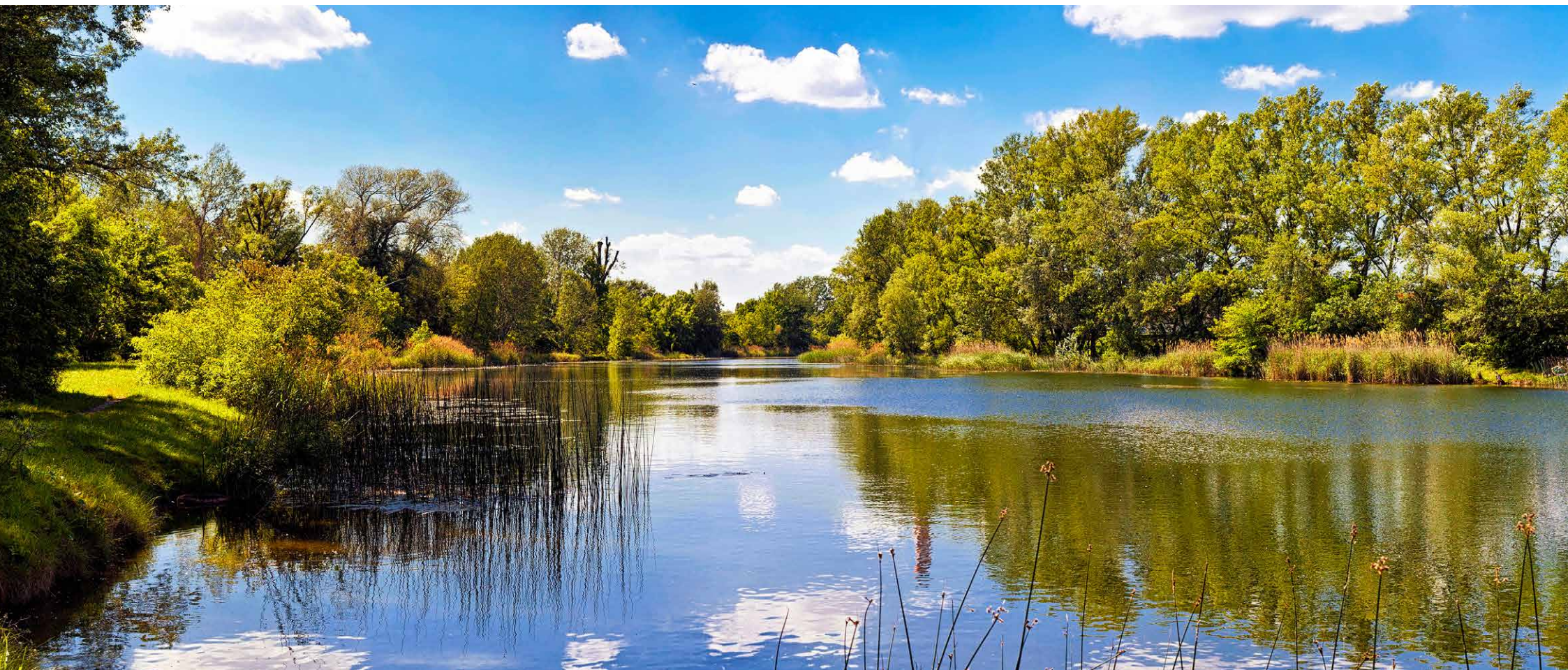


Republic of Austria Green Investor Report 2023

June 2024

 Federal Ministry
Republic of Austria
Finance

 Federal Ministry
Republic of Austria
Climate Action, Environment,
Energy, Mobility,
Innovation and Technology



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1 Preamble

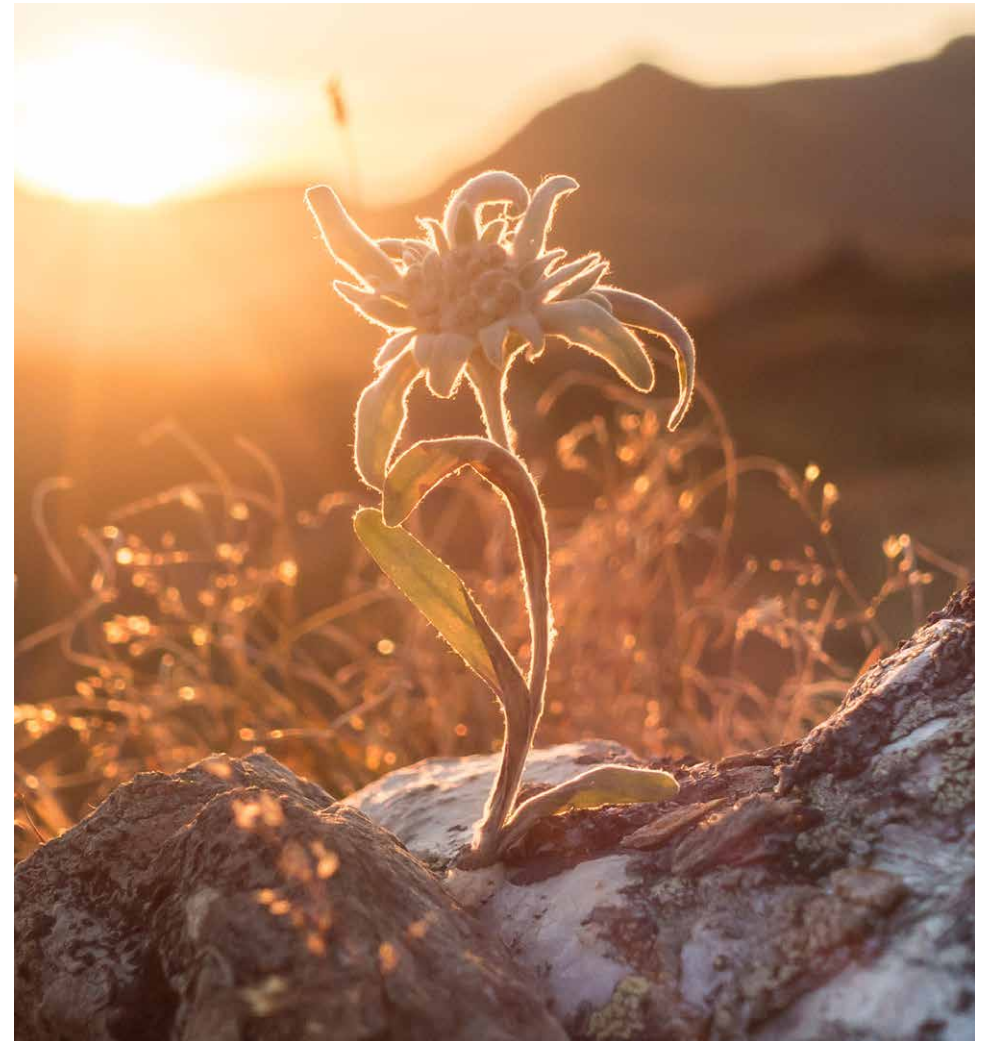
This document is the second Green Investor Report of the Republic of Austria, which is being published in accordance with our commitments under the Green Framework (April 2022) and to comply with the principles of transparency laid out in the Green Bond Principles 2021 as published by the International Capital Market Association (ICMA), as well as the Green Loan Principles 2023, published by the Loan Market Association (LMA).

In the course of 2023, the Republic of Austria issued new Green financial instruments under the above-mentioned framework in the amount of EUR 5.51 bn. It is intended to precisely define the allocation of these funds and to identify their sustainable impact on the environment. Hence, the Republic of Austria has again decided to publish the allocation and impact of proceeds within this documentation together. We intend to continue with this approach and plan to issue a combined Allocation- and Impact Report on an annual basis also in the future until further notice. This emphasises our commitment towards transparency and demonstrates a proactive approach for reporting based on the internal processes established for the framework.

This report was confirmed by the external verification provider ISS Corporate Solutions (ISS-Corporate). Particular attention was paid to the alignment with the Green Framework, market standards and the appropriate choice of impact metrics.

The Republic of Austria is striving to constantly improve its Green Investor Report. This year for example a new chapter on Research, Development and Innovation was added, giving additional colour on a variety of cross-sectoral initiatives and projects, which are crucial for the sustainable transition of the economy and society.

We believe our approach results in the best outcome for investors and other stakeholders, as well as for reaching the environmental goals. We are applying a conservative approach in our assessments and the results should be viewed as prudent figures. As sustainable finance continues to evolve, we will be providing future updates to meet investor expectations, best market practices and regulatory developments.



The edelweiss is a mountain flower that prefers rocky limestone places at about 1,800–3,000 metres altitude. The edelweiss is used as a symbol for alpinism, for rugged beauty and purity associated with the Alps and is also a national symbol of Austria.

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2 Introduction

Environmental protection and the value of nature have a long history in Austria and represent an integral part of the national identity. The Austrian government is committed to achieve climate neutrality by 2040, ahead of the EU's 2050 target. It intends to guarantee a clean environment by, among other things, embracing a Green Growth Approach, promoting modern technologies and climate relevant research and decarbonising its cities and industries. It considers policies to ensure a clean and safe environment as a prerequisite to provide prosperity to subsequent generations and guarantee both a future-oriented and attractive business location.

On the international level, Austria's climate change policies and targets are embedded in the Paris Agreement of 2015, in which the international community commits to limit global warming to well below two degrees and pursue efforts to limit the temperature increase to 1.5 degrees Celsius, compared to pre-industrial levels. The Austrian climate policy is also strongly influenced by the European Union which seeks to become climate neutral by 2050 and to cut greenhouse gas (GHG) emissions by at least 55% by 2030 compared to 1990. At the beginning of 2020, the federal government announced its commitment for Austria to be climate-neutral as early as 2040¹.

GHG emissions in Austria fell by 5.8% from 2021 to 2022². This corresponds to a reduction of 4.5 mn tonnes of CO₂ equivalents, despite significant economic growth in all sectors, i.e., buildings, transport, agriculture and industry. Preliminary data for 2023 show a further decrease in GHG emissions of 5.3%, which corresponds to a decrease of 3.9 mn tonnes CO₂ equivalents compared to 2022³. Assuming this forecast is confirmed, this will be the lowest level of emissions since 1990.

The objectives of Austria's climate and environmental policy are, among others, to reduce its GHG emissions in order to mitigate climate change and to prepare for its adverse effects, to reduce emissions of air and water pollutants, to preserve and improve biodiversity and ecosystems, to foster the sustainable use of natural resources and to reduce waste. To govern respective action on the national level, Austria has developed several detailed road maps and strategies.

These include, for example:

- The *National Energy and Climate Plan*⁴ defines Austria's climate and energy targets for 2030 and outlines the roadmap to achieving those targets.
- The *Austrian Strategy for Adaptation to Climate Change*⁵ contains a detailed catalogue of recommendations for 14 sector-specific areas of action.
- The federal government's *climate and transformation initiative*⁶ aims to support Austrian industrial companies in making their production processes climate-neutral.
- The *Climate Change Adaptation Model Regions Programme*⁷ (Klimawandel-Anpassungsmodellregionen, "KLAR") seeks to increase the importance of adaptation to climate change at the regional and local level.
- The thermal refurbishment of buildings is incentivised even more by a newly launched bonus (*Sanierungsbonus*)⁸.
- The *Bioeconomy strategy*⁹ seeks to replace fossil resources (raw materials and energy sources) with renewable raw materials in as many areas and applications as possible.

⁴ Federal Ministry for Sustainability and Tourism, [Integrated National Energy and Climate Plan for Austria](#), December 2019

⁵ Federal Ministry for Climate Action, Environment, Energy, Mobility, Innovation and Technology, [Austrian Strategy for Adaptation to Climate Change](#) (only available in German), April 2024; [Information in English](#), January 2017

⁶ Federal Ministry for Climate Action, Environment, Energy, Mobility, [Innovation and Technology, Climate and Transformation initiative](#) (only available in German), October 2022

⁷ KLAR!, [KLAR! Climate Change Adaptation Model Regions for Austria](#), May 2023

⁸ Federal Ministry for Climate Action, Environment, Energy, Mobility, Innovation and Technology, ["Österreich ist nicht ganz dicht" – Start of the campaign for the renovation bonus](#) (only available in German), May 2023

⁹ Federal Ministry for Climate Action, Environment, Energy, Mobility, Innovation and Technology, [Bioeconomy – A Strategy for Austria](#), March 2019

¹ Austrian Federal Chancellery, [Government Programme 2020 – 2024](#), January 2020

² Environment Agency Austria, [Austria's Annual Greenhouse Gas Inventory 1990–2022](#), January 2024

³ Environment Agency Austria, [Nowcast of Greenhouse Gas Emissions in Austria 2023](#), March 2024

- The national *Circular Economy Strategy*¹⁰ helps to preserve the value of products, materials and resources within the economy for as long as possible to reduce waste and negative environmental impacts.
- The *2030 Mobility Master Plan*¹¹, has identified ways to avoid, shift and improve traffic and transport and significantly increase the share of eco-mobility in total transport.
- The *Hydrogen Strategy for Austria*¹² sets out how Austria intends to use hydrogen to decarbonise the energy system.
- The *Biodiversity Strategy Austria 2030+*¹³ intends to contribute to a comprehensive transformative change in our society.
- The strategy for Research, Technology and Innovation (*RTI Strategy 2030*)¹⁴ intends to strengthen research which addresses the influencing factors, effects and mitigation of the climate crisis, as well as research in the areas of climate adaptation and resource efficiency.
- The *Integrated Austrian Network Infrastructure Plan*¹⁵ represents a strategic planning instrument that enables a comprehensive consideration of the infrastructure needs of the future energy system.

When it comes to sustainable finance, the Austrian *Green Finance Agenda* (GFA)¹⁶ paves the way for future-proof financial market policies. It sets out the building blocks for a climate-friendly and environmentally sustainable financial system and identifies strategic measures and action areas with potential to scale up sustainable financial instruments for climate-friendly investments. These are geared towards three key aspects: raising capital to protect the climate, incorporating cli-

mate-relevant risks into due diligence obligations and managing them accordingly and promoting transparency and a long-term approach. The GFA is based on the Government Programme 2020-24 and the National Energy and Climate Plan and constitutes a reform project in accordance with the national recovery and resilience plan under REPowerEU. With this strategy, Austria is positioning itself as a global leader in sustainable finance. The issuance of sovereign Green Debt Instruments is only one of the measures, which will be further expanded in the future.

In 2024, the federal government's Green Budgeting Methodology¹⁷ has been applied for the screening of Green Expenditures for the first time. Therefore, green items identified in the Climate and Environment Supplement to the Budget 2024 have been taken as a basis and were further evaluated on their suitability for Green Securities. In the future, Green Budgeting is expected to be increasingly incorporated into the reporting process, while a recurring assessment based on the EU Taxonomy is also to be gradually integrated into the process.

¹⁰ Federal Ministry for Climate Action, Environment, Energy, Mobility, Innovation and Technology, [Circular Economy Strategy](#), December 2022

¹¹ Federal Ministry for Climate Action, Environment, Energy, Mobility, Innovation and Technology, [Austria's 2030 Mobility Master Plan](#), July 2021

¹² Federal Ministry for Climate Action, Environment, Energy, Mobility, Innovation and Technology, [Hydrogen Strategy for Austria](#), June 2022

¹³ Federal Ministry for Climate Action, Environment, Energy, Mobility, Innovation and Technology, [Biodiversity Strategy 2030+](#) (only available in German), November 2022

¹⁴ Federal Government Republic of Austria, [RTI Strategy 2030](#), January 2021

¹⁵ Federal Ministry for Climate Action, Environment, Energy, Mobility, Innovation and Technology, [Integrated Austrian Network Infrastructure Plan](#) (only available in German), April 2024

¹⁶ Federal Ministry for Climate Action, Environment, Energy, Mobility, Innovation and Technology, [Green Finance Agenda](#), September 2023

¹⁷ Federal Ministry of Finance, [Green budgeting](#)

3 Republic of Austria's Green Financing

The sustainable transition of the economy is an important goal for the Austrian government. However, financing the transition and reaching the objectives set out above requires significant investments. Public households in Austria have already made considerable progress in greening their budgets, while remaining firmly anchored in fiscal sustainability. Nevertheless, funds provided by the private sector are crucial to catalyse public investments and to achieve the levels of investment required to decarbonise the economy and ensure environmental sustainability. In this context, the issuance of Green Securities has the potential to make a significant contribution to the Green Transition of the Republic of Austria.

Rationale for issuing Green Securities

The Green Framework sets the basis for the issuance of a broad range of instruments, including Green Austrian Government Bonds (RAGB) or Notes (EMTN-Format), Green Austrian Treasury Bills and Green Austrian Commercial Papers as well as Green Loans or Deposits (all hereafter referred to as "Green Securities").

The rationale for Austria's Green Issuance Programme includes:

- The Green Securities issued by the Austrian Treasury enable Austria to attract dedicated funding for government expenditures that contribute to GHG emission reductions, climate change adaptation and environmental goals, provide investors an opportunity to diversify their investment portfolios towards sustainable assets and further promote and develop the domestic and international sustainable finance markets.
- The implementation of this Green Issuance Programme promotes and highlights Austria's strong environmental agenda. This is important in the context of increasing the participation of Austria's private sector to achieve the levels of investment required to decarbonise the economy and ensure environmental sustainability.

- Funding for the transition to net zero GHG emissions and achieving the Austrian climate goals will be supported by this Green Issuance Programme. Green Securities will also contribute to the national strategies for environmental sustainability and encourage the development of the wider sustainable finance sector.
- Austria's federal budget already contains a high proportion of Green Expenditures. At the same time, huge demand from investors is noticed for Green Securities both from short-term as well as longer-term oriented investors. With this programme, Austria addresses this situation by offering an attractive Green Investment for domestic and international investors with tenors ranging from one week to currently 25 years (May 2049).
- Austria is a leader in terms of sustainability which is underscored by its high sustainability rankings¹⁸. Issuing Green Securities further expands Austria's broad investor base and potentially increases the demand for Austrian debt securities overall.
- The Green Investor Report, coupled with the issuance of Green Securities, considerably enhances transparency and traceability of Green Investment. This provides an important link to national environmental strategies and initiatives and their contribution to achieving Austria's climate targets.

3.1 Milestones in Austria's Green Funding

Austria is a leader in various activities to promote sustainability, which is underlined by a high proportion of Green Expenditures in its federal budget. Starting in 2022, the Republic of Austria successfully built-up a second pillar in its funding strategy. The introduction of Green Funding Instruments on a broad scale, which have been implemented in all relevant programmes and as the first sovereign worldwide, includes Green Short-term Debt Instruments. This further diversifies the investor base and perfectly complements the traditional funding pillar.

¹⁸ Austrian Treasury, [Sustainability Rankings](#)

June 2021	Republic of Austria's Federal Minister of Finance announces plan to issue a Sovereign Green Bond in the first half of 2022
October 2021	Republic of Austria has set up an interministerial Green Bond Board to ensure the appropriate evaluation and selection of eligible Green Expenditures
May 2022	- Republic of Austria publishes – as the first sovereign issuer worldwide - a Green Framework allowing for Green Short-term Debt Instruments (publication together with associated Second Party Opinion) - Republic of Austria issues its inaugural Green Bond (Green RAGB 1.85% May 2049)
October 2022	- First Green Loan issued by the Republic of Austria - Inaugural Austrian Treasury Bill (ATB) in Green Format issued
March 2023	- Inaugural Austrian Commercial Paper (ACP) in Green Format issued - Introduction of Green Deposits as additional short-term funding instrument
April 2023	Republic of Austria issues its second Green Bond (Green RAGB 2.90% May 2029)
June 2023	Publication of Austria's first Green Investor Report (combined Allocation and Impact Report) including Second Party Opinion
December 2023	Inaugural Euro Medium Term Note (EMTN) in Green Format issued
January 2024	Successful tap of outstanding Green RAGB May 2029 and Green RAGB May 2049 by EUR 1.25 bn each (as part of a triple-tranche transaction, the first one worldwide including two Green Bonds).
April 2024	With the launch of the online retail savings product "Green Bundesschatz", Austria is the first sovereign worldwide to offer a Green Money Market Product for retail investors.

In 2023, the Green Pillar of the financing strategy was further expanded: The Green ATB, issued for the first time in 2022, was rolled over or tapped on four dates in 2023. The Green ATBs, which have been in very high demand, have found a loyal investor base (around 50% of investors have rolled over their positions in the Green ATB auctions).

On March 6, 2023 the issuance of Green Austrian Commercial Paper started, which also represented a worldwide novelty in the sovereign debt market. Strong demand for this new Green Product was recorded from the very beginning, especially from Green Money Market Funds, corporate treasuries

and central banks. Green Commercial Paper can be issued in a very flexible manner. Issuances are possible on a bilateral basis in all currencies and tenors (up to 12 months).

At the end of March 2023, the Austrian Green Financing Universe was further expanded by the introduction of Green Deposits.

On April 18, 2023, Austria successfully issued its second Green Bond with a volume of EUR 3 bn and a tenor of 6 years, yielding 2.952% p.a. The new Green Benchmark was characterised by a high-quality order-book (EUR 6.9 bn) and was very well received by Green Investors, accounting for two thirds of the total allocation. While around 40% of the Green Investors in this transaction have already been active in the foregone year's inaugural Green Bond Issuance, around 60% of the volume has been allocated to new Green Investors. The 6-year tenor enabled Austria to offer ESG-investors a new point on the Green Curve and to fill the gap between Green Short-term Instruments and the 2049 Green RAGB. This syndication also represented the first dual issuance of a new Green and conventional benchmark bond of any sovereign worldwide.

With the issue of a Green EMTN in December 2023, the Republic of Austria has now made use of all Green Financing Instruments available under the Green Framework published in 2022.

Going forward, the Republic of Austria will continue to be a regular and reliable issuer of Green Securities on the capital and money markets.

New Green Funding in 2024 will be over EUR 6.0 bn, based on a balanced split between Green Federal Budgetary Expenditures for 2023 and 2024. As in previous years, the aim is to roughly achieve a 80/20 split between medium/long-term and Short-term Green Financing Instruments. While on the bond side the Republic of Austria focuses on building up a Green Curve or tapping existing Green Bond(s), around 20% of the total eligible Green Expenditures shall be reserved for Green ATBs and Green ACP or Green Deposits. Given the large share of long-term projects in the Republic of Austria's eligible Green Expenditures, Green Short-term Instruments are intended to be rolled regularly.

On January 18, 2024, the Republic of Austria successfully priced a new EUR 7.0 bn triple-tranche transaction comprising a new EUR 4.5 bn 10-year conventional benchmark due February 2034, a EUR 1.25 bn tap of the Green RAGB 2.90% May 2029 and a EUR 1.25 bn tap of the Green RAGB 1.85% May 2049. This is the third triple-tranche syndication of the Republic of Austria and the first one worldwide including two Green Bonds. This shows once again Austria's innovative and responsive approach to capital markets. Austria's recognised credit quality, paired with its strong Green Funding Pillar, ensured the transaction was met with a very robust investor response from the beginning with strong demand in all tranches. The strong investor demand for both Green Taps (12-times oversubscription of the 2029 and 24-times of the 2049 tap) is yet another strong sign of support for Austria's Green Funding Programme.

