CLIMATE CHANGE LEGISLATION IN SWITZERLAND

AN EXCERPT FROM

The 2015 Global Climate Legislation Study
A Review of Climate Change Legislation in 99 Countries

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Switzerland

Legislative Process

Switzerland is a federal state with 26 cantons that enjoy far-reaching autonomy. The government, parliament and courts are organised across the federal level, the cantonal level and the communal level. There is a strong tradition of subsidiarity in the form of cantonal and communal self-determination and self-governance. The federal level aims to establish a minimal amount of national standards and holds responsibility for supra-cantonal policy areas. In consequence, constitutional law states that legislative power rests with the sovereign cantons unless it is explicitly assigned to the federal level.

The Swiss Parliament consists of two legislative chambers. The 200 members of the National Council are elected every four years based on a refined proportional representation system with modifications for smaller cantons. The last federal election was held in 2011 and the next will be held in October 2015. The cantons are represented in the second chamber, the Council of States. Its 46 members represent the 20 full cantons (two representatives each) and the 6 half cantons (one representative). The two chambers discuss new laws separately in an iterative process until an agreement can be reached. Because representing a constituency in the Parliament is not a full-time job, parliament meets only 4 times per year for several weeks. The meetings are supplemented with one-day conferences of the different commissions, where members of parliament represent their parties’ interests. The seven members of the federal government form the ‘Bundesrat’ (Federal Council). As heads of government departments they hold equal rights and can be re-elected without legal limit to their total term of office. They meet weekly and take decisions either by majority voting or consensus. At the beginning of a new four-year term, the Federal Assembly consisting of the National Council and the Council of States elects the Federal Council in the December following the parliamentary election (and the frequently jointly held Council of States election). The Swiss Presidency rotates among the members of the Federal Council each year.

Direct democracy plays a crucial role in the legislative process. There are frequent referenda on laws passed by the Parliament, some mandatory while others are discretionary if 50,000 citizens demand for it. Citizens can also submit proposals to change the Swiss constitution if supported by 100,000 signatures. The relatively small population and long tradition of direct democracy have so far had a stabilising effect on Swiss politics as they increase parties’ willingness to compromise, favour large coalitions and are likely to block extreme laws.
Approach to Climate Change

Swiss climate legislation takes an integrated approach, whereby climate mitigation and adaptation objectives are mainstreamed into areas with major GHG emissions. While Switzerland is not a member of the European Union, it has made many laws compatible with European legislation and co-ordinates in a wide range of policy areas with the EU via bilateral agreements and the European Economic Area.

According to the constitution, combating climate change is part of the objective of the Confederation and the Cantons to achieve sustainable development as well as to protect the environment and to ensure an environmentally sustainable energy supply by reducing energy consumption and increasing the use of renewable energies. The CO2 Act, passed in 2000, set emission reduction objectives for 2008 to 2012. It was fully revised in 2013 to set new emission reduction objectives for the post-2012 period, and to ensure the co-ordination of adaptation measures.

In 2011, in the aftermath of the nuclear accident in Fukushima, the Federal Council and the Parliament decided to exit step by step from nuclear power production. This decision led to the formulation of a new long-term energy policy (Energy Strategy 2050). In 2013 the Federal Council submitted to Parliament a first set of measures under the strategy. The package includes a set of policies and instruments to foster the use of renewable energies, to improve energy efficiency and so to reduce energy and power consumption until 2020. The strategy will also contribute to the long-term goals of climate policy – to reduce annual GHG emissions to 1-1.5 tonnes per person. The proposal is currently under parliamentary debate and is expected to be adopted by 2017.

Key proposal for the second set of measures of the Swiss Energy Strategy 2050 is a tax reform on fuels and electricity that includes a redistribution of revenues and might merge the feed-in tariffs and CO2 levy into a single levy.

The Interdepartmental Climate Change Committee oversees implementation and monitoring of policy and processes related to climate change. SwissFlex, the national secretariat for the flexible mechanisms, was established in 2004 to be the Designated National Authority under the CDM and Designated Focal Point under JI.

