Switzerland's second nationally determined contribution under the Paris Agreement 2031–2035

Schweizerische Eidgenossenschaft
Confédération suisse
Confederazione Svizzera
Confederaziun svizra

Swiss Confederation

This submission is made in accordance with Article 4 of the Paris Agreement and UNFCCC decisions 1/CP.21 and 4/CMA.1. According to Decision 1/CP.21, paragraphs 24 and 25, Parties have the obligation to submit to the secretariat their nationally determined contributions at least 9 to 12 months in advance of the relevant session of the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement with a view to facilitating the clarity, transparency and understanding of these contributions, and Parties whose intended nationally determined contribution contains a time frame up to 2030 are requested to communicate or update by 2020 these contributions and to do so every five years thereafter.

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Fleece covers on the glaciers of Zermatt's mountain railways to protect against solar radiation on the Upper Theodul Glacier near Zermatt.
Photo: Peter Baracchi / FOEN

Foreword

Switzerland is pleased to submit its second nationally determined contribution (NDC) under the Paris Agreement covering the years 2031 to 2035.

Switzerland is particularly affected by climate change, with a current climate mean temperature of 2.8 degrees Celsius above pre-industrial levels.

For global warming not to exceed the threshold of 1.5 degrees Celsius, greenhouse gas emissions need to be curbed with effective measures. Avoiding irreversible changes in many areas of the global atmosphere-biosphere-hydrosphere system becomes an increasingly challenging task. Tackling this task is essential to preserve the greatest possible scope for future generations to shape their lives in a prosperous way.

Switzerland is convinced that it is only through concerted action that the global community will be able to act in time to avoid the worst consequences of climate change. Switzerland remains committed to the full implementation of the Paris Agreement.

As a Party to the Paris Agreement, Switzerland fulfils its obligation and contributes to global action on climate change. In past years, emissions generated in Switzerland have decreased, and Switzerland achieved its 2020 target for the second commitment period under the Kyoto Protocol. In 2017, Switzerland submitted its first NDC with a mitigation target to halve its emissions by 2030, which corresponds to an average reduction in greenhouse gas emissions of at least 35 percent in the period from 2021 to 2030. Since then, the Swiss population has inscribed in law the goal to reach net zero greenhouse gas emissions by 2050.

Now it is time to look ahead. Switzerland's second NDC marks a milestone towards net zero by 2050. This NDC is further aligned with the 1.5 degrees Celsius objective and responds to the recommendations of the IPCC. Reducing emissions in line with these commitments will require the decarbonisation of the economy and the creation of framework conditions that enable a sustainable everyday life.

1 Switzerland's second NDC (2031–2035)

Switzerland's second NDC

Switzerland is committed to follow the recommendations of the IPCC in order to limit global warming to 1.5 degrees Celsius. Switzerland's second NDC is to reduce its greenhouse gas emissions by at least 65 percent by 2035 compared to 1990 levels, to be implemented as an emission budget covering 2031–2035. Thus, the target corresponds to a greenhouse gas budget of 106.8 million tonnes of CO_2 equivalents[1], which is equivalent to an average reduction of greenhouse gas emissions by at least 59 percent over the period 2031–2035. The methodological approaches underlying the Swiss NDC are included in this communication.

Further, Switzerland communicates a net-zero target for all greenhouse gas emissions by 2050[2].

1 Subject to recalculation, in accordance with UNFCCC decision 18/CMA.1.

2 Switzerland's Long-Term Strategy and its Supplement define an indicative pathway and indicative sectoral emission development to achieve the net zero target by 2050, available on the UNFCCC long-term strategies portal: *https://unfccc.int/process/the-paris-agreement/long-term-strategies.*

2 A pathway to net zero

The Federal Act on Climate Protection Targets, Innovation and Strengthening Energy Security (Climate and Innovation Act) adopted by popular vote in 2023 defines intermediate targets for emission development (compared to 1990 emission levels) towards net-zero as well as a net-negative pathway thereafter:

- Between 2031 and 2040: minus at least 64 percent on average;
- Until 2040: minus at least 75 percent;
- Between 2041 and 2050: minus at least 89 percent on average.

Indicative targets per sector as set in the Climate and Innovation Act: The reduction targets must be achieved by reducing greenhouse gas emissions in Switzerland compared to 1990 as follows:

1. In the building sector:
- By 2035: minus 66 percent;
- Until 2040: minus 82 percent;
- By 2050: minus 100 percent.

2. In the transport sector (excluding international aviation):
- By 2035: minus 41 percent;
- Through 2040: minus 57 percent;
- Until 2050: minus 100 percent.

3. In the industry sector:
- By 2035: minus 42.5 percent;
- Through 2040: minus 50 percent;
- Until 2050: minus 90 percent.

4. In other sectors (agriculture, waste, F-gases)
- By 2035: minus 33 percent;
- From agriculture by 2035: minus 25 percent[3];
- From agriculture by 2050: minus 40 percent[4];
- Greenhouse gas emissions footprint (i.e. consumption-based emissions over the whole life cycle) of food per capita (compared to 2020): minus 25 percent by 2030, minus 35 percent by 2035, and minus two thirds by 2050;
- Switzerland's agricultural production should contribute at least 50 percent to the food requirements of the Swiss population.

2050 Net-zero target

These sectoral emission reductions targets imply remaining hard-to-abate residual emissions of approximately 13–14 million tonnes of CO_2 equivalents by 2050, that will be addressed through carbon capture and storage (CCS) and carbon dioxide removal (CDR): approximately four million tonnes of CO_2 equivalents in the industry sector and three million tonnes of CO_2 equivalents from waste incineration are foreseen to be captured and stored permanently. Another five million tonnes of CO_2 equivalents originating from the agriculture sector and one to two million tonnes of CO_2 from international aviation are foreseen to be balanced by negative emissions. All enterprises in Switzerland must reach net-zero emissions by 2050 at the latest, taking at least direct and indirect emissions into account.

Net-negative pathway after 2050

According to the Climate and Innovation Act, after 2050, the amount of CO_2 captured from the atmosphere and stored using CDR must be greater than the remaining greenhouse gas emissions.

The Swiss federal and cantonal administrations set the example

By 2040, the federal administration must reach at least net-zero in its emissions. In addition to direct and indirect emissions, emissions generated upstream and downstream by third parties are equally taken into account. The cantons aim at minimum for a net zero emission objective by 2040 for their central administrations, the same goes for enterprises affiliated to the Swiss Confederation. The Swiss Confederation supports them in this role.

3 Climate Strategy for Agriculture and Food 2050
4 Climate Strategy for Agriculture and Food 2050

3 National context

Today, Switzerland's share in global greenhouse gas emissions is around 0.1 percent. In 2022, total greenhouse gas emissions of Switzerland (including LULUCF and indirect CO_2) equated 42.1 million tonnes of CO_2 equivalents. This corresponds to emissions of 4.8 tonnes of CO_2 equivalents per capita, which is below world's average. Both total emissions and average emissions per capita have reached their highest levels in the 1990s and have been falling continuously for several years.

