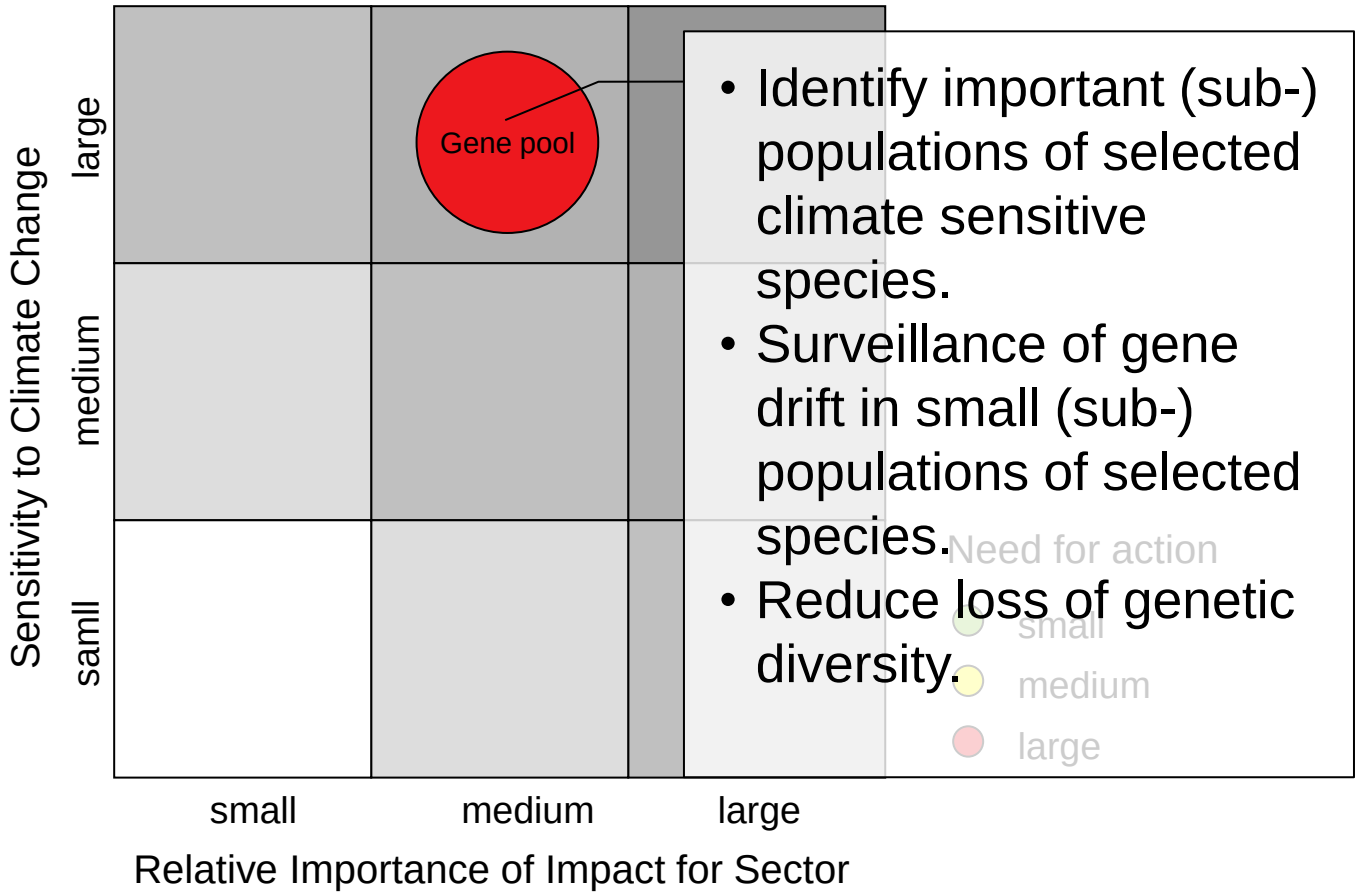
Development of sectoral strategies

Identification of main fields of action



Biodiversity management

Aims of adaptation for identified fields of action

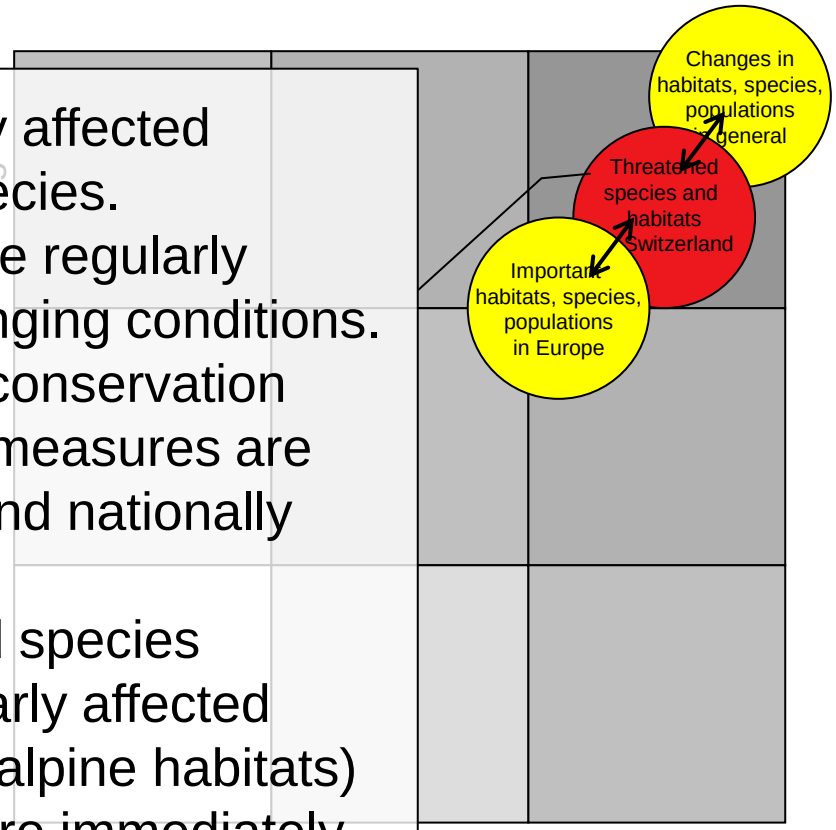


- Identify important (sub-) populations of selected climate sensitive species.
- Surveillance of gene drift in small (sub-) populations of selected species.
- Reduce loss of genetic diversity.

Biodiversity management

Aims of adaptation for identified fields of action

- Identify primarily affected habitats and species.
- Assessments are regularly adjusted to changing conditions.
- The necessary conservation and supporting measures are internationally and nationally coordinated.
- For habitats and species already particularly affected (moist habitats, alpine habitats) first measures are immediately taken.