Switzerland has a multitude of laws, ordinances, plans and programmes that have co-benefits for climate mitigation and adaptation, too numerous to provide an exhaustive list in this report. Policy measures are frequently combined to implement or modify initiatives and can be superseded by more recent policies, while a multitude of policies integrate climate objectives at the cantonal level.

Despite the federal structure and special status of the cantons, many direct climate-related measures are co-ordinated and implemented at the federal level. For example in the industry sector, the CO2 levy, the ETS and the emission
reduction targets for companies not participating in the ETS are implemented at the federal level.

The cantons are self-governed and widely independent entities that also set up a wide range of climate-related measures, which are further implemented by the communities and municipalities. Most of these initiatives focus on measurable emission reductions in sectors including heating in buildings, municipal transportation, adaptation measures and education.

**Energy supply**

Electricity generation predominantly focuses on hydropower (56%) and nuclear power (39%), with oil and gas imported for transportation and heating. Switzerland introduced a feed-in tariff for electricity from renewable energy sources in 2009 in conjunction with a liberalisation of the electricity market to make renewable energy more competitive with fossil-fuel based electricity. In 2011 the solar/PV scheme was so popular that the allocated funding was exhausted and several projects were postponed. The funding of CHF320m (USD334m) for 2013 is capped for the different types of renewable energy sources at 50% for hydropower, 30% for wind power and 5% for solar PV.

In 2013 the Federal Council adopted a legislative package in line with Energy Strategy 2050, in the wake of the 2011 decision to phase out nuclear power. After Fukushima, it became clear that Swiss citizens would not approve any new nuclear plants. The package, which consists of amendments to various laws, is now being debated in the Parliament. Electricity liberalisation has been delayed in the face of nuclear phase out and a public consultation started in October 2014 on the liberalisation of electricity supply that implements the Federal Electricity Supply Act (2007).

**Energy demand**

The Swiss Energy programme aims to reduce energy consumption by 10% compared to 2000 levels, with electricity consumption being no more than 5% above 2000 levels and renewable energy meeting 3% of electricity and heat demand. Other measures to reduce energy demand include liberalisation of the electricity market, new building codes, energy efficiency and renewable energy action plans. Industrial emissions are predominantly addressed with carbon pricing measures such as the CO₂ levy and the domestic ETS.

The buildings programme of the confederation and the cantons 2013-2016 aims to reduce energy use and increase energy efficiency in the buildings by means of renovation, use of optimal energy efficiency technology, waste heat recovery and generating power in each building. Review of the programme is conducted every year. 2012 was the final year of the previous phase and completed projects include solar-oriented design in urban areas, buildings as power stations and buildings as intelligent technical control systems. New projects starting between 2012 and 2013 included development of a cost-effective air-gel insulating material and investigation of effective insulation thickness of buildings.
Targets for energy demand include the following: the average annual per capita energy demand in 2020 is to be lowered by 16% from 2000 levels and 43% by 2035. Energy demand in 2020 is to amount to 213TWh, compared to 245TWh in 2012. Average annual electricity use per capita is to decline by 3% by 2020 and 13% by 2035 from 2000 level. This implies electricity demand will stabilise (64TWh in 2020 against 63.4TWh in 2012) despite continued population (and economic) growth.

**Carbon pricing**

Pricing GHG emissions to incentivise lower fossil fuel consumption and to raise revenue for (exclusively) climate mitigation measures is a key feature of Swiss climate policy. Switzerland introduced a carbon levy for stationary fuels in 2008, which was increased from CHF12 to CHF36 (USD12.5-USD37.6) per tonne CO₂ in 2010, and then further increased to CHF60 (USD62.7) in 2014, with a third of the revenues – and no more than CHF300m (USD313m) a year as of 2013 – earmarked for the buildings programme to cut emissions in the building sector. Firms exposed to international competition and for which the carbon tax would be a substantial burden are exempted from the tax in exchange for committing to emission reductions. The largest ones participate in the Swiss Emission Trading Scheme (ETS), the linkage of which with the EU ETS is under negotiation.

