# **Q&A** on the sustainable finance industry initiative

# 1. Reasons for the industry initiative

# Why did Swiss wealth management banks and private banks launch a sustainable finance initiative?

Many wealth management banks and private banks have been active in sustainable finance activities for years and some of them even made their operations climate-neutral quite some time ago. At the end of 2020, the Association of Swiss Asset and Wealth Management Banks (VAV) decided to consolidate all efforts being made in this regard and launch an industry-wide initiative. The idea is to show what type of leverage the industry realistically has here — in other words to present the specific measures the industry has been taking over the past few years and show the progress that has been made with the various measures. The measures were presented in 2021 and the first progress report was published in 2022.

## What specifically is the industry initiative meant to achieve?

Switzerland's wealth management banks and private banks want to do their part to help achieve the objectives of the Paris Agreement as active members of society and as part of their duty of care towards their clients because climate risks also represent investment risks that we all need to be aware of. Sustainability and sustainable finance have been at the top of the agenda here for some time now. This published report illustrates how and why the VAV and the ASPB and their members are following through on their commitment. The industry initiative has established specific priorities in the areas of greenhouse gas reductions, advisory and offering, and training and disclosure, and the wealth management banks and private banks are now focusing on these priorities. The industry initiative's ambitions and climate-related obligations are aligned with the objectives of the Paris Agreement. Sustainable finance offers an opportunity for the wealth management industry, and will benefit coming generations as well.

# Do all of Switzerland's wealth management banks and private banks have to participate in the industry initiative?

The initiative was launched last year with twelve banks; today, 23 banks are participating. The initiative is based on voluntary participation and no association members have been or will be forced to participate. However, those that do agree to join must commit to being evaluated on the basis of the twelve priorities so as to enable the disclosure of consolidated results for the industry as a whole. Each bank can still decide for itself whether it wishes to disclose its own individual results.

#### What are the 23 member banks / associations in the initiative?

The initiative was launched in 2021 with 12 VAV members; in 2022, there are 14 members in the initiative. New additions are LGT Bank and the members of the ASPB. The following institutions are currently participating in the initiative: Aquila AG, Bank Julius Bär & Co. AG, Bank Vontobel AG, Banque Bonhôte & Cie SA, Banque Lombard Odier & Cie SA, Banque Pictet & Cie SA, Bordier & Cie SA, Cornèr Banca SA, Edmond de Rothschild (Suisse) SA, EFG International, E. Gutzwiller & Cie, LGT Bank AG, Maerki Baumann & Co. AG, Mirabaud & Cie SA, Rahn+Bodmer Co., Reichmuth & Co., Scobag Privatbank AG, Union Bancaire Privée UBP SA and VZ Depotbank AG. Four banks have chosen not to disclose their membership in the initiative.

# Who is allowed to participate in the initiative?

The initiative is intentionally designed to be an open platform that welcomes all financial institutions that engage in wealth management activities. The members of the initiative would also welcome the support of additional associations and the addition of further private, foreign, cantonal and major banks as members.

# Why did the ASPB decide to support the industry initiative?

Sustainable finance has been a priority issue for ASPB members for a long time now. The launch of the initiative last year showed that this issue affects the entire wealth management industry. The measures relating to sustainable finance that have been taken by banks throughout the industry are similar in nature, so it made sense to adopt a coordinated approach here.

Have all initiative members committed themselves to the priorities in equal measure?

The sustainable finance initiative lays down the strategy – in other words it sets the priorities. However, no rigid guidelines have been defined for each individual institute. The participating banks are involved in the same core business, but they are all very different in terms of their size and structure. For example, the 23 members include very small SMEs with fewer than 50 employees and with only one location but there are also banks that operate globally and have several thousand employees and locations all over the world. So all 23 members cannot simply be lumped together. At the same time, all those that do agree to join must commit to being evaluated on the basis of the twelve priorities so that the consolidated results can be disclosed for the industry as a whole.