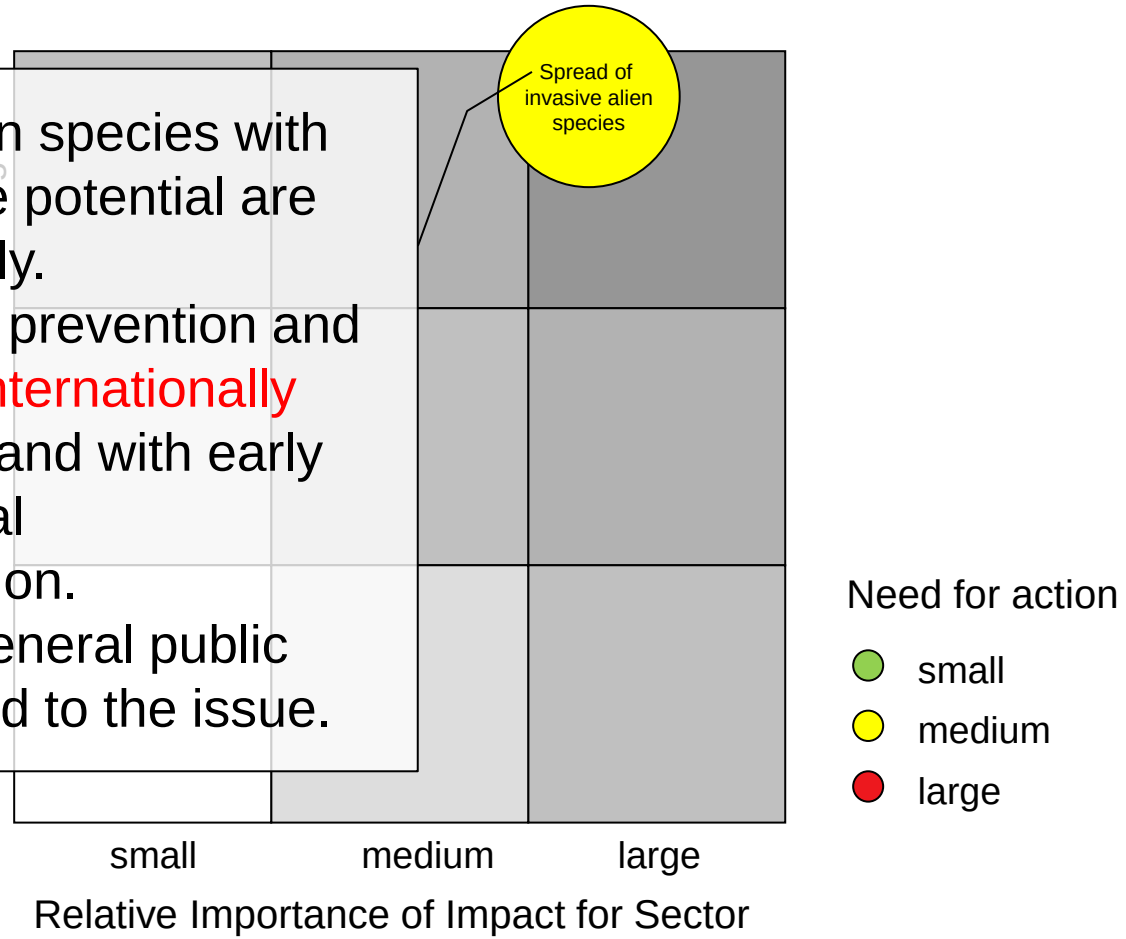
Need for action

- small
- medium
- large

Biodiversity management

Aims of adaptation for identified fields of action

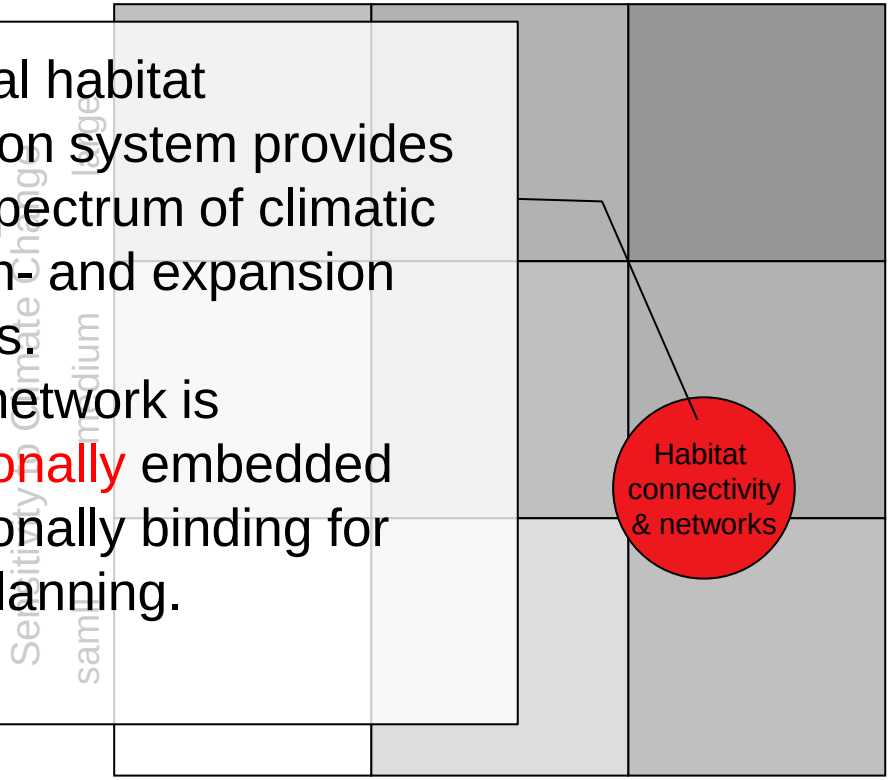
- Invasive alien species with high damage potential are detected early.
- Measures of prevention and control are internationally harmonized and with early trans-sectoral implementation.
- Trade and general public are sensitised to the issue.



Biodiversity management

Aims of adaptation for identified fields of action

- A national habitat connection system provides a wide spectrum of climatic migration- and expansion pathways.
- Habitat network is internationally embedded and nationally binding for spatial planning.



