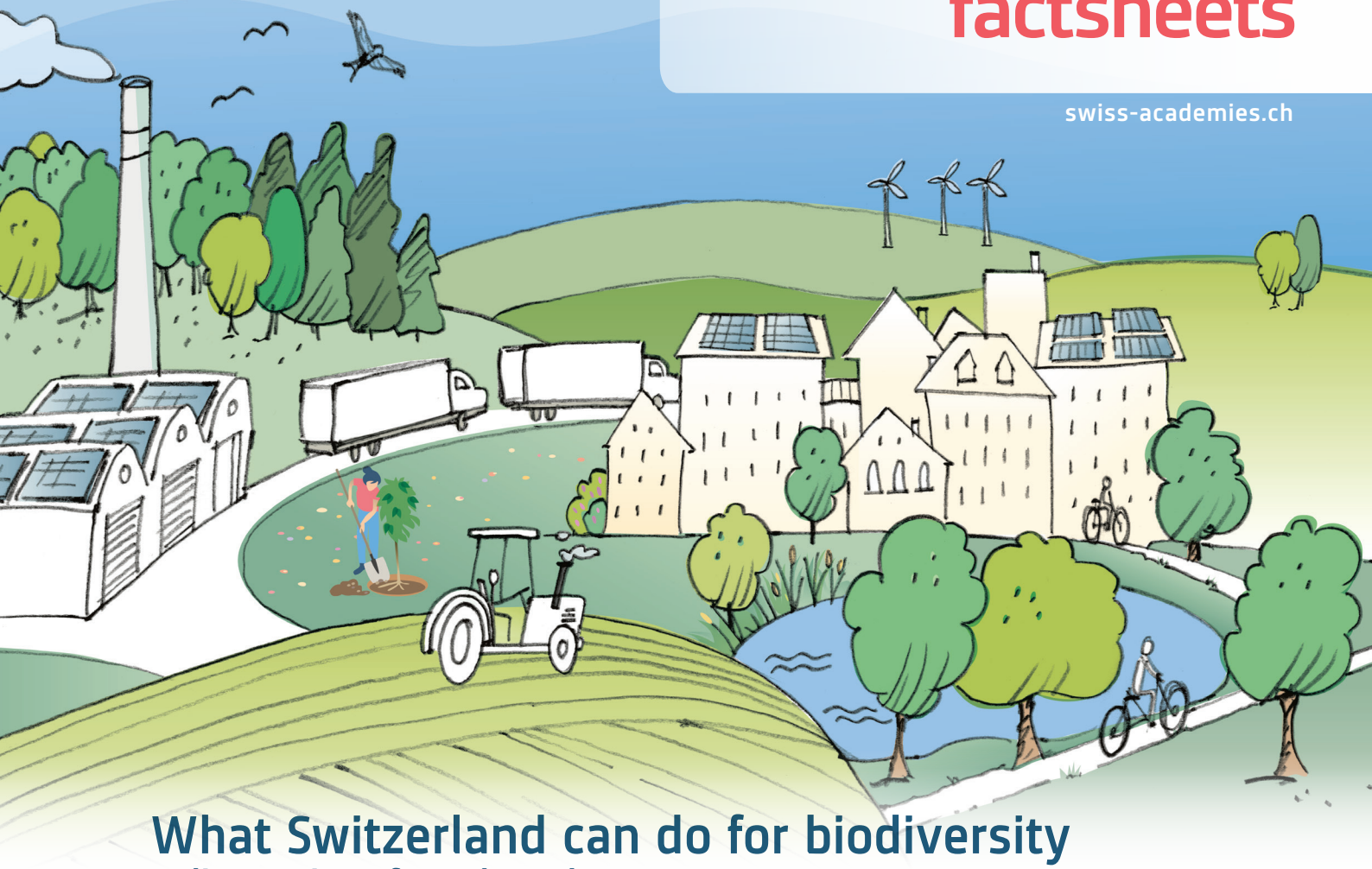
Vol. 17, No. 2, 2022

scnat
swiss academy of sciences

swiss academies
factsheets

swiss-academies.ch



What Switzerland can do for biodiversity

Policy options for selected sectors

The marked decline in biodiversity is affecting the very basis of human life. The Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) has identified a wide range of options for counteracting this loss and safeguarding the services nature provides. Various policy areas can thus make a significant contribution to effectively promoting sustainable development for the benefit of biodiversity and people. An analysis for Switzerland clearly shows that there is still great potential for implementing these policy options.

