


Inverser la tendance : climat et biodiversité

Rencontre entre le Parlement et les scientifiques



LEGAL

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Irène Kälin, President of the National Council, and Thomas Hefti, President of the Council of States, invited
scientists and Parliament to a discussion session on the climate crisis and biodiversity loss on 2 May 2022.
In view of this event, the Swiss authors of the 6th assessment report of the Intergovernmental Panel on
Climate Change (IPCC) and the reports of the Intergovernmental Science and Science Platform and Policy on
Biodiversity and Ecosystem Services (IPBES) has compiled the main findings for Switzerland.

1st draw, 2022

The report in electronic form is available at scnat.ch/en/id/C67Fh?embed=4kUUB

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Reversing the trend: climate and biodiversity

Meeting between Parliament and scientists

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Foreword



Photo: Parliament

I would like to start with a brief history: the Gods of antiquity presided over a trial. In the dock was a minor who had looted the Earth. The latter did not seem to be aware of having committed an unlawful act, but justified himself by arguing that wealth was unevenly distributed on Earth. That is why it was necessary to intervene. But to buy goods, you needed silver and gold coins, metals that the Earth hid in its depths. The coins could also be used to help the poor.

And without the miners, no harmonious cohabitation was possible, he said. The Gods freed the miner, but with a serious warning: Mother Earth will take matters into her own hands if humanity overexploits her unreservedly. This story was written by Paulus Niavis (1460 – 1514) 500 years ago with terms that have now become keywords in the debate on sustainable development: *sustenare* and *conservare*.

Paulus Niavis could hardly have imagined what the Earth would look like in the twenty-first century. On the other hand, we know that our planet is going badly. The reports that have just been published by the IPCC are proof of this. Greenhouse gas emissions continue to rise, while biodiversity declines. We are experiencing the first manifestations of the climate crisis: heat waves, forest fires, rainfall of considerable magnitude. And we know that such threats will multiply if we fail to stop the climate crisis and biodiversity loss. We have the knowledge, we can have the technologies. What we lack is an iron will to reverse the trend.

On 2 May 2022, scientists and politicians will be able to meet and exchange in the Palace of Parliament. Thomas Hefti, President of the Council of States, and I have invited them to this dialogue, because a direct exchange makes it possible to improve understanding, dispel misunderstandings and clarify the outstanding issues. Indeed, scientists are not only advancing terrifying facts, they are conveying a key message: the transition to a climate-friendly and sustainable society is possible.

Placing "ecology" at the heart of our reflections and actions must no longer be an ideology, but become a principle of action. The political sphere is necessary for this. It has the capacity to make the triangle of sustainable development prevail: ecological balance, economic security and social justice.

We know. So, let's act (we don't have much time left)!

Irène Kälin, President of the National Council

Climate change and biodiversity loss: two inseparable crises

Climate change and the loss of biodiversity are taking place at a rapid pace and are extremely damaging on a global scale and also for Switzerland

- Climate change and the loss of biological diversity are both man-made. The Swiss population has a heavy responsibility in these crises, both at home and abroad.
- Both crises have a very negative impact on society, the economy, health and our quality of life.
- Environmental issues are regularly one of the most recurrent concerns in Swiss and international surveys.

Climate change and biodiversity loss have some common causes

- Climate change is mainly due to the use of fossil fuels.
- The loss of biodiversity is mainly due to the unsustainable use of natural resources. Examples include deforestation, agricultural intensification, overfishing and environmental pollution.
- Some of these factors lead to greenhouse gas emissions, particularly deforestation and intensive agriculture.

- Climate change is contributing to the loss of biological diversity in greater proportions. If we fail to contain it quickly, it will become the main cause of biodiversity loss.

Measures against climate change and biodiversity loss are mutually beneficial

- To mitigate climate change, we need to achieve CO₂ neutrality. This requires an almost total abandonment of

fossil fuels.

- Measures for the conservation, restoration and sustainable use of biodiversity serve a dual purpose: they are not only needed on a large scale to protect the climate, but also to stop and reverse the loss of biological diversity.
- Increasing biodiversity contributes to adaptation to climate change. At the same time, climate change must be limited to halt the loss of biodiversity.
- Restricting global warming to 1.5°C prevents a large number of animal and plant species from dying.

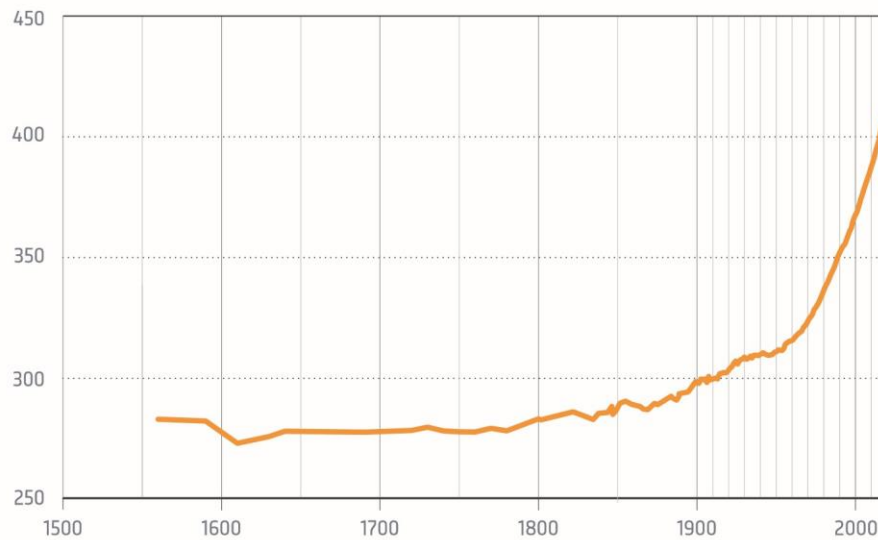
The simultaneous fight against climate change and biodiversity loss requires resolute action by different sectors

Key policy options include:

- Moving away from fossil fuels
- Increase in nature reserves and large-scale renaturation
- Reduction of resource and waste consumption
- Internalization of hitherto outsourced costs of negative effects on climate and biodiversity (accounting, taxes, subsidies, taxes and customs duties)
- Ensuring respect for the environment and the sustainability of innovations and investments

1.1 La concentration de CO₂ dans l'atmosphère continue d'augmenter

Concentration de CO₂ en parties par million (ppm) à l'observatoire de Mauna Loa (Hawaï) et au pôle Sud