In April, the new online retail savings product "Bundesschatz" (www.bundesschatz.at) was launched, which is also available in Green format with tenors of 6 months and 4 years. Proceeds raised through "Green Bundesschatz" are used exclusively to finance Green Expenditures and investments by the Republic of Austria. With this, Austria is the first sovereign worldwide to offer a Green Money Market Product for retail investors.

Financing Instruments Republic of Austria

- Government bonds RAGB 
- Debt issuance programme (DIP 144A) 
- EMTN-Programme (Euro Medium Term Notes) 
- Australian Dollar MTN-Programme – "Kangaroo Programme"
- Loans (short- and long-term) and "Schuldschein"-Format 
- Austrian Treasury Bills (ATB-Programme) 
- Austrian Commercial Paper (ACP-Programme) 
- Euro Medium Term Note programme (EMTN) 
- Online retail savings product "Bundesschatz" 

For the avoidance of doubt, all information on allocation and impact presented in this report only refers to Green Issuances until December 31, 2023.



Zillertal Alps © Österreich Werbung/Michael Stabentheiner

3.2 Republic of Austria Green Bond Framework

The Republic of Austria's Green Framework is aligned with the 2021 Green Bond Principles (GBP), as published by the International Capital Market Association (ICMA). The most important aspects can be found in the following overview.



- Austria intends to allocate an amount equal to the net proceeds from the issuance of Green Securities to exclusively finance and/or to refinance, in whole or in part, central government expenditures that meet the environmental eligibility criteria
- Eight Eligible Green Expenditure categories have been defined: (1) Clean Transportation; (2) Renewable Energy; (3) Energy Efficiency; (4) Pollution prevention and control; (5) Environmentally sustainable management of living natural resources and land use; (6) Terrestrial and aquatic biodiversity; (7) Sustainable water and wastewater management; (8) Climate change adaptation
- The scope of Eligible Green Expenditures includes (but is not limited to) subsidies, tax expenditures, operational expenditures and investment expenditures



- The Republic of Austria has set up a Green Bond Board managing the evaluation and selection of Eligible Green Expenditures
- The Green Bond Board closely cooperates with further relevant federal ministries and associated entities whenever expenditures from their respective area of responsibility are discussed, and additional expertise is needed
- Expenditures related to the following fields are explicitly excluded from being financed: (1) Nuclear power; (2) Production/refining of fossil fuels, fossil fuel power generation and the transport of fossil fuels, as well as projects concerning carbon capture and storage (CCS); (3) Alcohol, gambling and tobacco; (4) Weapons and defense-related goods and expenditures



- Tracking the allocation of the proceeds derived from Green Securities' issuances will be done by the Green Bond Board
- Eligible Green Expenditures occurred no earlier than one calendar (i.e. budget) year prior to issuance and the budget year of issuance
- The Austrian Treasury aims to distribute the allocation of the net proceeds in a balanced manner between "Past Expenditures" and "Current Expenditures"
- The total volume of Eligible Green Expenditures in Austria's Green Portfolio will always be at least as high as the volume of total net proceeds from all outstanding Green Securities



- The Republic of Austria is committed to provide two levels of reporting:
 - The management and allocation of bond proceeds
 - The assessment of environmental impact of allocated Green Expenditures



External Review

- To underpin Austria's commitment to full transparency, independent external reviews will be conducted on key documents and reports



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4 Allocation Report

This section of the report provides an overview of the Green Initiatives and Projects for which the financing proceeds were used. It gives investors an overview of the allocation of capital to environmentally sustainable investments. The government of the Republic of Austria recognises the importance of a common definition of sustainable economic activities that enhances transparency and thereby supports the further development of the Green Debt Market.

In this Allocation Report, the equivalent value of the proceeds from the issuance of Green Government Securities newly issued in the financial year 2023 were allocated to the Green Expenditures of the federal budgets of 2022 and 2023. The total eligible expenditures from the federal budget years of 2022 and 2023 add up to EUR 10.50 bn, whereby EUR 5.51 bn were assigned to the Green Securities issued in 2023.

In the accounting system of the Republic of Austria, all transaction entries (transactions are always entered using a four-eye-principle) are clearly marked with regard to the Green Framework and the allocation of Green Expenditures to the respective year. This ensures that all data required for the allocation report is taken directly from the accounting system. This diligent approach also ensures the avoidance of any double-counting in the allocation process.

Allocation of Green Expenditures



Green Funding 2023

Following the approach from the 2022 Green Investor Report, the equivalent value of Green Financing newly issued in the financial year 2023 was allocated to the Green Expenditures of the federal budgets of 2022 (which had not been assigned to previous financings; thereafter referred to as 2022 II) and the first part of Green Expenditures 2023 (thereafter referred to as 2023 I), accordingly.

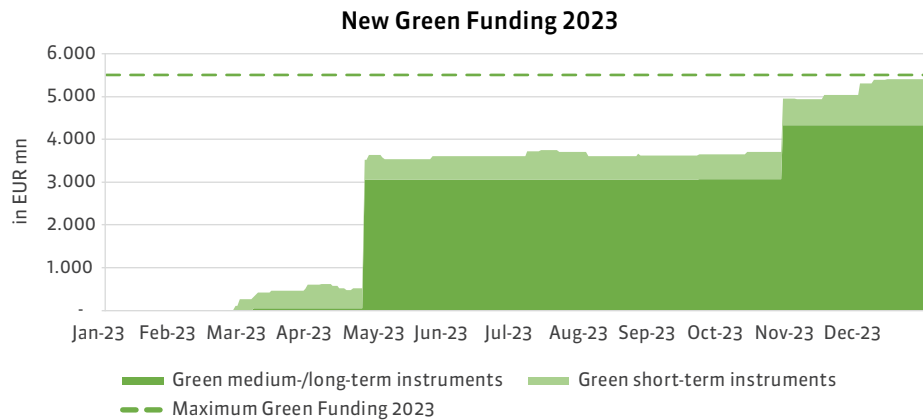
The table below shows all Green Financing Instruments issued in the year 2023:

Green Financing of the Calendar Year 2023 - Overview - Expenditures 2022 II/2023 I							
Name	Value date	Maturity	Maturity in years	Issuing volume in EUR	Increase	Form of issue	Outstanding at the end of the year
Loan 2023-2025/2 (G)	07.03.2023	07.03.2025	2,00	50.000.000,00	No	Bilateral	Yes
2,90%-Bundesanleihe 2023-2029/2 (G)	25.04.2023	23.05.2029	6,08	3.000.000.000,00	No	Syndicate	Yes
2,993% Schuldschein-darlehen (G)	20.09.2023	20.09.2028	5,00	25.000.000,00	No	Bilateral	Yes
Loan 2023-2024/11 (G)	11.10.2023	11.10.2024	1,00	50.000.000,00	No	Bilateral	Yes
RAGB 1.85% 05/23/2049 (G)	27.10.2023	23.05.2049	25,57	1.250.000.000,00	Yes	Syndicate	Yes
USD Austrian Commercial Paper 2023/133 (G)	31.10.2023	30.04.2024	0,50	9.469.696,97	No	Bilateral	Yes
Austrian Treasury Bill 2024-02-29 (G)	30.11.2023	29.02.2024	0,25	825.194.600,00	No	Auction	Yes
Loan 2023/26 (G)	06.12.2023	08.01.2024	0,09	50.000.000,00	No	Bilateral	Yes
Loan 2023/27 (G)	06.12.2023	08.01.2024	0,09	30.000.000,00	No	Bilateral	Yes
Loan 2023/28 (G)	12.12.2023	12.01.2024	0,08	12.000.000,00	No	Bilateral	Yes
EUR Austrian Commercial Paper 2023/119 (G)	14.12.2023	15.01.2024	0,09	100.000.000,00	No	Bilateral	Yes
EMTN (G)	29.12.2023	28.06.2024	0,50	111.438.000,00	No	Bilateral	Yes
New Green Net Issuance 2023				5.513.102.296,97			
Austrian Treasury Bill 2023-05-25 (G)	23.02.2023	25.05.2023	0,25	9.927.000,00	No	Auction	No
Austrian Treasury Bill 2023-05-25 (G)	27.02.2023	25.05.2023	0,24	100.000.000,00	Yes	Bilateral	No
Austrian Treasury Bill 2023-05-25 (G)	01.03.2023	25.05.2023	0,23	160.000.000,00	Yes	Bilateral	No
EUR Austrian Commercial Paper 2023/31 (G)	08.03.2023	11.04.2023	0,09	25.000.000,00	No	Bilateral	No

USD Austrian Commercial Paper 2023/29 (G)	08.03.2023	11.04.2023	0,09	23.465.365,12	No	Bilateral	No
USD Austrian Commercial Paper 2023/30 (G)	09.03.2023	14.04.2023	0,10	46.882.325,36	No	Bilateral	No
Austrian Treasury Bill 2023-04-17 (G)	15.03.2023	17.04.2023	0,09	50.000.000,00	No	Bilateral	No
Austrian Treasury Bill 2023-05-25 (G)	30.03.2023	25.05.2023	0,15	45.000.000,00	Yes	Bilateral	No
Deposit (G)	31.03.2023	03.05.2023	0,09	50.000.000,00	No	Bilateral	No
Deposit (G)	31.03.2023	04.05.2023	0,09	50.000.000,00	No	Bilateral	No
USD Austrian Commercial Paper 2023/67 (G)	06.04.2023	06.07.2023	0,25	9.128.251,94	No	Bilateral	No
EUR Austrian Commercial Paper 2023/45 (G)	20.04.2023	20.07.2023	0,25	50.000.000,00	No	Bilateral	No
Austrian Treasury Bill 2023-05-25 (G)	27.04.2023	25.05.2023	0,08	110.000.000,00	Yes	Bilateral	No
Austrian Treasury Bill 2023-08-24 (G)	25.05.2023	24.08.2023	0,25	500.000.000,00	No	Auction	No
EUR Austrian Commercial Paper 2023/55 (G)	06.07.2023	02.08.2023	0,07	126.000.000,00	No	Bilateral	No
EUR Austrian Commercial Paper 2023/60 (G)	12.07.2023	25.08.2023	0,12	25.000.000,00	No	Bilateral	No
GBP Austrian Commercial Paper 2023/12 (G)	25.07.2023	25.08.2023	0,08	11.515.430,68	No	Bilateral	No
EUR Austrian Commercial Paper 2023/78 (G)	02.08.2023	02.11.2023	0,25	20.000.000,00	No	Bilateral	No
Austrian Treasury Bill 2023-11-30 (G)	24.08.2023	30.11.2023	0,27	556.323.000,00	No	Auction	No
EUR Austrian Commercial Paper 2023/118 (G)	14.11.2023	14.12.2023	0,08	100.000.000,00	No	Bilateral	No
Green Rollovers and Green Intra-Year funding				2.068.241.373,10			
Total Green Gross Issuance 2023				7.581.343.670,07			

New Green Net Issuance, which is relevant for the allocation of proceeds in the reporting period and for this Green Investor Report, amounted to EUR 5.51 bn in 2023. Total Green Gross Issuance amounted to EUR 7.58 bn as Green Short-term Instruments also include rollovers and Intra-year Issuances, which amounted to EUR 2.07 bn. Further details are provided in the section “Short-Term Green Funding 2023”.

The sections below provide an overview of the issuances and outstanding amounts of New Green Net Issuance in 2023 by instrument, grouped into Medium/long-term Green Funding and Short-term Green Funding.



Medium-/Long-term Green Funding 2023

In 2023, Green Bonds were issued in two transactions with a total amount of EUR 4.25 bn. On April 18, 2023, the Republic of Austria issued its second Green Bond, the Green RAGB 2.90% 05/23/2029 via syndication, with a maturity of six years and a volume of EUR 3.0 bn. On October 19, 2023 the inaugural Green Bond, the Green RAGB 1.85% 05/23/2049 issued in May 2022, was tapped by EUR 1.25 bn via syndication.

The bilateral issuance of Green Loans accumulated to a total amount of EUR 75 mn during the year 2023. On March 7, 2023, a Green Loan with a maturity of two years and a volume of EUR 50 mn was concluded. On September 20, 2023, the Republic of Austria issued a Green “Schuldscheindarlehen” with a maturity of 5 years and a volume of EUR 25 mn.

Short-term Green Funding 2023

After the first EUR 1.0 bn Green ATB issuance in October 2022 via auction¹⁹, Green ATBs were rolled over at four different auctions during the year 2023 (in February, May, August and November). Green ATBs have also been increased in volume by EUR 825.2 mn last year, leading to an outstanding amount of EUR 1.83 bn as of December 31, 2023. In addition to increases via auctions, the outstanding amount of the Green ATBs has also been enlarged via bilateral taps. Rollovers are only possible for Short-term Green Financing Instruments, which are defined by a maximum term to maturity of one year.

On March 6, 2023, the issuance of Green ACP started. Issuances are done on a bilateral basis in all currencies and tenors (up to 12 months), which makes it possible to respond to individual investor preferences. As of December 31, 2023, the total volume of Green ACPs outstanding amounted to EUR 109.5 mn.

In March 2023, the Republic of Austria also started to issue Green Deposits (bilateral; short-term loans with maturities of up to 12 months). As of December 31, 2023, the total outstanding volume of Green Deposits amounted to EUR 142.0 mn.

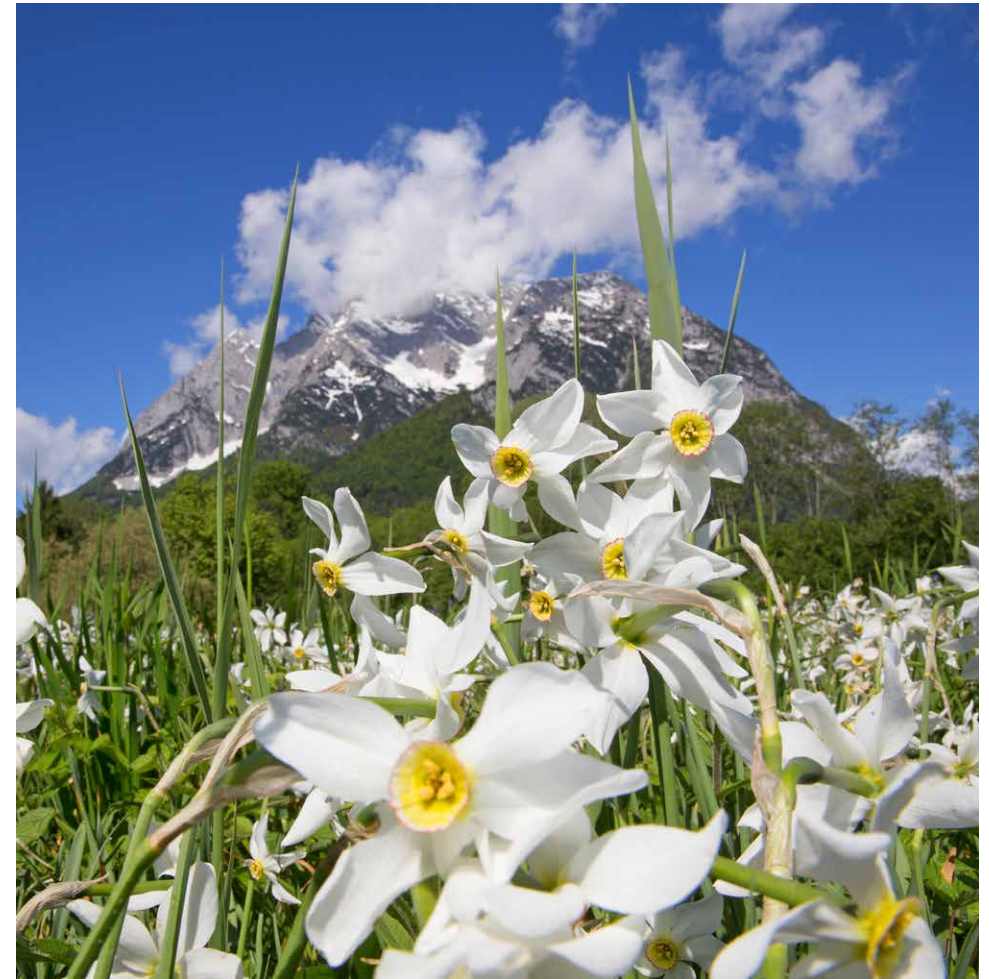
The range Short-term Green Financing Instruments is complemented by Green EMTNs (European Medium-term Notes). With the first Green EMTN issuance of a six-month 0% EUR Zero Coupon Note on December 29, 2023 (volume: EUR 111.4 mn) all financing instruments covered by the Green Framework have now been used for a Green Issue.

Given the nature of Green ACP, Green Deposits and Green EMTNs, which are issued bilaterally, a direct roll over of these Green Financing Instruments is not the standard case, as individual investor demand is driving the issuance. Therefore, for the determination of the maximum issue amount of

¹⁹ For this inaugural Green ATB, issued in October 2022, EUR 1.0 bn Green Expenditures were allocated based on available Green Expenditures 2021 and 2022 I. Consequently, allocation and impact data for this volume was already included in the Green Investor Report 2022, accordingly.

Green Short-term Financing Instruments throughout the calendar year a high-watermark principle is applied. Specific Green Expenditures may be allocated several times during the year as long as this is not the case at the same time for two outstanding instruments. This ensures that double counting is avoided. The total amount of Green Expenditures allocated is determined by the highest outstanding amount of Short-term Green Financing Instruments in a given year. For 2023, this amount was reached on December 29, 2023 with EUR 1.19 bn, which also equals the year-end level.

The graph below shows the new issuances and outstanding amounts of Green Short-term Financing Instruments during the year 2023.



Daffodil meadow at the Grimming © Österreich Werbung/Martin Huber

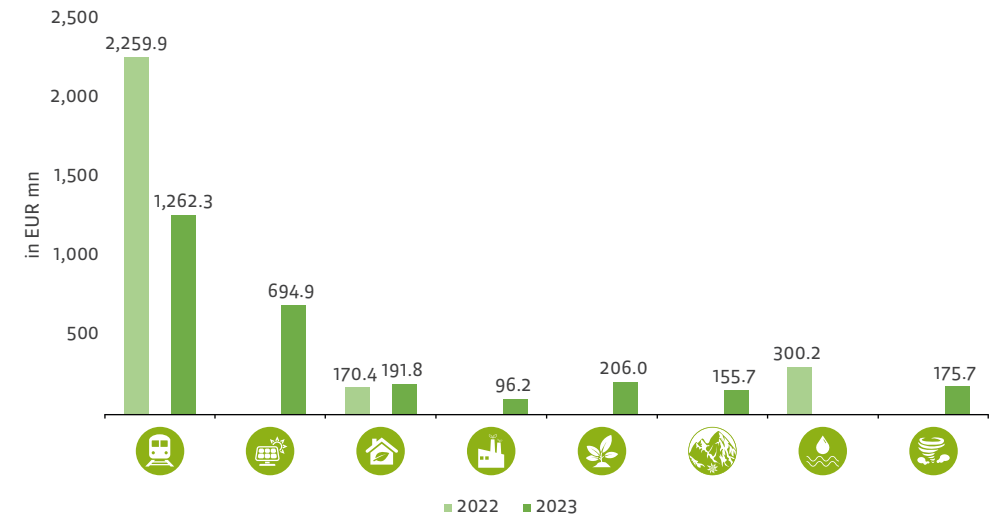
Allocation of Proceeds

The net proceeds raised in 2023 have been aligned with eight categories of Green Expenditures, listed in the Green Framework published in April 2022. Furthermore, the Republic of Austria's Green Framework has been aligned with the 2021 version of the Green Bond Principles (GBP), as published by the International Capital Market Association (ICMA).

Eligible Green Expenditures are related to a large number of assets, support Austria's environmental policy and target different beneficiaries: citizens, households, companies, local authorities, public agencies and universities. An overview of the Eligible Green Categories covered by the Green Government Security issuances can be found in the following table.

 1. Clean transportation	 5. Environmentally sustainable management of living natural resources and land use
 2. Renewable energy	 6. Terrestrial and aquatic biodiversity
 3. Energy efficiency	 7. Sustainable water and wastewater management
 4. Pollution prevention and control	 8. Climate change adaptation

The bar chart below shows the allocated amounts (in EUR mn) per category in 2022 and 2023.



Out of the available eligible amounts of the federal budgets of 2022 and 2023, EUR 5,513 mn were allocated to Green Securities issued in 2023:

EUR 3,522 mn, accounting for 63.9% of the total allocation, were assigned to the Clean transportation category, with EUR 2,260 mn stemming from eligible Green Expenditures of 2022 and EUR 1,262 mn from 2023. The second largest share (12.6%) was allocated to the Renewable energy category (EUR 694.9 mn). Energy efficiency represents the category with the third largest allocation (6.6%), with a total of EUR 362.2 mn. This is followed by the categories Sustainable water and wastewater management at EUR 300.2 mn (5.4%), Environmentally sustainable management of living natural resources and land use at EUR 206.0 mn (3.7%), Climate change adaptation at EUR 175.7 mn (3.2%), Terrestrial and aquatic biodiversity at EUR 155.7 mn (2.8%) and Pollution prevention and control at EUR 96.2 mn (1.7%).

Allocation detail on Green category level (in EUR mn)

GBP project category	Key EU Environmental Objectives	UN SDG Mapping	Eligible Amounts			Allocated Amounts				Remaining eligible amounts
			2022	2023	Total Eligible	2022 II	2023 I	Total Allocated	% total allocated	Balance 2023
 Clean transportation	Climate change mitigation Pollution prevention and control	   	3,444.7	3,926.5	7,371.2	2,259.9	1,262.3	3,522.2	63.9%	2,664.2
 Renewable energy	Climate change mitigation	 	257.6	694.9	952.4		694.9	694.9	12.6%	
 Energy efficiency	Climate Change mitigation	 	170.4	191.8	362.2	170.4	191.8	362.2	6.6%	
 Pollution prevention and control	Pollution prevention and control		174.1	96.2	270.3		96.2	96.2	1.7%	
 Environmentally sustainable management of living natural resources and land use	Pollution prevention and control Transition to a circular economy	 	104.7	206.0	310.7		206.0	206.0	3.7%	
 Terrestrial and aquatic biodiversity	Protection and restoration of biodiversity and ecosystems	 	133.9	155.7	289.5		155.7	155.7	2.8%	
 Sustainable water and wastewater management	Sustainable use and protection of water and marine resources Pollution prevention and control	 	300.2	279.1	579.4	300.2		300.2	5.4%	279.1
 Climate change adaptation	Climate change adaptation		185.1	175.7	360.8		175.7	175.7	3.2%	
			4,770.6	5,725.9	10,496.5	2,730.6	2,782.5	5,513.1	100.0%	2,943.4

Allocation detail on Green Financing Instruments issued in 2023 (in EUR mn)

				Allocated Amounts							
				Medium-/Long term			Short-term				
GBP project category	2022 II	2023 I	Total Allocated	Bonds	Loans	Total	ATB	ACP	Deposits	EMTN	Total
 Clean transportation	2,259.9	1,262.3	3,522.2	2,715.2	47.9	2,763.2	527.2	69.9	90.7	71.2	759.1
 Renewable energy		694.9	694.9	535.7	9.5	545.1	104.0	13.8	17.9	14.0	149.7
 Energy efficiency	170.4	191.8	362.2	279.2	4.9	284.2	54.2	7.2	9.3	7.3	78.1
 Pollution prevention and control		96.2	96.2	74.1	1.3	75.5	14.4	1.9	2.5	1.9	20.7
 Environmentally sustainable management of living natural resources and land use		206.0	206.0	158.8	2.8	161.6	30.8	4.1	5.3	4.2	44.4
 Terrestrial and aquatic biodiversity		155.7	155.7	120.0	2.1	122.1	23.3	3.1	4.0	3.1	33.5
 Sustainable water and wastewater management	300.2		300.2	231.4	4.1	235.5	44.9	6.0	7.7	6.1	64.7
 Climate change adaptation		175.7	175.7	135.5	2.4	137.8	26.3	3.5	4.5	3.6	37.9
	2,730.6	2,782.5	5,513.1	4,250.0	75.0	4,325.0	825.2	109.5	142.0	111.4	1,188.1

5 Impact Report

The total eligible Green Expenditures from the federal budget years of 2022 and 2023 add up to around EUR 10.50 bn, whereby EUR 5.51 bn were assigned to the Green Securities issued in 2023. For 98.8% of the allocated amount, information on performance and impact is presented in this chapter. An overview with details on allocated amounts per Use of Proceeds (UoP) category covered by the impact reporting is presented in the tables below.