The decline in biodiversity is dramatic and accelerating. This is clearly described in the 2018 report of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) on Europe and Central Asia and its 2019 report on the global situation. According to IPBES, the drivers are: (1) changes in land and sea use, (2) direct exploitation of organisms, (3) climate change, (4) pollution and (5) invasive alien species. Underlying these direct causes (drivers) are higher-level causes (indirect drivers) relating to: demographic and socio-cultural factors, economic and technological factors, institutions and governance, as well as conflicts and epidemics.

As biodiversity declines, so does nature's capacity to provide contributions to people. This poses a threat not only to economic development and security, but also to our culture and quality of life. It moreover affects the contribution of biodiversity to mitigating climate change and its impacts.

The two IPBES reports identify a wide range of policy options and pathways for political and practical action to halt this negative trend (Fig. 1). The Biodiversity Forum of the Swiss Academy of Sciences (SCNAT), together with Interface Politikstudien, examined the relevance of these policy options for Switzerland on behalf of the Federal Office for the Environment (FOEN), and drew up, with the help of external experts, concrete sector-specific and cross-sector recommendations. These are described in detail in a comprehensive report, but they are not exhaustive because they deal only with selected

Swiss Biodiversity Forum (SCNAT), Interface Politikstudien (2022) What Switzerland can do for biodiversity – Policy options for selected sectors. Swiss Academies Factsheet 17 (2)

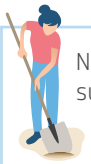
sectors. Moreover, IPBES does not make any proposals for certain fields of activity that are important for Switzerland, and the focus of the analysis was mainly on the federal government as an actor. The cantons and municipalities, however, also have crucial roles in developing and implementing effective measures, as do the economic sector, civil society and citizens in general.

Policy options for Switzerland

The federal government, cantons and municipalities have made numerous efforts to promote biodiversity in Switzerland, as have nature conservation organisations, companies and many private individuals. Such efforts, however, usually only have local benefits because harmful drivers continue to affect extensive areas. Direct drivers include the massive input of nitrogen and pesticides from agriculture into the environment, the removal of landscape structures that promote biodiversity, the expansion and maintenance of settlements and transport infrastructure, as well as climate change. In order to initiate a trend reversal across all sectors, both these direct drivers and their underlying indirect drivers, such as subsidies that harm biodiversity or unsustainable consumption, must be addressed. This requires a fundamental and transformative change in society and the economic system.
Switzerland has already adopted many of the IPBES policy options considered relevant. However, much needs to be done to implement them effectively, and there is great potential for improving most policy options – even where some measures have already been implemented (Fig. 2).

Recommendations for selected sectors

To bring about transformative change, IPBES policy options should be implemented both in the sectors concerned and across sectors (e.g. through coordination in cross-sectoral platforms in administration). This would help to resolve conflicting goals. Transformation processes require intensive dialogue between all stakeholders and should be initiated at different levels. It is essential to use the whole range of (policy) instruments including regulatory and economic instruments, education, cooperation and communication. What is also needed is more efficient use of resources, replacement of existing materials and technologies with more sustainable alternatives, closed material cycles and a reduction of consumption to an acceptable level.



No new incentives that harm biodiversity (e.g. via subsidies) should be created. Similarly, redisigning or abolishing existing incentives that harm biodiversity would also be effective.

The federal government should examine across sectors how external costs of biodiversity loss can be incorporated into taxes, company and public sector balance sheets, prices, customs duties, international trade regulations and other relevant areas.

The federal government and the cantons should ensure that policy instruments are consistent with legislation. For example, regulatory impact assessments or evaluations of effects such as strategic environmental assessments can be used to optimise laws, plans and programmes at an early stage so that biodiversity in all sectors is affected as little as possible.

→ *for specific recommendations for action, see report p. 106 and 113, biodiversity.scnat.ch/publications*