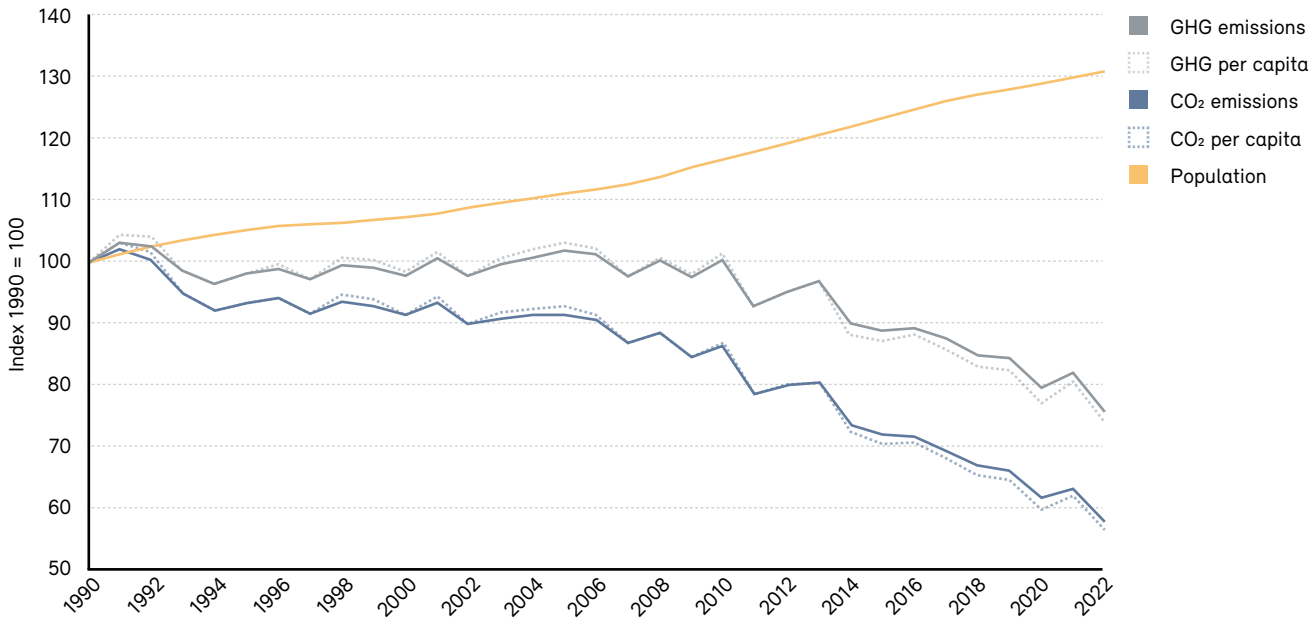
Since 1990, Switzerland has experienced substantial economic and population growth. These two parameters influence the consumption and production of energy, traffic volumes and the number and volumes of heated buildings, which strongly impact greenhouse gas emissions in almost all sectors. Compared with 1990, by 2022, Switzerland's real gross domestic product (GDP) as a measure of economic output had risen by 68 percent, the building space that had to be heated for households increased by 53 percent, 54 percent more passenger cars, motorcycles and coaches were in circulation on Swiss roads and 31 percent more people lived in Switzerland. Greenhouse gas emissions in this period nevertheless decreased slightly: new buildings are better insulated than in the past, cars have become more fuel efficient, and fossil fuels are increasingly substituted with renewable energy sources.

Figure 1 and Figure 2 show the respective reduction over the period 1990 to 2022 in greenhouse gas emissions per capita by 42.3 percent and in greenhouse gas emissions per real gross domestic product by 55.0 percent, indicating a decoupling of economic growth from greenhouse gas emissions.

Figure 1

Relative changes in Switzerland's greenhouse gas and CO_2 emissions from 1990 to 2022 compared to Switzerland's population (1990=100).

Excluding international aviation, maritime transport and land-use change / forestry.



The largest shares of greenhouse gas emissions arise from the transport and buildings sector. Agriculture and industry also contribute substantial shares to Switzerland's total greenhouse gas emissions, while energy industries are less emissions-intensive when compared with many other countries.

Climate change has already left many marks in Switzerland

The environment, society, and the economy are affected. The current climate mean temperature in Switzerland has risen by 2.8 degrees Celsius compared to the pre-industrial average of 1871-1900. The year 2024 in particular was 3.3 degrees Celsius warmer than the pre-industrial period.[5] In the Alps, glaciers have been retreating at an accelerating pace since 1980. Since 1850, glaciers have lost over 65 percent of their volume. If the warming con-

5 Estimated using a non-linear climate trend line to describe the climate evolution (Scherrer et al. 2024: *https://doi.org/10.1016/j.cliser.2023.100428*

Figure 3

Switzerland's greenhouse gas emissions in 2022 by sector. Total emissions: 42.1 million tonnes of CO_2 equivalents.

Including domestic civil aviation (excluding military), excluding international aviation, maritime transport, including land-use change / forestry.

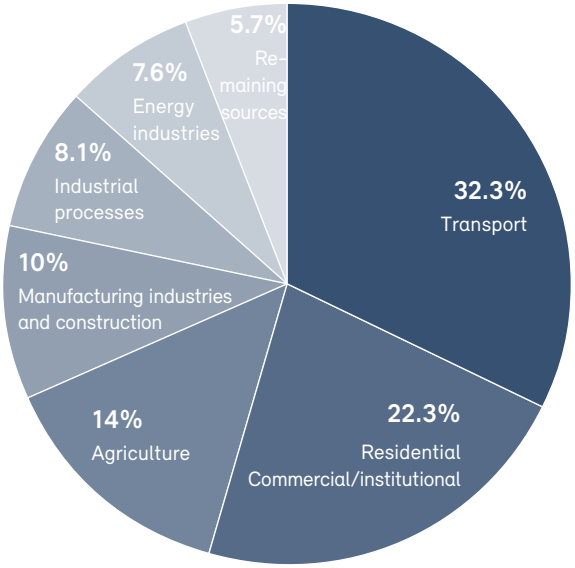
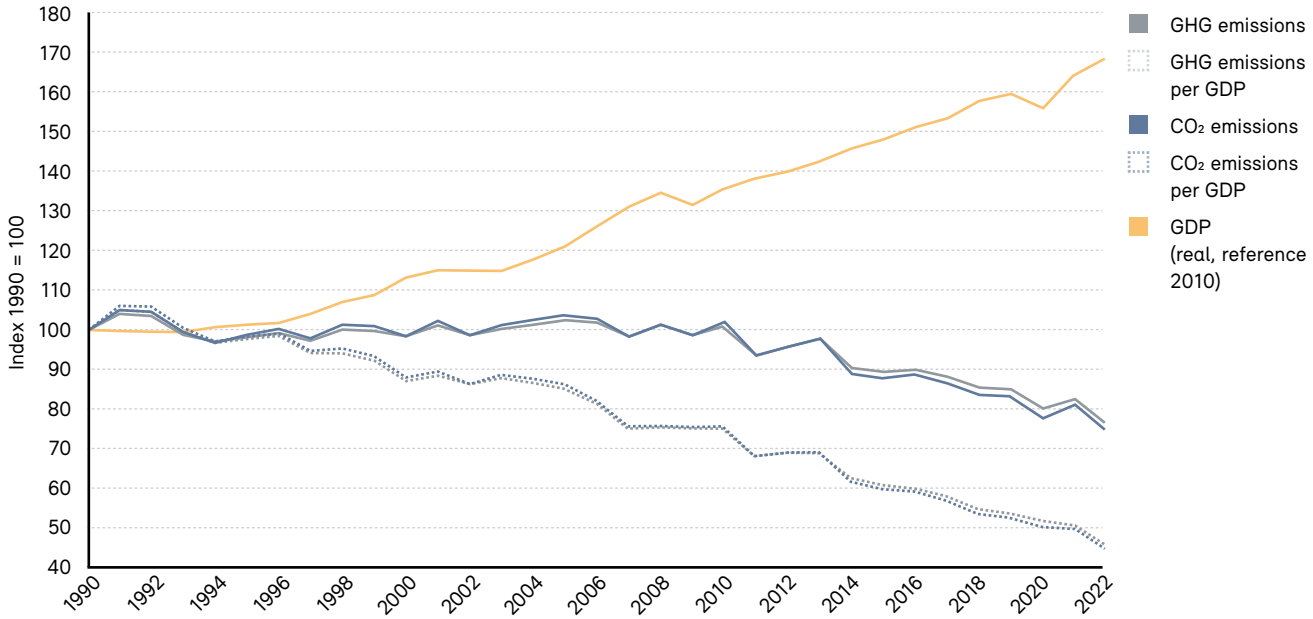


Figure 2

Relative changes in Switzerland's greenhouse gas and CO_2 emissions from 1990 to 2022 compared to Switzerland's real gross domestic product (GDP).