For 2022, information on impact is reported for EUR 2.68 bn (or 98.2% of allocated amounts), whereas in 2023 EUR 2.77 bn (or 99.4% of allocated amounts) are covered. Compared to the Green Investor Report 2022, the significant increase in the proportion covered by the impact reporting is primarily driven by three advancements: Firstly, a methodology for an integrated impact assessment for rail transport funding was developed²⁰. Secondly, information on research & development funding is now included for the first time. And thirdly, in the category “Pollution prevention and control” the proportion of funding, for which indicators are presented, was significantly increased.

The indicators relate to the total volumes of supported projects and infrastructure investments and therefore represent facilitated effects²¹. The analyses and the methodological approach were prepared by the Environment Agency Austria (Umweltbundesamt)²² specifically for the purpose of the Green Investor Report and are not directly comparable to those of other publications addressing the respective funding instruments due to the different scope. Several projects and infrastructure investments are eligible to receive funding and grants from more than one funding body. In order to prevent overstatement of impact, performance and impact metrics for such activities are presented only with regard to one funding instrument.

²⁰ See methodology in chapter 7.1

²¹ Allocated amounts shown in the tables in this chapter refer to the share of the amounts for which impact is presented (which in some cases is not equal to the total allocated amount referred to in chapter 4)

²² For the calculation of performance and impact metrics input from the responsible bodies (as mentioned in the relevant sub-chapters) has been used. Further sources are listed in chapter 8.

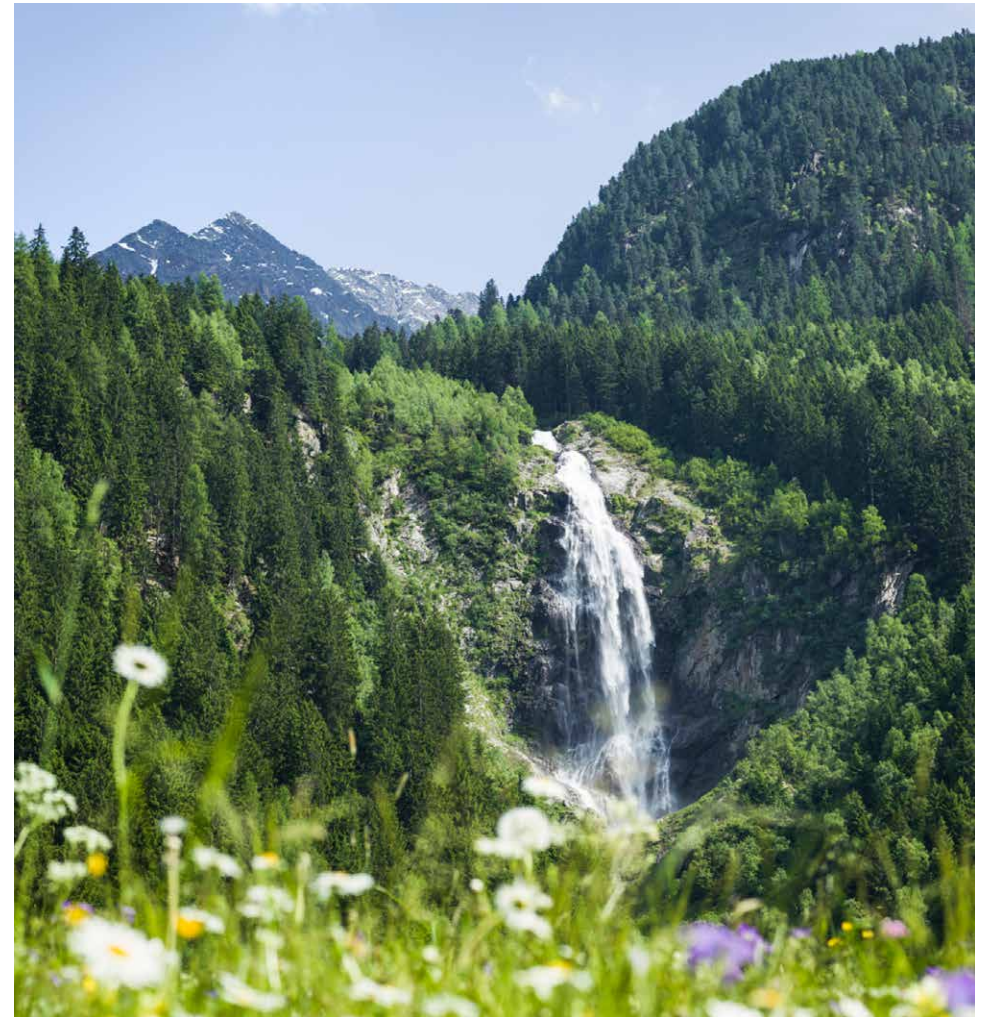
Highlights

- In total, the expenditures for projects and infrastructure financed under the Green Framework and allocated in Green Securities issued in 2023 are leading to annual GHG emissions reduction/avoidance of 4.42 mn tonnes. Thereof, 2.68 mn tonnes were facilitated by expenditures realised in 2022, which represents around 3.7% of Austria's total GHG emissions in 2022 according to a recent report by the Environment Agency Austria²³. For the part of the 2023 expenditures allocated to Green Securities issued in 2023, an additional 1.73 mn tonnes of annual GHG emission reduction/avoidance is enabled. The major part of CO₂e-reductions covered by this reporting (3.51 mn tonnes) is attributable to investments in the construction, modernisation and maintenance of rail infrastructure and to the funding of railway operations. In total, however, a broad set of 14 sub-categories, including funding programmes facilitating the transition towards a zero-emission mobility by promoting active mobility, mobility management and zero emission vehicles as well as renewable energy and energy efficiency are contributing to this positive result.
- Federal government financing in the area “Terrestrial and aquatic biodiversity” (*Austrian Agri-environmental Programme*) enabled a total number of over 88,400 farm subsidies and funding of more than 1.8 mn hectares of agricultural land. The total area of highly biodiversity-relevant areas on agricultural land significantly increased to 208,538 hectares in the year 2023 due to the increased requirement to establish 7% biodiversity-areas (instead of 5%) and introduction of the requirement for organic farms.
- Federal government financing in the area “Environmentally sustainable management of living natural resources and land use” (Austrian compensatory allowance for less-favored areas) enabled a total number of almost 79,700 farm subsidies and funding of around 1.45 mn hectares of agricultural land.
- In 2022, public funding in the area of drinking water supply enabled more than 14,300 people to be additionally connected to the drinking water supply and over 200 km of water pipes to be renovated.

²³ Umweltbundesamt, [Austria's Annual Greenhouse Gas Inventory 1990-2022](#), January 2024.

- Flood protection measures financed under the Green Framework amount to EUR 109.9 mn in 2023 and have enabled more than 11,000 citizens to be protected from flood events.
- Projects and infrastructure funded in the areas “Renewable energy” and “Energy efficiency” led to annual energy savings of 1,519,125 MWh and an annual renewable energy generation/use of 2,080,462 MWh.

Details on the abovementioned effects and further impact and performance indicators are presented in the following chapters.



Mischbach falls in the Stubai valley © Andre Schoenherr

Allocated amounts covered by impact metrics (in EUR mn)

GBP project category	UN SDG Mapping	2022 II			2023 I			Total (2022 II + 2023 I)		
		Allocated amount	Allocated amount covered by impact metrics	Impact metrics in % of allocated amount	Allocated amount	Allocated amount covered by impact metrics	Impact metrics in % of allocated amount	Allocated amount	Allocated amount covered by impact metrics	Impact metrics in % of allocated amount
 Clean transportation		2,259.9	2,259.9	100.0%	1,262.3	1,262.2	100.0%	3,522.2	3,522.1	100.0%
 Renewable energy					694.9	692.3	99.6%	694.9	692.3	99.6%
 Energy efficiency		170.4	122.5	71.9%	191.8	188.1	98.1%	362.2	310.6	85.7%
 Pollution prevention and control					96.2	95.6	99.4%	96.2	95.6	99.4%
 Environmentally sustainable management of living natural resources and land use					206.0	202.5	98.3%	206.0	202.5	98.3%
 Terrestrial and aquatic biodiversity					155.7	151.3	97.2%	155.7	151.3	97.2%
 Sustainable water and wastewater management		300.2	298.5	99.4%				300.2	298.5	99.4%
 Climate change adaptation					175.7	174.9	99.6%	175.7	174.9	99.6%
		2,730.6	2,680.8	98.2%	2,782.5	2,766.9	99.4%	5,513.1	5,447.7	98.8%

5.1 Clean transportation

The transport sector is one of the main sources of GHG emissions. The highest share of emissions in this sector can be attributed to road traffic and in particular to passenger car traffic. Since 1990, all federal provinces have recorded an increase in GHG emissions per capita for the transport sector. Due to the high share of local public transport, the lowest per capita emissions are reported for Vienna²⁴. This example illustrates the importance of building infrastructure and providing incentives for sustainable modes of transport in order to encourage people to switch to public transport.

In order to maintain and further improve the quality of the public transport network, Austria invests steadily in its maintenance, modernisation and extension. For the railway network this is regulated in a special framework plan (further information available in sub-chapter “Federal subsidies to ÖBB-Infrastruktur AG” on page 21 et seq.). As new incentive for the use of public transport, Austria introduced the so-called Climate Ticket (KlimaTicket) in 2021, which allows the use of all means of public transport in Austria with one annual ticket (further information available in sub-chapter “Climate Ticket Austria (KlimaTicket)” on page 25).

In the course of the reporting period, a total of EUR 2,259.9 mn was allocated to projects dedicated to clean transportation in 2022 and EUR 1,262.3 mn in 2023. The projects selected for the impact reporting are described in further detail in the next chapters. This section is comprised by five sub-sections, including Clean transportation infrastructure and services, Public transport, Funding programmes for a transition to zero emission mobility, Consulting for enabling a transition to zero emission mobility and Research, development and innovation.

2022				2023		
Clean Transportation	Allocated amount with reported impact (EUR mn)	Annual GHG emissions reduced/ avoided (tonnes CO ₂ e)	Number of users	Allocated amount with reported impact (EUR mn)	Annual GHG emissions reduced/ avoided (tonnes CO ₂ e)	Number of projects (x) / trained personnel (*) / new programme partners (°)
Clean transportation infrastructure and services	2,120.8	2,554,100		1,062.7	904,100	
Public transport - Climate Ticket Austria	139.1		213,000			
Funding programmes for a transition to zero emission mobility				133.6	53,816	20,274 (x)
Consulting for enabling a transition to zero emission mobility				7.7		252 (*) / 12 (°)
Research, Development and Innovation				58.3		206 (x)
Total	2,259.9			1,262.2		

Table 1: Clean transportation: overview of indicators. Sums in the table may not add up due to rounding differences.

Monetary figures are related to spent public funding assigned to Clean transportation infrastructure or projects and financed by Green Securities. Impact and performance indicators refer to the enabled effects with regard to the investment volumes of the supported projects and infrastructure. The figures in Table 1 present the respective share of the budget assigned to Clean transportation projects and infrastructure that are funded by Green Securities. When interpreting the data, it should be noted that the figures only represent a portion of the total assigned expenditures.

²⁴ Environment Agency Austria (Umweltbundesamt), [Klimaschutzbericht 2023](#) (only available in German), April 2024

5.1.1 Clean transportation infrastructure and services

In order to guarantee the provision of rail passenger and freight transport and public transport in general, investments in infrastructure are necessary. Depending on the type and category of investment, there are legal obligations or agreements that regulate the federal government's share of investment.

Railway, in particular, is a very popular means of transportation. In the years before the COVID-19 pandemic, which resulted in travel restrictions, the number of passengers travelling by train increased steadily, from 279 million passengers in 2014 to 316 million in 2019. In 2021 the numbers of rail passengers started to recover from the COVID-19 pandemic, with already 295 million passengers in 2022²⁵.

Public transport in Austria is financed through a multi-layered system of financing mechanisms in which financial allocations from the federal government, state governments, local governments as well as revenues from ticket sales and season ticket sales interact. Due to public transfers and subsidies, it is possible to guarantee public transport in areas where the operation of public transport would otherwise not be economically feasible. On 26 October 2021 the Climate Ticket Austria (KlimaTicket Ö) was introduced. For the first time in Austria, it is now possible to use all public transport services with just one card. The price for the Climate Ticket Austria is EUR 1,095 per year (EUR 3 per day).

For the purpose of the impact assessment, investments in rail infrastructure and investments in rail passenger and freight transport services, are considered together, as rail transportation infrastructure is an enabler for rail passenger and freight transport services and cannot be regarded separately. The avoided GHG-emissions reported thus reflect the overall effect of these different investments in the rail infrastructure and services. The detailed methodology for determining the avoided GHG-emissions is described in chapter 7.1.

²⁵ Schienen-Control, [Annual Reports 2018 and 2022](#)

Federal subsidies to ÖBB-Infrastruktur AG

Objective

Operation of rail infrastructure and its provision as well as maintenance, planning and construction of rail infrastructure for general enhancement of attractiveness of rail transport.

Responsible Body

Federal Ministry for Climate Action, Environment, Energy, Mobility, Innovation and Technology (BMK)

Beneficiaries

- Direct beneficiary: ÖBB-Infrastruktur AG
- Indirect beneficiaries: all users of the ÖBB rail network

Description of Financing

According to §31 of the Austrian Federal Railways Act (Bundesbahngesetz), ÖBB-Infrastruktur AG is obliged to make its rail infrastructure available to rail transport companies operating on the Austrian rail network. The ÖBB framework plan provides for investments in the network of ÖBB-Infrastruktur AG. The legal basis for this is set in §42 of the Federal Railways Act²⁶.

The Austrian railway framework plan includes planned projects and their investments over a 6-year period as well as expenses foreseen for the maintenance of the rail network. This forms the basis for the subsidies of the BMK to ÖBB-Infrastruktur AG, which are subsequently contractually agreed (subsidy contracts).

The main focus of the current Austrian railway framework plan is:

- In the area of rail passenger transport, the Austrian railway framework plan will significantly reduce the travel time on important axes, enabled by large infrastructure projects (Brenner tunnel, Semmering basis tunnel, Koralm tunnel) and investments in electrification, au-

²⁶ Bundesbahngesetz, [Federal Law Gazette. Nr. 825/1992](#) (last amended version)

tomation and digitalisation. Further, renovations of railway stations, improved customer services and better connections will make travelling by rail more attractive.

- In the area of rail freight transport, the Austrian railways framework plan has the objective to increase the transport capacity within the railway network. The framework plan includes large infrastructure projects along important trans-European network axes (TEN-T), like the Brenner tunnel on the Scandinavian-Mediterranean corridor and the Semmering basis tunnel on the Baltic-Adriatic corridor, investments in intermodal terminals and cargo centres (Villach, Graz, Wels, Wien), as well as in electrification and ongoing investments in automation and digitalisation.

In 2022²⁷, 163.7 mn train kilometres were travelled on the ÖBB railway network, thereof 146.1 mn kilometres with electric traction^{28, 29}.

- 114.3 mn train kilometres were attributable to passenger transport (88% electric)
- 41.7 mn train kilometres were attributable to freight transport (95% electric)

In 2023²⁷, 165.9 mn train kilometres were travelled on the ÖBB railway network, 149.9 mn train kilometres of which with electric traction^{28, 29}.

- 117.9 mn train kilometres were attributable to public service passenger transport (89% electric)
- 40.1 mn train kilometres were attributable to freight transport (95% electric)

Environmental Impact

The effect of the funding is presented in Table 1 by the following indicator:

- Avoided GHG-emissions 2022 and 2023³⁰

²⁷ Data provided by ÖBB

²⁸ Transport services provided by electric locomotives or electric railcars, excluding diesel vehicles.

²⁹ The delta between total train kilometres and train kilometres in passenger and freight transport are service and locomotive trains which were not included in the impact calculation.

³⁰ Presented cumulatively for rail infrastructure and services in Table 1 above

Co-financing of rail infrastructure investments by private railway companies and contributions to the provision of rail infrastructure

Objective

The operation of rail infrastructure and its provision as well as for maintenance, planning and construction of rail infrastructure for the general enhancement of the attractiveness of rail transport

Responsible Body

Federal Ministry for Climate Action, Environment, Energy, Mobility, Innovation and Technology (BMK)

Beneficiaries

- Direct beneficiaries: Private Railroads (Neusiedler Seebahn GmbH, Raaberbahn AG, NÖ-VOG, Wiener Lokalbahnen GmbH, Linzer Lokalbahn AG, Lokalbahn Gmunden - Vorchdorf AG, Lokalbahn Lambach - Vorchdorf AG, Lokalbahn Vöcklamarkt - Attersee AG, Salzburg AG, Pinzgauer Lokalbahn, Cargo Centre Graz, GKB, Steiermärkische Landesbahnen, Lokalbahn Mixnitz-Sankt Erhard AG, IVB, Stubaitalbahn, Zillertaler Verkehrsbetriebe AG, Montafonerbahn AG)
- Indirect beneficiaries: all users of the rail network of the private railway companies

Description of Financing

In accordance with Section 4 of the Private Railways Act 2004, the infrastructure of private railroads in Austria is financed via so-called „*Medium-term Investment Programmes*“, which are concluded between the federal government, the relevant regional authorities and the respective private railroad for a period of five years. The current *9th Medium-term Investment Programme (9th MIP)* covers the financing period 2021-2025.

Under the *9th MIP*, 23 private railway lines in eight Federal States will be co-financed by the federal government from 2021-2025. The federal funds earmarked for this purpose amount to EUR 480.7 mn over the entire financing period. This is 277% more than the investments in the *8th MIP*. The pre-

requisite for funding under the Private Railways Act is that the private railroads are open to the public with regular year-round traffic. As a rule, the financing of private railways under the Private Railways Act is divided into 50% state and 50% federal.

Investments are focussed on electrification, infrastructure improvements and safety. Detailed information on all funded projects can be found in the report on the 9th *Medium-term Investment Programme*³¹.

In addition to maintaining the existing stock, the investment programme aims at making the existing lines more attractive. The impact and effectiveness of the investments can be illustrated by the number of train kilometres and users. Private railroads that are open to the public with regular year-round traffic are supported by the federal government in order to ensure a basic service in rail passenger transport (see also chapter Ordering of non-commercial services in rail passenger transport).

Environmental Impact

The effect of the funding is presented in Table 1 by the following indicator:

- Avoided GHG-emissions 2023³²

Ordering of non-commercial services in rail passenger transport

Objective

Offering a basic service in rail passenger transport.

Responsible Body

Federal Ministry for Climate Action, Environment, Energy, Mobility, Innovation and Technology (BMK)

³¹ See project-specific information on the [dedicated section for private railroads](#) on the website of the BMK (only available in German)

³² Presented cumulatively for rail infrastructure and services in Table 1 above

Beneficiaries

- Direct beneficiaries: ÖBB-Personenverkehr AG (ÖBB-PV AG) and private railway companies
- Indirect beneficiaries: all rail passengers

Description of Financing

Federal contributions to ensure a basic service in rail passenger transport. These offerings in rail passenger transport are services (or service components) whose provision is in the public interest, but where cost coverage is not possible by fare revenues alone (in most cases, ticket revenues cover only around one-third of the incurred costs). As such, these services would not be offered on the market; their provision requires co-financing by the public sector.

Environmental Impact

The effect of the funding is presented in Table 1 by the following indicator:

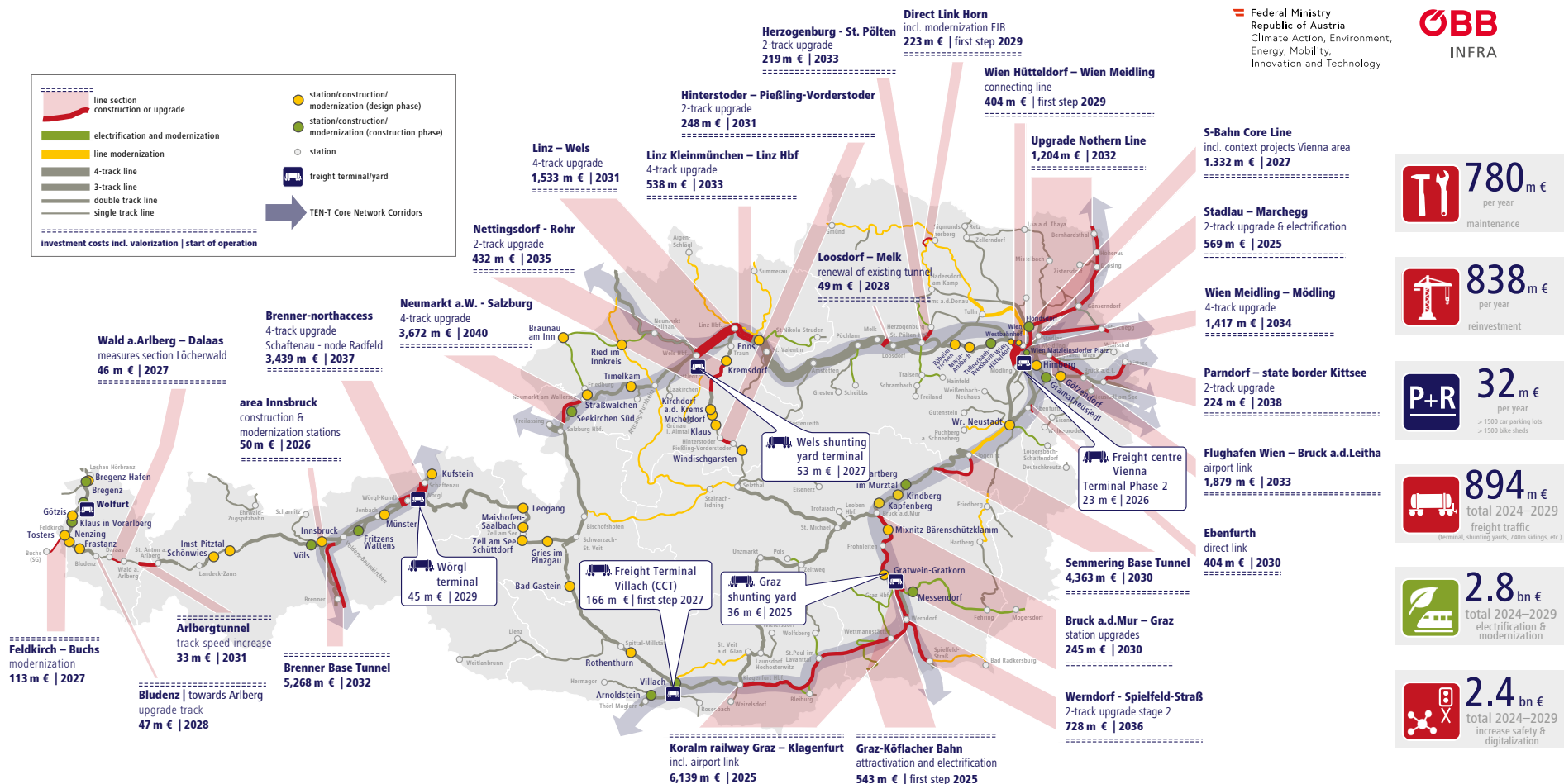
- Avoided GHG-emissions 2022 and 2023³³



“Cityjet” train © ÖBB WeXplore

³³ Presented cumulatively for rail infrastructure and services in Table 1

ÖBB Framework Plan: 21.1 bn € 2024–2029



Design phase: Kufstein – Schafnau, Tiroler Oberland, Pass Lueg, Schwarzach-St.Veit – Bad Gastein, Kirchdorf – Micheldorf, Bosruck Tunnel, Tulln – Tullnerfeld, northaccess lines S-Bahn Vienna, innere Aspengbahn

Figure 1: Austrian Railway Framework Plan 2024-2029³⁴

³⁴ Federal Ministry for Climate Action, Environment, Energy, Mobility, Innovation and Technology & ÖBB INFRA: Rahmenplan 2024-2029 (only available in German), October 2023
The Austrian railway framework plan is adopted by the federal government. The figure shows the most recent Austrian railway framework plan, including the main projects planned for the period 2024-2029.