**REDD+ and LULUCF**

Switzerland’s forests are protected from land use changes via the Forest Act, which prescribes sustainable forest management, bans deforestation unless an equal area of afforested land replaces the cleared area or equivalent measures to improve biodiversity are implemented. The national forest programme describes in its action plan for 2004-2015 the priority areas of guaranteeing the forest’s protective functions, conserving biodiversity, improving the economic viability of the forestry sector, strengthening the value chain for wood and protecting forest soils, trees and drinking water. The rate of wood harvesting is likely to increase, partly to replace fossil fuel intensive building materials such as cement and steel with wood products and partly because of the mature state of the forest stock, which is likely to be harvested in the near future, thus reducing the carbon sink. The agriculture sector accounts for over 10% of overall emissions. Measures integrated into agricultural policy mirror the increasing greening measures within the European Common Agricultural Policy. Policy focuses on product-independent direct payments encouraging farmers to maintain the land according to good environmental standards, subsidising the more efficient use of natural resources, maintaining a suitable proportion of ecological compensation areas, encouraging crop rotation and soil protection, selective application of crop protection agents and reducing the GHG intensity of agricultural production.

**Transportation**

The transportation sector accounts for over 30% of GHG emissions and thus has a large potential for reducing emissions. The focus is on introducing more sustainable modes of infrastructure and transportation by supporting low
emission technologies. Regulations encourage more sustainable modes of passenger transportation through emission standards, the promotion of biofuels, environmental labels for vehicles and supportive climate mitigation measures at the communal and cantonal level. In 2012, Switzerland introduced carbon emission regulations for new cars (CO\textsubscript{2} Ordinance). In line with the respective EU regulation, all importers are mandated to reduce CO\textsubscript{2} emission from their newly registered cars to 130g/km on average by 2015.

From 2005 to 2012, transportation fuels were subject to the Climate Cent, a CHF0.015/litre (USD0.016) levy collected by a private foundation and used to buy emissions certificates in compensation for CO\textsubscript{2} emissions from motor fuels as well as to realise emission reduction projects. From 2013, it was replaced by an obligation for importers of petrol, diesel, natural gas and kerosene to compensate for their transportation-related CO\textsubscript{2} emissions (if > 1,000 tCO\textsubscript{2}). The compensation rate is to be raised in three steps and amount to: 2\% for 2014 and 2015; 5\% for 2016 and 2017; 8\% for 2018 and 2019; and to reach 10\% by 2020.

Freight transportation is to be moved from the road to the railways and subject to a heavy vehicle fee, which differentiates not only according to the distance travelled and the gross weight, but also the pollution intensity of the vehicle based on EURO classes/ emission standards. There are also aircraft engine emissions charges.

**Adaptation**

The Swiss National Adaptation Strategy is a response to the risks associated with the unavoidable consequences of climate change. These are in particular increased melting rates of Alpine glaciers and the destabilisation of permafrost soil resulting in landslides, changes in surface runoff, flooding of valleys and irregular water levels in rivers and hydropower-related reservoirs. Biodiversity in the fragile Alpine ecosystems is also very likely to be affected. An integrated approach spanning different policy areas and involving various stakeholders is required to effectively address these challenges.

The Strategy aims to serve as framework for federal offices to adopt co-ordinated action in response to adverse climate effects. It is split into two parts. The first part, which describes the goals, challenges and fields of action in adapting to climate change, was adopted by the Federal Council in 2012. In the second part, adaptation measures are presented and co-ordinated in a joint action plan, which was adopted in 2014.
Switzerland: Legislative Portfolio

<table>
<thead>
<tr>
<th>Name of law</th>
<th>CO₂ Act (Act 641.71, fully revised version)</th>
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<tbody>
<tr>
<td>Date</td>
<td>1 January 2013</td>
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<tr>
<td>Summary</td>
<td>The CO₂ Act is at the core of Swiss climate legislation and has been updated several times, including for meeting Swiss commitments under the UNFCCC. The most recent version of the CO₂ Act is a full revision of the 2000 CO₂ Act, which has been partially revised several times, and a response to the need for post-2012 climate legislation until 2020. The revision of 1 January 2013 sets out a number of targets, measures and strategies to address climate change via emission reductions in Switzerland, including market-based carbon trading mechanisms. Key aspects are:</td>
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reduce CO₂ emissions via lower energy use in buildings and support for renewable energy sources. One third of the revenues (and no more than CHF300m USD313.4m) from the CO₂ tax and cantonal funds are channelled into the Building programme. Two updates of the programme were necessary as a result of its popularity. These aim at accommodating the 48,000 applications that were received since 2010.