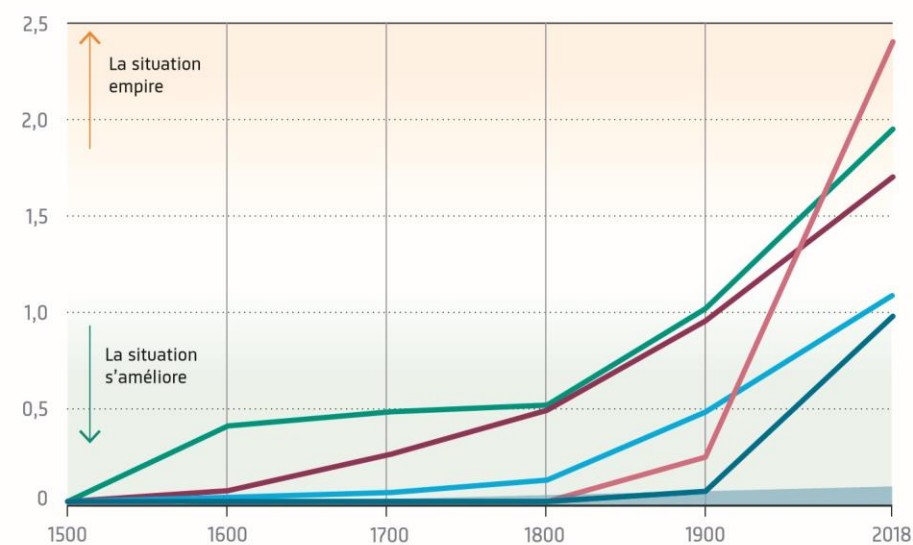
Chronique

- 1990 1^{er} rapport du GIEC
- 2005 Protocole de Kyoto
- 2007 Prix Nobel de la paix pour le GIEC
- 2015 Accord de Paris sur le climat
- 2020/
- 2021 Crise du COVID

Source:
 Ethridge et al. (1996) MacFarling
 Meure et al. (2006) Scripps CO₂
 Source: Keeling RF, Piper SC,
 Bollenbacher AF, Walker SJ.

1.2 L'extinction des espèces progresse sans faiblir

Pourcentage cumulé des espèces éteintes (Taux d'extinction)



- Amphibiens
- Mammifères
- Oiseaux
- Reptiles
- Poissons
- Taux d'extinction naturel en l'absence de toute influence de l'homme

Source:
 IPBES, global assessment report
 2019, summary for policymakers,
 fig. 3B

2 Global warming, extreme events and regional climate

Global warming since the pre-industrial era is caused by humans

- Warming since the pre-industrial period (1850–1900) is attributed:
 - The consumption of fossil fuels, namely oil, natural gas and coal; over the past decade these sources were responsible for about 85 to 90 percent of CO₂ emissions.
 - Changes in land use (remaining 10 to 15 percent).
- Compared with the pre-industrial period, the measured warming was 1.1°C for the period 2011–2020. The magnitude of this phenomenon is unprecedented in the last 100,000 years. And the climate is warming to a life that has not been equalled for at least 2000 years.
- Each additional tonne of CO₂ emitted leads to an increase in global warming.

Man-made climate change has discernible consequences and already affects all inhabited regions of the world.

- Switzerland is part of one of the regions of the world, Central and Western Europe, which is affected by increased heat waves, heavy rainfall and droughts.
- The contribution of human emissions to the likelihood of recent weather and climate events can be quantified. Some high-consequence events would have been extremely unlikely without our influence on the climate system.

Every tenth of a degree of global warming leads to more climate change and impacts

- Each increase in global warming increases the frequency and intensity of the various extreme weather and climate events, and notes unprecedented phenomena in terms of magnitude and duration in the during the observation period.

- Simultaneous extreme events in multiple locations will be more frequent with an increase in global warming. Agricultural areas will be particularly affected by these phenomena in the event of global warming of 2 °C or more compared to global warming of 1.5 °C.
- If CO₂ emissions continue to rise, the Swiss climate at the end of the century will change dramatically compared to the period from 1981 to 2010: the hottest days will see their temperature increase by 4 to 8 °C. Rivers will carry about 30 percent more water in winter, compared to about 40 percent less water in summer, which would hurt agriculture.

CO₂ emissions have lasting and irreversible repercussions for many future generations

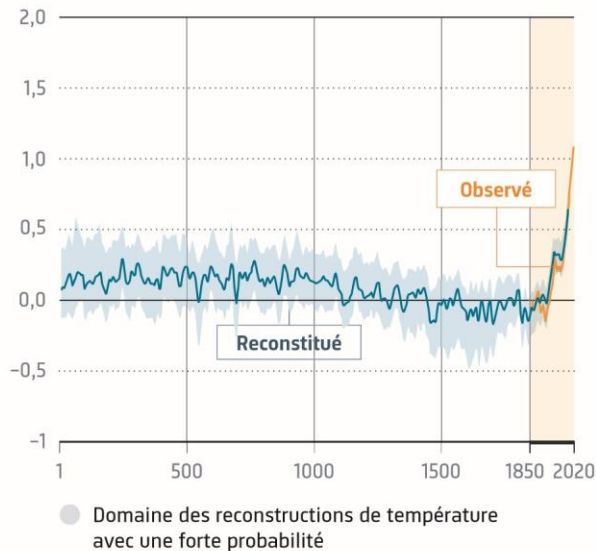
- There is no turning back: if we manage to achieve a CO₂ neutral budget, this will lead to a stabilisation of global warming, but not a significant cooling.
- Some of the CO₂ emitted will remain in the atmosphere for hundreds or even thousands of years.
- Some aspects of climate change will continue even if global temperature on the world's surface stabilizes. Examples include sea-level rise, acidification and oxygen loss from the oceans, melting ice caps and retreating some glaciers.

If our emissions remain at the current level, the remaining CO₂ budget to stabilize warming at 1.5°C will be exhausted in a few years.

- If our emissions remain at the current level, the CO₂ budget remaining to stabilize warming at about 1.5°C will run out in 7 to 12 years.
- To avoid larger-scale harmful changes, we need to reduce emissions of CO₂ and other greenhouse gases as quickly as possible and reduce our emissions to zero. net CO₂ input into the atmosphere. This presupposes the rapid abandonment of fossil fuels.
- The share of CO₂ emissions captured from the atmosphere by terrestrial and oceanic carbon sinks is lower in scenarios with higher CO₂ emissions. Therefore, the increase in warming reduces the absorbing effect of vegetation.

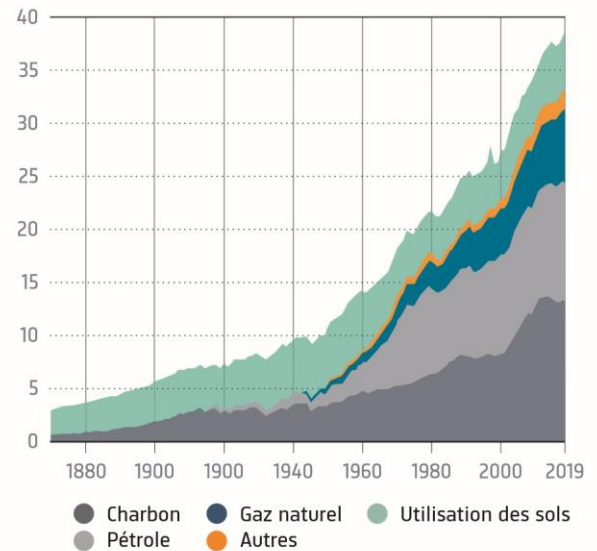
2.1 La température mondiale augmente depuis l'industrialisation

Ecart de température mesuré en degrés Celsius par rapport à la moyenne de la période 1850-1900