Excluding international aviation, maritime transport and land-use change / forestry.



tinues, only a fraction of the current glacier cover will be left by the end of the 21st century with large impacts on the seasonal availability of water for drinking water, agriculture and power generation. Parallel to the retreat of glaciers, the permanently frozen subsoil (permafrost) in the high mountains also continues to thaw. More frequent mountain and rock falls as well as debris slides that can endanger transport links, infrastructure and human life in the mountains are a result of this. Already today, large investments are necessary to secure infrastructures at higher elevations. People are not only threatened by natural disasters caused by climate change, but their health is also directly affected. Daily maximum temperatures in Switzerland have risen steadily since 1960. Hotter than usual summers have already led to higher mortalities.

Early action

Switzerland has long-standing climate policies. Since 2000 a specific CO_2 Act has been established. Switzerland had committed itself under the first commitment period of the Kyoto Protocol and reached its target to reduce greenhouse gas emissions to 92 percent of base year (1990) emissions over the period 2008 to 2012, including through the use of carbon credits. At the beginning of 2013, the second CO_2 Act, a revision of the first CO_2 Act, entered into force, providing the framework of the Swiss climate policy under the second commitment period of the Kyoto Protocol. Switzerland achieved the committed target – i.e. a reduction to 84.2 percent of base year (1990) emissions over the period 2013 to 2020 – thanks to decisive domestic action and the supplemental use of credits from emission reductions through projects abroad. Recently, the existing legal framework has again been subject to revision in view of Switzerland's commitment under the Paris Agreement for the period from 2021 to 2030. Information on Switzerland's policies and measures which will help strengthen the implementation of its NDC can be found in Switzerland's Biennial Transparency Reports (BTR).[6]

6 *www.bafu.admin.ch/nc-btr* (chapter II.D)

Additional contributions to the Paris Agreement goals

Switzerland's NDC comprises a mitigation target only, in accordance with the Paris Agreement Article 4 and the guidance from decision 4/CMA.1. Additional information on Switzerland's contributions to the global goal on adaptation or to international climate finance can be found in the resources below.

Switzerland's commitment to building resilience

Comprehensive information on adaptation strategies, planning, measures and implementation are found in Switzerland's first adaptation communication under the Paris Agreement (2020)[1] and in Switzerland's 8th National Communication (2022)[2]. Additional information is also available under Switzerland's Long-Term Strategy and Supplement to the second NDC[3].

Switzerland's contribution to international climate finance and consistency of financial flows

Switzerland takes seriously its commitment to provide and mobilize financial support, capacity building, and technology transfer for climate action in developing countries. Switzerland has and will continue to report regularly on its provision of financial support to developing countries, in the context of its Article 9.5 communication[4]. In past years, Switzerland has assessed its fair share towards the USD 100 billion goal to be between 450 and 600 million Swiss francs per year. In 2022, Switzerland's international climate finance contribution amounted 711 million Swiss francs in total, showing our steadfast commitment to effective climate finance. Switzerland intends to continue to contribute its fair share in the context of the new collective quantified goal.

With the Climate and Innovation Act, Switzerland has taken a first legislative step in making financial flows consistent with a low-emission and climate resilient development pathway. According to the Act, the Confederation will ensure that the Swiss financial market makes an effective contribution to low-emission and climate resilient development. This includes taking measures to reduce the climate impact of national and international financial flows. The Federal Council may conclude agreements with the financial sector aimed at making financial flows compatible with climate objectives.

1 Switzerland's adaptation communication has been submitted to the UNFCCC in December 2020: *https://unfccc.int/topics/adaptation-and-resilience/workstreams/adaptation-communications*

2 *www.bafu.admin.ch/nc-btr*

3 Available under the Long-term strategies portal of the UNFCCC: *https://unfccc.int/process/the-paris-agreement/long-term-strategies*

4 Available under the UNFCCC website: *https://unfccc.int/Art.9.5-biennial-communications*

4 Information necessary for clarity, transparency and understanding of nationally determined contributions

1. **Quantifiable information on the reference point** (including, as appropriate, a base year)	a.	**Reference year(s), base year(s), reference period(s) or other starting point(s)**	Base year: 1990
	b.	**Quantifiable information on the reference indicators, their values in the reference year(s), base year(s), reference period(s) or other starting point(s), and, as applicable, in the target year**	Emissions in the base year comprise net emissions and removals from all sectors (including LULUCF) indirect CO_2. A provisional value for base year emissions, subject to change due to recalculations of the greenhouse gas inventory, is 52.1 million tonnes of CO_2 equivalents (based on the National Inventory Report from April 2024). The value for the final accounting will be defined in the inventory submission covering data up to 2035. Net emissions from LULUCF will be reported and accounted for on a land-based approach. Emissions from international aviation and shipping will be reported as a memo item. They are not yet accounted towards Switzerland's emission reduction targets for 2031-2035.
	c.	**For strategies, plans and actions referred to in article 4, paragraph 6, of the Paris Agreement, or polices and measures as components of nationally determined contributions where paragraph 1(b) above is not applicable, Parties to provide other relevant information**	Not applicable.
	d.	**Target relative to the reference indicator, expressed numerically, for example in percentage or amount of reduction**	Reduction of greenhouse gas emissions by at least minus 65 percent by 2035 compared with 1990 levels, to be implemented as an emission budget covering 2031–2035. The target corresponds to a greenhouse gas budget of 106.8 million tonnes of CO_2 equivalents[7], which is equivalent to an average reduction of greenhouse gas emissions by at least 59 percent over the period 2031–2035.
	e.	**Information on sources of data used in quantifying the reference point(s)**	National greenhouse gas inventory.
	f.	**Information on the circumstances under which the Party may update the values of the reference indicators**	Values of the reference indicators as provided in the national greenhouse gas inventory are subject to recalculations in accordance with UNFCCC decision 18/CMA.1. Any recalculations are transparently reported in the national inventory document.

2. **Time frames and/or periods for implementation**	a.	**Time frame and/or period for implementation, including start and end date, consistent with any further relevant decision adopted by the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement (CMA)**	01.01.2031–31.12.2035
	b.	**Whether it is a single-year or multi-year target, as applicable**	Switzerland expresses its second NDC both as single-year (2035) and multi-year target (2031–2035). The single-year target is implemented using an emission budget over the period 2031–2035.

7 Subject to recalculation, in accordance with UNFCCC decision 18/CMA.1

3. **Scope and coverage**	**a.**	**General description of the target**	Absolute economy-wide emission reduction target compared with a base year.
	b.	**Sectors, gases, categories and pools covered by the nationally determined contribution, including, as applicable, consistent with Intergovernmental Panel on Climate Change (IPCC) guidelines**	Gases covered: CO_2 (including indirect CO_2), CH_4, N_2O, HFCs, PFCs, SF_6, NF_3 Sectors covered (as reported in the national inventory report): energy; industrial processes and product use; agriculture; land-use, land-use change and forestry; waste and other. Emissions from international aviation and maritime navigation as reported as memo item in the national greenhouse gas inventory are not yet covered by the NDC, but they are due to contribute to the achievement of the net zero greenhouse gas objective by 2050.
	c.	**How the Party has taken into consideration paragraph 31(c) and (d) of decision 1/CP.21**	Switzerland includes all categories of anthropogenic emissions by sources or removals by sinks in its second NDC, as reported in its national greenhouse gas inventory.
	d.	**Mitigation co-benefits resulting from Parties' adaptation actions and/or economic diversification plans, including description of specific projects, measures and initiatives of Parties' adaptation actions and/or economic diversification plans**	Not applicable.