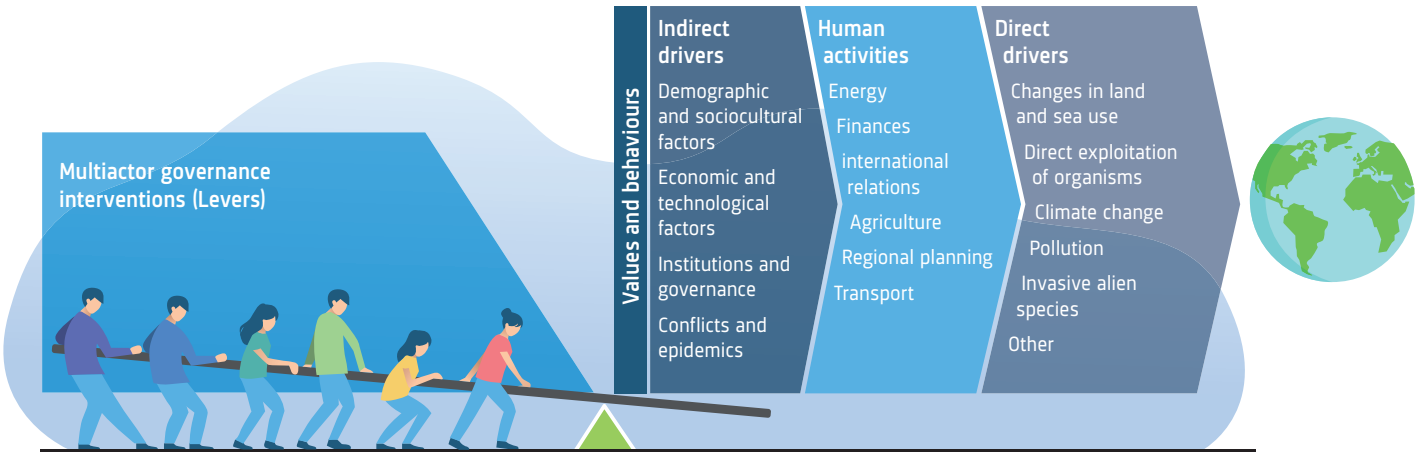


Fig. 1: Effective implementation of priority governance interventions (levers) can target key points of interventions (leverage points) to enable transformative change from current trends towards more sustainable pathways. Adapted from IPBES 2019.

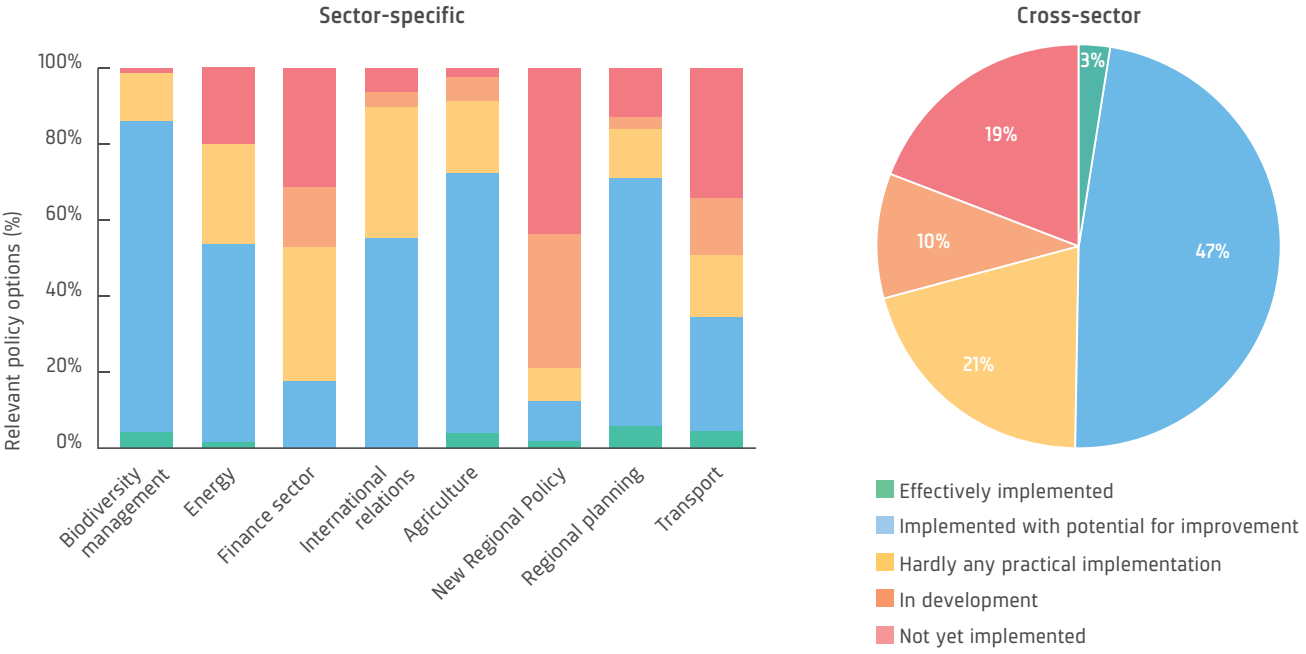
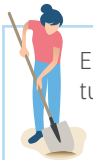


Fig. 2: Switzerland still has great potential for effectively implementing policy options proposed by IPBES. Their implementation would promote a shift towards more sustainable behaviour that advances biodiversity and nature's contributions to people.