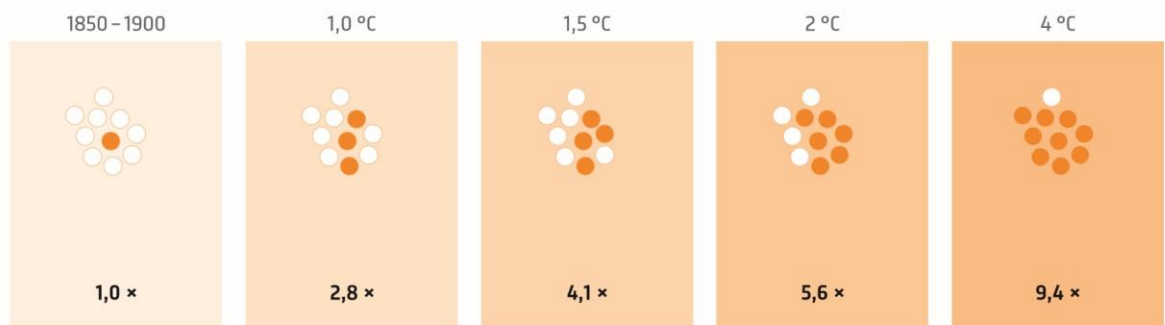
2.2 Les carburants fossiles engendrent la majorité des émissions de CO₂

Emissions de CO₂ mondiales par an en gigatonnes



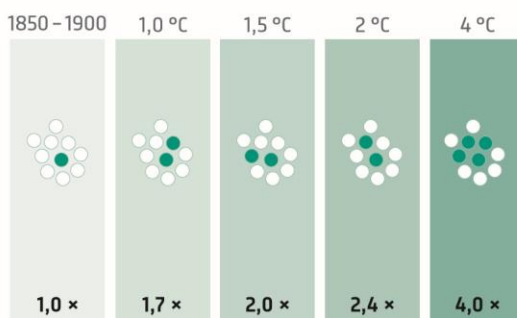
2.3 Les canicules sont plus fréquentes

Les graphiques montrent la fréquence des différentes canicules qui se sont produites une fois tous les 10 ans de 1850 à 1900 (moyenne pour les régions des continents)



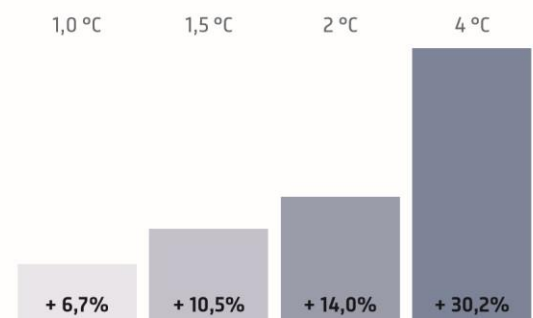
2.4 Les sécheresses augmentent

Fréquence des événements (moyenne pour les régions affectées par une augmentation des sécheresses, y compris l'Europe centrale et occidentale)



2.5 Les fortes précipitations gagnent en intensité

Augmentation de l'intensité (moyenne pour les régions des continents)



Source: IPCC, AR6, WG1, summary for policymakers, fig. SPM.6

3 Impacts of climate change and urgent changes

Climate change is already having particularly negative effects these days, especially due to extreme events.

- These impacts are felt on the lives of people around the world, in Europe and Switzerland. Basic needs such as health and nutrition are at stake. The general well-being and the economy are also at risk.
- The consequences of climate change include heat waves, droughts and floods.
- More than three billion people worldwide, and particularly in developing countries, are highly vulnerable to climate change.
- 50 percent of the world's population experiences severe water shortages each year.
- Each increase in global warming intensifies the negative effects and risks.

Risks are becoming more complex and increasingly difficult to overcome

- Climate risks are increasingly interconnected, occurring at the same time and creating complex repeating crises that are difficult to overcome.
- Extreme weather and climate events are a growing driver of migration in all regions of the world. Large-scale displacement is inevitable, especially in the event of high warming.
- About one billion people will be exposed to the risks of rising sea levels by 2050.

Switzerland is strongly impacted by climate change

- In Switzerland, heat waves, droughts and floods are causing the most serious consequences of climate change.
- The main negative effects concern inhabited areas, energy production, agriculture, water supply, tourism and other important infrastructure.
- Mountainous areas and socially disadvantaged populations are particularly affected by climate change in Switzerland.
- The heavy dependence on foreign countries makes the country very vulnerable to international crises. The integration of international supply chains would jeopardise Switzerland's ability to meet its needs, for example in the event of a drought or health crisis.

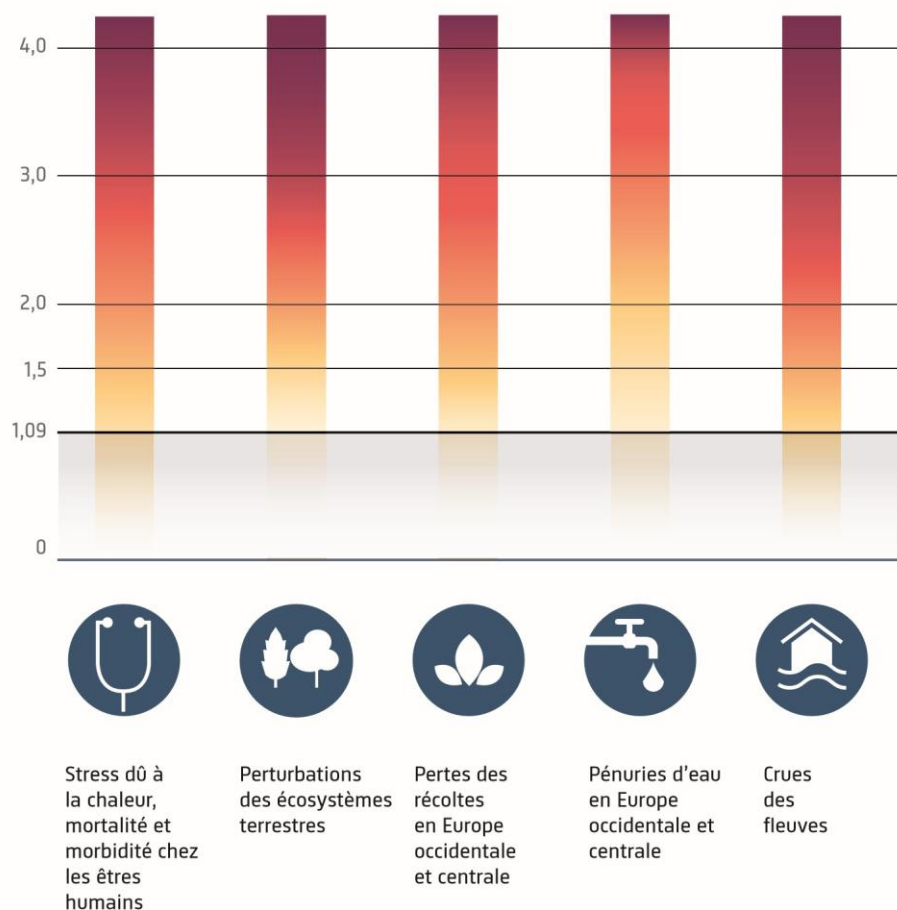
Adaptation to climate change is possible and must take place as soon as possible

- Many possibilities for adaptation exist. Many of them have multiple advantages. Measures such as flood protection, river renaturation and urban greening improve the quality of life in Switzerland and enhance biodiversity.
- It is crucial to significantly consolidate adaptation efforts over the next ten years. It's worth the effort: rehabilitations would be much more expensive.
- Limit warming to 1.5°C permand substantial reduction in damage and loss compared to more pessimistic warming scenarios. In the event of warming above 2°C (1.5°C for some ecosystems), many adaptation measures will be ineffective or no longer feasible.