The 2000 CO₂ Act focused on meeting the Kyoto Protocol commitment of overall GHG emission reductions of 8% in the 2008 – 2012 period compared to the 1990 base line. The CO₂ Act set an emission reduction objective of 10% for CO₂ emissions for the period 2008-12 compared to 1990 levels (CO₂ emissions represent around 80% of Switzerland’s GHG emissions under the Kyoto Protocol). It contained a number of policy measures, which were further specified in action plans, programmes and policies and have been amended based on the changes to the CO₂ Act since 2000. Those include:

- CO₂ levy for thermal fuels
- Climate cent on transportation fuels
- Voluntary commitments
- Cross-cutting measures in areas suitable to climate policy integration
- Use of cap and trade market mechanisms and flexible mechanisms
- Requires the Federal Council to propose further GHG emission reduction targets for period after 2012 leading up to 2020.

<table>
<thead>
<tr>
<th>Name of law</th>
<th>Mineral Oil Tax reduction on Biofuels and Natural Gas (Mineral Oil Tax Act) (amendment)</th>
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<tbody>
<tr>
<td>Date</td>
<td>1 July 2008</td>
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| Summary     | The Mineral Oil Tax Act was amended to provide tax incentives for low carbon fuels. It contains provisions that allow a tax reduction of CHF0.40 (USD0.42) per litre petrol for natural gas and liquefied petroleum gas (LPG). Furthermore, biogas and other fuels from renewable energy sources are fully exempted from the Mineral Oil Tax under the condition that they fulfil ecological and social criteria. These include:
  - Minimum of 40% GHG reduction
  - Net environmental burden does not significantly exceed the environmental burden of fossil fuels
  - The cultivation of biofuels must not endanger biodiversity, in particular rainforests
  
  In contrast to other countries, in particular the EU, Switzerland has no percentage target for biofuels. |

<table>
<thead>
<tr>
<th>Name of law</th>
<th>Federal Heavy Vehicle Fee Act 641.81 and Federal Heavy Vehicle Fee Ordinance 641.811</th>
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<tbody>
<tr>
<td>Date</td>
<td>1 February 2000 (Federal Heavy Vehicle Fee Act)</td>
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<td></td>
<td>1 January 2001 (Federal Heavy Vehicle Fee Ordinance)</td>
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</table>
| Summary     | Freight transportation is subject to the heavy vehicle fee (HVF). In 2008 it was levelled off at CHF0.0275 (USD0.0287)/tonne/km. It differentiates according to three aspects:
  - Distance travelled in Switzerland
  - Gross weight
  - Pollution intensity of the vehicle based on EURO classes/ emission standards. It applies to road vehicles over 3.5 tonnes and aims at internalising the external costs of road transportation, especially goods in transit through Switzerland. The revenue is shared between the cantons (1/3) and the federal government (2/3). While the cantons predominantly use the revenues as compensation for road costs they incur, the revenues attributed to the federal government are invested into rail transportation projects such as Rail 2000, New Transalpine Rail Routes (NEAT), links to the European high-speed network and rail noise control programmes. |
### Climate Change Legislation – Switzerland

<table>
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<tr>
<th>Name of law</th>
<th>Energy Act 730.0 and related regulation</th>
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<tr>
<td><strong>Date</strong></td>
<td>1 January 1999</td>
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#### Summary

The Energy Act (as amended notably by the 2007 Electricity Supply Act, in force since 01/01/2009) and related Ordinances (see below) provide the basis for a “sustainable and modern Swiss energy policy” (Swiss Federal Office of Energy). The main aim of the Act is to contribute to an adequate energy supply – i.e. diversified, safe, economical and compatible with the requirements of environmental protection. Its principal goals include:

- ensure production and distribution of economic power, compatible with the requirements of environmental protection
- promote the efficient and rational use of energy
- encourage the use of indigenous and renewable energy

The Act provides three main targets, to be reached in co-operation with the Cantons, the energy sector and other stakeholders:

- The average annual electricity production from renewable sources is to be increased by at least 5,400 GWh by 2030 compared to 2000. Up to 10% of the required target can be met by renewable electricity generation abroad (e.g. CDM).
- The average annual hydro-power production is to increase by at least 2,000 GWh by 2030 compared to 2000
- Households’ final energy consumption must be stabilised by 2030 at the level it would have had at the entry into force of this provision (2009)

Among the measures put forward by the Act to meet the above targets are certification of electricity origin (renewable electricity certificates), preferential installation of new renewable electricity or CHP compared to fossil fuel plants, mandatory offtake for renewable electricity for utilities (conditions apply) with financial support for solar PV plants (30kW max), and energy labelling for buildings, vehicles and appliances.

The Energy Ordinance specifies the provisions of the Energy Act: It includes provisions for a feed-in tariff for electricity from solar PV, wind, hydro (up to 10MW), geothermal and biomass. The payments are made for 10, 20 or 25 years and are differentiated according to application, technology and size of the installation. They only apply to installations built, renovated or expanded after 1 January 2006. The overall funding for available feed-in tariffs is capped in 2015 at approximately CHF580m (USD605.9m), with funds to be distributed among the different types of technologies so as to ensure their parallel development (the entire fund cannot assigned to one single technology).

<table>
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<tr>
<th>Name of law</th>
<th>Forest Act 921.0</th>
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<tr>
<td><strong>Date</strong></td>
<td>1 January 1993</td>
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#### Summary

Legislation to support sustainable management of forests and adaptation to climate change.

Its objective is to maintain existing forest cover and protect it as natural habitat. These objectives are combined with maintaining the forests’ protective, welfare and usefulness function as well as to support and maintain the forest economic sector. The forest act also aims to protect humans and capital from landslides, erosion and natural disasters.

Deforestation permits are required for land use changes and public accessibility is to be ensured (except for vehicles). The key overall principle is the sustainable management of the forest to ensure its continued existence with its current level of forest cover, biodiversity and functionality (e.g. its protective function against landslides resulting from melting of glaciers and permafrost soils).

The national forest programme based on the Forest Act describes in its action plan for 2004-2015 the priority areas of guaranteeing the forest’s protective functions, conserving biodiversity, improving the economic viability of the forestry sector, strengthening the value-added chain for wood and protecting forest soils, trees and drinking water.
Switzerland: Executive Portfolio

<table>
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<tr>
<th>Name of Policy</th>
<th>Ordinance for the Reduction of CO2 Emissions (CO2 Ordinance), SR 641.711</th>
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<tbody>
<tr>
<td><strong>Date</strong></td>
<td>1 January 2013</td>
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**Summary**

The CO2 Act is the core of Switzerland's climate policy: its objectives, instruments and measures. The CO2 Ordinance specifies how the different instruments are implemented and contains more detailed regulations on all the instruments mentioned in the CO2 Act. Details of the CO2 Levy on Process and Heating Fuels has been integrated under this Ordinance, which originally stipulated the following:

The initial levy was set at CHF12 (USD12.5) per tonne of CO2, which equates to CHF0.03 USD.03)/litre of heating oil and CHF 0.025 (USD.026)/m³ of natural gas. As CO2 emission reductions were not on track to meet the commitments, the CO2 tax was increased to CHF36 (USD37.6) per tonne of CO2. The revenues of the first phase (2008-2010) were redistributed to employers and to the population on a per-capita basis. Since 2010, one third of the revenues have been channelled to the building refurbishment programme (about CHF300m, USD313m).