Biodiversity management

Biodiversity management involves core tasks such as maintaining habitats of national and cantonal importance and promoting species. In addition, it also includes cross-sectorial tasks in cooperation with other sectors (e.g. promoting biodiversity in agriculture and maintaining roadside areas as naturally as possible). The Swiss Biodiversity Strategy of 2012 and the associated action plan are intended to close gaps in biodiversity management and incorporate biodiversity concerns more strongly in other sectors (mainstreaming). However, there is still room for improvement in actual core tasks of biodiversity management as well as in cooperation with other sectors.



Expanding and developing an ecological infrastructure on at least 30 percent of the land in Switzerland and safeguarding it in regional planning and legislation are central to achieving the goals of the country's Biodiversity Strategy. This requires close cooperation with the relevant sectors, the provision of necessary bases for planning and implementation, as well as financial and human resources at various government levels.

Biodiversity should be paid more attention in other sectors. Biodiversity management should, in cooperation with other sectors and their stakeholders, be able to successfully initiate a comprehensive transformation of the economy and society towards greater sustainability.

→ *for specific recommendations for action, see report p. 52, biodiversity.scnat.ch/publications*

Energy

In Switzerland, hydropower and wind energy in particular, as well as energy transmission, directly affect biodiversity. Solar energy, on the other hand, is less problematic provided it is generated on already built-up areas. The existing laws, strategies and instruments form a good basis for promoting and conserving biodiversity in the energy sector. However, these should be seen in the context of economic and political interests that attach greater importance to the expansion of renewable energies than to the conservation of biodiversity. There is thus a risk that biodiversity will be further impaired.

The energy sector can contribute significantly to the conservation of biodiversity if it already takes biodiversity into account when planning the expansion of renewable energies and if it internalises environmental costs. In this context, it is important to identify conflicts between conservation and exploitation interests, and to seek dialogue between stakeholder groups.

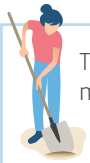
In addition to promoting renewable energies, clear goals should be set and measures implemented for energy efficiency and sufficiency.

Through research and the promotion of sustainable technologies, renewable energy production facilities can be optimised.

→ *for specific recommendations for action, see report p. 62, biodiversity.scnat.ch/publications*

Financial sector

The financial sector is a major lever for real economy because it provides capital and assesses risks. Accordingly, it can also greatly reduce negative impacts on biodiversity and its benefits for people. In the Swiss financial sector, however, biodiversity is only marginally considered. The federal government lacks the legal basis for issuing levies or taxes to minimise investments and loans that harm biodiversity. The main focus has therefore been on voluntary measures. If the Swiss financial sector is to fulfil its responsibility in the global biodiversity crisis, it must become significantly more active. This is also necessary to protect itself against systemic risks of biodiversity loss and to ensure it does not fall behind internationally in the field of sustainable finance.



The federal government should continue to promote the development of a method to assess the impact of business activities on biodiversity and the environment in all economic sectors.

This method should then be used to assess the impact of financial activities on biodiversity and the environment and a disclosure requirement should be introduced.

A label for sustainable financial products should be introduced. Such a label would give the Swiss financial centre a locational advantage in the growing business of sustainable finance.

→ *for specific recommendations for action, see report p. 68, biodiversity.scnat.ch/publications*

International relations

The import of goods and services from abroad accounts for almost three quarters of Switzerland's ecological footprint. Companies and actors based in Switzerland greatly influence global biodiversity through international trade, investments and other activities along international value chains. As an important trading centre for oil, metals and agricultural products from all over the world, Switzerland bears a great responsibility to minimise harm to biodiversity and the environment in commodity-exporting countries. Moreover, development cooperation also has an impact on global biodiversity. Switzerland has, through its widespread international activities, the potential to greatly reduce negative impacts and strengthen sustainable use of natural resources such as biodiversity.

In international free trade agreements, biodiversity and ecosystem services should be taken into account explicitly in order to reduce Switzerland's ecological footprint. This can be done, for example, through import requirements, standards and labels, transparent product information and/or environmental reporting.