3.1 Les conséquences se multiplient en Europe avec le changement

Risques en lien avec l'augmentation de la température superficielle mondiale par rapport à la période 1850–1900. La valeur mondiale s'établit à 1,09 °C.

En degré Celsius



Risques

En cas d'adaptation similaire à aujourd'hui

● Très élevés

Exemple: en moyenne jusqu'à 30 fois plus de décès annuels qu'aujourd'hui du fait de la chaleur et des capacités limitées à s'adapter

● Élevés

Exemple: jusqu'à 10 fois plus de décès annuels qu'aujourd'hui du fait de la chaleur

● Modérés

Exemple: décès du fait de la chaleur provoquée par le changement climatique

● Non vérifiable

Source:
IPCC, AR6, WG2, chapter 13,
supplementary material,
factsheet europe, fig. 2

4 Loss of biodiversity : causes and consequences for society

The state of nature and its vital contributions to humanity are deteriorating throughout the world at an increasingly rapid rate.

- Nearly a quarter of all species are threatened with extinction today, and the global extinction rate is 10 to 100 times higher than in the last 10 million years.
- The state of natural ecosystems has deteriorated by almost 50 percent. The abundance of terrestrial species has decreased by more than 20 percent on average. The biomass of large wild animals and insects has drastically decreased, including by nearly 8 percent for mammals.
- The losses also concern local varieties and breeds of domestic animals and plants. At the same time, more and more alien species are invading ecosystems and threatening native species, contributing to the homogenization of biological communities.

Biological diversity is as much or even more threatened in Switzerland as in other European countries

- Contrary to a widely held misconception, Switzerland is also affected by the loss of biodiversity. The key facts from national reports are clear:
 - multiple plant species, insects, birds, fungi, algae and lichens have disappeared locally or are permanently extinct.
 - More than half of the species are at least potentially threatened. This figure rises to almost 60 percent for insects.
 - Populations have declined sharply in terms of quantity, size and genetic diversity.
 - More than half of the natural habitat types are threatened (in terms of surface and quality); 90 per cent of peatlands and 95 per cent of dry grasslands have already disappeared.
 - Natural habitats and their populations are extremely fragmented and very insufficiently connected to each other.
- (FR) Despite some new measures in favour of biodiversity, for example the area under which growth is adopted in agriculture, negative trends still predominate very largely in relation to positive developments.

There is scientific evidence that human activities lead to the decline of biodiversity

- Over the past 50 years, the human population has doubled, the world economy has quadrupled and world trade has increased tenfold. This growth has greatly reshaped the biosphere: worldwide, 75 per cent of the Earth's surface and 66 per cent of the oceans have undergone changes while more than 85 per cent of wetlands have disappeared.
- The predominant causes of this deterioration on a global scale are:

- destruction of terrestrial and aquatic habitats
- overexploitation of wildlifesppecies
- the arrival of exotic species

climate change • environmental pollution

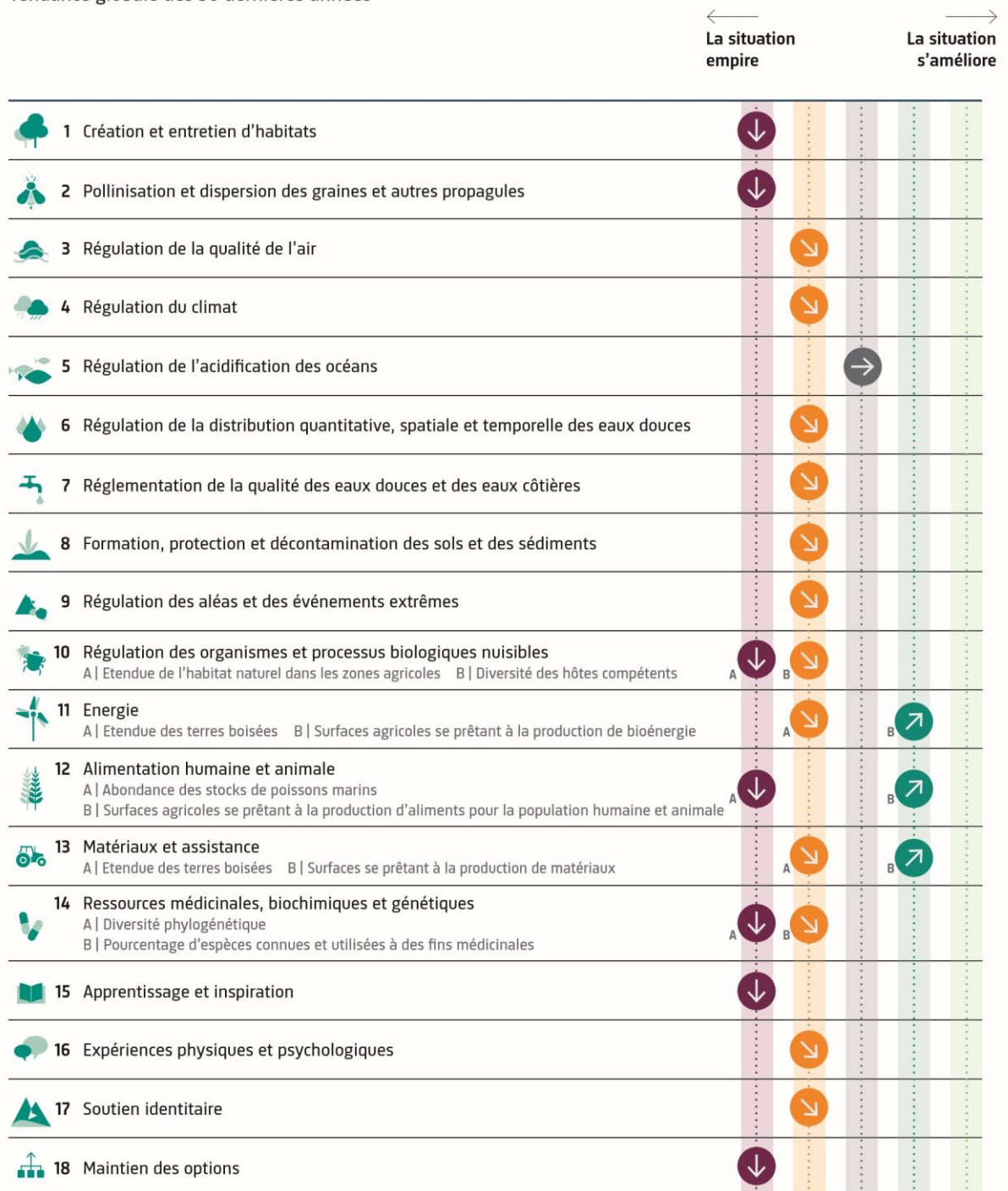
- In Switzerland, the main causes of biodiversity decline are:
 - loss and fragmentation of natural habitats (due to the extension of (peri)urban, industrial or agricultural areas).
 - Degradation of remaining habitats (e.g. by pesticides, herbicides, fertilizers, industrial effluents and other pollution).
- Due to its high consumption of foreign resources, Switzerland is disproportionately involved in the global decline in biodiversity.