4. **Planning processes**	**a. Information on the planning processes that the Party undertook to prepare its nationally determined contribution and, if available, on the Party's implementation plans, including, as appropriate**	
	(i) Domestic institutional arrangements, public participation and engagement with local communities and indigenous peoples, in a gender-responsive manner	Swiss climate policy is defined through direct democracy. Switzerland's multi-year target of at least minus 64 percent average reduction compared to 1990 over the period 2031–2040 is set by the Climate and Innovation Act, which was subject to a nation-wide popular vote. The Act further inscribed the net-zero greenhouse gas emission target by 2050. The second NDC 2031–2035 corresponds to the Climate and Innovation Act and has been confirmed by the Federal Council. The Climate and Innovation Act is the blueprint for Switzerland's long-term climate policy. The law sets the objective of achieving net zero greenhouse gas emissions by 2050, as well as intermediate emission reduction targets for 2040, along with an average reduction over the period 2031–2040. The law includes indicative values for reducing greenhouse gas emissions in the main sectors (building, transport and industry). It entered into force on January 1st 2025. The Climate and Innovation Act first responded to a popular initiative "For a healthy climate (glacier initiative)", which was submitted in 2019, with a view to ban the consumption of fossil fuels such as gas and oil by 2050. As a compromise, the Swiss Parliament elaborated an indirect counter-proposal to this initiative, which incorporated the initiative's main objectives. The initiative committee then conditionally withdrew the glacier initiative. A referendum was filed against the counter-proposal of the Parliament, hence making it subject to a nation-wide popular vote. On June 18, 2023, the Swiss population voted to accept the counter-proposal, entitled the Climate and Innovation Act. Without introducing any bans, the law provides for the reduction of oil and gas consumption, as well as the granting of financial support to encourage the ecological transition. The measures for achieving the climate targets defined in the Climate and Innovation Act are set out step by step in separate laws. These are primarily the CO_2 Act, but also the Energy Act and agricultural policy. This approach ensures that measures are developed and debated in a democratic manner. The participation of all those concerned is thus guaranteed, as future legislative changes are subject to an optional referendum. According to the Constitution of the Swiss Confederation, the Swiss people together with the Cantons are sovereign and ultimately the supreme political authority. The most important formal instruments of Switzerland's direct democracy are (i) the optional referendum which allows citizens to veto decisions made by the Swiss Parliament, (ii) the mandatory referendum on each constitutional amendment, and (iii) the popular initiative by which citizens can propose amendments to the Constitution of the Swiss Confederation. For further information on domestic institutional arrangements, see Switzerland's National Communications (NC) and Biennial Transparency Reports (BTR): *www.bafu.admin.ch/nc-btr.*
	(ii) Contextual matters, including, inter alia, as appropriate:	
	a. National circumstances, such as geography, climate, economy, sustainable development and poverty eradication	Information on national circumstances can be found in Switzerland's National Communications and Biennial Transparency Reports (BTR).

	b. Best practices and experience related to the preparation of the nationally determined contribution	See 4a)
	c. Other contextual aspirations and priorities acknowledged when joining the Paris Agreement	Climate change can only be solved in cooperation with all nations. Switzerland recognizes the need for an effective and progressive response to the threat of climate change, in line with the best available scientific knowledge. Switzerland fully subscribes to the view that Parties should, when taking action to address climate change, respect, promote, and consider their respective human rights obligations, including due consideration for gender equality and gender responsive policies, intergenerational equity, and the needs of particularly vulnerable groups. Switzerland is further committed to upholding environmental integrity, including the integrity of ecosystems and the protection of biodiversity.
	b. Specific information applicable to Parties, including regional economic integration organizations and their member States, that have reached an agreement to act jointly under Article 4, paragraph 2, of the Paris Agreement, including the Parties that agreed to act jointly and the terms of the agreement, in accordance with Article 4, paragraphs 16–18, of the Paris Agreement;	Not applicable.
	c. How the Party's preparation of its nationally determined contribution has been informed by the outcomes of the global stocktake, in accordance with Article 4, paragraph 9, of the Paris Agreement;	Switzerland is committed to the implementation of the decision on the first global stocktake (1/CMA.5). In the first global stocktake, Parties recognized the Paris Agreement temperature goals and underscored that the impacts of climate change will be much lower at the temperature increase of 1.5 degrees Celsius compared with two degrees Celsius and resolved to pursue efforts to limit the temperature increase to 1.5 degrees Celsius. They also recognized that limiting global warming to 1.5 degrees Celsius with no or limited overshoot requires deep, rapid and sustained reductions in global greenhouse gas emissions of 43 percent by 2030 and 60 percent by 2035 relative to the 2019 level and reaching net zero carbon dioxide emissions by 2050. They encouraged Parties to come forward in their next nationally determined contributions with ambitious, economy-wide emission reduction targets, covering all greenhouse gases, sectors and categories and aligned with limiting global warming to 1.5 degrees Celsius, as informed by the IPCC, in the light of different national circumstances. Information on how Switzerland's second NDC supports the recommendations of the IPCC, and specifically on alignment with the 1.5 degrees Celsius objective can be found under 7(b). Switzerland is answering the call for developed countries to take the lead by undertaking economy-wide absolute emission reduction targets. Finally, Switzerland's second NDC is aligned with its Long-Term Strategy and its Supplement[8], in accordance with paragraph 40 of the decision of the first global stocktake. Further information on how Switzerland intends to contribute to the global calls and objectives defined in the first global stocktake, Decision 1/CMA.5, can be found in Chapter 6 and in annex to this communication as well as in Switzerland's Biennial Transparency Report.

8 Available on the Long-term strategies portal of the UNFCCC website: *https://unfccc.int/process/the-paris-agreement/long-term-strategies*

	d. Each Party with a nationally determined contribution under Article 4 of the Paris Agreement that consists of adaptation action and/or economic diversification plans resulting in mitigation co-benefits consistent with Article 4, paragraph 7, of the Paris Agreement to submit information on:	
	(i) How the economic and social consequences of response measures have been considered in developing the nationally determined contribution;	Not applicable.
	(ii) Specific projects, measures and activities to be implemented to contribute to mitigation co-benefits, including information on adaptation plans that also yield mitigation co-benefits, which may cover, but are not limited to, key sectors, such as energy, resources, water resources, coastal resources, human settlements and urban planning, agriculture and forestry; and economic diversification actions, which may cover, but are not limited to, sectors such as manufacturing and industry, energy and mining, transport and communication, construction, tourism, real estate, agriculture and fisheries.	Not applicable.

5. Assumptions and methodological approaches, including those for estimating and accounting for anthropogenic greenhouse gas emissions and, as appropriate, removals	**a.**	**Assumptions and methodological approaches used for accounting for anthropogenic greenhouse gas emissions and removals corresponding to the Party's nationally determined contribution, consistent with decision 1/CP.21, paragraph 31, and accounting guidance adopted by the CMA**	The accounting approach is based on the national greenhouse gas inventory. By doing so, scope, coverage, data sources, assumptions, methodologies, and metrics are fully consistent between Switzerland's NDC and the greenhouse gas emissions inventory. The methodologies used ensure transparency, accuracy, completeness, consistency and comparability as far as can be achieved and avoid any double counting of emissions and removals, consistent with decisions 4/CMA.1 and 18/CMA.1.
	b.	**Assumptions and methodological approaches used for accounting for the implementation of policies and measures or strategies in the nationally determined contribution**	Not applicable.
	c.	**If applicable, information on how the Party will take into account existing methods and guidance under the Convention to account for anthropogenic emissions and removals, in accordance with Article 4, paragraph 14, of the Paris Agreement, as appropriate**	The national greenhouse gas inventory is relying on metrics agreed upon by the CMA and methodologies and good practice guidance from the IPCC in order to provide a sound quantitative framework for accounting of anthropogenic emissions and removals. In order to foster environmental integrity and to reduce uncertainty due to assumptions regarding extrapolated management practices and other parameters influencing the calculation of reference levels, Switzerland decided to use net accounting of emissions and removals in the LULUCF sector from 2021 onwards.
	d.	**IPCC methodologies and metrics used for estimating anthropogenic greenhouse gas emissions and removals**	**Methodologies:** (i) 2006 IPCC guidelines, 2019 Refinement to the 2006 IPCC guidelines, or any subsequent version or refinement of the IPCC guidelines agreed upon by the CMA, as per UNFCCC decisions 4/CMA.1, paragraph 12.(a) and 18/CMA.1, paragraph 20; (ii) 2013 Revised Supplementary Methods and Good Practice Guidance Arising from the Kyoto Protocol (IPCC 2014 KP Supplement) by the IPCC; (iii) 2013 Supplement to the 2006 IPCC Guidelines for National Greenhouse Gas Inventories: Wetlands (IPCC 2014 Wetlands Supplement). **Metrics:** 100-yr GWP values from 5th IPCC assessment report, or from a subsequent IPCC assessment report as agreed upon by the CMA, as per UNFCCC decision 18/CMA.1 paragraph 37.
	e.	**Sector-, category- or activity-specific assumptions, methodologies and approaches consistent with IPCC guidance, as appropriate, including, as applicable:**	
		(i) Approach to addressing emissions and subsequent removals from natural disturbances on managed lands	No provision for natural disturbances will be applied.
		(ii) Approach used to account for emissions and removals from harvested wood products	Harvested wood products are accounted for using a production approach (only wood from domestic harvest), consistent with the 2013 Revised Supplementary Methods and Good Practice Guidance Arising from the Kyoto Protocol (IPCC 2014 KP Supplement).
		(iii) Approach used to address the effects of age-class structure in forests	Not applicable.