# 2. International developments

# How has Switzerland positioned itself globally with regard to sustainable finance?

The Swiss financial industry is seeking to further strengthen its position as a leader in sustainable financial services. Efforts are being made to design the framework conditions in such a way that the competitiveness of the Swiss financial industry is continuously improved and the financial sector can make an effective contribution to sustainability. The everincreasing regulatory activity in the field of sustainable finance is not only being felt on a national level, as it has long been tangible on the international stage as well. Because climate change represents a global challenge, the issue is being taken up by various international organisations and many parties are rightfully attempting to agree on globally applicable standards. These are being developed within international financial bodies, in some cases with the involvement of Swiss authorities.

#### What are the key regulatory challenges here?

There is a real risk of fragmentation of international regulations due to the formation of blocks of competing economic areas and the diverging focus of various countries' respective national energy policies. The desired consistent national implementation of aligned international sustainable finance principles is therefore unfortunately far from being achieved at the moment.

### Can Switzerland afford to go it alone here?

With its heavy export focus, the Swiss financial industry has to be aware of the existing international differences, as a large proportion of its clients are domiciled abroad and its investment products are sold internationally. In view of the real possibility of the fragmentation of international regulations, a staggered approach would be sensible from a Swiss point of view, as there are still many uncertainties with regard to regulation within the EU and how it aligns with other international initiatives in this area. It is therefore also

foreseeable that one day, there will be questions about the exportability of Swiss products and services in the area of sustainable finance and how Swiss regulations equate to those of other nations and international bodies, particularly those of the EU.

# What important sustainable finance developments have occurred on the international level?

- G20 and the Financial Stability Board (FSB): In a global context, the framework developed by the Task Force on Climate-related Financial Disclosures (TCFD) has gained particular momentum due to its recognition as a global standard by relevant stakeholders. The framework introduces consistent and transparent rules regarding the disclosure of the financial climate risks associated with economic players. This development should be welcomed, as consistent rules are important for banks that operate internationally, and some of these rules have been incorporated into national regulations (for example the FINMA circular on disclosure, or the planned climate reporting obligation in the indirect counterproposal to the responsible business initiative).
- UN: The UN Environment Programme (UNEP) and the UN Sustainable Development Goals (UN SDGs) form the foundations for achieving the climate objectives. Based on these, the UN Principles for Responsible Investing (PRI) and the UN Principles for Responsible Banking (PRB) have been established for the financial sector. Many financial institutions in Switzerland and around the world have already signed up and the sustainable finance industry initiative is also committed to these principles.
- Net-Zero Banking Alliance: In April 2021, during the run-up to the UN Climate Change Conference (COP26) in November 2021, the UN Net-Zero Banking Alliance was launched. The alliance is made up of 116 of the world's largest banks (as of September 2022). Through collaboration and transparency, the alliance aims to align the ambitions of the banking sector and its climate-related obligations with the objectives of the Paris Agreement. The alliance coordinates the bank section of the Glasgow Financial Alliance for Net Zero (GFANZ), which is the overarching alliance that brings together the various net-zero alliances in the financial sector such as the Net Zero Asset Managers initiative (NZAM) and the Net-Zero Insurance Alliance (NZIA).
- **Central banks and regulators**: Parallel to this, central banks and regulators in the EU, the UK, Switzerland, Singapore and Hong Kong are becoming more concerned about climate risks and are increasingly taking them into account in their existing stress tests.
- EU: The EU has taken on a pioneering role in the area of sustainable finance by implementing the EU Action Plan and the Green Deal for a sustainable European economy. The latter aims to establish the conditions necessary for the EU to become climate-neutral by 2050. It describes the measures and investments that are crucial for this and explains how these measures can be funded. The introduction of a Green Bond Standard has been accompanied by the implementation of further regulatory changes for banks in the field of sustainable finance and the EU taxonomy has been further developed as well. Furthermore, the European Commission proposed the 'fit for 55' programme, which involves a comprehensive package of measures that aim to reduce greenhouse gas emissions by at least 55% by 2030.
- International Platform on Sustainable Finance (IPSF): The IPSF, which was established by the EU in 2019, has 18 members, including Switzerland. Together, these members represent 55% of the world's greenhouse gas emissions, 50% of the global population and 55% of global GDP. The aim of the IPSF is to increasingly mobilise private capital for environmentally responsible investments by aligning national standards as much as possible. The IPSF therefore offers a multilateral forum to facilitate dialogue between the political decision-makers responsible for the development of regulatory measures for sustainable finance in order to help investors identify and take advantage of sustainable investment opportunities that make a real contribution to achieving climate and environmental targets.