Need for action

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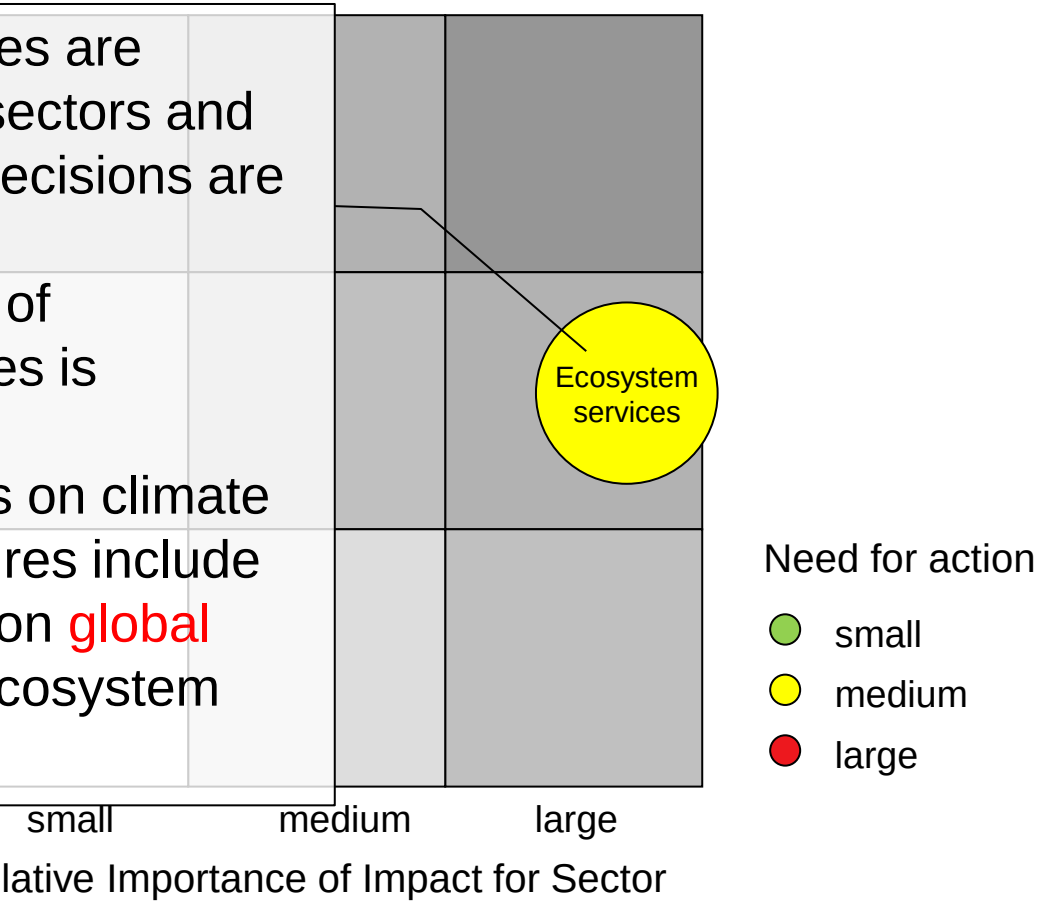
Biodiversity management

Aims of adaptation for identified fields of action

- Ecosystem services are recognized in all sectors and respected when decisions are made.
- The development of ecosystem services is surveyed.
- National decisions on climate adaptation measures include potential impacts on global biodiversity and ecosystem services.



Action plan to the Swiss adaptation strategy

8 domains for measures for identified fields of action

Biodiversity management:

- Risk evaluation and management verification for particularly affected populations, species and habitats
- Standards for the arrangement of green and open spaces in settlement areas
- Securing ecological minimum requirements and upgrading measures for habitats depending on sufficient water supply
- Protection and regeneration of peat- and organic soils
- Securing of large-scale habitat quality in higher altitudes
- Applying climate scenarios in the early detection of and action against invasive alien species
- Promotion of biodiversity-friendly control of pest organisms

Implementation of measures in synchrony with the **action plan of the Swiss Biodiversity Strategy** (presently in consultation)

Conclusions

(from a national perspective)

- Climate change does not stop at national/political borders
- National strategy identified several fields of action where international collaboration is needed
- Exchange of knowledge and experience among (neighbouring) countries may help and improve the implementation of national strategies
- Bern Convention GoE is an appropriate forum to provide the relevant framework and support