Rail freight funding (Schienengüterverkehrsförderung)

Objective

The provision of rail freight transport services in the form of single-wagon transport, unaccompanied intermodal transport or rolling road (piggyback transportation of road trucks by rail).

Responsible Body

Federal Ministry for Climate Action, Environment, Energy, Mobility, Innovation and Technology (BMK)

Beneficiaries

- Railroad companies providing rail freight transport services in the form of single-wagon transport, unaccompanied intermodal-transport or rolling road.

Description of Financing:

The financing is provided in the form of a non-repayable grant. For this purpose, contracts are concluded in each case between the BMK and the railroad companies providing the rail freight transport service.

In 2022, 66% of tonne-kilometres transported by rail in Austria were supported by rail freight funding³⁵.

Environmental Impact

The effect of the funding is presented in Table 1 by the following indicator:

- Avoided GHG-emissions 2022³⁶

³⁵ According to the annual evaluation of the funding programme by the Federal Ministry for Climate Action, Environment, Energy, Mobility, Innovation and Technology (BMK); 2023 data not yet available

³⁶ Presented cumulatively for rail infrastructure and services in Table 1 above

5.1.2 Public transport

Climate Ticket Austria (KlimaTicket)

Objective

Easy and convenient use of public transport services with an annual ticket. The ticket is available as Climate Ticket Austria (one annual ticket for all means of public transport in Austria) and as Regional Climate Ticket (annual ticket for one region).



Responsible Body

Federal Ministry for Climate Action, Environment, Energy, Mobility, Innovation and Technology (BMK)

Beneficiaries

- Direct beneficiaries: public transport providers
- Indirect beneficiaries: all holders of the Climate Ticket (regular users of public transport)

Description of Financing

The Climate Ticket Austria is financed by financial contributions from the federal government and revenues from ticket sales.

The introduction of the Climate Ticket in 2021 is to be considered as an enabling activity, as affordable and easy to use public transport services are crucial for the shift to a low carbon mobility. In 2022, there were 213,000 ticket holders of the Climate Ticket Austria and 1,082,500 ticket holders of the Regional Climate Tickets³⁷.

According to the KlimaTicket-Report 2022³⁸, 20% of Climate Ticket users state that they would have travelled by car instead of public transport without the Climate Ticket, 5% state that they would not have travelled. Taking into account the uncertainties of surveys, CO₂e-savings in 2022 of 64,631 t CO₂e were calculated in the KlimaTicket-Report.

Environmental Impact

The effect of the funding is presented in Table 1 by the following indicator:

- Number of users 2022

³⁷ The Regional Climate Ticket is co-financed by the Federal Ministry for Climate Action, Environment, Energy, Mobility, Innovation and Technology (BMK)

³⁸ See [KlimaTicket-Report 2022](#) for further details (only available in German)

5.1.3 Funding Programmes for a Transition to Zero Emission Mobility

The transition to zero emission mobility is supported by several funding programmes that focus on promoting e-mobility, active mobility (cycling and walking) and mobility management. Depending on the funding programme, private individuals, companies, municipalities and associations are supported.

Objective

National funding programmes aim at facilitating the transition towards a zero-emission mobility by promoting active mobility, mobility management and zero emission vehicles. Moreover, transport- and energy-related research projects and measures to bring climate-friendly energy technologies to market are supported³⁹.

Responsible Bodies

- Federal Ministry for Climate Action, Environment, Energy, Mobility, Innovation and Technology (BMK)
- Federal Ministry of Labour and Economy (BMAW)

Beneficiaries

Cities, municipalities and regions, businesses, administrations, fleet operators, tourism operators, schools, youth initiatives and citizens

Description of Financing

The funding is provided as a non-repayable investment grant. Funding is available for

- Cycling: cycling infrastructure (e.g. cycling paths), bike&ride, bicycle parking facilities, signposting, related planning services
- Walking: redesign of public space for pedestrians (e.g. pedestrian zones, improvements of sidewalks), improvements in the accessibility by foot of public transport, schools or similar infrastructure, related planning services
- E-Mobility: e-vehicles, e-bikes, charging stations
- Mobility management: sharing, demand orientated mobility solutions, rationalisation of mobility, awareness-raising campaigns

³⁹ Projects in the field of applied research, development and innovation, which are funded by the Austrian Climate and Energy Fund, are generating CO₂e savings and thus included in this section.

Active mobility and mobility management

Active mobility and mobility management is mainly supported by the klimaaktiv mobil funding programme (see chapter 5.1.4.).

e-Mobility

E-mobility is funded via several funding programmes – depending on the beneficiaries and the type of vehicles. One large programme is the klimaaktiv mobil funding programme.

- E-vehicles: Funding is available for cars (including FCEV)⁴⁰, scooters, motorcycles and light weight vehicles. Funding is limited to 30% (businesses, administrations and associations) or 50% (private persons) of the acquisition costs. Proof is required that the vehicles are powered by electricity (or hydrogen) from renewable sources. The prerequisite for receiving the subsidy is that the vehicle dealer has granted (and indicated on the invoice) its share on the e-mobility bonus.
- Charging stations: Proof is required that only electricity from renewable sources is used. Funding is limited to 50% of the acquisition costs.
- E-bikes, foldable bikes (with/without electric drive) and cargo bikes (with/without electric drive): For bikes with an electric drive, it needs to be proven that only electricity from renewable sources is used for charging and that the motor assistance is restricted to 25 km/h. Funding is limited to 30% (businesses, administrations and associations) or 50% (private persons) of the acquisition costs. The prerequisite for receiving the subsidy is that the vehicle dealer has granted (and indicated on the invoice) a mobility bonus, including a major bike service per bike.

The Climate and Energy Fund, endowed with funds from the BMK, is the programme owner of the *klimaaktiv mobil funding programme*.

Environmental Impact

The effect of the funding is presented in Table 1 by the following indicators:

- Avoided GHG-emissions 2023
- Number of projects 2023

⁴⁰ FCEV: fuel cell electric vehicles

5.1.4 Consulting for Enabling a Transition to Zero Emission Mobility

Promotion of a climate-friendly mobility transition (klimaaktiv mobil)

Objective

The initiative klimaaktiv mobil promotes a climate-friendly mobility transition towards active mobility, electric mobility, intelligent mobility management and innovative mobility services. The portfolio of klimaaktiv mobil includes the *extensive financial support programme* (see chapter 5.1.3.), consulting services and awareness raising programmes, partnerships and networks, as well as trainings and certification initiatives. It was founded in 2004 and since then, in cooperation with partners⁴¹, has been advising cities, municipalities and regions, businesses, administrations, fleet operators, tourism operators, schools, youth initiatives and citizens on funding opportunities for active mobility, e-mobility and mobility management.

Responsible Body

Federal Ministry for Climate Action, Environment, Energy, Mobility, Innovation and Technology (BMK)

Beneficiaries

Cities, municipalities and regions, businesses, administrations, fleet operators, tourism operators, schools, youth initiatives and citizens

Description of Financing

The Federal Ministry for Climate Action, Environment, Energy, Mobility, Innovation and Technology (BMK) finances the training courses (full cost coverage or additional payment) for e-mobility and cycling and the corresponding public relations work.

The impact of the klimaaktiv mobil training courses can be measured in the number of certified personnel that has been trained. In 2023, the following personnel was trained

- 45 cycling instructors and 13 master cycling instructors
- 70 certified driving instructors for fuel-saving driving
- 71 certified driving instructors for e-mobility and 18 graduates of an e-mobility training programme

- 20 municipal mobility officers
- 15 municipal cycling officers

The partnerships and networks are an important lever of klimaaktiv mobil. They serve to jointly implement activities for climate-friendly mobility. Performance and impact can be measured by the number of newly acquired long-term programme partners – these are companies or associations that enter into a long-term, general, contractual cooperation with klimaaktiv mobil. In 2023, 12 new long-term programme partners joined klimaaktiv mobil.

Environmental Impact

- Supporting activity, the effects of the *klimaaktiv mobil funding programme 2023* are included in chapter 5.1.3
- Number of trained personnel 2023
- Number of new long-term programme partners 2023

⁴¹ The partners are listed on the [website](#) of klimaaktiv in the section “mobility”

5.2 Renewable energy

Pushing the use of regional and renewable energy sources as a substitute for fossil resources has been an important element of Austria's climate protection policy for considerable time. All major climate and energy policy strategies of the recent past reflect this effort. Austria considers the increase of the share of renewable energy sources not only important for climate change mitigation, but also for the increase of security of supply and domestic value added. Several programmes contribute to the increase of renewable energy utilisation⁴².

This section will be split up into three sub-sections including biomass, photovoltaic (PV) as well as heat pumps, solar thermal, power storage, energy communities and other renewable energy sources.

2023					
Renewable Energy	Allocated amount with reported impact (EUR mn)	# of projects supported	Annual renewable energy generation/use (MWh)	Annual energy savings (MWh)	Annual GHG emissions reduced/avoided (tonnes CO ₂ e)
Biomass	203.7	27,085	1,125,638	136,626	319,679
Photovoltaic	231.3	43,895	395,323	27,093	117,198
Heat pump	121.6	15,410	320,144	143,398	102,114
Power storage	14.4	4,980	12,155	6,544	16,826
Solar thermal	16.9	67	28,456	34,480	10,140
Energy communities, consulting, guidance	5.5	184			
Other	74.0	7,643	172,251	67,981	55,508
Research, Development & Innovation	24.8	63			
Total	692.3				

Table 2: Renewable energy – overview of indicators. Sums in the table may not add up due to rounding differences.

Monetary figures are related to spent public funding for renewable energy projects financed by Green Securities. Impact and performance indicators refer to the enabled effects with regard to the overall investment volumes of the supported projects. Estimates for performance/impact indicators are based on data for approved projects in the respective year.

Explanatory notes:

- Some renewable energy measures result both in renewable energy generation/use and in energy savings due to higher energy efficiency of the technology. Examples are biomass, used for district heating, and heat pumps. The programmes are classified either under “Energy efficiency” or “Renewable energy” depending on the respective main purpose.
- The figures in Table 2 present the respective share of the budget that was assigned to renewable energy projects and financed by Green Securities⁴³.
- More information on the category “Research, development & innovation” can be found in chapter 5.9.

⁴² Federal Ministry for Climate Action, Environment, Energy, Mobility, Innovation and Technology, [Umweltinvestitionen des Bundes](#) (only available in German), 2023

⁴³ The analyses and the methodological approach were prepared specifically for the purpose of the Green Investor Report and cannot be applied one-to-one to other publications addressing the respective funding vehicles due to the different scope.

5.2.1 Biomass

Objective

Use of biomass as renewable energy source to substitute fossil fuels.

47.9% of Austria's territory is covered by forests and wood regrows faster than it is lumbered. In the last 10 years, forest area has increased by 6 hectares per day. The harvested area is smaller and corresponds to only 89% of the regrown area. Additionally, an increase in broadleaf and mixed forests and biodiversity is recorded⁴⁴.

Responsible Bodies

Federal Ministry for Climate Action, Environment, Energy, Mobility, Innovation and Technology (BMK), Federal Ministry for Labour and Economy (BMAW), Federal Ministry of Finance (BMF)

Description of Financing

Under the Environmental Subsidy Act (Umweltförderungsgesetz), the Investment Bonus Act (Investitionsprämienengesetz), the Climate and Energy Fund Act (Klima- und Energiefondsgesetz) and the Municipal Investment Act (Kommunalinvestitionsgesetz), capital expenditures are subsidised.

Supported activities include:

- Individual biomass heating systems in buildings
- Utilisation of heat from biomass in district heating or micro grids: installation of biomass firing systems and connection of additional buildings to the heat grid
- Combined heat and power generation from biomass
- Energy generation from biogenic waste

Beneficiaries

Individuals, companies

Environmental Impact

Reduction of fossil fuels, especially in heating, resulting in reduced/avoided CO₂e emissions (see Table 2)

⁴⁴ Federal Ministry for Agriculture, Forestry, Regions and Water Management, [Austrian National Forest Inventory](#) (only available in German)

5.2.2 Photovoltaic

Objective

Renewable power generation by photovoltaics (PV)

Responsible Bodies

Federal Ministry for Climate Action, Environment, Energy, Mobility, Innovation and Technology (BMK), Federal Ministry of Finance (BMF), Federal Ministry for Labour and Economy (BMAW)

Description of Financing

Under the Environmental Subsidy Act (Umweltförderungsgesetz), the Municipal Investment Act (Kommunalinvestitionsgesetz) and the Climate and Energy Fund Act (Klima- und Energiefondsgesetz) capital expenditures are subsidised. Supported activities include:

- Installation of PV systems at small and large scale
- “Lighthouse projects”: projects with innovative PV application

Beneficiaries

Individuals, companies, municipalities, farms

Environmental Impact

Renewable power generation, resulting in reduced/avoided CO₂e emissions (see Table 2)

5.2.3 Heat pumps, solar thermal, power storage, energy communities and other renewable energy technologies

Objective

Use of further renewable energy sources to substitute fossil fuels by installation of additional capacity. Facilitation of renewable power and heat use by providing power storage and heat grid infrastructure.

Responsible Bodies

Federal Ministry for Climate Action, Environment, Energy, Mobility, Innovation and Technology (BMK), Federal Ministry of Finance (BMF), Federal Ministry for Labour and Economy (BMAW)

Description of Financing:

Under the Environmental Subsidy Act (Umweltförderungsgesetz), the Investment Bonus Act (Investitionsprämien-gesetz) and the Climate and Energy Fund Act (Klima- und Energiefondsgesetz) capital expenditures are subsidised. Supported activities include:

- Installation of heat pumps
- Large-scale and individual housing solar thermal systems
- Generation of process energy from renewable sources
- Use of solar thermal systems in climate and energy model regions
- Power storage systems
- Innovative heat network design
- Heat grids for transport and heat grids for distribution of residual heat from companies
- Hydrogen produced by power from renewable sources and other renewable gases, e.g. bio-methane
- Production of biogenic fuels
- Climate and energy model regions to promote the cooperation of municipalities concerning use of natural resources, energy saving potentials and sustainable economy
- Mixed renewables programmes which cannot be attributed to a single sub-category

Beneficiaries

Individuals, companies

Environmental Impact

Renewable heat generation, switch to renewable energy supply in energy-intensive industry, power storage, use of residual heat from companies, resulting in reduced/avoided CO₂e emissions (see Table 2)



Solar installation © Adobe Stock

5.3 Energy efficiency

Programmes for energy saving measures in production processes and other energy efficiency measures in businesses, the reuse of residual heat in and from companies, building renovation, energy efficient heating systems and lighting are the focus areas of energy efficiency spending. The target groups are companies, municipalities, residential buildings owners and for some programmes also associations and confessional institutions.

2022						2023				
Energy Efficiency	Allocated amount with reported impact (EUR mn)	# of projects supported	Annual renewable energy generation/use (MWh)	Annual energy savings (MWh)	Annual GHG emissions reduced/avoided (tonnes CO ₂ e)	Allocated amount with reported impact (EUR mn)	# of projects supported	Annual renewable energy generation/use (MWh)	Annual energy savings (MWh)	Annual GHG emissions reduced/avoided (tonnes CO ₂ e)
Processes	20.9	244	-	182,653	48,986	21.0	261	-	222,172	62,459
Heat reuse	3.7	208	5,165	32,933	6,868	13.8	352	10,276	114,240	37,557
Lighting	9.9	1,539	-	73,134	16,730	26.1	1,715	-	66,019	14,999
Building renovation	76.6	6,906	601	187,629	40,444	63.2	4,887	471	132,389	25,512
New buildings	6.2	118	-	7,480	2,015	4.5	61	-	4,328	1,294
Cooling	5.2	116	8,661	38,567	14,101	9.9	833	1,321	41,459	11,684
Research, Development & Innovation						49.6	147			
Total	122.5					188.1				

Table 3: Energy efficiency – overview of indicators. Sums in the table may not add up due to rounding differences.

Monetary figures are related to spent public funding, contributing to energy efficiency and financed by Green Securities. Impact and performance indicators refer to the enabled effects with regard to the overall investment volumes of the supported projects and infrastructure. Estimates for performance/impact indicators are based on data for approved projects in the respective year.

Explanatory notes:

- Some energy efficiency measures result both in energy savings and in renewable energy generation/use. This is the case when the new system with higher energy efficiency is based on renewables instead of fossil fuels. Examples are new heating systems in buildings, or reuse of heat generated from renewable sources. The programmes are classified either under “Energy efficiency” or “Renewable energy” depending on the respective main purpose.
- The figures in Table 3 present the respective share of the budget that was assigned to energy efficiency projects and financed by Green Securities⁴⁵.
- More information on the category “Research, Development and Innovation” can be found in chapter 5.9.

⁴⁵ The analyses and the methodological approach were prepared specifically for the purpose of the Green Investor Report and cannot be applied one-to-one to other publications addressing the respective funding vehicles due to the different scope.

5.3.1 Processes

Objective

Implementation of energy efficiency measures in production processes

Responsible Body

Federal Ministry for Climate Action, Environment, Energy, Mobility, Innovation and Technology (BMK)

Description of Financing

Under the Environmental Subsidy Act (Umweltförderungsgesetz) capital expenditures are subsidised. Supported activities include:

- Heat recovery from refrigeration systems and from ventilation systems with a heat exchanger or recirculation systems
- Heat recovery or utilisation of previously unused heat flows as well as heat pumps for tapping low-temperature waste heat
- Optimising heating systems in existing buildings
- Optimisation of fossil process heat generators (if conversion to renewable energy sources is not possible)
- Efficiency improvements in industrial processes and plants with a significant technological and ecological improvement compared to the existing plant

Beneficiaries

Companies

Environmental Impact

Reduction of energy consumption for production, resulting in reduced/avoided CO₂e emissions (see Table 3)

5.3.2 Heat reuse

Objective

Utilisation of otherwise unused waste heat, externally e.g. for district heating or internally in the company

Responsible Bodies

Federal Ministry for Climate Action, Environment, Energy, Mobility, Innovation and Technology (BMK), Federal Ministry of Labour and Economy (BMAW), Federal Ministry of Finance (BMF)

Description of Financing

Under the Environmental Subsidy Act (Umweltförderungsgesetz), the Investment Bonus Act (Investitionsprämienengesetz) and the Municipal Investment Act (Kommunalinvestitionsgesetz), capital expenditures are subsidised.

Supported activities include:

- Heat extraction from industrial and commercial processes, feed-in to distribution networks and installation of internal distribution networks for waste heat utilisation
- Efficient energy centres for the internal supply of heat and cooling that contain a combination of particularly innovative and energy-efficient measures

Beneficiaries

Companies, municipalities

Environmental Impact

Reduction of energy consumption, resulting in reduced/avoided CO₂e emissions (see Table 3)

5.3.3 Lighting

Objective

Switch to energy efficient lighting systems indoors and outdoors

Responsible Bodies

Federal Ministry for Climate Action, Environment, Energy, Mobility, Innovation and Technology (BMK), Federal Ministry of Finance (BMF)

Description of Financing

Under the Environmental Subsidy Act (Umweltförderungsgesetz), the Municipal Investment Act (Kommunalinvestitionsgesetz) and the Climate and Energy Fund Act (Klima- und Energiefondsgesetz), subsidies for capital expenditure are provided for lighting optimisation, in particular by switching to LED systems, of:

- street and outdoor lighting installations
- outdoor sports facilities (floodlighting systems)
- indoor lighting

Beneficiaries

Companies, municipalities, associations and confessional institutions

Environmental Impact

Reduction of power consumption, resulting in reduced/avoided CO₂e emissions (see Table 3)

5.3.4 Building renovation

Objective

Reduction of energy consumption, especially for heating, by renovation of buildings

Responsible Bodies

Federal Ministry for Climate Action, Environment, Energy, Mobility, Innovation and Technology (BMK), Federal Ministry of Finance (BMF)

Description of Financing

Under the Environmental Subsidy Act (Umweltförderungsgesetz), the Municipal Investment Act (Kommunalinvestitionsgesetz) and the Climate and Energy Fund Act (Klima- und Energiefondsgesetz), capital expenditures are subsidised. Supported activities include:

- Building renovation to improve energy performance
- Exemplary renovation projects demonstrating best practice

Beneficiaries

Individuals, companies, municipalities, associations and confessional institutions

Environmental Impact

Reduction of energy consumption in buildings, including housing, resulting in reduced/avoided CO₂e emissions (see Table 3)

5.3.5 New buildings

Objective

Improve energy performance of new commercial buildings

Responsible Body

Federal Ministry for Climate Action, Environment, Energy, Mobility, Innovation and Technology (BMK)

Description of Financing

Under the Environmental Subsidy Act (Umweltförderungsgesetz) capital expenditures are subsidised. Supported activities include new construction of buildings used predominantly for business purposes in energy-efficient design that have significantly better energy performance than the legal requirement (legal implementation of the Austrian OIB guideline⁴⁶).