The loss of biodiversity poses a significant risk to human well-being and the functioning of the economy in Switzerland

- The degradation of nature has already led to a decline of more than 75 per cent in various ecosystem services important to humans :
 - Globally , for example, there is a 23 per cent loss of soil fertility and ecosystem productivity.
 - More than 500 billion agricultural crops are potentially threatened by pollinator decline.
 - Protection against environmental hazards is greatly reduced.
 - Negative impacts on human health, such as anxiety, are increasing.

4.1 Presque toutes les contributions de la nature au bien-être humain reculent

Tendance globale des 50 dernières années



Source : IPBES, global assessment report 2019, summary for policymakers, fig. 1

– The loss of locally adapted natural populations, breeds of domestic animals, crop varieties, and their genetic diversity

poses a serious risk to food security and global health. .

This situation is likely to:

- This degradation of ecosystem services restricts pests, pathogens and change humanity's adaptation options to a climate future. increasingly uncertain.

- Promote the emergence of new crop diseases.

5 Ways to stop climate change

Switzerland and the world have fallen behind in the fight against global warming

- In order to limit warming to 1.5°C, global emissions must reach their maximum level before 2025, then halve their current level by 2030 and reach zero by 2050.
- Greenhouse gas emissions in Switzerland have fallen slightly. To eliminate them completely, it is necessary to abandon fossil fuels. The latter currently account for most of the country's energy consumption.
- Emissions from our consumption around the world continue to rise. They are among the highest on the planet and are almost three times higher than the global average.

Emissions can be halved by 2030 with existing technologies

- In order to drastically reduce our emissions, we need technologies to produce renewable energy and technologies to reduce demand.
- Investment costs for a range of renewable energies and for energy storage have fallen by 85 per cent over the last 10 years. The estimated overall economic costs of a rapid and significant reduction in emissions are therefore currently low and are even negative in many sectors when side effects such as improved air quality.
- Switzerland has considerable potential for cost-effective emission reductions in the short and medium term through the electrification of transport and building heating.
- Transition is possible, but requires coordinated and comprehensive action by many actors, including governments.

Annual investment in climate protection at the global level must be significantly increased

- In order to reach the 1.5°C target, investment in the world must be multiplied by 3 to 6 and by 2 to 4 in Europe.
- Investments in renewable energies, energy efficiency and the electrification of heating and transport are particularly necessary.
- Capital and liquidity are available in sufficient quantities to fill investment gaps. Using these means for climate protection, however, requires political decisions as well as directives from governments and the international financial community in which Switzerland plays a role.
- Swiss climate policy and investment in climate protection are currently lagging behind many other European countries.
- Developing countries face the biggest hurdles in increasing their investment in climate protection quickly enough. They can only do so with financial, technical and training assistance from the industrialized countries.

International collaboration is decisive

- The Paris Agreement is at the heart of the collaboration, but sectoral and regional conventions are also of paramount importance. Town twinning and transnational interprofessional agreements are also playing an increasing role.
- Regional energy markets for renewable energy are a decisive aspect of the collaboration.
- Thanks to the latter, Europe and Switzerland could integrate a larger part of the solar and wind energy produced into the energy supply. In addition, cooperative approaches promise a high degree of systemic reliability and reduce costs as well as the ecological footprint.

5.1 Il faut augmenter fortement les investissements annuels dans la protection du climat à l'échelle mondiale

Investissements annuels pour réduire les émissions de gaz à effet de serre en milliards de dollars US

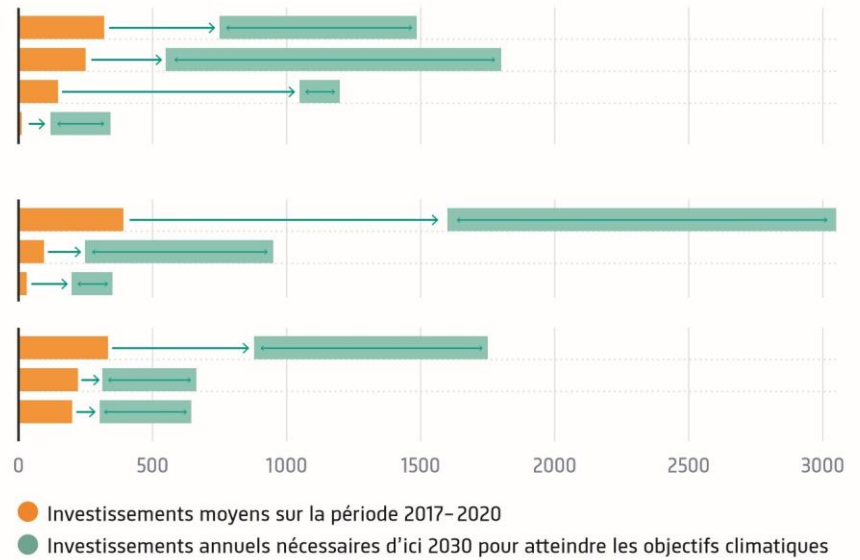
Selon les secteurs et segments

Electricité
Efficacité énergétique
Transport
Agriculture et sylviculture

Selon le type d'économie/la région

Pays en développement
Dont l'Amérique latine, les Caraïbes
Dont l'Afrique

Pays développés
Dont l'Europe
Dont l'Amérique du Nord



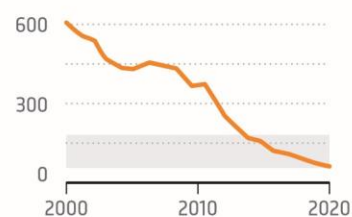
Source: IPCC, AR6, WG3, full report, technical summary, chapter 6.4 Investment and finance, fig. TS.25

5.2 Les coûts des énergies renouvelables diminuent, la part de marché augmente

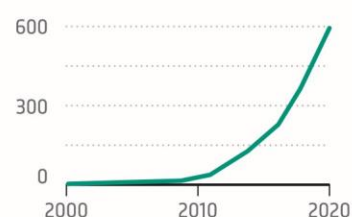
Coûts en dollars par mégawattheure ou kilowattheure (batteries) installé;
zone grise: pour les carburants fossiles; la quantité d'installations existantes en gigawatts ou nombre de pièces

Photovoltaïque

Coûts (\$/MWh)

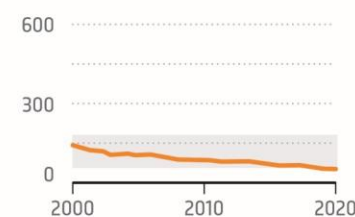


Installation (GW)

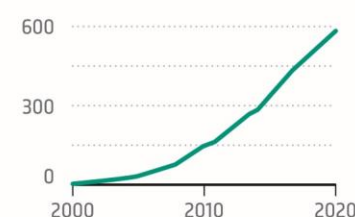


Eolien terrestre

Coûts (\$/MWh)

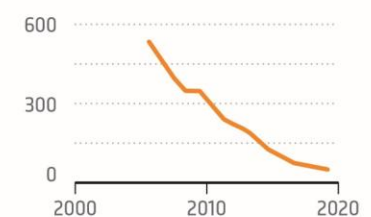


Installation (GW)



Véhicules électriques

Coûts batteries (\$/KWh)



Nombre de pièces (Mio)



Source: IPCC, AR6, WG3, summary for policymakers, fig. SPM.3

6 Opportunities to preserve and promote biodiversity

Securing the precious areas of biodiversity that still exist

- Currently, the valuable areas that still remain are shrinking considerably, for example in mountainous regions.
- Preserving biodiversity and related ecosystem services requires significantly more resources and surface areas.
- The ecological infrastructure must be developed and developed to reach about 30 per cent of the national territory.
- First, it is necessary to protect and restore key areas of biodiversity. In a changing climate, the interconnection of these key areas will always become more decisive. This requires the establishment of networking areas.