# 3. Activities in Switzerland and the financial sector

### How is Switzerland reacting to international developments?

The Federal Council approved a report and set of guidelines on sustainability in the financial sector in June 2020, thereby underscoring its objective of turning the Swiss financial industry into a leading hub for sustainable financial services. To achieve this aim, the framework conditions need to be designed in such a way that the competitiveness of the Swiss financial industry is continuously improved and the financial sector can make an effective contribution to sustainability.

# What role does the Federal Council play here?

The Federal Council's primary objective is to develop industry standards rather than regulations. The Federal Council encourages companies in the financial industry to use comparable and reliable climate compatibility indicators to create transparency with regard to all of their financial products and client portfolios. The Federal Council has also recommended that companies in the financial industry join the various international "netzero alliances" and believes that new industry agreements should be concluded to this end. In addition, the Council plans to examine whether measures to prevent greenwashing need to be developed and implemented. The Council defines greenwashing as a situation in which the clients of a financial institution are knowingly deceived or misled about the supposed sustainable attributes of financial products and consultation processes. Within the context of the Paris Agreement, Switzerland has committed itself to implementing climate-related regulations for the financial industry, which is why it makes sense to initially focus on climate impacts. Such a focus is also in line with international developments such as those occurring in the EU and among the G20 nations.

#### The Federal Council launched the Swiss Climate Scores this year. Why?

The Swiss Climate Scores system utilises a catalogue of criteria that are based on the latest international findings. These criteria make it possible for private and institutional investors to judge how climate-friendly a specific investment product actually is.

# Why is climate transparency at the product level important?

It is important because it allows investors to get a clear picture of the footprint of their investments and, if they so wish, make investment decisions that help achieve the climate targets. What we're talking about here is reliable and comparable information on how compatible various investment products are with international climate targets. You need to have a set of several indicators in order to ensure that such information is reliable. The Swiss Climate Scores system promotes comparability by defining specific minimum requirements for formulating the indicators.

#### What are the associations doing?

Several associations have become active in this area and have developed recommendations for the effective implementation of a sustainable investment process (Swiss Sustainable Finance, SSF) and a set of guidelines for integrating ESG (Environmental, Social and Governance) criteria into the consultation process for private clients (Swiss Bankers Association, SBA).

• The Swiss Bankers Association (SBA) introduced a system of self-regulation for Sustainable Finance in 2022. The new guidelines define binding sustainability-related provisions for the first time with regard to investment advice, mortgage advice and wealth management. By making sustainability an integral component of advisory discussions with private clients, the industry is making a real contribution to the achievement of the Paris Agreement's climate objectives and targets and is also helping to further strengthen Switzerland as the leading hub for sustainable finance. The

aforementioned guidelines will enter into force on 1 January 2023, whereby certain grace periods will be defined for the various institutions in order to allow internal bank processes to be adjusted as needed. The guidelines will be reviewed on a regular basis and refined whenever necessary.

- The Asset Management Association Switzerland (AMAS) is currently developing a principle-based self-regulation system for sustainable asset management that will be binding for all its members. This self-regulation system will initially focus on combating greenwashing and promoting climate protection.
- In the summer of 2021, Swiss Sustainable Finance (SSF) decided to develop recommendations to help financial industry practitioners integrate client sustainability preferences into consultation processes ("Practitioners' Guide on the Integration of Sustainability Preferences into the Advisory Process for Private Clients").

#### What are the challenges here?

Basically, it is important to use different measures for both the investment side and the financing side of the banking business. Furthermore, any Swiss regulation should focus on the areas for which equivalence with EU laws is required for export reasons. From a Swiss point of view, a staggered approach would also be sensible as there are still many uncertainties with regard to regulation within the EU and how it aligns with other international initiatives in the field.

# What is special about the "climate contribution" made by banks? Why do we need to distinguish between the investment side and the financing side of banking?