Biodiversity can also be promoted by incorporating external costs into product prices and abolishing or redesigning subsidies on production and consumption that damage biodiversity.

Development cooperation can also play an important role, for example by explicitly taking biodiversity and ecosystem services into account and making greater use of synergies between the Sustainable Development Goals (SDGs) 14 and 15 (biodiversity) and all other SDGs.

→ *for specific recommendations for action, see report p. 76, biodiversity.scnat.ch/publications*

Agriculture

Some of the existing instruments for promoting biodiversity in agriculture have been quite successful. Nevertheless, the agricultural sector continues to cause major biodiversity losses. Numerous subsidies harming biodiversity and other misguided incentives are still affecting biodiversity and environmental quality. This is why the elimination of many environmental deficits in agriculture has been stagnating for years, despite considerable financial investment. Likewise, current measures to promote biodiversity cannot compensate for widespread harmful practices. According to IPBES, food production is one of the main drivers of the decline in biodiversity and nature's contributions to people.

In order to reverse the current trend and promote more sustainable agricultural and food systems, decision-makers, farmers and the general public must be made aware of the need for profound change along the entire value chain (production, trade and consumption).

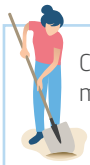
New approaches are needed to integrate biodiversity and its benefits for people holistically into the agricultural sector (e.g. into production systems). These include defining binding policy targets and indicators for production systems adapted to the local context, the environment, biodiversity and ecosystems. Conflicts of objectives should be analysed and ways of dealing with them in agricultural policy should be identified.

Other measures, such as abolishing or redesigning incentives that are harmful for biodiversity and the environment, or taking negative impacts into consideration in prices, subsidies, tariffs and regulations, would be very effective.

→ *for specific recommendations for action, see report p. 82, biodiversity.scnat.ch/publications*

Regional planning

Regional planning can contribute significantly to conservation and the promotion of biodiversity, as it is legally obliged to conserve the natural bases of life in the long term and to use land appropriately and economically. The authorities entrusted with the task of planning must also ensure that buildings blend into the landscape as well as possible, that near-natural habitats and recreational areas are conserved, and that residential areas contain sufficient green spaces and trees. A regional planning policy can, together with its instruments, slow down the further expansion of built-up areas, urban sprawl and landscape fragmentation, and enhance built-up areas ecologically. In addition, it can specify that areas important for biodiversity should be protected. Cooperation between the federal government, cantons and municipalities is essential for implementing regional planning policies.



Careful use of land should continue to be the central maxim for action in cantonal and municipal regional planning. Planning that protects land areas and saves energy contributes significantly to the conservation and promotion of biodiversity.

Around 30 percent of the land surface in Switzerland should be designated as priority areas for biodiversity and legally safeguarded in structure plans and/or land-use plans (ecological infrastructure).

Financial incentives in projects involving regional planning should increasingly promote biodiversity, e.g. in projects for the inward development of settlements or in projects in industrial and commercial areas.

→ *for specific recommendations for action, see report p. 91, biodiversity.scnat.ch/publications*

New Regional Policy

With the funding instrument 'New Regional Policy (NRP)', the federal government has increased the competitiveness and added value of rural areas as well as mountain and peripheral regions. The promotion of biodiversity is not the main focus of the instrument, but the funding of NRP projects could potentially be geared more strongly towards promoting biodiversity and to minimising undesirable impacts. Moreover, according to the Federal Law on Regional Policy, one of the principles of the NRP is to take into account the requirements of sustainable development.

As an instrument of economic policy, NRP can more comprehensively provide biodiversity and landscapes with more sustainable value. This means, for example, that programmes and projects in tourism should be designed to ensure that valuable natural resources are exploited in a systematically sustainable way. The value of these resources must, therefore, be recognised and investments must be made to maintain them in the long term.

The implementation of the NRP is decentralised, which means the cantons in particular are also required to consider aspects of ecological sustainability and biodiversity when assessing NRP applications.

→ *for specific recommendations for action, see report p. 96, biodiversity.scnat.ch/publications*

Transport

Transport negatively affects biodiversity and ecosystem services in various ways. For example, roads and railways destroy habitats, fragment the landscape and increase animal mortality. The various emissions from transport affect the quality of the environment.