<table>
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<tr>
<th>Name of Policy</th>
<th>Regulation on the CO2 Emission for New Passenger Vehicles</th>
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<tr>
<td><strong>Date</strong></td>
<td>1 May 2012</td>
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**Summary**

Following from the CO2 Act, the Regulation specifies that all newly registered cars are subject to the overall average value of CO2 emissions of 130g CO2/km by 2015. If the average emissions from a passenger car fleet exceed the emission standards, the vehicle importer must pay a fee. There are exemptions for second hand cars (registered for more than 6 months at home or abroad) and (residential) utility vehicles. This applies to both large scale importer (50 or more new registered cars per year) and small scale importer (50 or less new registered cars per year including individual importer).

From 2012 to 2018, the first gram of CO2 above target will be penalised at CHF7.5 (USD7.8), second gram at CHF22.5 (USD23.5), third at CHF37.5 (USD39.2). Excess emissions beyond will incur a sanction of CHF 142.5 (USD148.9). From 2019, the maximum sanction applies to all excess emissions.

The revision on 30 November 2012 accompanies the revision of CO2 Act, by providing instruments to meet 20% emission reduction by 2020 compared to 1990 level. The instruments include the following:

- Reduce emission from buildings (40%), transport (10%) and industrial (15%) sectors by 2020
- Increase CO2 levy if the reduction target for thermal fuel is not met in 2012
- Building programme financed by CO2 levy on thermal fuel
- Fossil fuel importers to compensate 10% of transport-generated CO2 emission by 2020
- Above emission standards of 2012 to continue
- Establishment of technology fund financed with at most CHF25m (USD26.1m) per year from CO2 tax revenue
- Measures to promote information, training and advisory services.
Climate Change Legislation – Switzerland

**Name of Policy**  
*Adaptation to Climate Change in Switzerland: Goals, Challenges and Fields of Action (UD-1055-E) (Swiss National Adaptation Strategy: Part I) and Adaptation to Climate Change in Switzerland: Plan of Action 2014-2019 (1081-F) (Swiss National Adaptation Strategy: Part II)*

**Date**  
2 March 2012 (Part I) and 9 April 2014 (Part II)

**Summary**  
The Swiss National Adaptation Strategy aims to serve as framework for the federal offices to adapt a co-ordinated course of action in response to adverse climate effects. It is split into two parts. The Strategy describes the goals, challenges and fields of action in adapting to climate change in Switzerland. The overall goal of the strategy is to seize the opportunities provided by climate change, to minimise climate change related risks and to improve the adaptive capacity of society, the environment and the economy.

The first part examines the climate change impacts and identifies the most important fields of action of adaptation to climate change in the following sectors:
- Natural hazard management
- Water management
- Agriculture
- Forestry
- Energy
- Tourism
- Biodiversity management
- Health
- Spatial development.

The second part of the strategy is an action plan to reach the strategy's goals. These measures are co-ordinated between the federal offices in order to address the challenges posed by climate change, i.e., effects of heat waves in urban areas, droughts, floods, increasing slope instabilities in the Alps, decreasing snow cover, adverse effects on water, soil and air quality, changes in biodiversity, and the potential spreading of invasive species, vermin and infectious diseases. The adaptation measures need to be carefully aligned with other cross-cutting strategies of the Federal Council.

12 cross-sectoral challenges are identified, including:
- Greater heat stress on agglomerations and cities
- Increasing levels of summer drought
- Greater risk of flooding
- Decreasing slope stability and more frequent mass wasting
- Rising snowline
- Impaired water, soil and air quality
- Change in habitats, species, composition and landscapes
- Spread of harmful organisms, diseases and alien species.

Co-ordinated approach includes the following:
- Working with the cantons, cities and municipalities
  - In the context of sectoral policies
  - Cross-collaboration and coordination
- International cooperation on adaptation to climate change
  - International climate negotiations
  - Adapting to climate change in Europe
  - Collaboration with neighbouring countries.
Sources


FOEN, 2009. Switzerland’s Fifth National Communication under the UNFCCC. Second National Communication under the Kyoto Protocol to the UNFCCC. Bern, Swiss Confederation. [URL: http://unfccc.int/resource/docs/natc/che_nc5.pdf].