Like companies in other industries, banks can have direct and indirect impacts (Scopes 1, 2 and 3) along their entire value chains. However, given its specific economic function, the financial industry can also make a further significant impact by assisting other sectors. This specific additional assistance the financial sector can provide for other industries necessitates a differentiated view on the extent to which banks can offer support in different business fields. The sustainable finance concept assigns three core functions to the banking business: investment, credit and financing, and the capital market and the issuing of securities. Due to the different roles a bank plays in each of these functions, specific instruments must be used to ensure sustainability. That is because it makes a difference if a bank is operating within the commercial sector with companies or if it targets its services at private clients. We also need to take into account whether a bank is only considered an intermediary and therefore plays an advisory role towards third parties, or whether it manages third parties' funds as a fiduciary or invests its own money (treasury, granting credit) and is therefore subject to increased liability or risk. Finally, we can also distinguish between the primary market and the secondary market, as banks in the primary market give new companies and new or expansion projects access to the financial markets or provide the necessary financing, and therefore have a more direct influence on CO2 emissions, while in the secondary market they only assist with changes in ownership of securities and therefore have no comparable direct CO2-relevant impact.

# How does the initiative define sustainable investment?

Over time, sustainable investment has become an important topic for almost all investors – both institutional and private. The wealth management banks and private banks are very aware of their responsibility towards the environment, society and clients within this transformation process. They actively communicate with their clients about the challenges, opportunities and risks for investors that are associated with climate change and a move towards a more sustainable economy.

#### How can wealth management banks influence their clients with regard to sustainability?

The wealth management banks want to offer their clients investment solutions that make a measurable contribution towards achieving the objectives of the Paris Agreement. At the same time, they want to provide them with opportunities to participate in the transformation process as investors. The industry initiative will create transparency in this regard through its policies for bank staff training and the provision of information to clients. The latter will ensure that clients always know what proportion of their portfolio meets the defined sustainability criteria.

#### How can greenwashing be prevented?

To prevent greenwashing, companies need to provide transparent information and comparable and high-quality raw data. Without such information and data as a basis, there will continue to be confusion with regard to the sustainability of products and services — and the overall activities of companies in general. There must also be clear agreement on the use of key terms and concepts such as sustainable investment, ESG integration, etc.

#### How much CO<sub>2</sub> does the financial industry produce?

According to the environmental accounts produced by the Federal Statistical Office, the financial and insurance industries produced 0.3 million tonnes of  $CO_2$  equivalents in 2018. This corresponds to 0.7% of the emissions produced by the Swiss economy as a whole as per the General Classification of Economic Activities and 0.5% of all Swiss emissions (i.e. including private households). In comparison to other sectors, it appears the achievement of climate-neutrality in terms of direct business activity (Scope 1 of the Greenhouse Gas (GHG) Protocol) is within reach for the entire financial sector. The sector is therefore fulfilling its primary task. As is the case with other sectors, the financial industry can make a further contribution through measures relating to the quality of its energy purchasing (Scope 2 of the GHG Protocol) and its up- and downstream corporate activities (Scope 3 of the GHG Protocol: supply chain, business trips / commuting, waste disposal, assets under management, etc.), and also – due its specific economic function – make a further significant impact by assisting other sectors.

# How can banks reduce their carbon footprint?

See the "bank climate contribution" question above. As part of the responsibility they have as companies to support the greater good, many wealth management banks and private banks are working on reducing their own carbon footprints in accordance with national climate objectives and reporting transparently on the process. The sector is already practically neutral today. Nevertheless, it can make a further contribution by making improvements with regard to Scopes 2 and 3 and expanding its investment promotion activities and client advisory services. The sustainable finance industry initiative wants the Swiss financial industry to play a globally leading role in the field of sustainability.

# 4. The industry initiative's 12 priorities

#### What are the industry initiative's 12 priorities?

The 12 priorities for 2022 have been divided into four categories that reflect the most important aspects for wealth management banks:

 Reducing greenhouse gas emissions: The participants have committed themselves to taking measures that will lead to a massive reduction in greenhouse gas emissions in line with the Paris Agreement, with the aim of limiting the average increase in global temperatures to no more than 1.5° Celsius as they make themselves net zero by 2050 or earlier.