f.	**Other assumptions and methodological approaches used for understanding the nationally determined contribution and, if applicable, estimating corresponding emissions and removals, including:**	
	(i) How the reference indicators, baseline(s) and/or reference level(s), including, where applicable, sector-, category- or activity-specific reference levels, are constructed, including, for example, key parameters, assumptions, definitions, methodologies, data sources and models used	The reference indicator corresponds to net emissions and removals from all sectors (including LULUCF, see 5.(c)) and indirect CO_2 as reported in the greenhouse gas emissions inventory.
	(ii) For Parties with nationally determined contributions that contain non-greenhouse-gas components, information on assumptions and methodological approaches used in relation to those components, as applicable	Not applicable.
	(iii) For climate forcers included in nationally determined contributions not covered by IPCC guidelines, information on how the climate forcers are estimated	Not applicable.
	(iv) Further technical information, as necessary	Not applicable.
g.	**The intention to use voluntary cooperation under Article 6 of the Paris Agreement, if applicable.**	Switzerland will partly use internationally transferred mitigation outcomes (ITMOs) from cooperation under Article 6. The share of emission reductions realized abroad will decrease for the 2031–2035 period compared to the pre-2030 period, consistent with the principle of progression. The percentage of domestic emission reductions will be determined in the context of parliamentary deliberations on the CO_2 Law for the post-2030 period. Switzerland will implement all relevant Article 6 guidance adopted by the conference of the Parties serving as the meeting of the Parties to the Paris Agreement (CMA), to apply robust rules that avoid any form of double counting, ensure environmental and social integrity and promote sustainable development, including the protection of human rights. As of February 2025, Switzerland signed bilateral agreements with Peru, Ghana, Senegal, Georgia, Vanuatu, Dominica, Thailand, Ukraine, Morocco, Malawi, Uruguay, Chile, and Tunisia, creating the necessary frameworks for cooperative approaches under Article 6.2 of the Paris Agreement. The agreements govern the transfers of mitigation outcomes and their use[9]. The ITMOs may be used for other international mitigation purposes, such as e.g. voluntary climate targets by private actors, which would not be counted towards Switzerland's NDC.

6. **How the Party considers that its nationally determined contribution is fair and ambitious in the light of its national circumstances**	**a. How the Party considers that its nationally determined contribution is fair and ambitious in the light of its national circumstances** **b. Fairness considerations, including reflecting on equity**	It is important to Switzerland that the global community shares the required efforts to combat global climate change in a fair and equitable manner and must be rooted in the best available science. It is in the interest of all Parties to come forward with their highest possible ambition. It is important to recognize that equity and fairness considerations are multifaceted, and that not one principle alone can adequately capture equity considerations. The evolving nature of a country's circumstances should also be reflected in fairness considerations. Switzerland's understanding of a fair share includes in particular consideration of the aspects below. · Equity should take into account responsibility for cumulative emissions, rooted in countries past, present, and future emissions. Total emissions, territorial and consumption-based, as well as per capita emissions are to be considered. Based on the polluter pays principle, countries who bear responsibility for emissions in the past and those who are responsible for a large proportion of emissions now, as well as those whose emissions are still rising, should demonstrate leadership and strive to put in place urgent emission reductions that support a 1.5 degrees Celsius pathway. · Switzerland has a low level of cumulative greenhouse gas emissions since 1990, contributing around 0.12 percent of cumulative global greenhouse gas emissions from 1990 to 2021. Today, Switzerland emits around 0.08 percent of world's greenhouse gas emissions and per capita emissions are below world's average. Through climate policies implemented domestically, Switzerland's total share in global greenhouse gas emissions as well as per capita emissions continue to decrease despite a substantial growth in real gross domestic product (1990–2022: +68 percent) and population (1990–2022: +31 percent). · To respond to the urgency of climate action, equity considerations must take into account capacity. Major emitters and those with significant economic capacity should make significant contributions to climate action. Capacity to contribute to solving the climate problem is closely related to the ability to invest in appropriate mitigation measures, such as carbon-efficient technologies. Hence, one aspect of capacity is to take into account GDP per capita in fairness considerations. · Finally, international cooperation to build capabilities for low carbon and climate-resilient development in all countries is a vital part of any serious approach to addressing climate change. Switzerland continues to support its partner countries to increase their climate action. Based on equity considerations outlined above, Switzerland is committed to reduce greenhouse gas emissions in line with emission reduction pathways that keep the increase in global average temperature to 1.5 degrees Celsius. Switzerland remains open to discuss a framework to transparently consider Parties' equitable contributions to the global effort of keeping within the 1.5 degrees Celsius goal.

c.	**How the Party has addressed Article 4, paragraph 3, of the Paris Agreement**	Article 4, paragraph 3 of the Paris Agreement provides that each Party's NDC will present a progression beyond the Party's first NDC and reflect its highest possible ambition. Switzerland's second NDC reflects a progression beyond its first NDC in several areas: **Strengthened emission reduction objective (headline objective)** Switzerland's emission reduction objective of minus at least 65 percent by 2035 compared to 1990, to be implemented as an emission budget of 106.8 million tonnes of CO_2 equivalents covering 2031–2035, which is equivalent to an average reduction of greenhouse gas emissions by at least 59 percent over the period 2031–2035, is strengthened, compared with its first NDC of at least minus 50 percent by 2030 compared to 1990, corresponding to an average reduction of net greenhouse gas emissions by at least 35 per cent over the period 2021–2030. **Increased domestic emission reductions** The share of emission reductions realized abroad will decrease for the 2031–2035 period compared to the pre-2030 period, consistent with the principle of progression. The percentage of domestic emission reductions will be determined in the context of parliamentary deliberations on the third CO_2 Law. **Strengthened measures and legislative framework** Switzerland's second NDC further presents an enhanced policy and legislative framework, including new and strengthened measures, intermediate and sectoral targets, as well as a long-term net-zero target 2050 and a net-negative pathway defined in domestic law. **Strengthened accounting and baseline methodology** Switzerland's second NDC includes a carbon budget, which provides new quantitative precision towards quantification of future emissions. Switzerland will account for changes in net emissions and removals in the LULUCF sector, using a land-based approach, covering all land-uses. By doing so, the uncertainties related to the calculation of reference levels are avoided and a more robust accounting is achieved. **Inclusion of new sectors towards 2050** According to the Climate and Innovation Act, international aviation and maritime navigation will contribute to the achievement of the net zero objective by 2050. These emissions are not yet accounted towards Switzerland's emission reduction targets for 2031-2035.
d.	**How the Party has addressed Article 4, paragraph 4, of the Paris Agreement**	Article 4, paragraph 4 of the Paris Agreement provides for developed countries, such as Switzerland, to continue taking the lead by undertaking economy-wide emission reduction targets. Switzerland has a long history of concrete climate policy measures and a CO_2 Act since 2000. The country had absolute economy-wide emission reduction targets both under the first and second commitment period of the Kyoto Protocol and continues to formulate absolute economy-wide targets.
e.	**How the Party has addressed Article 4, paragraph 6, of the Paris Agreement**	Not applicable.