Looking beyond nature protection measures

- The vectors of destruction of nature are stronger than the measures to protect it.
- In Switzerland, the main causes of this destruction are:
 - **intensive** land use, structural remediation, urban area and infrastructure development
 - the use of pesticides, fertilization with nitrogen from agriculture and transport
 - Climate Change – What It

Takes:

- agriculture and forestry as well as an urbanization policy that respects biodiversity

- reduction of nitrogen emissions
- decrease in livestock and feed imports
- moderation in the consumption of animal products

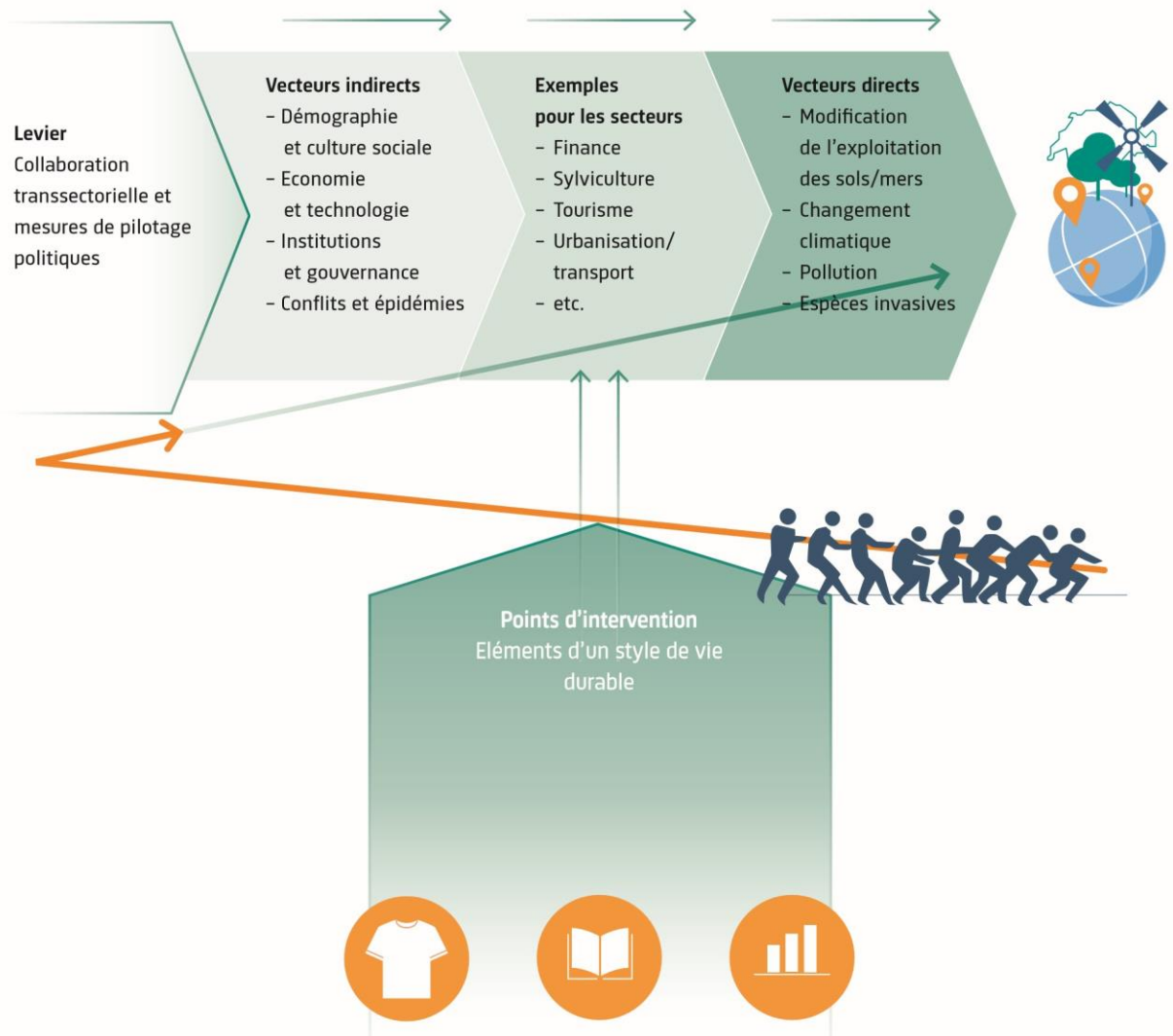
Nature protection policies alone are not enough

- Aspects of biodiversity must be integrated into all political and economic decisions to stem the loss of biodiversity.
- We need to transform society and the economy to significantly reduce our consumption of resources.

Explore and implement policy options

- Opportunities to preserve and promote biodiversity include :
 - the use of synergies potential, the development of beneficial strategies between the different land uses, for example by promoting and developing renewable energies.
 - The consideration of biodiversity aspects in planning and the increased internalisation of external environmental costs.
 - Condition the subventions to criteria favouring biodiversity and limit them over time.

6.1 Un changement fondamental doit comprendre des vecteurs indirects et directs



Source : IPBES, global assessment report 2019, summary for policymakers, fig. 9

7 Summary for Switzerland

Switzerland is vulnerable to the consequences at home and abroad caused by climate change and biodiversity loss

- Already above 2°C, warming in Switzerland is particularly significant, almost twice as high as global warming, which currently stands at 1.1°C.
- The indirect repercussions of climate change on Switzerland, i.e. the consequences which take place abroad, but which also have an impact at home because of interdependencies, go far beyond the direct repercussions within the Swiss borders.
- The country's critical infrastructure is exposed to particularly significant climate risks, such as natural disasters.
- The Swiss economy is closely linked to the stranger: the export industry requires strong foreign demand and intact supply chains. The tertiary sector needs a thriving international economy, a functioning financial sector and intact business structures.
- The well-being of the Swiss population depends not only on a thriving economy, but also on a healthy environment.

Whether it is the climate crisis or biodiversity, Switzerland bears a large part of the major responsibility.