- Offering and Advisory: The participants broaden their range of sustainable investment solutions and proactively approach clients to discuss the opportunities and risks of sustainable investments with them.
- **Training:** The participants are training all client-facing staff in advising clients about the opportunities and risks of sustainable investments.
- **Disclosure**: The participants are supporting international standards such as the EU Action Plan for financing sustainable growth, and key industry initiatives as well as promoting guiding principles. Specifically, they are making sure that the measures taken to help meet the Paris climate targets are disclosed.

# Why is this year's priority list different from last year's list?

Originally set at 16, the number of priorities has been reduced to twelve and split into four categories as a result of various modifications and further developments. These adjustments made sense as a response to ongoing developments. The priorities relate to those aspects that are particularly relevant to wealth management banks.

- Four new priorities were added: 1) joining one of the net-zero initiatives by 2023, 2) the provision of information to customers about the proportion of sustainable assets in their portfolios (in accordance with the EU taxonomy), 3) training for all staff in the foundations of sustainability and 4) the provision of information/materials on the topics of climate protection and decarbonisation as part of the consultation process.
- Four priorities were made more stringent and/or more specific: 1) The greenhouse gas reductions needed to achieve the net-zero target were set for the year 2050 and were linked to a scientific industry standard. 2) The 50% reduction target for greenhouse gases will now need to be achieved by 2030 instead of 2050 and the target now also includes the Treasury Book. 3) Implementation of the TCFD recommendations will now begin in 2023 and the results will be disclosed. Finally, transparent reporting on measures taken within the value chain (Scopes 1, 2 and 3) was expanded to include the Treasury Book.
- Several measures have become unnecessary due to their integration into the regulatory framework (application of the EU taxonomy as a "lingua franca") and their incorporation as integral components of newly defined and further specified priorities (performance of a scenario analysis in accordance with the TCFD, use of the UN Principles for Responsible Banking as a basis for a net-zero alliance, active discussion with clients about the opportunities and risks of sustainable investment as a basis for newly defined measures for advisory and offers, presentation of environment-based investment solutions as a foundation for increasing sustainably managed assets, active ownership engagement as part of the net-zero alliance that addresses asset owners). Other measures were discontinued because they had become less relevant in view of other priorities that are being emphasised (FOEN climate stress test).

# Are all measures actually being implemented?

The progress report shows the current status of implementation of the 12 measures weighted on the basis of the assets under management. All of this involves a dynamic benchmarking and learning process. The members are queried on their progress on a regular basis. Additional measures are also being defined and existing measures are being continuously adjusted. The progress report presents the consolidated results, and every member can decide for itself whether it wishes to disclose its own results.

Does the industry initiative plan to set binding minimum standards or issue a label? An own label will not be issued. However, some of the 12 priorities are already based on international standards such as the UN PRI, the UN PRB and the TCFD.

# 5. Switzerland as a sustainable finance hub

### Why is Switzerland destined to be a sustainable finance hub?

The framework conditions for the transformation of Switzerland as a location for wealth management into a sustainable finance hub are already favourable today. Switzerland manages 25% of all worldwide cross-border assets under management and is the global leader in the wealth management sector, whose creation of services is a low-emission activity. Switzerland is also a location that boasts solid interaction and rapid communication between the government, financial industry companies, the scientific community and major players in various sectors of the real economy that are committed to sustainability. This is an excellent foundation for the successful development of Switzerland as a sustainable finance hub – one that can attract talented individuals as well.

# How should Switzerland distinguish itself as a sustainable finance hub from other hubs that have also made sustainability a priority?

Switzerland has been a global leader in the wealth management sector for decades now. Clients from all over the world trust the expertise that Swiss financial companies can offer them and appreciate the centuries of stability and legal certainty that Switzerland has provided. The concentration of experience and expertise in wealth management is unique in Switzerland, as are the network and ecosystem, including the academy. What's more, the numerous Swiss startups in the areas of fintech and distributed ledger technology (DLT, blockchains) show just how innovative the Swiss financial industry can be.

Hasn't the entire financial industry been addressing ESG issues for a long time now? Sustainable financial products still only account for a relatively small share of client investment portfolios. In other words, there's still a lot of potential here. According to SSF, a total of CHF 1,982 billion in sustainable investments is currently under management in Switzerland, whereby the definition of such investments could be narrowed in future in line with changes that might be made to the criteria for evaluating and classifying investments. Nevertheless, the current trend clearly points to strong growth in future.