Beneficiaries

Companies

Environmental Impact

Reduction of energy consumption in buildings, resulting in reduced/avoided CO₂e emissions (see Table 3)

⁴⁶ Austrian Institute of Construction Engineering (Österreichisches Institut für Bautechnik – OIB), [Guideline 6 on Energy savings and thermal insulation](#)

5.3.6 Cooling

Objective

Use of energy-efficient systems for air-conditioning and for process cooling

Responsible Bodies

Federal Ministry for Climate Action, Environment, Energy, Mobility, Innovation and Technology (BMK), Federal Ministry of Labour and Economy (BMAW), Federal Ministry of Finance (BMF)

Description of Financing

Under the Environmental Subsidy Act (Umweltförderungsgesetz), the Investment Bonus Act (Investitionsprämien-gesetz) and the Municipal Investment Act (Kommunalinvestitions-gesetz), capital expenditures are subsidised. Supported activities include:

- Air-conditioning of buildings used for business purposes and systems for the provision of process cooling:
 - Adsorption and absorption chillers with drive energy from renewable energy sources (e.g. biomass, solar thermal energy) or from industrial waste heat
 - Free cooling systems (e.g. based on groundwater, river water or well water)
- Process cooling depending on the refrigerant used:
 - Use of alternative/natural refrigerants (e.g. CO₂, ammonia, propane) as well as refrigerants with a Global Warming Potential (GWP)⁴⁷ of less than 150 in (new) procurement and optimisation

Beneficiaries

Companies, associations and confessional institutions, municipalities

Environmental Impact

Reduction of energy consumption for cooling, resulting in reduced/avoided CO₂e emissions (see Table 3)

⁴⁷ The global warming potential (GWP) is an index measuring the radiative forcing following an emission of a unit mass of a given substance, accumulated over a chosen time horizon, relative to that of the reference substance, carbon dioxide (CO₂). The GWP thus represents the combined effect of the differing times these substances remain in the atmosphere and their effectiveness in causing radiative forcing.



Solar panels and air conditioning © Adobe Stock

5.4 Terrestrial and aquatic biodiversity

Biodiversity is the vital component of functioning ecosystems and thereby the services these ecosystems provide, like clean water, clean air and pollination of many of our food crops. Like in most other places globally, the status of biodiversity in Austria is not of a sufficient quality. Therefore, targeted funding of measures that conserve species and landscapes and contribute to sustainable land-use are of high importance. With the *Austrian Agri-environmental programme*, the funding of the Austrian National Parks and targeted research projects, public spending is directed towards such productive use.

This section will be split up into two sub-sections including the *Austrian Agri-environmental Programme* and Austrian National Parks.

2023						
Terrestrial and aquatic biodiversity	Allocated amount with reported impact (EUR mn)	# of farms that received funding	% of total farms in Austria	Area funded (ha)	% of total agricultural land	# of projects supported
Austrian Agri-environmental Programme	130.2	88,425	83.6	1,811,682	70.7	
Environmentally sound and Biodiversity promoting management	27.6	45,710	43.2	975,869	38.1	
Nature protection + Result based nature protection	17.2	19,819	18.7	86,293	3.4	
Organic/biological farming	38.4	22,518	21.3	516,577	20.2	
Overall highly biodiversity-relevant area on agricultural land				208,538	8.1	
Austrian National Parks	12.5			239,313		
Research, Development & Innovation	8.6					3
Total	151.3					

Table 4: Terrestrial and aquatic biodiversity – overview of indicators^{48,49}. Sums in the table may not add up due to rounding differences.

⁴⁸ The number of farms and size of area shown represent 100% of the beneficiaries of the programmes, whereas federal funding accounts for approximately 30% of total funding. Only selected measures of the *Austrian Agri-environmental programme* are shown. Allocated amounts, beneficiaries and therefore number of farms overlap between these measures. Summing up the number of farms is therefore not possible.

⁴⁹ The overall biodiversity-relevant area on agricultural land is part of the funded areas of the three other sub-categories of the *Austrian Agri-environmental programme*. It is shown separately to clarify the contribution of the programme to the conservation of biodiversity.

Explanatory notes:

- The *Austrian Agri-environmental Programme* was assigned to project category “Terrestrial and aquatic biodiversity” as it contains measures that have a quantifiable positive impact on species diversity. The programme also contributes positively to “Environmentally sustainable management of living natural resources and land use”.
- The project categories “Environmentally sustainable management of living natural resources and land use” and “Terrestrial and aquatic biodiversity” are overlapping to a certain degree as it is possible for a single farm to partake in the *Austrian Agri-environmental Programme* as well as in the Austrian compensatory allowance for less-favoured areas at the same time. The descriptions of the impact in the text of chapters 5.4 and 5.5 refer explicitly to the respective measure of the *Agri-environmental programme* or in case of the compensatory allowance to the programme as a whole.
- The Austrian compensatory allowance for less-favoured areas was assigned to project category “Environmentally sustainable management of living natural resources and land use” as it is foremost a measure to support ongoing cultivation of challenging terrains across Austria. The programme also contributes positively to the preservation of biodiversity.
- Funding of the Austrian Biodiversity Strategy and Biodiversity Fund was included in category “Environmentally sustainable management of living natural resources and land use”.
- More information on the category “Research, Development and Innovation” can be found in chapter 5.9.



European tree frog enjoys sunbathing in the Neusiedlersee-Seewinkel National Park
© Österreich Werbung

5.4.1 Austrian Agri-environmental programme

Objective

The *Austrian Agri-environmental Programme (ÖPUL)* is one of the main funding sources on the federal level to support environmentally sound agriculture practices.

Responsible Body

Federal Ministry of Agriculture, Forestry, Regions and Water Management (BML)

Description of Financing

The *ÖPUL Programme 2023-27*, which was offered for the first time in 2023, following on from the programme offered until 2022, includes 25 measures, 21 of which are funded from the national budget. Federal funding accounts for about 30% of the total budget of these measures⁵⁰. In the following, the focus is set on three measures that have a significant positive impact on agro-biodiversity: 1. Environmentally sound and biodiversity promoting management; 2. Natur protection incl. result based nature protection; 3. Organic/biological farming.

Beneficiaries

Austrian agricultural sector

Environmental impact⁵¹

The impact is shown as the number of farms and the area funded under the different biodiversity promoting measures of the programme (see Table 4). The number of participating farms can overlap between the different measures, adding up the numbers to a total amount is therefore not meaningful.

The different measures generate additional positive impacts with respect to water protection, soil health, mitigation of climate change and animal welfare.

⁵⁰ Further funding that is not eligible under the Green Framework is provided by the federal provinces as well as the EU.

⁵¹ The following descriptions of the impact for the different measures are based on the results of the overall evaluation of the *ÖPUL-programme* from the year 2019 (with the exemption of number of farms and total area funded), as it contains the most recent available data. An updated evaluation of the programme and the accompanying measures can be expected in 2025/26.

Environmentally sound and biodiversity promoting management

To be eligible for receiving funding under this measure the applicant must fulfil the following criteria:

- Obligation to maintain the extent of grassland
- Crop diversification (max. 55% of one crop, max. 75% cereals/maize)
- Creating at least 7% biodiversity areas on cultivated land and mowed grassland
- Taking part in further education on environmental topics
- Payments for maintaining landscape elements (like trees, bushes), enhancing agro-biodiversity by additional biodiversity areas, increasing carbon storage in the soil by growing field-fodder, mowing of steep slopes, etc.

The impact on local biodiversity of this measure is mostly driven through smaller plot sizes on participating farms in relation to non-participating farms, the enhanced conservation of landscape elements as well as the obligatory creation of biodiversity areas on 7% of the total area of cultivated arable land and mowed grassland. For upholding plant diversity, establishment of 7% of biodiversity-areas on arable land and the required delay of mowing at minimum 7% of grasslands are especially relevant.

In terms of bird diversity, biodiversity areas and fallows on cultivated land have a positive impact on the farmland bird index⁵². This was shown for example in the monitoring of the Great Gray Shrike (*Lanius excubitor*), a top indicator species for diverse cultural landscapes threatened with local extinction, showing a higher degree of breeding on cultivated land with larger extent of biodiversity areas.

Concerning the monitoring of grasshoppers and butterflies, especially fallows show a significant impact on diversity with three to four times more species than on reference plots of agricultural land. The conservation of landscape elements also has a significant positive impact on species diversity in those two taxa.

⁵² Birdlife Austria, [Monitoring der Brutvögel Österreichs](#) (only available in German), July 2023

Nature protection

To be eligible for receiving funding under this measure the applicant must fulfil the following criteria: Project confirmation from the competent nature protection authority on the state level, including a conservation plan and management measures to maintain or reach the nature-conservation target on the area. There is also a “result-based-approach” where there are no strict management requirements, but rather management targets and indicators that must be met.

“Nature protection” has significant positive impacts on biodiversity. Typical nature conservation farmland areas are extensively used grassland like dry meadows, wetland meadows, mountain meadows, orchard meadows with fruit trees as valuable landscape elements, or fallow arable land. As part of the “nature conservation” measure farmers get paid for additional work and costs and/or reduced yields due to project obligations for the extensive management. Especially the higher degree in connectivity between plots under the measure, as well as the higher share of area under extensive use, is leading to much higher shares of plots classified as “high nature value farmland”⁵³ (of around 60% in comparison to 10% in areas not participating in the measure).

In terms of animal diversity (birds, grasshoppers & butterflies), the picture is more diversified. Effects are present in regions with a high share of areas under the measure “Nature protection”. In grasslands, the measure can mitigate the loss of bird species. Farmland areas that have breeding grounds of the above-mentioned Great Gray Shrike fall under the measure “Nature protection” with a mean coverage of 31.1% of area, compared to 9.1% in regions where the bird was not breeding.

Due to the geographical specificity of the measure “Nature protection” it shows the highest degree of diversity of grasshoppers and butterfly species important for conservation compared to all other measures in the *Agri-environmental programme*.

These results can also be expected for the measures “Result oriented management”, which are also included in the number of farms and funded area.

⁵³ European Environment Agency, [High nature value \(HNV\) farmland](#), May 2022

Organic/biological farming

To be eligible for receiving funding under this measure the applicant must fulfil the following criteria:

- Fulfilment of EU and national regulation on organic production
- Certification as an organic farm from the competent local authority
- Fulfilment of all requirements for farms under the “Environmentally sound and Biodiversity promoting management” measure

The impact of this measure, which in certain parts overlaps with the measure “Environmentally sound and biodiversity promoting management”, is driven by a higher usage-diversity of cultivated areas (i.e. for the cultivation of different plant species, rare plant species or threatened livestock breeds) and more conserved landscape elements compared to areas not covered by the measure. In addition, the renouncement of chemical-synthetic fertilisers and plant protection products leads to a higher biodiversity, especially on arable land. Higher amounts of extensively used grassland under the measure, support diversity of cultivated plant species. A positive impact on diversity of soil species is expected.

Additional positive impacts of this measure are predominantly found in the categories water protection, soil health, mitigation of climate change and animal welfare. The prohibition of chemical/synthetic pesticides and mineral fertilisers has positive impacts on ground water and reduces GHG emissions.

Overall highly biodiversity-relevant area on agricultural land

Adding up the highly biodiversity promoting areas established within the specific sub-measures of the measures reported above (biodiversity-areas and nature conservation areas) presents a more complete picture of the actual biodiversity-relevant area on agricultural land across Austria.

The total area of highly biodiversity-relevant areas on agricultural land significantly increased in the year 2023 due to the increased requirement to establish 7% biodiversity-areas (instead of 5%) and introduction of the requirement for organic farms. The areas in the nature-protection-measure also increased due to higher funding for these measures and an increased participation due to more attractive premia.

5.4.2 Austrian National Parks

Objective

The six Austrian National Parks as places of outstanding biological diversity are natural jewels and thus part of the Austrian identity. Together they cover a total area of 239,313 ha. A National Park strategy was adopted to ensure further coordinated development.

In 2023 two of the six National Parks were extended by a total of 213 ha. The area of 100 ha for the national park Neusiedler See – Seewinkel means better protection for Europe's westernmost steppe lake. An additional 113 ha for the National Park Gesäuse ensures better connectivity of the ecosystems within the National Park.

Responsible Bodies

Federal Ministry for Climate Action, Environment, Energy, Mobility, Innovation and Technology (BMK)

Description of Financing

The Austrian National Parks are financed 50% each by the respective federal provinces and the federal government. This participation system is the solid basis for the positive development of the Austrian National Parks.

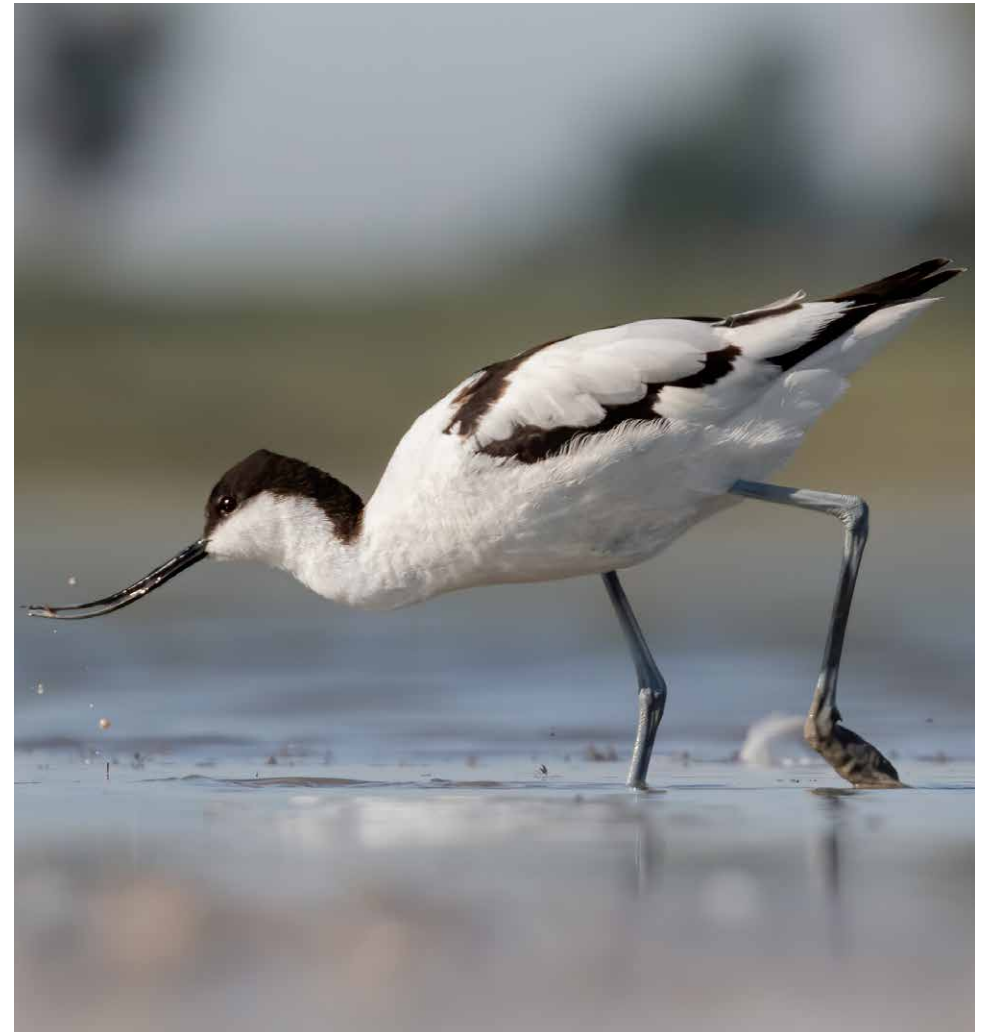
Beneficiaries

Austrian National Parks

Environmental Impact

The focal points are to increase options for development with no influence from humans in accordance with the IUCN specifications⁵⁴, the conservation of biodiversity, research and monitoring, education, the use of synergies between the National Parks and the professional presentation to the outside world under the brand "National Parks Austria". For further details see also Table 4.

⁵⁴ International Union for Conservation of Nature provides various resources like guidelines and tools on the management of protected areas



Avocet hunting in the Neusiedlersee-Seewinkel National Park © Österreich

5.5 Environmentally sustainable management of living natural resources and land use

Public funding of cultural landscapes that preserve ways of farming in the mountainous regions of Austria is not only important to uphold cultural practices and ways of life that have existed for centuries, it also helps to maintain diverse habitats for plants and animals. Austria is also active in other areas to ensure the best possible management of living natural resources. For example, a comprehensive circular economy strategy was passed by the government at the end of 2022. Many more initiatives can be expected to come out of this strategy, which encompasses around 600 detailed measures, over the coming years.

This section will be split up into three sub-sections including the Austrian compensatory allowance for less-favoured areas, the Austrian Forest Fund and other (comprising e.g. the Austrian Biodiversity Strategy and Biodiversity Fund).

2023						
Environmentally sustainable management of living natural resources and land use	Allocated amount with reported impact (EUR mn)	# of farms that received funding	% of total farms in Austria	Area funded (ha)	% of total agricultural land	# of projects supported
Austrian compensatory allowance for less-favoured areas	72.2	79,696	73.4	1,446,115	56.4	
Austrian Forest Fund	37.0					4,963
Other (including Circular economy, Digitalisation, Green Chemistry, Austrian Biodiversity Strategy and Biodiversity Fund, etc.)	27.8					
Research, Development and Innovation	65.5					89
Total	202.5					

Table 5 : Environmentally sustainable management of living natural resources and land use – overview of indicators⁵⁵. Sums in the table may not add up due to rounding differences.

Explanatory notes:

- The Project categories “Environmentally sustainable management of living natural resources and land use” and “Terrestrial and aquatic biodiversity” are overlapping to a certain degree as it is possible for a single farm to partake in the *Austrian Agri-environmental Programme* as well as in the Austrian compensatory allowance for less-favoured areas at the same time. The descriptions of the impact in the text of chapters 5.4 and 5.5 refer explicitly to the respective measure of the *Agri-environmental Programme* or in case of the compensatory allowance to the programme as a whole.
- The Austrian compensatory allowance for less-favoured areas was assigned to project category “Environmentally sustainable management of living natural resources and land use” as it is foremost a measure to support ongoing cultivation of challenging terrains across Austria. The programme also contributes positively to the preservation of biodiversity.
- In the last few years, the Austrian government has launched several landmark initiatives (e.g. Biodiversity Strategy, Biodiversity Fund, Green Chemistry, Circular Economy Strategy) aimed at making a substantial contribution to the “Environmentally sustainable management of living natural resources”. Due to the piloting character of these initiatives, quantitative impact and performance indicators can only be provided at a later stage. Qualitative information on the Austrian Biodiversity Strategy and Fund is provided in chapter 5.5.2.
- More information on the category “Research, Development and Innovation” can be found in chapter 5.9.

⁵⁵ The number of farms and size of area shown represent 100% of the beneficiaries of the programmes, whereas federal funding accounts for approximately 26% of total funding.

5.5.1 Austrian compensatory allowance for less-favoured areas

Objective

The compensatory allowance for less-favoured areas (“Ausgleichszulage” or “AZ”) supports the continued management of agricultural land in areas with natural or other area-specific constraints, mostly situated in mountainous regions. As the intervention aims at maintaining the management of less productive or difficult-to-manage agricultural areas it forms an important basis for maintaining the management of these areas and a diverse, species-rich cultural landscape in the mountain zone with its high proportion of “high nature value farmland”.

Responsible Body

Federal Ministry of Agriculture, Forestry, Regions and Water Management (BML)

Description of Financing

The programme has been equipped with EUR 72.2 mn in federal funding for the year 2023, which in turn amounts to around 26% of the programmes total budget⁵⁶.

Beneficiaries

Austrian farms located in less-favoured areas

Environmental Impact

For summary on impact indicators see Table 5.

Around 75% of the farms that receive funding via this measure are located in mountainous regions where extensive use of cultivated land and grassland is becoming more important in response to challenging geographical conditions. Funding to secure the continuous management of those areas is especially relevant as they show the highest degrees of “high nature value farmland”⁵⁷, adding up to around 30% of the total area.

⁵⁶ Further funding that is not eligible under the Green Framework is provided by the federal provinces as well as the EU.

⁵⁷ European Environment Agency, [High nature value \(HNV\) farmland](#), May 2022

Cultivated grassland in mountainous regions is comprised of unique ecosystems that contain various ecological niches for plant and animal species, which depend on agricultural management of these areas. At the same time, these culture landscapes fall out of use frequently due to their lower productive capacities. The discontinued usage of these grasslands can lead to a loss of plant diversity and the cultural landscape would be soon overgrown by forest. Also, in terms of grasshopper and butterfly diversity, cultivated grasslands in mountainous regions show higher species diversity than uncultivated ones.

5.5.2 Austrian Biodiversity Strategy and Biodiversity Fund

The Biodiversity Strategy Austria 2030+ defines “biodiversity” as a common task and formulates over 300 concrete measures⁵⁸. It takes up the objectives and measures for the conservation of biodiversity formulated by the European Union and at an international level. A *ten-point programme* provides national quantitative and qualitative targets and the necessary preconditions for the conservation of biodiversity in all habitats in Austria. The industry sectors relevant to biodiversity are addressed as well as the necessary framework conditions. These targets and the corresponding measures are aimed at protecting biodiversity in Austria, actively addressing the threats and thus preventing further losses and also creating the appropriate framework conditions to achieve the formulated goals. The implementation of the Biodiversity Strategy Austria 2030+ is also intended to contribute to a comprehensive transformative change in the society.

The Biodiversity Fund created by the Austrian Federal Government will support the implementation of the Biodiversity Strategy Austria 2030+ in addition to the measures within the framework of the Common Agricultural Policy of the European Union and the Forest Fund, as well as the funding to improve the ecological status of water bodies. Biodiversity and investments in the protection and restoration of diversity in nature will make an important contribution. The loss of biodiversity has dramatic consequences for the economy and society. The cost of non-implementation of EU legislation relevant to nature alone is estimated at EUR 55 bn per year across EU countries⁵⁹.

⁵⁸ Federal Ministry for Climate Action, Environment, Energy, Mobility, Innovation and Technology, [Biodiversitäts-Strategie Österreich 2030+](#) (only available in German), November 2022

⁵⁹ European Commission, [The costs of not implementing EU environmental law study](#), March 2019

The Biodiversity Fund has been in place since mid 2021. A total of 25 projects have been funded until 2023. These include for example monitoring projects of wild bees, butterflies, bats and sea eagles, conservation strategies for wetlands in Austria and programmes to involve the youth in biodiversity conservation.

5.5.3 Austrian Forest Fund

Objective

The Forest Fund Act was adopted in the Austrian National Council on July 7, 2020. The measures of the Forest Fund aim at the development of climate-fit forests, the promotion of biodiversity in forests and the increased use of the resource of wood as an active contribution to climate change mitigation. The funded measures include⁶⁰:

- Re-forestation and tending measures after damage events
- Development of climate-fit forests - forest tending
- Establishment of deposits for damaged wood
- Mechanical debarking as a forest protection measure
- Measures to prevent forest fire
- Research priority and research facility for the production of wood gas and biofuels
- Research priority "Climate-fit forests"
- Measures to increase the use of wood as a raw material
- Strengthening, preserving and promoting biodiversity in forests

Responsible Body

Federal Ministry of Agriculture, Forestry, Regions and Water Management (BML)

Description of Financing

Due to the topical diversity of projects, the funds of the Austrian Forest Fund are split between the categories "Environmentally sustainable management of living natural resources and land use" and "Climate change adaption".

⁶⁰ Federal Ministry of Agriculture, Forestry, Regions and Water Management, [10 measures for Austria's forests](#), July 2020

Beneficiaries

For example, Austrian forest owners, research institutions

Environmental Impact

For summary on impact indicators see Table 5.