Existing transport infrastructure should be developed in a way that promotes biodiversity. When planning new infrastructure, the conservation and promotion of biodiversity should be incorporated. For example, verges and embankments can be created and maintained in a biodiversity-friendly way, and the legal basis and guidelines for wildlife corridors can be specified in such a way that they actually fulfil their function.

Financing instruments should be more strongly geared towards promoting biodiversity.

In future, the transport sector can significantly contribute to the protection of landscape quality and biodiversity if, instead of building new infrastructure to expand capacity, existing infrastructure is used intelligently (smart mobility).

→ *for specific recommendations for action, see report p. 101, biodiversity.scnat.ch/publications*

Conclusion

The Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) clearly demonstrates that a transformative change towards more sustainability is necessary to stop the global loss of biodiversity and to maintain nature's contributions to people. IPBES presents a range of policy options for different sectors to tackle the problem.

If Switzerland wants to reverse current trends and meet corresponding national and international biodiversity goals, it must address the direct and indirect drivers of biodiversity loss. Promising approaches already exist in many sectors. The task now is to apply them more intensively and widely.

In Switzerland and worldwide, promoting biodiversity and thus nature's ability to contribute to people is absolutely crucial. In order to improve the condition of biodiversity significantly, existing measures must be reinforced and all sectors should take on significantly more responsibility. Moreover, the federal government should specifically facilitate cross-sectorial cooperation on conserving and promoting biodiversity and its contributions to people. This has to include also significantly reducing Switzerland's ecological footprint abroad.

The recommendations given here specify the IPBES policy options for Switzerland and particular sectors. They provide an important basis for implementing these measures in dialogue with the relevant stakeholders.

SDGs: The UN's international sustainability goals

This publication of the Swiss Academy of Sciences (SCNAT) contributes to SDGs 2, 3, 6, 11, 12, 13, 14, 15, and 17:
'End hunger, achieve food security and improved nutrition and promote sustainable agriculture', 'Ensure healthy lives and promote well-being for all at all ages', 'Ensure availability and sustainable management of water and sanitation for all', 'Make cities and human settlements inclusive, safe, resilient and sustainable', 'Ensure sustainable consumption and production patterns', 'Take urgent action to combat climate change and its impacts', 'Conserve and sustainably use oceans, seas and marine resources for sustainable development', 'Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss' and 'Strengthen means of implementation and revitalise the global partnership for sustainable development'.

› sustainabledevelopment.un.org
› eda.admin.ch/agenda2030/en/home/agenda-2030/the-17-goals-for-sustainable-development.html

A pdf version of this factsheet is available at biodiversity.scnat.ch/publications/factsheets.

The accompanying report 'Relevanz der IPBES-Handlungsoptionen für Sektoren in der Schweiz' with references and an English summary is available at biodiversity.scnat.ch/publications.

ABOUT THIS PUBLICATION

PUBLISHER AND CONTACT
Swiss Academy of Sciences (SCNAT) • Swiss Biodiversity Forum •
House of Academies • Laupenstrasse 7 • P.O. Box • 3001 Bern • Switzerland •
+41 31 306 93 40 • biodiversity@scnat.ch • biodiversity.scnat.ch
@biodiversityCH

RECOMMENDED FORM OF CITATION
Swiss Biodiversity Forum (SCNAT), Interface Politikstudien (2022)
What Switzerland can do for biodiversity – Policy options for selected sectors. Swiss Academies Factsheet 17 (2)

AUTHORS
Swiss Biodiversity Forum, SCNAT:
Jodok Guntern • Sascha Ismail • Daniela Pauli • Ursula Schöni • Eva Spehn

Interface Politikstudien:
Tobias Arnold • Marcelo Duarte • Alexandra La Mantia • Chantal Strotz

EXPERTS CONSULTED
See Report, Annex 6.3

EDITING
Andres Jordi (SCNAT)

TRANSLATION
Silvia Dingwall

LAYOUT AND ILLUSTRATIONS
Sandra Schwab (SAT-sandras atelier GmbH)

This factsheet is based on the report 'Relevanz der IPBES-Handlungsoptionen für Sektoren in der Schweiz' by the Swiss Biodiversity Forum of SCNAT and Interface Politikstudien. The report was commissioned by the Federal Office for the Environment (FOEN). Responsibility for all statements made in the factsheet and in the report lies with the authors. The claims made do not necessarily reflect the position of the Federal Office for the Environment or the other federal offices mentioned in the report.

ISSN (print): 2297–8283 · ISSN (online): 2297-1831

DOI: 10.5281/zenodo.6604049