# Glossary – the most important terms

#### Decarbonisation

Decarbonisation refers to a process that reduces the use of energy sources that contain carbon. The long-term goal regarding decarbonisation is to completely eliminate carbon-based sources of fuel and energy in the mobility and power generation sectors and other economic sectors.

#### **Greenhouse Gas (GHG) Protocol**

The GHG Protocol establishes a globally standardised framework for measuring and managing greenhouse gas emissions from the private and public sector and along value chains. The GHG Protocol is the result of a 20-year partnership between the World Resources Institute and the World Business Council for Sustainable Development. The protocol organisation works with governments, industrial associations, NGOs, companies and other organisations.

#### **Global warming**

Global warming refers to the increase in the average global temperature since the beginning of the industrial era. Average global temperature increased by 1 °C between 1880 and 2017. It is extremely likely that greenhouse gas emissions are the cause of this increase. Greenhouse gas emissions are mainly a result of the combustion of fossil fuels such as coal, oil and natural gas, but they are also caused by large-scale changes in land use – for example deforestation in tropical rain forests.

# Sustainable financial system (sustainable finance)

A financial system is considered sustainable if the financing and investment decisions made within it promote economic activity that takes the scarcity of limited natural resources and the regenerative capacity of renewable resources into account. In order to increase the level of sustainability in such a system, companies and individuals will systematically incorporate sustainability factors into their financing and investment decisions.

#### **UN Sustainable Development Goals (SDG)**

The UN's 2030 Agenda, which has 17 sustainable development goals, is a global plan for promoting sustainable peace and prosperity in order to protect our planet. Since 2016, all UN member states have been working on incorporating this shared vision for fighting poverty and reducing inequality into their national development plans. The 17 sustainable development goals can be found here: THE 17 GOALS | Sustainable Development (un.org)

#### **Net-zero emissions**

If global warming is to be slowed, greenhouse gas emissions will need to be completely eliminated by the middle of the century. Some emissions that are difficult to reduce will continue to be produced, however.  $CO_2$  removal could be used to offset these, and this would result in net-zero emissions. Example for Switzerland:  $CO_2$  emissions in Switzerland caused by transport, buildings and industry can be reduced by as much as 95 per cent by 2050 by using existing technologies and renewable energy sources. The remaining emissions will be offset in future by natural  $CO_2$  storage media (e.g. forests and soil), as well as through the use of technologies that permanently remove greenhouse gases from the atmosphere and then store them.

#### Corporate social responsibility (CSR)

Corporate social responsibility involves addressing the impact that business activities have on society and the environment. It relates to a broad range of issues that companies need to

pay attention to. Such issues include working conditions (health, occupational safety, etc.), human rights, environmental protection, taxes, transparency, the prevention of corruption, ensuring fair competition and protecting consumer interests. Effective CSR requires companies to consider the interests of stakeholder groups (e.g. shareholders, employees, consumers, local communities and non-governmental organisations).

# **The Paris Agreement**

During the UN Climate Change Conference in Paris at the end of 2015, an agreement was reached for the period after 2020 that for the first time requires all participating countries to reduce their greenhouse gas emissions. The Paris Agreement is a legally binding instrument that is part of the United Nations Framework Convention on Climate Change. The agreement contains elements for enabling the gradual reduction of global greenhouse gas emissions and it also defines common principles for all nations for the first time. For example, the agreement calls for keeping the rise in average global temperature to well below 2 °C when compared to the pre-industrial era, and for the parties to the agreement to make efforts to limit the global temperature increase to 1.5 °C. In order to accomplish all of this, global greenhouse gas emissions will have to be reduced to net-zero by the beginning of the second half of this century. In other words, fossil emissions may no longer be released into the atmosphere after that time. Other key objectives of the agreement include redirecting public and private finance flows towards low-carbon development (and development that releases low levels of other greenhouse gases as well) and improving humankind's ability to adapt to climate change.

By ratifying the Paris Agreement, Switzerland has committed itself to reducing greenhouse gas emissions by 50% by 2030 compared to 1990 levels.