7. How the nationally determined contribution contributes towards achieving the objective of the Convention as set out in its Article 2	a.	**How the nationally determined contribution contributes towards achieving the objective of the Convention as set out in its Article 2**	The Paris Agreement has been adopted in the context of the UNFCCC and specifies its provisions. Thus any actions and measures taken in view of Article 2.1a and 4.1 of the Paris Agreement, as per this NDC, serve the objective of the Convention.
	b.	**How the nationally determined contribution contributes towards Article 2, paragraph 1(a), and Article 4, paragraph 1, of the Paris Agreement**	Switzerland's second NDC is consistent with Article 2.1(a) to hold the increase in the global average temperature to well below 2 degrees Celsius above pre-industrial levels and pursuing efforts to limit temperature increase to 1.5 degrees Celsius above pre-industrial levels. Switzerland's second NDC keeps Switzerland on an emission development pathway in line with the recommendations of the IPCC to keep average global temperature increase to 1.5 degrees Celsius. The sixth assessment report of the IPCC, published in 2023, confirmed the findings of the IPCC special report on global warming of 1.5 degrees Celsius published in 2018. It reiterated that global greenhouse gas emissions must peak as early as this decade and then decline rapidly and substantially. Scenarios in which global warming does not exceed 1.5 degrees Celsius with a probability of 50 percent achieve net zero for CO_2 emissions in the early 2050s and net zero for all greenhouse gases in the 2070s. In these scenarios, global greenhouse gases would have to be reduced by 43 percent by 2030, 60 percent by 2035 and 84 percent by 2050 compared to 2019 levels. According to the IPCC, there is a global CO_2 budget of 500 gigatonnes of CO_2 from 2020 onwards. At the same time, there needs to be a significant reduction in the other greenhouse gases, particularly methane. In the meantime, this budget has decreased further. According to the UNEP Emissions Gap Report 2024, from 2025 only 200 gigatonnes of CO_2 will be available to limit global warming to 1.5 degrees Celsius with a probability of 50 percent. Switzerland's second NDC puts Switzerland slightly above an emission development pathway that responds to the recommendations of the IPCC to reduce global greenhouse gas emissions by approximately 60 percent from 2019 levels by 2035 (equivalent to 62.5 percent by 2035 compared to 1990). Switzerland's net zero objective is more ambitious than the IPCC's recommendation to reach net-zero carbon dioxide emissions by 2050, by incorporating all greenhouse gas emissions, including international aviation and shipping. Furthermore, a clear trajectory is established towards net-zero by 2050, underpinned by sectoral and intermediate targets.

Solar panels on the Monte Rosa hut at the Gorner Glacier.
Photo: Peter Baracchi / FOEN

5 Implementation framework and contributions to the global stocktake

The legislative framework

In its national legislation, the international commitment translates as follows:

- The second revision of the CO_2 Act requires an annual reduction of 1.5 percent relative to the 1990 level during the years 2021–2024. At least 75 percent of the reduction of emissions must be achieved with domestic measures, the remainder with measures abroad;

- The third revision of the CO_2 Act requires a reduction of total greenhouse gas emissions (relative to 1990) by
  - at least 50 percent by 2030 and
  - at least 35 percent in the mean over the years 2021–2030, primarily with measures in Switzerland, but also allowing for measures abroad;

- The Climate and Innovation Act requires net-zero greenhouse gas emissions by 2050, with a reduction of total greenhouse gas emissions (relative to 1990) by
  - at least 64 percent in the mean over the years 2031–2040,
  - at least 75 percent by 2040, and
  - at least 89 percent in the mean over the years 2041–2050; as far as possible, the targets must be achieved by reducing emissions in Switzerland;

- The Climate and Innovation Act also sets out the following sectoral targets (reductions relative to 1990):
  - Buildings sector: By at least 82 percent by 2040 and by 100 percent by 2050;
  - Transport sector (excluding international aviation): By at least 57 percent by 2040 and by 100 percent by 2050;
  - Industry sector: By at least 50 percent by 2040 and 90 percent by 2050;

- With the ongoing revision of the CO_2 Ordinance (to be adopted in spring 2025), the Swiss Federal Council aims at establishing – by agreement with the parties concerned – sectoral targets to be reached by 2030;

- The deliberations on the CO_2 Act for the post-2030 period have begun in 2025, and will determine the package of climate policy measures underpinning the period 2031–2035, covered by this NDC.

Switzerland's national targets for the reduction of greenhouse gas emissions are identical in scope to Switzerland's nationally determined contribution. Further information on the legislative framework and sectoral strategies can be found in Switzerland's Long-Term Strategy and its Supplement[10].

Further information on Switzerland's contribution to the global commitments of the first global stocktake can be found in the Annex to this communication: *www.bafu.admin.ch > Annex to Switzerland's second NDC 2031–2035: Contributions to the outcome of the first Global Stocktake*

10 Available on the Long-term strategies portal of the UNFCCC website: *https://unfccc.int/process/the-paris-agreement/long-term-strategies*

Annex to Switzerland's second NDC 2031–2035: Contributions to the outcome of the first Global Stocktake

Switzerland intends to contribute to the global commitments of the first global stocktake inscribed in Decision 1/CMA.5 inter alia by the elements described below:

1) Energy transition

(a) Tripling renewable energy capacity globally and doubling the global average annual rate of energy efficiency improvements by 2030

The Federal Act on a Secure Electricity Supply from Renewable Energy Sources, adopted by the Swiss population by referendum on 9 June 2024, includes targets for the expansion of electricity production from renewable energies:

- Electricity production from renewable energies, excluding hydropower, is to reach at least 35,000 GWh by 2035 and at least 45,000 GWh by 2050.
- Net electricity production from hydropower must reach at least 37,900 GWh in 2035 and at least 39,200 GWh in 2050. For pumped storage power plants, only production from natural flows is counted.
- Every five years, the Federal Council will set interim targets, globally and for specific technologies. It will monitor the achievement of the targets and take measures to achieve them in good time.

The Act sets energy efficiency targets:

- The net quantity of electricity imported during the winter half-year (October 1 to March 31) must not exceed the indicative value of 5 TWh.
- In order to increase security of supply in winter, energy efficiency measures must be implemented that reduce electricity consumption by 2 TWh by 2035.
- If it becomes apparent that these efficiency gains cannot be achieved, the development of renewable energy power plants may be intensified.

The Act further sets consumption targets:

- The average energy consumption per person per year is to be reduced by 43 percent by 2035 and by 53 percent by 2050, compared with 2000 levels.
- The average electricity consumption per person per year is to be reduced by 13 percent by 2035 and by 5 percent by 2050, compared with 2000 levels.

(b) Accelerating efforts towards the phase-down of unabated coal power

No coal is mined in Switzerland. In Switzerland, coal represents 0.5 percent of total energy consumption and is used 99 percent by the cement industry and 1 percent by households. The cement industry is increasingly replacing coal with non-recyclable waste such as used tires, residual wood, etc.

(c) Accelerating efforts globally towards net zero emission energy systems, utilizing zero- and low-carbon fuels, well before or by around mid-century

The Federal Council published the Swiss hydrogen roadmap by the end of 2024 which sets measures to develop markets for hydrogen and low-carbon fuels (additional information under letter e). In addition, the Swiss government funds the Re-Fuel project (funded by the SWEET program) aimed at developing robust supply paths for sustainable fuels and base chemicals for Switzerland, notably for aviation and industrial processes. To incentivize research and innovation to support the energy transition, the Swiss government has launched the programme SWEET – SWiss Energy research for the Energy Transition", to accelerate innovations that are key to implementing Switzerland's Energy Strategy 2050 and achieving the country's climate goals. The programme was launched in early 2021. The funding programme runs until 2032. A follow-up program named SWEETER must take place for the period 2025-2036.