Selected projects funded via the programme

Forest Fire Training facility in Carinthia

The federal state of Carinthia is increasingly confronted with forest fires, with climate change being a contributing factor in this regard. Against this backdrop, there is a significant change in the operational requirements for the Carinthian fire departments.

With the forest fire training facility, the aim is to make a significant contribution to the avoidance (prevention) and fighting of forest fires. In addition, these practice and training facilities are also used for information events for interested (public) institutions (e.g. forestry authorities, police, armed forces, pilots) in order to exploit synergies.

connectPLUS – fostering stepping stone biotopes

This project helps to maintain, enhance and restore valuable stepping stone biotopes, which serve as breeding grounds and habitats for protected and other species. The aim of these stepping stone biotopes is to provide the best possible networking effect between otherwise isolated habitats, thereby fostering biodiversity in the whole area and counteracting the ongoing fragmentation of natural habitats. During an agreed period of time the forest owner is contractually prohibited from reforestation, extraction or other activities in the stepping stone biotopes.

5.6 Sustainable water and wastewater management

The sustainable safeguarding of the valuable resource of water is one of the core tasks of the Austrian government. The Federal Ministry of Agriculture, Forestry, Regions and Water Management has set the framework conditions for the protection of water, in particular for drinking water supply, for a resource-saving utilisation and infrastructure for wastewater treatment and sewerage as well as for the ecological restoration of aquatic habitats. Austria has sufficient drinking water of excellent quality. The daily per capita consumption of drinking water by Austrian households is around 130 litres⁶¹. The total demand for drinking water is covered from ground water and spring water. Austria has also taken enormous efforts for decades in order to encourage citizens and industry to use this precious resource carefully and has invested considerably, with an amount of EUR 16.2 bn⁶², in drinking water supply infrastructure⁶³. As of July 2023, about 93% of the population profit from one of the more than 5,500 central drinking water suppliers^{64,65}. Moreover, Austria has invested more than EUR 52.5 bn⁶⁶ in the areas of municipal waste water management and water ecology, thus making a significant contribution to the sustainable use of water resources and to the objectives of the EU Water Framework Directive.

This section will be split up into three sub-sections including the drinking water supply, waste water treatment and sewerage and water ecology.

2022											
Sustainable water and wastewater management	Allocated amount with reported impact [mn EUR]	Number of inhabitants additionally connected to water supply*	Constructed water pipelines [kilometres]	Renovated water pipelines [kilometres]	New volume of water reservoirs [cubic metres]	Number of Inhabitants additionally connected to wastewater treatment plants*	Constructed wastewater sewers [kilometres]	Renovated wastewater sewers [kilometres]	Number of transverse structures made passable for fish	River courses morphologically improved and renaturalised [kilometres]	Number of projects supported
Drinking water supply	44.5	14,384	266	203	7,747						526
Waste water treatment and sewerage	247.5					186,374	1,000	1,015			4,425
Water ecology	6.4								17	6	32
Total	298.5										

* including individual installations

Table 6: Sustainable water and wastewater management – overview of indicators. Sums in the table may not add up due to rounding differences.

Monetary figures are related to spent public funding assigned to sustainable water projects and financed by Green Securities. Impact and performance indicators refer to the enabled effects with regard to the overall investment volumes of the supported projects. Estimates for performance/impact indicators are based on data for approved projects in the respective year.

⁶¹ Federal Ministry for Agriculture, Forestry, Regions and Water Management, Facts and Figures 2023

⁶² Investments in drinking water supply infrastructure 1959-2023, valorised to the current price level according to the construction price index.

⁶³ Federal Ministry for Agriculture, Forestry, Regions and Water Management, [Public sewer and water pipeline inventory](#) (only available in German)

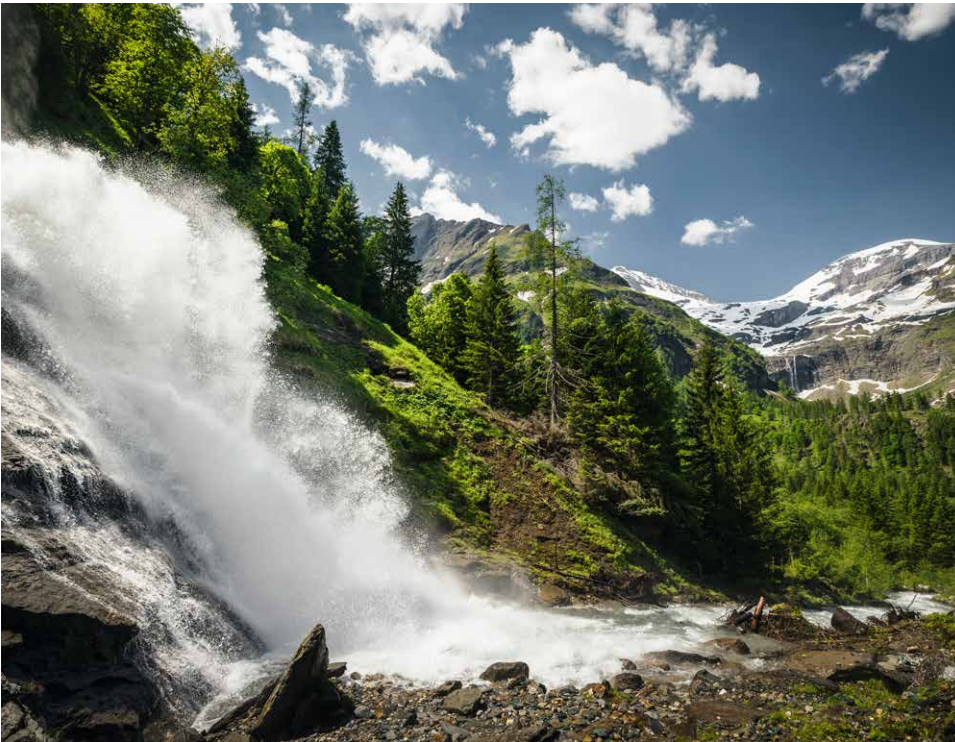
⁶⁴ Federal Ministry for Agriculture, Forestry, Regions and Water Management, [Precautionary plan for a safe drinking water supply in times of drought](#) (only available in German)

⁶⁵ Federal Ministry for Agriculture, Forestry, Regions and Water Management, Facts and Figures 2023

⁶⁶ Investments in municipal waste water management and water ecology 1959-2023, valorised to the current price level according to the construction price index; [Public sewer and water pipes status](#) (only available in German)

Explanatory notes:

The figures in Table 6 present the respective share of the budget that was assigned to sustainable water projects and financed by Green Securities⁶⁷.



Kaefertal at the foot of the Grossglockner High Alpine Road in the Hohe Tauern National Park
© Österreich Werbung

⁶⁷ Performance and impact indicators are calculated on the basis of data available for projects approved in the years covered by the reporting. Based on this, the performance and impact figures are extrapolated for expenses related to comparable types of projects and infrastructure. The analyses and the methodological approach were prepared specifically for the purpose of the Green Investor Report and cannot be applied one-to-one to other publications addressing the respective funding vehicles due to the different scope.

5.6.1 Drinking water supply

Objective

The aim of the funding of measures for water protection and water supply is the sustainable use of surface and underground water and to supply the population with safe drinking water. In this context, the careful use of water as a valuable resource has to be ensured and the volume of wastewater has to be limited to an unavoidable extent. Moreover, interference with the natural water balance has to be minimised and water supply facilities have to be operated in an energy-saving and resource-efficient manner.

Responsible Bodies

Federal Ministry of Agriculture, Forestry, Regions and Water Management (BML), Federal Ministry of Finance (BMF)

Description of Financing

According to the Environmental Subsidy Act (Umweltförderungsgesetz) and the Municipal Investment Act (Kommunalinvestitionsgesetz), capital expenditures are subsidised. Supported activities include, among others,

- construction/renovation of water supply facilities or emergency water supply facilities,
- measures of inter-municipal cooperation in the field of water supply that lead to efficiency improvements,
- the creation of a digital pipe information system for water supply or wastewater discharge facilities with leakage control and
- measures to reduce GHG emissions from water supply facilities.

Beneficiaries

The funding is primarily addressed to municipalities, water cooperatives, municipal companies, associations and cooperation of municipalities. In addition, private individuals and legal entities can receive subsidies for individual plants or for house connection pipes.

Environmental Impact

The effect of the funding is presented in Table 6 by the following indicators:

- Number of inhabitants additionally connected to water supply (including individual installations)
- Length of constructed public water pipelines (kilometres)
- Length of renovated public water pipelines (kilometres)
- New volume of water reservoirs (cubic metres)
- Number of projects supported

5.6.2 Waste water treatment and sewerage

Objective

The aim of the funding of measures for wastewater disposal, sludge treatment and sewerage is, in particular, to protect surface and ground water from contamination as well as to minimise environmental impacts on air or soil. The pollution of wastewater with ingredients that are not biologically degradable or are only degradable with difficulty shall be minimised. Production wastewater has to be avoided as far as possible, recycled internally or pre-treated. An energy-saving and resource-efficient operation of the wastewater disposal or sludge treatment facilities has to be ensured.

Responsible Bodies

Federal Ministry of Agriculture, Forestry, Regions and Water Management (BML), Federal Ministry of Finance (BMF)

Description of Financing

According to the Environmental Subsidy Act (Umweltförderungsgesetz) and the Municipal Investment Act (Kommunalinvestitionsgesetz), capital expenditures are subsidised. Supported activities include, among others,

- the construction or renovation of wastewater disposal facilities,
- the construction or renovation of specific sludge treatment equipment,
- environmental investments in local stormwater management measures,
- measures of inter-municipal cooperation in the field of wastewater disposal, or sludge treatment that lead to efficiency improvements,

- measures for the implementation of circular wastewater systems,
- construction of operational buildings for wastewater treatment plants,
- the creation of a digital pipe information system for wastewater discharge facilities with leakage and
- condition control and measures to reduce GHG emissions from waste water disposal or sludge treatment facilities.

The aim of the funding is to achieve the greatest possible effect on water protection and the conservation of water resources.

Beneficiaries

The funding is primarily addressed to municipalities, wastewater cooperatives, municipal companies and cooperation of municipalities. In addition, private individuals and legal entities can receive subsidies for individual plants or for house connection pipes.

Environmental Impact

The effect of the funding is presented in Table 6 by the following indicators:

- Number of inhabitants additionally connected to waste water treatment plants including individual plants
- Length of constructed wastewater sewers (kilometres)
- Length of renovated wastewater sewers (kilometres)
- Number of projects supported

5.6.3 Water ecology

Objective

The objective of funding measures to improve the ecological status of waters pursuant to Article 17a of the Austrian Environmental Subsidy Act (Umweltförderungsgesetz) is to reduce hydro-morphological pressures in order to achieve the environmental objectives for water bodies stipulated in the Austrian Water Act 1959 (as amended) and in the EU Water Framework Directive.

Responsible Body

Federal Ministry of Agriculture, Forestry, Regions and Water Management (BML)

Description of Financing

According to the Environmental Subsidy Act (Umweltförderungsgesetz), capital expenditures for measures contributing to the improvement of the ecological status of water bodies are subsidised.

The supported activities include, among others, measures

- to improve river continuity and fish passability,
- for the restructuring of morphologically modified river stretches,
- to mitigate the impacts of backwater, discharges and hydropeaking and
- basic concepts, investigations, studies, general planning, awareness raising and expert opinions, in connection with the physical measures.

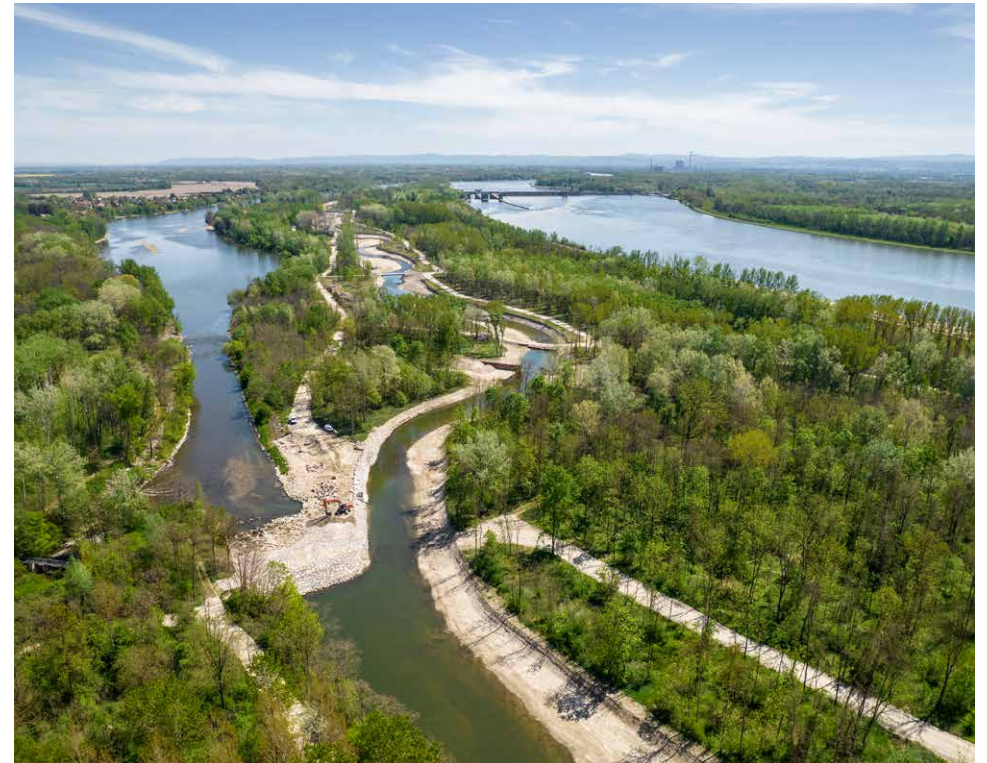
Beneficiaries

The funding in the field of water ecology is addressed to municipalities, associations of municipalities and enterprises.

Environmental Impact

The effect of the funding is presented in Table 6 by the following indicators:

- Number of transverse structures made passable for fish
- River courses morphologically improved and re-naturalised (kilometres)
- Number of projects supported



Fish migration aid Altenwörth © Verbund

5.7 Pollution prevention and control

While public expenses assigned to the category “Pollution prevention and control” generally cover a wide range of activities, including, among others, remediation, circular economy, waste prevention, reduction, recycling and sustainable waste management as well as measures supporting the reduction of GHG and air emissions, the impact reporting focusses on the remediation of contaminated sites. As of January 1, 2024, 2,721 sites are under investigation, 344 severely contaminated sites are known, 190 of which have been remediated and remediation measures are ongoing for another 57 contaminated sites⁶⁸. In general, up to 15% of the available funds can be used for site investigation, complementary at least 85% of the available funds are used for remediating contaminated sites.

2023										
Pollution prevention and control	Allocated amount with reported impact [mn EUR]	Contaminated soil or landfill bodies remediated [cubic metres]	Contaminated area remediated [square metres]	Heavily contaminated soil or landfill body excavated and subsequently treated [cubic metres]	Contaminated groundwater or landfill leachate pumped out and purified [cubic metres / yr]	Landfill gas or contaminated soil air extracted and treated [cubic metres / yr]	Number of preliminary assessments	Number of risk assessments	Hazardous** waste from contaminated sites cleared & treated [tonnes]	Number of projects supported
Remediation of contaminated sites - Funding according to the Environmental Subsidy Act	11.0	8,561,973	1,113,056	30,823	1,541,155	17,980,142				10
Remediation of contaminated sites: Initial & supplementary investigations, analysis, risk assessment, enforcement and processing	8.7						2,991	89		
Remediation of contaminated sites processing according to § 18 ALSAG	23.3				664,000				103,000	13
Project finance & substitute measures	29.1									4,466
Research, Development and Innovation	23.4									162
Total	95.6									

* for remediation of contaminated sites: the projects usually run for several years, thus there is an intersection of the indicated number of projects per year

** all waste from contaminated sites is hazardous waste per definition

Table 7: Pollution prevention and control – overview of indicators. Sums in the table may not add up due to rounding differences. Monetary figures are related to spent public funding assigned to projects contributing to the objective of pollution prevention and control and financed by Green Securities. Impact and performance indicators refer to the enabled effects with regard to the overall investment volumes of the supported projects. Estimates for performance/impact indicators based on data for approved projects in the respective year.

Explanatory notes:

The figures in Table 7 present the respective share of the budget that was assigned to pollution prevention and control projects and financed by Green Securities⁶⁹.

More details on Research, Development and Innovation can be found in chapter 5.9.

⁶⁸ Environment Agency Austria (Umweltbundesamt), [Register of Suspected Contaminated Sites and Contaminated Sites Atlas](#) (only available in German, including English summary), January 2024

⁶⁹ The analyses and the methodological approach were prepared specifically for the purpose of the Green Investor Report and cannot be applied one-to-one to other publications addressing the respective funding vehicles due to the different scope

5.7.1 Remediation of contaminated sites

Objective

The management of contaminated sites aims to reduce the risks and the impacts of historical contamination for the environment and human health. The objective of the funding is to achieve the greatest possible ecological benefit at economically justifiable costs. Technical methods may involve decontamination, confinement and monitoring.

Responsible Body

Federal Ministry for Climate Action, Environment, Energy, Mobility, Innovation and Technology (BMK)

Description of Financing

According to the Act on the Remediation of Contaminated Sites (Altlastensanierungsgesetz, AL-SAG) and to the Environmental Subsidy Act (Umweltförderungsgesetz-UFG), financing is available for all measures directly related to the remediation of contaminated sites, e.g. for

- Preparatory work (exploration, planning)
- Risk assessment and evaluation of investigation results
- Construction and implementation measures
- Ongoing remediation measures (operating costs) for a maximum of five years
- Compensation and fees for restrictions of existing uses
- Restoration measures
- Measures for the preservation of evidence like e.g. groundwater investigation
- Construction, expansion and improvement of waste treatment facilities to the extent required for remediation of contaminated sites
- Required intangible services ("ancillary services") such as construction supervision and chemical analyses
- Immediate measures that are urgently required to prevent hazards to human life or health arising from contaminated sites, insofar as these measures are not ordered in a timely manner from the party causing these hazards, or cannot be carried out in a timely manner, in particular for economic reasons.
- Evaluation of remediation results

Beneficiaries

Funding for the remediation of contaminated sites is available to owners or persons authorised to dispose of a contaminated site and persons or companies obliged to clean up under the Austrian Water Act, the Austrian Waste Management Act or the Industrial Code (Gewerbeordnung). In addition, regardless of their legal relations to the contaminated site, municipalities, associations of municipalities, waste associations and federal provinces may also apply for funding.

Environmental Impact

The effect of the funding is presented in Table 7 by the following indicators:

- Contaminated soil or landfill bodies remediated (cubic metres)
- Contaminated area remediated (square metres)
- Heavily contaminated soil or landfill body excavated and subsequently treated (cubic metres)
- Contaminated groundwater or landfill leachate pumped out and purified (cubic metres per year)
- Landfill gas or contaminated soil air extracted and treated (cubic metres per year)
- Number of preliminary assessments
- Number of risk assessments
- Hazardous⁷⁰ waste from contaminated sites cleared and treated [tonnes]
- Number of projects supported

5.7.2 Project finance & substitute measures

Objective

The aim of measures reported under this sub-category is to prevent or reduce pollutants and thus to protect citizens as well as the environment. Project financing focuses on the source of emissions and is aimed at the reduction and sustainable management of (hazardous) waste as well as the reduction of the emission of pollutants. Substitute measures, on the other hand, aim at eliminating imminent hazards to the environment and human health.

⁷⁰ All waste from contaminated sites is hazardous waste per definition

Responsible Bodies

Federal Ministry for Labour and Economy (BMAW), Federal Ministry for Climate Action, Environment, Energy, Mobility, Innovation and Technology (BMK)

Description of Financing

Under the Investment Bonus Act (Investitionsprämienengesetz) capital expenditures are subsidised.

Supported activities include, among others, investment in:

- **Air pollution control:**
Measures to prevent or reduce (by at least 10%) particulate matter, NO_x, NH₃, CO, SO₂ or C_xH_y emissions in existing installations or emission sources or in commercially used buildings that go beyond regulatory requirements
- **Circular economy and sustainable management of hazardous and non-hazardous waste:**
Measures to reduce raw material consumption, to improve recycle quality by at least 10% by removal of contaminants, plants for the recovery of critical raw materials and recycling plants etc.

Under the Administrative Enforcement Act, in case of imminent hazards, appropriate immediate measures must be taken by the public sector instead of the inactive obliged parties^{71,72}, particularly in accordance with the Federal Waste Management Act and the Federal Water Rights Act 1959 (as amended).

Beneficiaries

Companies, citizens

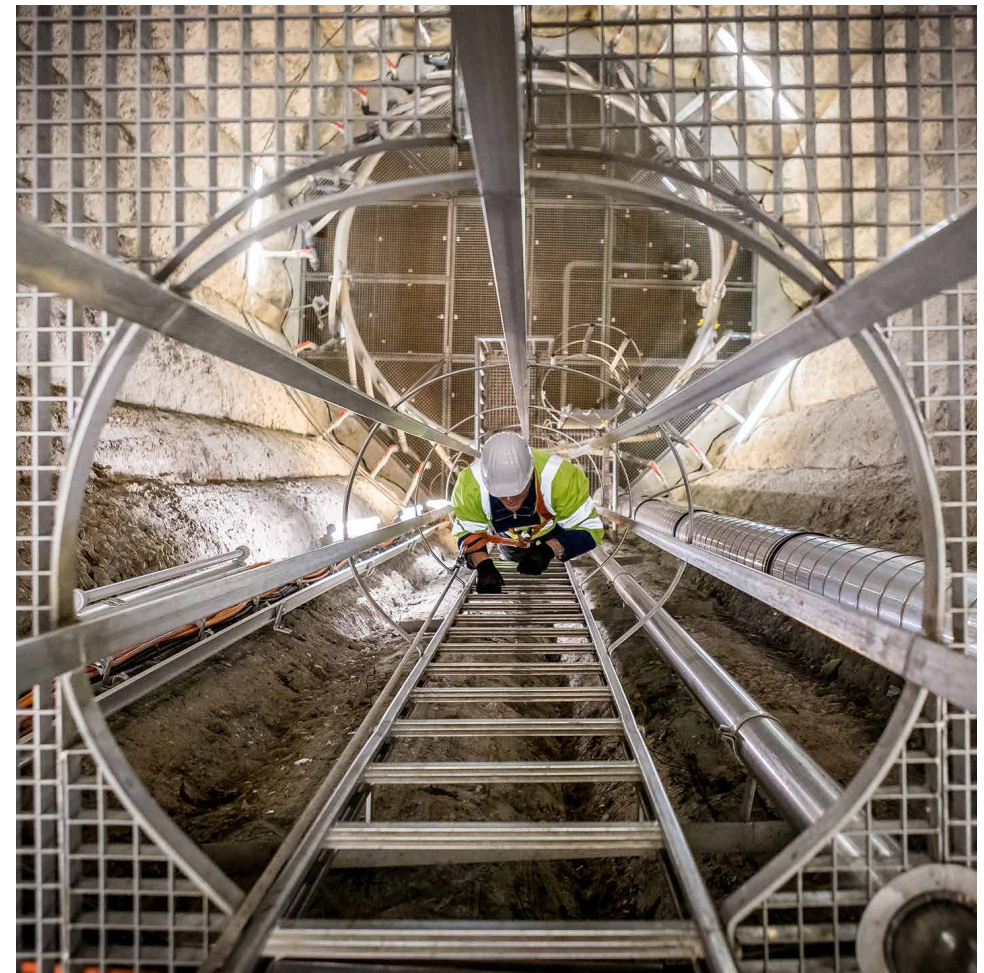
Environmental Impact

The effect of the funding is presented in Table 7 by the following indicators:

- **Number of projects supported:** As the projects in this category are very heterogeneous and include numerous smaller projects as well as substitution measures, the impact of which cannot be systematically assessed at present, the number of funded projects is presented.