- Taking into account the greenhouse gas emissions caused by consumption, Switzerland as a prosperous country has a particularly high per capita emission rate and ranked 16th in the world in 2019. Switzerland's carbon footprint abroad is at least twice that within its borders. In 2015, Switzerland ranked 9th in this regard. Swiss consumption has repercussions all over the world, on distant continents and seas, for example due to the burning of coal in China to produce goods or deforestation in Brazil to cover our demand for meat and soy.
- Swiss industry has many opportunities to develop, produce and export new climate- and environmentally friendly products. By actively seizing these opportunities, Switzerland is shouldering its responsibilities, simultaneously consolidating its international position and helping to meet its own security needs, particularly with regard to displacement, migration and conflicts of all kinds. In addition, the transition to renewable energy in Switzerland is helping to stop supporting autocratic regimes whose economy is heavily dependent on fossil fuels.
- As the world's fifth largest financial centre, Switzerland is involved in investment and trade in raw materials that are of global importance for climate and biodiversity.

Rigorous and immediate climate protection measures aimed at net-zero CO2 emissions are needed to further achieve the targets set

- The time frame for limiting global warming in line with the Paris Agreement is rapidly shrinking. An immediate reduction in emissions is therefore necessary. It is essential to use emission and development trajectories

that will halve CO2 emissions by 2030 and achieve net-zero emissions by the middle of the century.

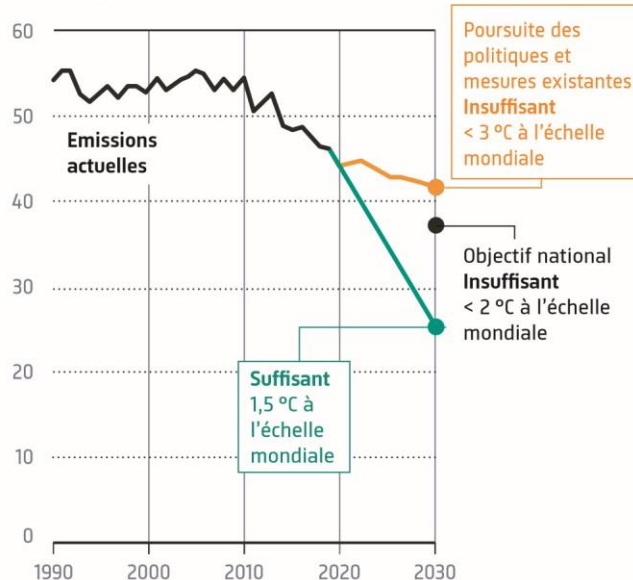
- This can only be achieved through the consistent implementation of adaptation and reduction measures across all sectors and an integrated approach.
- Anticipatory adaptation to inevitable climate change helps reduce risks, costs and damage to our country and its people to the extent possible, and thus preserve our well-being as much as possible.
- When Switzerland does its part in the fight against climate change, it can expect other countries to do the same in order to be able to reach zero in time. global net emissions e.
- All countries, and in particular Switzerland, must make their necessary contribution according to their capacities to ensure that the global target of limiting global warming to 1.5°C remains achievable.

Warming must be stopped at the lowest possible level, i.e. 1.5 °C

- Limiting global warming to the lowest level is the best way not to run into the limits of adaptive capacity. Prosperity and human well-being are thus preserved to the extent possible and biodiversity is protected.
- Stopping global warming implies a fundamental technological and societal transition, because fossil fuels (coal, oil, natural gas) must be completely replaced by other sources for production. uction of energy. This transition must take place in three decades to limit warming to 1.5°C.
- All unavoidable greenhouse gas emissions persisting after this period, such as methane from livestock farming or certain industrial processes such as cement production, must be compensated by the removal of CO2. Despite the significant need for surface area, this must be achieved without further disturbing biodiversity.
- An ambitious reduction trajectory must now be followed to maintain the need to eliminate CO2 at a low and achievable level following the achievement of the zero target net emissions so that food production and biodiversity are subject to only sustainable risks.

7.1 La Suisse a réduit ses émissions de gaz à effet de serre au sein de ses frontières, mais cela ne suffit pas

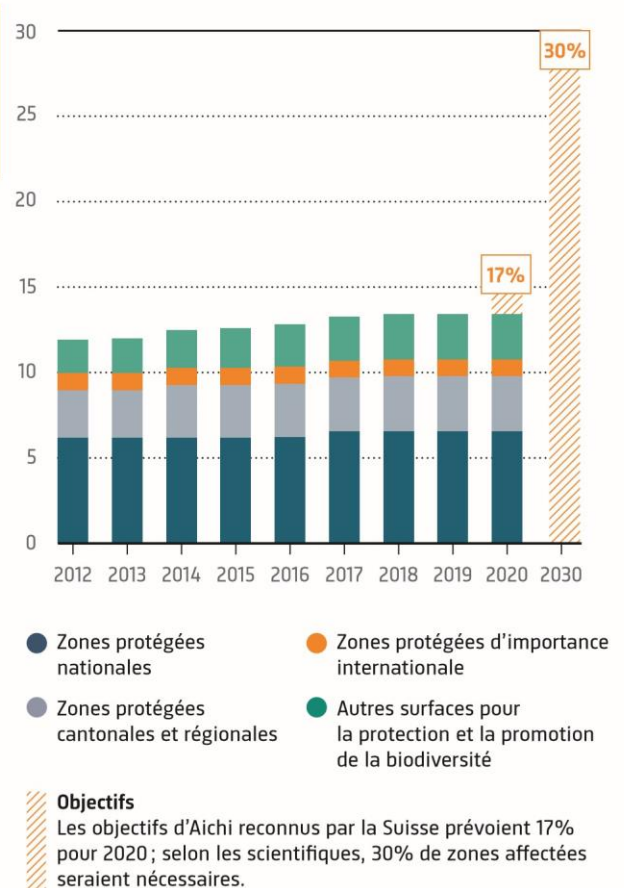
Emissions de gaz à effet de serre en mégatonnes d'équivalent CO₂



Quelle: climateactiontracker.org

7.2 Les zones affectées à la biodiversité augmentent faiblement

Surface en pourcentage du territoire national



Source: OFEV 2021. Indicateur biodiversité, Aires consacrées à la biodiversité. Etat au 31.12.2020.
<https://www.bafu.admin.ch/bafu/fr/home/themen/thema-biodiversitaet/biodiversitaet--daten--indikatoren-und-karten/biodiversitaet--indikatoren/indikator-biodiversitaet.pt.html>
<https://www.hacfornatureandpeople.org/home>

Biodiversity conservation must be promoted in a targeted manner on almost 30 per cent of surface areas

- In order to halt the loss of biodiversity in Switzerland, it should be aimed at promoting, protecting and interconnecting it in a targeted manner on around 30 per cent of surfaces, which applies particularly to key areas of biological diversity.
- As climate change is a growing threat to biodiversity, climate protection is paramount to its conservation. This also applies to the use of renewable energies such as hydropower or wind power, whose problematic repercussions on nature are not always avoidable, but can be kept within acceptable limits with full procedures.

In order to achieve the 1.5°C climate target enshrined in the Paris Agreement, profound changes must take place immediately

- The current measures are not sufficient. If global CO₂ emissions reach their maximum level in 2025 and are to be halved by 2030, there is a need to massively reduce CO₂ emissions and fossil fuel consumption.
- Offsets cannot replace real reductions in emissions in The West. It is difficult to verify the effectiveness of reductions obtained abroad. Since all countries have to reduce their net emissions to zero, not just Switzerland, this limits the possibilities of compensation.