(d) Transitioning away from fossil fuels in energy systems, in a just, orderly and equitable manner, accelerating action in this critical decade, so as to achieve net zero by 2050 in keeping with the science

Switzerland understands transitioning away from fossil fuels as including both consumption and production of fossil fuels. Switzerland does not extract fossil fuels, however the last active refinery produces about 25 to 30% of its end fossil fuel consumption. In addition to setting energy efficiency and energy consumption targets, Switzerland has put in place the following strategies, plans, or policies towards reducing fossil fuel consumption, including consumption-based emissions, with a view to reduce dependence on imported fossil fuels:

- Measures in the buildings sector: The Confederation will initiate an extraordinary ten-year programme to replace fossil fuel-fired heating installations, electric resistance heating systems, hot water preparation systems, and measures to increase energy efficiency of buildings. This programme is additional to the existing Buildings Programme, which aims to support emission reductions in buildings.
- If the replacement of the heating system is accompanied by thermal insulation measures in buildings, the Confederation may provide a guarantee for these measures. The extraordinary heating system replacement program is fully financed by the Confederation up to a maximum of CHF 200 million per year. The Federal Assembly will grant a 10-year commitment credit by means of a simple federal decree.
- Support for innovation in companies: The Confederation will also support the application of innovative technologies and processes in companies. This programme is limited to 6 years (2025-2030). The Confederation will provide a maximum of CHF 1,2 billion in total (CHF 200 million per year).
- Companies that would like to apply for support must provide a net-zero roadmap that lays out a reduction path reaching net-zero emissions in 2050 the latest and including negative emission pathways.

These measures are subject to budgetary constraints and possible austerity measures.

Switzerland underlines the importance of working to sequence the transition away from fossil so as to scale up investment in clean energy and the decline in investment in fossil fuel supplies in order to avoid damaging price spikes or stranded assets, as

recommended by the IEA. At the international level, Switzerland would encourage the submission of economic diversification plans from fossil-fuel producing countries. Switzerland further supports efforts towards oil conservation. Switzerland would welcome further collaboration at the international level in that regard.

(e) Accelerating zero- and low-emission technologies, including, inter alia, renewables, nuclear, abatement and removal technologies such as carbon capture and utilization and storage, particularly in hard-to-abate sectors, and low-carbon hydrogen production

Carbon capture and storage (CCS) and Carbon dioxide removal (CDR): The Swiss government considers CCS and CDR to be essential to reach the Swiss long-term climate targets. These technologies shall be developed gradually to address hard-to-abate emissions, namely from industry, waste treatment, agriculture, and international aviation.[1] Due to currently unknown CO_2 storage capacity in Switzerland, international cooperation is crucial, e.g. with regards to CO_2-export and trading of negative emissions from technological approaches. Developing these technologies is also seen as an opportunity for the Swiss economy and academia. In this context the Swiss government actively supports early pilot projects with national and international partners[2,3,4,5]. In addition, funding for industrial-scale CCS and CDR is provided for from 2025 under the Climate and Innovation Act and the revised CO_2 Act.

Nuclear energy: Following the Fukushima nuclear accident in 2011, the Swiss Government and Parliament decided to gradually phase out nuclear energy, i.e. new plants were banned while existing plants were allowed to continue operating as long as deemed safe. To replace the share of nuclear energy, the Energy Strategy 2050, along with implementing legislation and the Energy Act, was adopted and eventually endorsed by a majority of Swiss voters. In 2024, the Federal Council has launched consultations on an amendment to the Swiss Federal Nuclear Energy Act that will allow new nuclear power plants to be licensed in Switzerland. The aim is to make Switzerland's energy policy more open to different technologies. Lifting the ban on the construction of new nuclear power plants would allow Switzerland to produce low carbon nuclear power in the future if renewable energy production is insufficient to meet the country's electricity needs.

Hydrogen: Switzerland has developed a national hydrogen strategy. The strategy shows what role hydrogen can play as an energy carrier in Swiss energy and climate policy up to 2035 and 2050. The strategy aims to create the framework conditions for the development of a hydrogen market in Switzerland so that hydrogen can contribute to achieving energy and climate targets. It is important that hydrogen is not produced from fossil fuels. Norms and standards, together with the legal framework, form the basis for the development of a hydrogen market. Hydrogen is a very volatile gas, has a different calorific value and also different properties than natural gas. Therefore, norms and standards for hydrogen must be developed along the entire value chain, from production to transport and storage to consumption, that enable environmentally friendly and safe

[1] Klimawandel: Bundesrat heisst Bericht zum Ausbau von Negativemissionstechnologien gut (admin.ch)
[2] Bilateral climate agreements (admin.ch)
[3] DemoUpCARMA – Demonstration und Upscaling von Kohlenstoffdioxid-Management-Lösungen für Netto-Null-Schweiz - Basic data (admin.ch)
[4] Klimaschutz: Bund erneuert Zusammenarbeit mit der Stiftung Klimarappen (admin.ch) ; Negative emissions technologies (klimarappen.ch)
[5] swisstopo übernimmt das Bohrloch der Nagra in Trüllikon (admin.ch)

operation. Switzerland would support opportunities to develop international standards in the field of hydrogen.

(f) Accelerating the substantial reduction of non-carbon-dioxide emissions globally, in particular methane emissions by 2030

Switzerland joined the Global Methane Pledge launched at COP26 and thus supports the global methane reduction goal of at least 30 percent below 2020 levels by 2030. While agriculture's share of fossil CO_2 emissions for Switzerland as a whole is low (barely 2 percent), agriculture is the main source of methane and nitrous oxide emissions (83 and 57 percent respectively) in Switzerland. In agriculture, these two gases are also the most important sources of GHG emissions. In its Climate Strategy for Agriculture and Food 2050[6] and accompanying measures[7], Switzerland defined concrete measures to reduce greenhouse gas emissions, including methane.

(g) Accelerating the reduction of emissions from road transport on a range of pathways, including through development of infrastructure and rapid deployment of zero- and low-emission vehicles

Switzerland has set indicative targets for the transport sector to be electrified, through 2040 by a rate of 57 percent, and until 2050 by 100 percent. A number of measures have been set in place to achieve this objective. Namely, the new CO_2 law foresees that vehicle importers and manufacturers must limit the average CO_2 emissions of their vehicles that are put on the road for the first time to a specific target value. Additional information can be found in Switzerland's Long-Term Strategy and Supplement to the NDC 2031-2035[8].

(h) Phasing out inefficient fossil fuel subsidies that do not address energy poverty or just transitions, as soon as possible

Switzerland underlines the importance of the removal of fossil fuel subsidies, due to their major impact on greenhouse gas emissions. At the national level, Switzerland is actively reviewing its remaining fossil fuel subsidies. According to the Climate and Innovation Act, no floating market premiums may be claimed for plants powered partly by fossil fuels.

At the international level, Switzerland is engaged in the Friends of Fossil Fuel Subsidies Reform and a number of other initiatives that promote the removal of fossil fuel subsidies. At the World Trade Organization (WTO), Switzerland has actively supported the Agreement on Climate Change, Trade and Sustainability (ACCTS) which seeks to tackle fossil fuel subsidies. Switzerland further supports a global deadline for the elimination of fossil fuel subsidies. Switzerland would also welcome efforts to harmonize methodologies to promote transparency and tracking at the global level.

[6] Agriculture and climate strategy, available under Stratégie climat (admin.ch)
[7] Agriculture and climate strategy part II: measures, available under C:\Users\U80852567\Downloads\KSLE_2050_Teil2_F (1).pdf
[8] Available on the Long-term strategies portal of the UNFCCC website: Long-term strategies portal | UNFCCC

2) Biodiversity, nature, and forests

Switzerland intends to contribute to the global commitments inscribed in Decision 1/CMA.5 of the first global stocktake, namely in paragraph 33, 34, and 35.