⁷¹ Under current legislation, polluters are obliged to remedy the pollution they are responsible for. If those responsible parties do not exist any longer or are inactive, the public sector must take appropriate measures in case of imminent hazards.

⁷² Only those public expenses are allocated to Green Securities that are not reimbursable from the polluters and have to be covered by the public



Contaminated site Rudolf-Zeller-Gasse, Vienna © WGM/Christian Houdek

5.8 Climate change adaptation

In 2012, Austria was one of the first EU Member States to combine a strategic approach to climate change adaptation with a comprehensive Action Plan for the implementation of concrete recommendations for action.

The Austrian Adaptation Strategy⁷³ comprises a strategic part (Context) and an Action Plan with concrete recommendations for action. 14 fields of activity are addressed in detail. The revised strategy was adopted by the Council of Ministers in April 2024⁷⁴. It represents the comprehensive guiding document for all of Austria's activities with regards to the adaptation to climate change. Many decisions that have long-term effects – like flood control or in the field of infrastructure – must be taken in a way that they provide the most detailed picture possible of anticipated trends that result from climate change. The Federal Government continues its support of research activities, thus deepening the scientific basis for decision-making and the successful implementation of the Austrian Strategy for Adaptation to Climate Change.

This section will be split up into two sub-sections including “Climate Change Adaptation Model Regions” and “Flood protection”. Details on the Austrian Forest Fund can be found in chapter 5.5 “Environmentally sustainable management of living natural resources and land use” as well as details on “Research, development and Innovation” can be found in chapter 5.9.

2023								
Climate change adaptation	Allocated amount with reported impact [mn EUR]	Number of Climate Change Adaptation Model Regions	Number of municipalities covered	Number of inhabitants [mn citizens]	Area covered [square kilometres]	Number of protected citizens	Number of protected objects	Number of projects supported
Climate Change Adaptation Model Regions	5.9	89	745	2.1	36,036			
Flood protection	109.9					11,023	2,940	827
Austrian Forest Fund	1.6							24
Research, Development & Innovation	57.5							98
Total	174.9							

Table 8: Climate change adaptation – overview of indicators. Sums in the table may not add up due to rounding differences. Monetary figures are related to spent public funding contributing to climate change adaptation and financed by Green Securities. Impact and performance indicators refer to the enabled effects with regard to the overall investment volumes of the supported projects.

Explanatory notes:

The figures in Table 8 present a share of the budget that was assigned to projects supporting climate change adaptation and financed by Green Securities⁷⁵.

⁷³ Federal Ministry for Climate Action, Environment, Energy, Mobility, Innovation and Technology, [Austrian Strategy for Adaptation to Climate Change](#) (only available in German), April 2024; [Information in English](#), January 2017

⁷⁴ Federal Ministry for Climate Action, Environment, Energy, Mobility, Innovation and Technology, [Austrian Strategy for Adaptation to Climate Change - third version](#) (only available in German), April 2024

⁷⁵ Performance and impact indicators are calculated on the basis data available for approved and/or financed projects in the period covered by the reporting. Based on this, the performance and impact figures are assessed for expenses related to comparable types of projects and infrastructures. The analyses and the methodological documentation were prepared specifically for the purpose of the Green Investor Report and cannot be applied one-to-one to other publications addressing the respective funding vehicles due to the different scope.

5.8.1 Climate Change Adaptation Model Regions

Objective

The Austrian Adaptation Strategy explicitly refers to the increasing importance of adaptation to climate change at the regional and local level, with the aim of offering more local support. With the *Climate Change Adaptation Model Regions Programme* ⁷⁶ (*KLAR! Programme*), a Europe-wide flagship initiative was created in 2016.

Responsible Body

Federal Ministry for Climate Action, Environment, Energy, Mobility, Innovation and Technology (BMK)

Description of Financing

The programme requires the instalment of a climate adaptation manager (KAM) in each model region and the development of a detailed regional adaptation concept including a minimum of 10 concrete adaptation measures (soft/smart, green, grey, hybrid) on local and regional level. In general, manpower, awareness-raising measures and model region coordinators are grant-aided, while 25% co-financing by municipalities is obligatory.

Beneficiaries

The funding is addressed to regions and municipalities, as of July 2021, 74 Austrian regions were participating in the *Climate Change Adaptation Model Regions Programme*. In 2022, the number of participating regions further increased to 79 Austrian regions and in 2023 to 89 Austrian regions, which are supported in developing adaptation concepts and in planning and implementing adaptation measures, addressing a broad range of climate-related risks and sectors. Altogether, the model regions currently encompass 745 municipalities with a total population of nearly 2.1 mn inhabitants, covering a wide range of Austrian climatic conditions and most Austrian federal provinces.

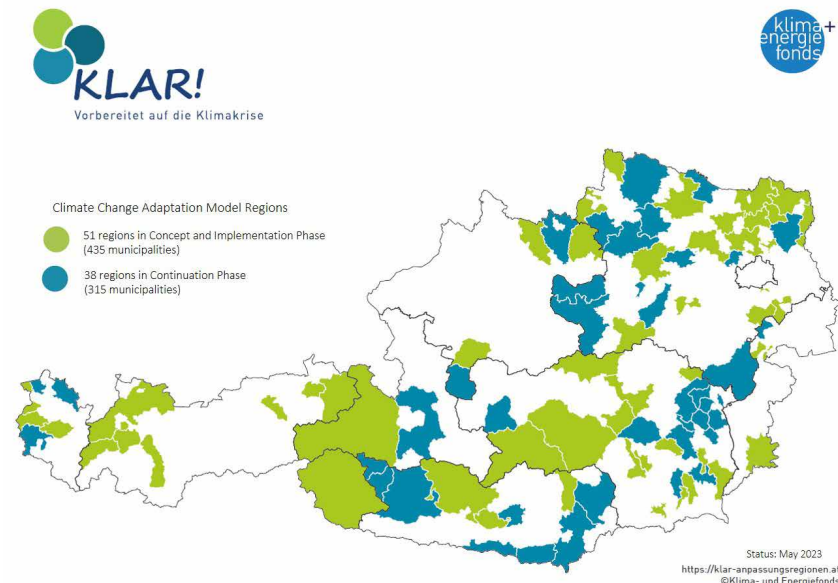
⁷⁶ KLAR!, <https://klar-anpassungsregionen.at> (only available in German)

Environmental Impact

The funding supports the implementation of the Austrian Strategy for Adaptation to Climate Change⁷⁷, increases adaptive capacity and strengthens resilience to climate-related risks.

The effect of the funding is presented in Table 8 by the following indicators:

- Number of Climate Change Adaptation Model Regions
- Number of municipalities covered
- Number of inhabitants (mn citizens)
- Area covered (square kilometres)



Climate Change Adaptation Model Regions © Klima- und Energiefonds

⁷⁷ Federal Ministry Climate Action, Environment, Energy, Mobility, Innovation and Technology, [Austrian Strategy for Adaptation to Climate Change](#)

5.8.2 Flood protection

Objective

Although Austria's overall vulnerability to climate change is relatively low in a global context⁷⁸ due to its geographical location and climatic conditions, there is still a considerable risk from natural disasters, which are occurring more frequently. Floods and mudflows threaten the mountain regions; long-lasting large-scale floods affect the living and economic areas in the lowlands and hills. In order to protect settlements, critical infrastructure and important economic infrastructure, retention areas, floodplains and flood control dams make a valuable contribution to climate change-adapted and resilient settlement areas and business locations in Austria. Moreover, ecological aspects are an integral part of flood protection measures.

Responsible Body

Federal Ministry of Agriculture, Forestry, Regions and Water Management (BML)

Description of Financing

The bundle of measures for integral flood risk management comprises numerous measures and ranges from technical protective structures and measures in catchment areas to awareness raising and preparation for flood events.

Beneficiaries

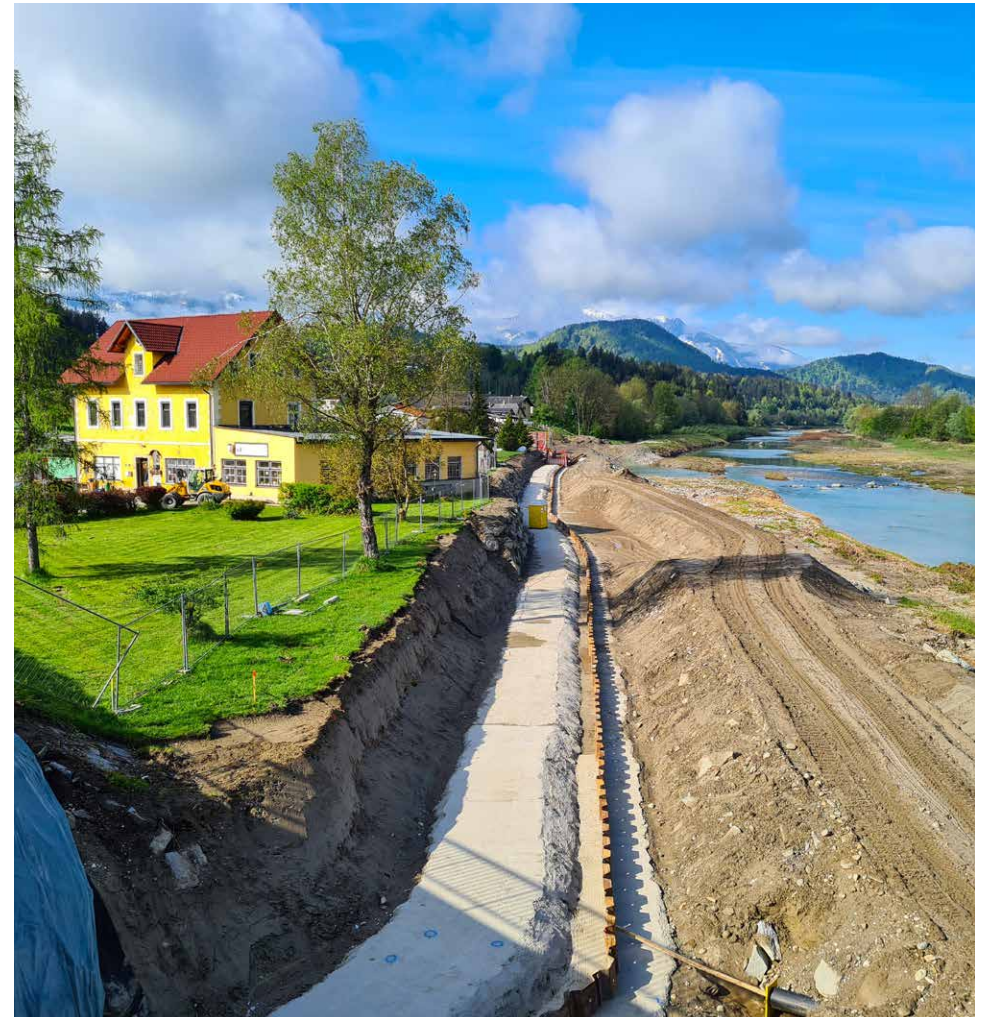
The new flood protection measures approved in 2023 will be able to protect a total of 11,023 people and 2,940 objects against floods (up to a 100-year event). This is mainly achieved through the construction or activation of retention areas and the construction of linear protection measures.

Environmental Impact

The effect of the funding is presented in Table 8 by the following indicators:

- Number of protected citizens
- Number of protected objects
- Number of projects supported

⁷⁸ Ranked number 7 out of 182 countries worldwide as measured by the [ND-Gain \(Vulnerability\) Index from the University of Notre Dame](#), January 2023



Flood protection, Rosegg © BML/Wenk

5.9 Research, development & innovation

Research, development and innovation (RDI) activities are crucial for the sustainable transition of economy and society and for achieving the objectives of the European Green Deal. Accordingly, strengthening research addressing the climate crisis, including mitigation and adaptation, resource efficiency, circular economy and the development of key technologies for the transition of energy systems, industrial processes and mobility are among the priority areas of the Strategy for Research, Technology and Innovation 2030⁷⁹ of the Austrian Federal Government. According to the most recent figures published by Statistics Austria⁸⁰, in 2023 Austria's total research and development expenditures accounted for around 3.26% of GDP and for 2024 the R&D intensity is estimated at 3.34%. Europe-wide figures are available for 2022: Here, Austria ranks third in the EU behind Belgium and Sweden. The Federal Ministry for Climate Action, Environment, Energy, Mobility, Innovation and Technology is the largest public funder of applied research in Austria. As part of the RTI Pact (2024 to 2026), the Ministry is providing EUR 1.85 bn for research, technology and innovation⁸¹, which corresponds to an increase of almost 7% compared to the previous RTI pact. Recent figures published by the Austrian Patent Office⁸² show that Green Tech Patent Applications have tripled in Austria over the last 20 years and Austria is one of the six European countries with the highest specialisation advantage in clean and sustainable technologies. In the field of buildings, Austria ranks first in Europe⁸³.

As research, development and innovation (RDI) is a cross-cutting issue, but no separate UoP category according to the Austrian Green Bond Framework, this chapter only presents an aggregated overview of the allocated RDI expenditures as well as supplementary information. The figures for the allocated amounts shown in Table 9 are included under the respective UoP categories in the previous chapters in the last line of the tables.

2023				
Research, development and innovation	Allocated amount with reported impact [EUR mn]	RDI project funding		Global budget for research infrastructure & fundamental research Split amount [EUR mn]
		Split amount [EUR mn]	Number of projects funded	
Clean transportation	58.3	58.0	206	0.3
Renewable energy	24.8	23.2	63	1.5
Energy efficiency	49.6	49.6	147	
Terrestrial and aquatic biodiversity	8.6	0.2	3	8.4
Environmentally sustainable management of living natural resources and land use	65.5	30.7	89	34.8
Pollution prevention and control	23.4	23.4	162	
Climate change adaptation	57.5	40.6	98	16.9
	287.6	225.7	767	61.9

Table 9: Overview of research, development and innovation expenditures allocated to Green Securities in 2023. Sums in the table may not add up due to rounding differences

⁷⁹ Federal Chancellery Republic of Austria, [RTI Strategy 2030](#)

⁸⁰ Statistics Austria, [R&D global estimate](#), April 2024

⁸¹ Federal Ministry Climate Action, Environment, Energy, Mobility, Innovation and Technology, [Research quota rises to record level in Austria](#), April 2024

⁸² Austrian Patent Office, [Green patents: Austria in first place for buildings](#) (only available in German), April 2024

⁸³ As public funding of the year 2023 for the category "Sustainable water and wastewater management" was not allocated to the Green Securities covered by this report, respective RDI indicators are not presented in Table 9.

Explanatory notes:

The figures in Table 9 present the respective share of the budget that was assigned to research, development and innovation projects and infrastructure and financed by Green Securities. Estimates for performance indicators are based on data for approved projects in the respective year and refer to the enabled effects with regard to the overall investment volumes of the supported projects.

5.9.1 RDI project funding

Objective

The objective of RDI project funding is to promote the development of key technologies to facilitate the transition to an environmentally sustainable and resilient economy and society, as well as to intensify cross-sectoral and international collaboration and the implementation of integrated solutions.

Responsible Bodies

Federal Ministry for Climate Action, Environment, Energy, Mobility, Innovation and Technology (BMK), Federal Ministry for Labour and Economy (BMAW), Federal Ministry of Agriculture, Forestry, Regions and Water Management (BML)

Description of Financing

Activities under this section include a wide range of different funding programmes, from large-scale COMET Competence Centres⁸⁴ to small-scale individual innovation projects. *The Green Frontrunner Programme*, for example, supports projects in the field of research and experimental development, conducted by companies with international activities and an ambitious business strategy, which contribute to the European Green Deal Objectives. The positive effect on the climate and environmental objectives can either result from improved production processes or from the manufacture of products that lead to positive climate and environmental effects for users. Apart from bottom-up, company driven RDI projects, there is a growing number of Transformative Innovation Policy initiatives, providing clear signals and opportunities for companies, research organisations

and important stakeholders to conduct research, development and innovation relevant to sustainability. For example, with the „Climate Neutral City“ mission, which is the national implementation of the EU „Climate Neutral and Smart Cities“ mission, the BMK has been providing funding since 2022 to make Austrian cities climate neutral even faster through research and innovation. In particular, the BMK has entered into partnerships with ten pioneering cities for the development, implementation and scaling of solutions for climate-neutral neighbourhoods and the transition of governance structures in the city administration towards climate neutrality. The integration of Austrian stakeholders in European and international innovation networks is also supported (EU partnership „Driving Urban Transition“ and Mission Innovation „Urban Transitions Mission“). Based on the Austrian Research Financing Act (Forschungsfinanzierungsgesetz), the Climate and Economic Stimulus Package (Klima- und Konjunkturpaket), the Austrian Forest Fund (Waldfonds) and the Environmental Subsidies Act (Umweltförderungsgesetz), subsidies are provided for research, development and innovation activities, among others in the fields of:

- Climate and energy transition as well as climate change adaptation and resilience for cities, regions and companies
- Mobility transition, including alternative fuels for air transport, batteries, hydrogen etc.
- Resource efficiency, renewable raw materials, circular economy and clean production
- Digitalised services and solutions for the sustainable transition of the industry
- Forest and wood related RDI activities, including on wood gas and biofuels, climate resilient forests and the increased usage of the resource wood

Beneficiaries

Companies, universities, non-university research institutions, cities, research consortia consisting of industrial companies and research institutions

Environmental Impact

The effect of the funding is presented in Table 9 by the following indicators:

- Number of projects supported: As research projects have a key enabling function but do not themselves have a direct environmental impact, the number of funded projects is used as a performance indicator in this category.

⁸⁴ FFG, [COMET Competence Centers for Excellent Technologies - COMET Projects](#)

5.9.2 Global budget for research infrastructure and fundamental research

Objective

Successfully implementing RDI projects requires adequate instruments covering all innovation phases which are combinable with each other. Fundamental research as well as research infrastructure are essential foundations financed by the global budget of universities. The specific objective of the global budget presented in this section is to provide the basis for climate-related and environmental research activities, aimed at enabling the transition to a sustainable economy and society.

Responsible Body

Federal Ministry for Education, Science and Research (BMBWF)

Description of Financing

Under this position, finance for research infrastructures as well as for fundamental research is provided for the BOKU University, Vienna (BOKU), which is among the leading Life Sciences Universities in Europe, distinguished by its holistic approach to research and teaching. During the academic year 10/2022-09/2023, 2,201 scientists, 10,107 students and 1,242 graduates⁸⁵ were researching solutions for important environmental and social issues and for a sustainable future. The scientific work at BOKU takes place in six areas of competence⁸⁶, which are dealt with in an interdisciplinary manner by 15 departments⁸⁷:

- Material Sciences and Process Engineering
- Biotechnology
- Water, Atmosphere, Environment
- Bionanosciences
- Chemistry
- Integrative Biology and Biodiversity Research
- Food Science and Technology
- Landscape, Spatial and Infrastructure Sciences
- Economics and Social Sciences
- Sustainable Agricultural Systems

⁸⁵ BOKU University, [BOKU Wissensbilanz](#)

⁸⁶ [BOKU competence areas](#)

⁸⁷ BOKU University, [Overview](#)

- Civil Engineering and Natural Hazards
- Forest and Soil Sciences
- Crop Sciences
- Agrobiotechnology, IFA-Tulln
- Applied Genetics and Cell Biology

Beneficiary

BOKU University, Vienna

Environmental Impact

The effect of the funding is reflected in figures on scientific performance, as fundamental research activities and infrastructures have a key enabling function but do not themselves have a direct environmental effect. According to the most recent figures prepared for the “Intellectual Capital Report” of the BOKU University⁸⁵, the following KPIs are presented:

- 1,051 ongoing research projects
- 922 SCI (Science Citation Index) publications in SCI-listed journals, 67.8% of which with international co-authors
- 32 pending patents (2 national, 6 EU, 24 in third countries)

Example: Risk assessment of nanocarriers

Three BOKU institutes have been launching a new research project on the risk assessment of nanocarriers. Researchers from the Institute of Safety and Risk Sciences, the Institute of Waste and Recycling Management and the Institute of Synthetic Bioarchitectures have joined forces for this project. Nanocarriers are the smallest synthetic carrier structures that are mainly used in agriculture for pesticides and fertilisers or in medicine for the targeted application of medication. In the three-year project, the environmental risks of nanocarriers are being investigated. For this purpose, test strategies are being developed and implemented for particularly critical nanocarriers, which will enable the analysis of their environmental behaviour and the release of the transported active substance under environmentally relevant conditions. In this way, the influence of the carriers on the change in the environmental behaviour of active substances is to be determined as an example and the implications for an appropriate evaluation of the environmental behaviour in the context of risk assessment are to be described in more detail. The results are intended to contribute to adapting the guidelines for the risk assessment of nanocarriers to the latest scientific findings.

6 Case Studies

6.1 ÖBB: Four-track upgrade Linz (Marchtrenk) – Wels

One of the most important developments of the Austrian railway network in the next few years is the advancing four-track expansion of the western line. Around a third of all trains in Austria travel this route, making the western route one of the main arteries of Austrian rail traffic. Due to its national and international importance, the Vienna – Salzburg railway line was declared a high-performance line by the Austrian federal government in 1989 and has been continuously upgraded since then. As a part of the Rhine-Danube Core Network Corridor of the Trans-European Transport Network the railway line is essential for trans-European rail traffic operations on Austrian territory. The next improvement on the western line is the establishment of a four-track railway line between Linz – Marchtrenk – Wels. The sub-section between Linz and Marchtrenk will be built from mid-2024 to 2031, while the construction of the sub-section between Marchtrenk and Wels is already underway and will be completed by 2029. Both sub-sections are part of the ÖBB Framework Plan and are financed with funds from the Republic of Austria.

Four-track expansion to overcome bottleneck

The existing railway line between Linz – Marchtrenk – Wels has a total length of 25 km with seven train stations and one freight terminal (Rail-Road Terminal Wels). The existing physical infrastructure, which is double track and electrified, is not able to meet the capacity requirements due to the high demand for transport. The result is a major bottleneck to medium and long-distance railway operations on the Rhine-Danube Corridor and therefore a hindrance for additional trans-European rail transport.

To bridge this missing link, the double-track rail infrastructure needs to be replaced by four tracks with a slightly different line routing. This creates the prerequisites for a denser commuter train (S-Bahn) system in the Linz-Wels area, a clock-face schedule, an overall better regional and express train service and more capacities for freight trains. Due to these infrastructure improvements, more passengers and goods will arrive at their destination on time, quickly, and safely.