Acting quickly is essential and worth it

As things stand, international biodiversity protection targets cannot be met

- Current trends indicate that biodiversity loss continues to accelerate in all regions of the world. In this context, the resolutions to protect biodiversity as enshrined in the Aichi Targets and the 2030 Agenda for Sustainable Development cannot be implemented.
- The loss of each species is irreversible. Many degraded ecosystems do not regenerate in a timely manner. In addition, entire ecosystems and their contribution to humanity threaten to reach a tipping point, for example in the Amazon.

Options exist

- It is essential that we become independent of fossil fuels and that we renounce investment in this sector. In addition, we must avoid at all costs activities that lead to a loss of biodiversity.
- Moving away from fossil fuels has many benefits. For example:
 - an overhaul of our energy system, including renewable energy and electric cars.
 - An adaptation of industrial processes.
 - Invest in environmentally friendly infrastructure and technologies to reduce energy needs and a lifestyle conducive to well-being.
- **Modification** of farming methods and transition to a healthy vegetarian diet.
- Reforestation and conservation of ecosystems necessary for climate protection and biodiversity.

Any delay exposes human societies to greater and uncontrollable risks

- The urgency is major, both from the point of view of climate and biodiversity.
- Rapid climate action strengthens Switzerland's innovation capacity. This improves prosperity and helps prevent increased or irreversible damage and loss.
- Adapting today is easier and cheaper than postponing actions until tomorrow. Adapting to increased warming will always be more costly and inefficient.
- In the area of biodiversity, urgent measures are needed to avoid further losses. Many aspects of biodiversity show prolonged or delayed reactions.

The facts are clear: a fundamental change in our society and economy must take place to achieve the climate and biodiversity targets set

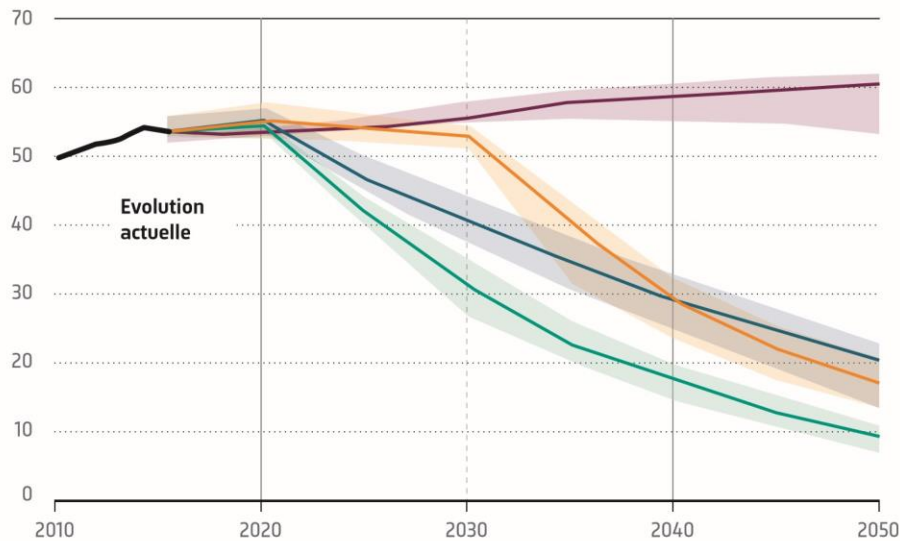
- The training puts the safety and well-being of the Swiss and world population at the forefront.
- It is necessary to drastically reduce the consumption of resources.
- For this change to succeed, the consequences on climate and biodiversity have priority in all political and economic decisions.

Transformation involves essential changes

- Fundamental changes are needed in the areas of energy, ecosystems, urban and rural infrastructure, industry and society to protect climate and biodiversity.
- They will make possible the necessary adaptations for the health and well-being of human beings, but also for the capacity for economic and social resilience and ecosystem resilience.
- Healthy ecosystems help reduce global warming by slowing climate change.

8.1 Les émissions de gaz à effet de serre doivent drastiquement diminuer pour atteindre les objectifs climatiques

Emissions mondiales de gaz à effet de serre en gigatonnes d'équivalent CO₂

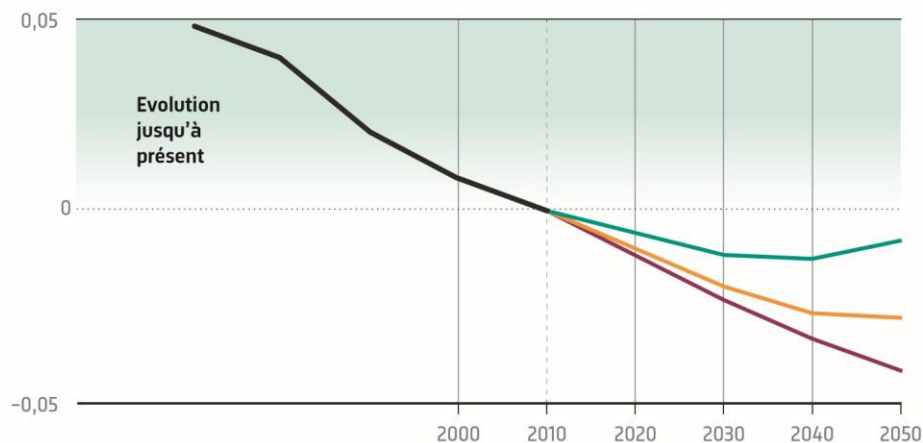


- Poursuite des politiques actuelles
- Valeurs annoncées dans le cadre de l'Accord de Paris jusqu'en 2030. Ensuite, trajectoire de réduction ambitieuse pour atteindre une température inférieure à 2 °C, puis à 1,5 °C sur le long terme.
- 2 °C à l'échelle mondiale
- 1,5 °C à l'échelle mondiale

Source : IPCC, AR6, WG3, summary for policymakers, fig. SPM.4

8.2 Il est possible d'endiguer la perte de la biodiversité

Evolution relative de la biodiversité



- Poursuite des politiques actuelles
- Evolution 1 avec des mesures de protection renforcées
- Evolution 2 avec des mesures de protection renforcées et une production et consommation plus durables



Poursuite des politiques actuelles :
les tendances historiques en matière de croissance démographique, d'alimentation, d'économie, de commerce et de technologie se poursuivent.



Evolution 1 :
les zones protégées sont élargies, mieux entretenues et connectées. Les écosystèmes sont renaturés et la biodiversité est prise en compte dans l'aménagement du territoire.



Evolution 2 :
en plus de l'évolution 1, production durable sur les surfaces agricoles existantes, évitement du gaspillage alimentaire et réduction de la consommation de produits d'origine animale.

Source : Leclère D, Obersteiner M, Barrett M, Butchart SHM, Chaudhary A, De Palma A et al. (2020) Bending the curve of terrestrial biodiversity needs an integrated strategy. Nature, 585, 551-556.

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Working Group I report (08/2021); WGII: IPCC Working Group II report (02/2022); WGIII: IPCC Working Group III report (04/2022); SPM: Summary for Policymakers

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