On the **importance of conserving, protecting and restoring nature and ecosystems towards achieving the Paris Agreement temperature goal (paragraph 33), including through enhanced efforts towards halting and reversing deforestation and forest degradation by 2030**, and other terrestrial and marine ecosystems acting as sinks and reservoirs of greenhouse gases and by conserving biodiversity, while ensuring social and environmental safeguards, in line with the Kunming-Montreal Global Biodiversity Framework:

In November 2024, the Federal Council adopted the second phase (2025 - 2030) of the Swiss Biodiversity Strategy action plan. The plan aims to strengthen and complement existing policies, including sectoral policies, such as agriculture and forestry, to protect biodiversity. It also aims to contribute to achieving the objectives of the new Kunming-Montreal Global Biodiversity Framework by addressing specific targets that are otherwise insufficiently covered by national legislation. Further to measures aiming at better mainstreaming of biodiversity, specific conservation measures include, for example, the identification and enhancement of areas of particular importance to insects, the adaptation of animal and plant species and their habitats to climate change, and increased support for cantons and municipalities in promoting biodiversity in urban areas. The action also defines the typology of areas through which Switzerland intends to contribute to the global objective to ensure that, by 2030, at least 30% ("30by30") of the world's terrestrial and marine areas conserve biodiversity through the establishment of protected areas or appropriate forms of management.

On the **need for enhanced support and investment, including through financial resources, technology transfer and capacity-building, for efforts towards halting and reversing deforestation and forest degradation by 2030** in the context of sustainable development and poverty eradication (paragraph 34), in accordance with Article 5 of the Paris Agreement:

- The Swiss government currently invests over 600 million Swiss francs a year in biodiversity. A total of CHF 24 million is available to implement the Swiss Biodiversity Strategy Action Plan's measures up to 2030.
- Forest protection and conservation is anchored in the Federal Constitution of the Swiss Confederation[9] to ensure that the ecosystem fulfills its protective, commercial, and public amenity functions. This is further elaborated in the Federal Act on Forests to conserve forests in area and spatial distribution and protect them as near-natural ecosystems, particularly by prohibiting deforestation[10]. Forest management is thus subjected to strict sustainability criteria.
- At the international level, Switzerland takes part in forest-related international processes to support and advocate sustainable forest management as the central tool to safeguard forests and their ecosystem services.

[9] SR 101 - Federal Constitution of 18 April 1999 o... | Fedlex (admin.ch)
[10] SR 921.0 - Federal Act of 4 October 1991 on Fore... | Fedlex (admin.ch).

On the invitation to Parties to **preserve and restore the ocean and coastal ecosystems** and scale up, as appropriate, ocean-based mitigation action (paragraph 35):

According to the Maritime strategy of Switzerland[11], Switzerland will continue and, where necessary, strengthen its commitment in areas such as the protection of marine biodiversity, the fight against plastic pollution and climate protection. Internationally, Switzerland intends to sign the international agreement on the conservation and sustainable use of marine biological diversity of areas beyond national jurisdiction (BBNJ) that foresees the implementation of area-based management tools including marine protected areas and is intended to be an important cornerstone to maintain functioning ocean-ecosystems, incl. their function as the main carbon sink. Further information on Switzerland's contribution can be found in the abovementioned strategy.

[11] Maritime strategy: newsd.admin.ch/newsd/message/attachments/79170.pdf

3) Sustainable lifestyles, sustainable patterns of consumption and production

On the **importance of transitioning to sustainable lifestyles and sustainable patterns of consumption and production** in efforts to address climate change, including through circular economy approaches (paragraph 36):

In a globalized economy, not only the greenhouse gases emitted in Switzerland must be recorded, but also those abroad due to Swiss final demand (the sum of household and government spending on final consumption). Due to the high share of imports in total consumption, a large part of the footprint is generated abroad. In Switzerland, consumption-based per capita emissions are high, about 2.5 to 2.7 times higher than territorial emissions per capita. A comprehensive climate policy must take this responsibility into account. In its Sustainable Development Strategy 2030, Switzerland inscribed the following objective: "Natural resources in Switzerland and abroad are not overexploited. The environmental impact of consumption and production is significantly reduced. The material ecological footprint per person is clearly declining and becoming compatible with the 1.5° C target set by the Paris Agreement".

Switzerland has succeeded in significantly reducing its domestic greenhouse gas emissions in recent years. By contrast, the greenhouse gas footprint has changed only slightly, though the current trend is declining: in 2021, the greenhouse gas footprint per capita has been reduced by almost a quarter since 2000, to 12.8 tons of CO_2 equivalents. Greenhouse gas footprint efficiency increased by around 44 percent between 2000 and 2021. This means that there has been a decoupling between the increase in prosperity and greenhouse gas emissions.

The decrease in the greenhouse gas footprint and the improvement in efficiency have different causes. On the one hand, environmental, energy and agricultural policy requirements have an influence. For example, the Swiss government has introduced a CO_2 tax on fossil fuels such as heating oil or natural gas, which has created incentives for economical consumption and for the increased use of climate-friendly energy sources. On the other hand, more resource-efficient technologies, an increasing market share of environmentally friendly goods and services, or the relocation of emission-intensive production abroad may also have had an influence.

Measures to conserve resources at home and abroad, for example through sustainable consumption, resource-efficient production processes, sustainable supply chains and approaches from the circular economy, can make a significant contribution to reducing environmental pollution abroad. They also offer Swiss companies the opportunity to apply their innovative approaches abroad. The following measures have been put in place by the Swiss government to reduce consumption-based per capita emissions:

- In the agricultural and food sector: in its Sustainable Development 2030 strategy, the Federal Council has set itself the goal of reducing the greenhouse gas footprint of food by a quarter by 2030 compared to 2020, and in the postulate report "Future Orientation of Agricultural Policy" by at least two thirds by 2050. According to Switzerland's Long-Term Strategy, the greenhouse gas footprint of food should decrease in line with the net-zero target and a further transfer of greenhouse gas emissions to other countries should be avoided.

- In Switzerland, 25 percent of the environmental impact of the food system is due to food waste (i.e. avoidable food losses). With the action plan to reduce food waste, the Federal Council wants to halve avoidable food losses by 2030 compared to 2017.
- Targets that include emissions generated upstream and downstream by third parties are further taken into account in the Climate Strategy for Agriculture and Food, in the Climate and Innovation Act, or in the Sustainable Development Strategy 2030.
- Under the Climate and Innovation Act, all companies must reduce their emissions to net zero by 2050 at the latest and are encouraged to develop roadmaps. In this context, at least direct and indirect emissions must be taken into account. The Swiss government will provide the basis, standards and professional advice for companies or industries that draw up such roadmaps by 2029.
- In the buildings sector: according to the Federal Energy Act, cantons have to set limit values for embodied energy that address material-based life-cycle emissions of buildings.
- Greater corporate responsibility: Switzerland has introduced measures set out in the action plans on corporate social responsibility and business and human rights, that are designed to encourage sustainable production in Swiss companies' global value chains. Furthermore, in 2020 the Federal Council adopted specific measures to make Switzerland a centre of sustainable finance. This specifically targets transparency, risk analyses and Switzerland's international engagement. It also enacted a statutory obligation from 2022 onwards for companies to report on sustainability.

Aside from these legislation and sectoral policies, many of the measures taken by the federal government address public-private partnerships, support for independent initiatives or foundational work such as the provision of data for lifecycle analyses. However, market failures and a lack of international coordination mean that the negative impacts of production and consumption on the environment are not sufficiently priced into the cost of goods and services. This results in the excessive use of natural resources.

For this reason, Switzerland supports increased international coordination to tackle these challenges. Switzerland plays an active part in the United Nation's Ten-Year Framework of Programmes on Sustainable Consumption and Production. It promotes the implementation of the United Nations Guiding Principles on Business and Human Rights, the OECD Guidelines for Multinational Enterprises, environmental standards, and commodities and infrastructure-related initiatives. International cooperation work is targeted in part at making food systems more sustainable, inclusive and resilient.