#### Scopes 1, 2 and 3

The Greenhouse Gas Protocol Corporate Standard divides the greenhouse gas emissions of companies into three categories (Scopes). Scope 1 emissions are direct emissions from owned or controlled sources (e.g. from company facilities and vehicle fleets). Scope 2 emissions are indirect emissions from the generation of energy (electricity, steam, heating and cooling) purchased for a company's own use. Scope 3 emissions are all other indirect emissions that occur in a company's value chain, including emissions from up- and downstream activities. Upstream activities relate to procured goods and services, capital goods, the use of fuels and other energy sources, employee commuting, business trips, leasing activities, the transport and distribution of manufactured goods and the production of waste. Downstream activities include, for example, the transport and distribution of sold goods, the processing and utilisation of sold goods and the recycling of sold goods, as well as investments, franchising and the provision of leased goods.

#### The greenhouse effect

The greenhouse effect works as follows: The sun warms the Earth's surface, which in turn radiates the heat into the atmosphere. Greenhouse gases in the atmosphere absorb this heat and radiate part of it back down to Earth. This heat that is returned to Earth warms up the surface and the lowest layer of the atmosphere. The higher the concentration of greenhouse gases, the greater the additional warming effect will be. The greenhouse effect is a natural phenomenon — and it is actually what makes life on Earth possible. If there were absolutely no greenhouse gases in the atmosphere, the Earth's average temperature would be around -18 °C. The problem is that the greenhouse gases emitted as a result of human activities have disrupted the natural balance between incoming and outgoing thermal radiation. As a result, the Earth's surface has become approximately 1°C warmer on average since the beginning of the industrial era in the mid-19th century. The average temperature in Switzerland actually increased by around 2°C between 1864, when industrialisation began in the country, and 2012.

#### Greenhouse gas emissions

Greenhouse gas emissions are emissions of gases that reinforce the greenhouse effect. Carbon dioxide (CO<sub>2</sub>) accounts for most of the greenhouse gas emissions in Switzerland (approx. 82%). Carbon dioxide is released when fossil fuels such as coal, oil and natural gas are burned – and cement manufacturing and deforestation also lead to higher levels of carbon dioxide in the atmosphere. Methane, which accounts for approximately 10% of greenhouse gases, is mainly produced by agricultural activity (livestock farming, the use of fertilisers), waste management operations (landfills, composting/fermentation, waste water treatment) and the use of fossil energy sources. Nitrous oxide (approx. 5%) is also produced as a result of agricultural activity (soil treatment and the use of fertilisers) but is also released in energy conversion processes, industrial operations and waste water treatment processes. The remaining 3% of greenhouse gas emissions are accounted for by synthetic greenhouse gases (HFCs, PFCs, SF6 and NF3) that are mainly produced as a result of industrial operations (production of semiconductors, solvents, refrigerants, electronic equipment, etc.).

# **Intergovernmental Panel on Climate Change (IPCC)**

The IPCC is an intergovernmental body of the United Nations responsible for advancing knowledge on human-induced climate change. It was established in November 1988 by the World Meteorological Organisation (WMO) and the United Nations Environment Programme. The IPCC provides information about academic research on climate change and its potential impact on the environment, society and the economy. The IPCC's assessment reports present the latest knowledge and findings regarding climate processes and influences, as well as proposals for adapting to and/or mitigating climate change. These reports are produced over a period of five to seven years by more than 1,000 researchers and editors around the world.

# Two-degree target

There is a far-reaching climate-policy consensus that a dangerous human-induced disruption to the Earth's climate system can still be avoided if the increase in average global temperature is kept under 2°C when compared to the pre-industrial era. If this two-degree limitation cannot be maintained, the consensus is that it will then no longer be possible to manage the effects of climate change. The resulting extreme weather events and other negative climate-related events will then increase in number and make things extremely dangerous and highly unmanageable, with unacceptably high economic costs as well. The Paris Agreement therefore set the goal of keeping the rise in average global temperature to well below 2 °C as compared to the pre-industrial era, and for the parties to the agreement to make efforts to limit the global temperature increase to 1.5 °C.

Sources: FOEN, United Nations, SBA, GHG Protocol