Infrastructure upgrade leads to reduction of greenhouse gas emissions

The upgrade of the railway infrastructure components stands as a key aspect of this project's scope. The global project is designed to not only increase the capacity through the construction of a four-track line, but also to increase the average speed. High-performance tracks for maximum speeds of up to 230 km/h for long-distance trains will be built instead of the existing railway system. A speed of up to 160 km/h is planned for regional traffic. Furthermore, a reduction of noise pollution and optimised timetables will be achieved.

The projected GHG emission savings over a 40-year period, from the start of operation in 2030 until 2069, are two million tonnes of CO₂e. The savings result from the modal shift from road to rail due to the improved railway line between Linz and Salzburg.

Source and further information:

- ÖBB Infrastruktur AG, [Expansion Marchtrenk – Wels](#) (only available in German)



© ÖBB/Deopito

6.2 Biodiversity Fund

The Biodiversity Fund created by the Austrian Federal Government supports the implementation of the Biodiversity Strategy Austria 2030+ in addition to the measures within the framework of the Common Agricultural Policy of the European Union and the Forest Fund, as well as the funding to improve the ecological status of water bodies. Biodiversity and investments in the protection and restoration of diversity in nature will make an important contribution to achieve Austrian and EU Biodiversity Objectives. In addition, establishing a biodiversity monitoring system is also a priority for the Biodiversity Fund. The loss of biodiversity has dramatic consequences for the economy and society. The cost of non-implementation of EU legislation relevant to nature alone is estimated at EUR 55 bn per year across EU countries⁸⁸.

The Biodiversity Fund has been in place since mid-2021. 25 projects in total have been funded up to 2023, including for example:

Creating a national red list of wild bees

Led by the Natural History Museum Vienna, the goal of this project is to put together a red list of wild bees in Austria following international standards. Austria hosts approximately 655 different species of wild bees that shall be analysed to determine threatened ones. This information is key to the implementation of successful conservation measures. It is expected that around 400,000 data points will be created on the dispersal of different bee species, which will lead to concrete assessments of their threat level.

Biodiversity starts in the own garden

In this project, three show gardens are planned and planted, which focus on different topics such as: wild fruits, wild vegetables, medicinal herbs and the protection of wild bees. The show gardens will be located near prominent cycling routes in Lower Austria and are open to visitors and schoolchildren in various workshops and seminars. The goal is to make biodiversity tangible and “tasteable”, especially through showing i.a. the cultivation of old and rare varieties of fruit as well

as widely unknown wild fruits, perennial vegetables, resilient forest gardens, natural alternatives to pesticides and fungicides as well as permaculture.

Mapping of degraded peat bogs and peat soils and evaluation of their restoration potential

Peat soils are former waterlogged areas, which were drained in many cases for agricultural use. Intact peatlands play an important role in the water cycle and store significant amounts of carbon. The Peatland Strategy Austria 2030+⁸⁹ and the Biodiversity Strategy Austria 2030+ aim to preserve or restore near-natural peatlands together with the ecosystem services they provide. To make this possible, it is necessary to know the extent and distribution of hydromorphic organic soils. Although these kinds of soils exist in all peatland-rich regions of Austria, their actual extent is mostly unknown. This project aims to record and assess peatlands and peat soil throughout Austria. Using different mapping techniques combined with geostatistical methods and machine learning, a distribution map of peat and other hydromorphic soils will be modelled, which can then be used by experts and other stakeholders to evaluate the potential for rewetting of selected areas.

Source and further information:

- Biodiversity Fund, <https://www.biodiversitaetsfonds.com/> (only available in German)



© Umweltbundesamt/B. Groeger

⁸⁸ European Commission, [The costs of not implementing EU environmental law study](#), March 2019

⁸⁹ Federal Ministry of Agriculture, Forestry, Regions and Water Management, [Moorstrategie Österreich 2030+](#) (only available in German), February 2022

6.3 Organic farming

In 2022 705,800 ha of farmland were under organic farming in Austria, this translates to a share of 27.7% of total agricultural land, which is the highest in any country within the EU. The year on year growth of the share of organic farming was 1.6% between 2021 and 2022. 23.4% of farms are certified organic producers.

With the *Action Programme Organic Farming 23+⁹⁰* the leading position of Austria in terms of organic agriculture shall be ensured and the demand for organic produce strengthened. As of 2022 more than 10% of produce bought by the general public originated from organic farming. The Austrian *Agri-environmental Programme (ÖPUL)* as well as the compensatory allowance for less-favoured areas (AZ) are key support measures for organic farming. Almost every third farm in a less-favoured area is also a certified organic producer. The stated goals of the mentioned action plan are to raise the share of organically cultivated farmland to around 30% in 2027 and 35% in 2030, depending on demand. To achieve these ambitious goals various measures have been developed together with all relevant stakeholders: from awareness raising and educational activities to research and development as well as investments and innovations. The implementation of the action plan is regularly monitored by the Federal Ministry of Agriculture, Forestry, Regions and Water Management.

Austria's engagement in the field of organic agriculture was also appreciated at the 2023 EU Organic Awards where Austria was crowned the winner in three out of seven categories. For example, the award for best organic region went to the federal state of Burgenland, which has implemented a strategy to grow the share of organic farmland to 50% until 2030. The award for best organic city went to Vienna, which has the city-owned food brand *Wiener Gusto* of organically produced foods within the city borders, a unique concept for a major European city.

⁹⁰ Federal Ministry of Agriculture and Forestry, Regions and Water Management, [Bio-Aktionsprogramm 2023+](#) (only available in German), December 2022

Sources and further information:

- Federal Ministry of Agriculture and Forestry, Regions and Water Management, [Organic Farming in Austria](#), October 2023
- European Commission, [EU Organic Day: Highlighting excellence across the organic value chain through the second EU Organic Awards](#), September 2023
- Federal Ministry of Agriculture and Forestry, Regions and Water Management, [Grüner Bericht 2023](#) (only available in German), September 2023



Wild herbs garden © BML/Alexander Haiden



Sheep on a heath © BML/AMA-Bioarchiv/Pichler

6.4 UpHy II - Upscaling of Green Hydrogen for mobility and industry II

Green hydrogen features a high potential to replace fossil energy carriers in the industry and heavy duty transport sector. In heavy duty transport, fuel cell buses and trucks powered by Green Hydrogen can significantly reduce GHG emissions. In industry, Green Hydrogen could be used to replace the current fossil-based hydrogen and to convert some fossil-based processes to renewable energies.

In order to simulate upscaling scenarios of the hydrogen supply chain, it is necessary to consider the whole energy system. To cover the time and space dependent energy demand with renewable energy, the potential of all renewable energy sources must be considered and used directly or converted to hydrogen by power-to-x plants.

For the first time in Austria, UpHy II will represent a complete Green Hydrogen value chain on an industrial scale from production (electrolysis) and distribution up to usage in transport (fueling infrastructure) and industry. The H₂ mobility segment will be fully developed and implemented based on the market development of hydrogen powered busses and heavy duty vehicles. The key technologies are being researched under real operating conditions and optimised in terms of availability, costs, GHG emissions and energy consumption. This is intended to reveal synergies that will allow an efficient cost structure and further upscaling.

UpHy II includes:

- the implementation of 10 MW electrolysis in the refinery producing up to 1,500 tons of H₂ per year (planned production start: end of Q2/2024; calculated emission reduction of 15,000 tons CO₂ per year),
- the large-scale use of Green Hydrogen in the refinery to hydrate bio-based fuels,
- the further development of the UpHy I developed gas quality analyses to verify ISO 14687,
- the engineering of a 500 bar trailer filling station including logistics⁹¹.

⁹¹ Final investment decision of the hydrogen stations can be expected as soon as the hydrogen mobility heavy duty market reaches a relevant share.

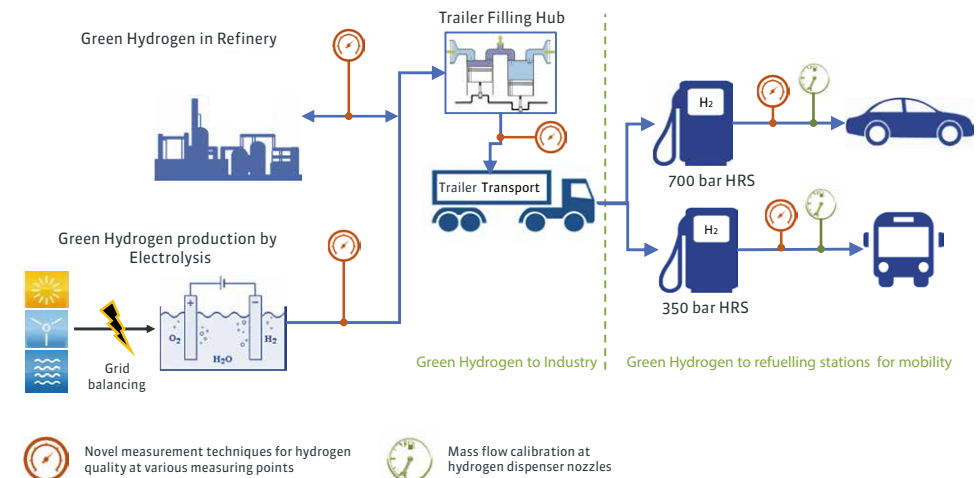
Additionally, within this project, the following key areas will be considered:

- analysis of market potential for renewable energy sources and the energy grid infrastructure for the production and storage of Green Hydrogen with electrolysis,
- performing a spatially resolved RES (renewable energy sources) potential analysis to determine maximum H₂ production for various areas in Austria.

The project UpHy II builds upon the results of the preceding project UpHy I and is being conducted from 2021 to 2025.

Sources and further information:

- Climate and Energy Fund, [Vorzeigeregion Energie](#) (only available in German)
- WIVA P&G, [UPHY I+II – Upscaling of green hydrogen for mobility and industry](#)
- EVT University of Leoben, [UPHY II](#)



© OMV

6.5 “klimaaktiv” Building Standard and Project Database

klimaaktiv buildings database

To enhance the visibility of best-practice projects in sustainable renovation and building, the klimaaktiv buildings database was established. It contains descriptions of more than 1,500 buildings in Austria which fulfil the criteria of the klimaaktiv Building Standard.

The klimaaktiv Building Standard: Bronze, Silver, Gold

Buildings can qualify for the klimaaktiv Building Standard based on a score system. A maximum of 1,000 points, distributed among around 30 indicators, can be reached. Two criteria sets, dedicated to residential buildings and non-residential buildings, are applied.

Energy consumption and energy supply are at the core of the criteria set with a maximum of 550 points, of which up to 200 can be achieved depending on the CO₂ emissions, 150 for heating energy consumption and 100 points on the primary energy needs per square metre. The remainder is awarded based on further indicators such as cooling energy needs, energy flexibility, use of photovoltaic systems or energy consumption monitoring. For protected buildings, a special criterion of at least 25% energy performance improvement by renovation may be applied instead of the absolute value for heating energy consumption.

For the location of the building (proximity of basic infrastructure, public transport etc.), for construction materials and design as well as for comfort and health, up to 150 points each are awarded.

The basic category of the klimaaktiv Building Standard is the Bronze Standard. To reach this, a set of minimum criteria composed of the 14 most important indicators must be fulfilled.

To achieve Silver Standard requires at least 750 points and the klimaaktiv Gold Standard is awarded if the building reaches at least 900 out of 1,000 points.

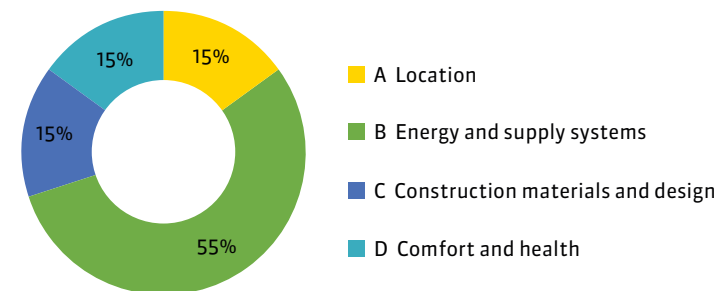
Declaration tool

Buildings can be registered in the database using the online declaration tool. The standard, the declaration tool and the database are free of charge.

EU taxonomy check

Since January 2024, the online declaration tool for building projects also includes a free EU taxonomy check. Values for all taxonomy criteria can be entered to check alignment. The documents which have been uploaded to proof the fulfilment of the klimaaktiv Standard criteria, as well as additional documents required to demonstrate taxonomy alignment are collected. The documents and a taxonomy alignment declaration of the project, created from the entered values, form a package ready for civil engineers, engineering firms and auditors dealing with taxonomy alignment.

klimaaktiv Criteria Catalogue 2020
Distribution of points by area
(1,000 points)



Sources and further information:

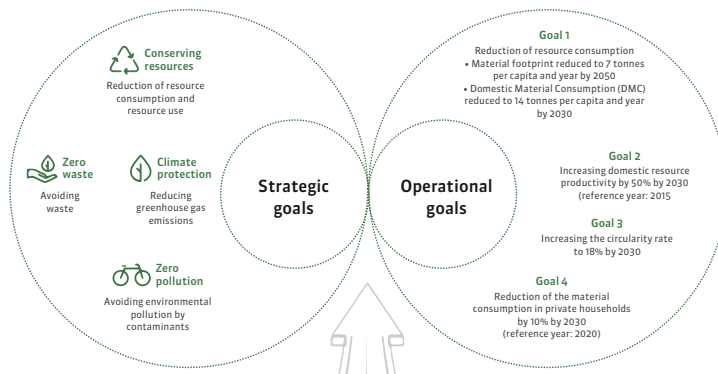
- klimaaktiv, [buildings database](#)
- klimaaktiv, [standard criteria](#)
- klimaaktiv, [declaration tool](#)

6.6 The Austrian Circular Economy Strategy

Austria on the path to a sustainable and circular society

Austria's vision is to transition its economy and society into a climate-neutral, sustainable circular economy by 2050. This means a massive reduction in material consumption, waste and environmental pressure. For this purpose, the Circular Economy Strategy was adopted by the Federal Government in the Council of Ministers at the end of 2022⁹². It was the result of a comprehensive, transparent participation process.

Based on Austria's vision four strategic goals were derived: the comprehensive reduction of resource consumption and use of resources (sparing resources), the avoidance of waste (zero waste), the avoidance of environmental pollution by hazardous materials (zero pollution) and the reduction of greenhouse gas emissions (environmental protection). To make these goals measurable, quantitative operational goals have been set.



The Austrian Circular Economy Strategy – Strategic and operational goals.

© Federal Ministry for Climate Action, Environment, Energy, Mobility, Innovation and Technology (BMK)

⁹² Federal Ministry Republic of Austria Climate Action, Environment, Energy, Mobility, [Austria on the path to a sustainable and circular society](#), 2022

Based on these goals, together with numerous stakeholders and experts, around 600 measures were developed in the transformation key areas consumption, construction industry, mobility, plastics and packaging, textile industry, electrical and electronic devices, information & communications technologies, biomass and waste as well as secondary raw materials.

The strategy is based on the ten R principles⁹³ and the raw material principles stating that raw material requirements should be met primarily from sustainable secondary sources and sustainable renewable sources and the remainder from non-renewable sources.

To facilitate the transformation to a circular economy, a smart mix of various instruments and measures must be implemented. Thus, intervention areas such as legislative measures⁹⁴, market incentives, financing and funding, RTDI, digitalisation as well as information, knowledge and cooperation were set, resulting in the following exemplary measures addressing various target groups:

- The new “circular economy funding programme”, established as part of the amendment to the Environmental Subsidies Act.
- The repair bonus⁹⁵ has been well received by consumers and provides significant support for the circular economy. Since its introduction (from April 2022 until December 2023), around 840,000 vouchers have already been used⁹⁶.
- To promote reusable systems, separate funding initiatives for investments in bottling plants, reverse vending machines and sorting plants totaling EUR 170 mn are being established until 2026. High-performance sorting systems are a core environmental technology element.

One element for steering and implementing the circular economy strategy is the Circular Economy Task Force set up by the BMK and BMAW in July 2023 with the aim of advising the federal ministers and proposing priority projects for the transformation. The first progress report on the implementation of the strategy is currently being prepared and will be published in 2024, including an overview of activities in the first year of implementation.

⁹³ Refuse, Rethink, Reduce, Reuse, Repair, Refurbish, Remanufacture, Repurpose, Recycle and Recover

⁹⁴ [REACH Regulation \(EC 1907/2006\)](#), [Proposal for a targeted revision of the Waste Framework](#), [Critical Raw Materials Act \(Proposal\)](#), [Construction Products Regulation \(EU\) No 305/2011](#), [Proposal for a new Ecodesign for Sustainable Products Regulation \(ESPR\)](#), [Proposal on common rules promoting the repair of goods](#)

⁹⁵ <https://www.reparaturbonus.at/>

⁹⁶ https://www.bmk.gv.at/service/presse/gewessler/2024/0103_reparaturbonus.html

6.7 KLAR! – Climate Change Adaptation Model Regions

In 2023 the number of participating Climate Change Adaptation Model Regions further increased to currently 89 in 2023 (from 79 in 2022)⁹⁷. A total of 89 regions with 745 municipalities and more than two million inhabitants throughout Austria received funding to develop a local adaptation concept, raise awareness and implement adaptation measures in their regions. 51 regions are in the concept and implementation phase. These regions develop a local adaptation concept with concrete adaptation actions and implement initial local adaptation actions. 38 regions are in the continuation phase and implement further local adaptation actions. (Status May 2023)

Several initiatives and implemented projects within KLAR regions were awarded for outstanding success in the field of climate and environment. Three of them are presented in more detail below:

KLAR regions as winners of various climate and environmental awards in 2023

Soil protection award for „KLAR! Südliches Weinviertel“ and „KLAR! Waldviertler Kernland“

The Federal Ministry for Climate Action, Environment, Energy, Mobility, Innovation and Technology (BMK) honors flagship projects of private, municipal and company initiatives that are particularly committed to soil protection, with the soil protection award “ERDREICH”. On November 27th 2023, the winners of the Soil Protection Prize were honored by the Federal Minister for Climate Action as part of the fallow “land summit” coordinated by the Environment Agency Austria. The “KLAR! Südliches Weinviertel” region was awarded in the “Save Land” category for its intensive discussion of the issues of municipal centre development and inner city revitalisation and the resulting position paper “Vacancy and Building Land Mobilisation in the Southern Weinviertel”. The land prize in the “Participation” category went to the “Boden ErLeben” project from “KLAR! Waldviertel Kernland” region to raise awareness of the importance of soil in primary schools.

Natural hazards award 2023 goes to “KLAR! Wachau-Dunkelsteinerwald-Jauerling”

Small-scale heavy precipitation events have become more frequent in Austria in recent decades. A folder from the “KLAR! - Wachau-Dunkelsteinerwald-Jauerling” region now provides information

on how you can protect yourself and your belongings from the consequences from heavy rainfall. Together with the regional fire departments, seven valuable and easy-to-implement tips and tricks for self-protection during heavy rainfall events were developed for the population in the region. The project has now been awarded the “ASDR Natural Hazards in Climate Change Award” at the 2023 Natural Hazards Conference of the Austrian Platform of the United Nations International Programme for Disaster Reduction (ASDR) in Kufstein, Austria.

“KLAR! Ennstal future region” awarded with Biodiversity Price 2023

On the occasion of International Biodiversity Day on May 22nd, 2023, the “Silberdistel M. & W. Graf” Biodiversity Prize 2023 from the federal state of Styria was awarded. The third place in the category “Educational Institutions and Communities” went to the municipality of Sölk with the “KLAR! Ennstal future region” and the “Sölktäler Nature Park”. The joint exhibition in the Schloss Großsölk Nature Park House about “Climate winners? Climate losers! How are our animals and plants doing in climate change?”, exposed the effects of climate change on the flora and fauna in the region.



KLAR! Ennstal (©) Natalie Prügler

⁹⁷ <https://klar-anpassungsregionen.at/>

7 Annex: Impact Measurement Methodology

Quality assurance of the input data and evaluation of the effectiveness of the funding

For projects funded according to the Environmental Subsidies Act or funded by the Climate and Energy Fund, quality assurance is based on a multi-stage approach, where checks are carried out at specific intervals by the responsible institutions:

- In general, the funding process can be divided into the application phase up to the funding contract, the construction phase and the phase of auditing and final invoicing.
 - For complex projects, throughout the entire funding process, several checks are carried out, e.g. by the funding handling agency, the Federal Ministries, the governments of the Federal Provinces etc. as an example for this process in the field of funding for municipal water management infrastructure, a detailed flow chart is presented in the Court of Auditors' report⁹⁸
 - For all projects, spot checks are carried out by the responsible agency for the processing of the funding, in which the projects and information are checked in detail (also on site).
- On behalf of the responsible bodies (Federal Ministries), annual audits are carried out by independent auditors in order to check the legal compliance of the agency entrusted with the processing of the funding.
- Ex-post Evaluation:
 - For projects funded according to the Environmental Subsidies Act, every three years, an in-depth evaluation is carried out⁹⁹
 - For projects funded according to the Austrian Climate and Energy Fund ex-ante as well as ex-post evaluations are carried out on a regular basis¹⁰⁰. Moreover, a detailed methodological report for these evaluations was published¹⁰¹.
- In addition, audits are carried out by the Court of Auditors¹⁰² at varying intervals.

⁹⁸ See page 70 of the report "[Subsidies in municipal water management – Report of the Austrian Court of Auditors](#)" (only available in German)

⁹⁹ As an example of the triennial evaluation reports according to the Environmental Subsidies Act, see "[Evaluation of environmental funding of the Federal Government 2020-2022](#)" (only available in German).

¹⁰⁰ As an example, see report "[Evaluation of the annual programmes 2018 and 2020 of the Climate and Energy Fund](#)" (only available in German)

¹⁰¹ Evaluation report on annual programmes of the Climate and Energy Fund

¹⁰² As an example, see report "[Subsidies in municipal water management – Report of the Austrian Court of Auditors](#)" (only available in German)

7.1 Clean transportation

7.1.1 Clean Transportation Infrastructure and services

Federal subsidies to ÖBB-Infrastruktur AG

Co-financing of rail infrastructure investments by private railway companies and contributions to the provision of rail infrastructure

Ordering of non-commercial services in rail passenger transport

Rail freight funding (Schienengüterverkehrsförderung)

Methodology for estimating the avoided GHG-emissions

1) Allocation of budget items to passenger and freight transport

The relevant budget items are allocated to the following clusters to enable a differentiated presentation of the GHG savings triggered by investments in rail passenger and freight transport:

- Rail passenger transport: non-commercial services and commercial services
- Rail freight transport: subsidised and non-subsidised

The creation of clusters is necessary because an attractive rail service can only be created through the interaction of rail infrastructure and the transport services provided on it. Rail infrastructure and rail services therefore work together and together contribute to shifting transport from road to rail and thus to avoiding GHG emissions.

2) Passenger and freight transport infrastructure

For the allocation of infrastructure investments, the allocated (i.e. already reduced by the share of non-electrified lines) federal subsidies to ÖBB-Infrastruktur AG and co-financing of rail infrastructure investments by private railways and contributions to the provision of rail infrastructure are allocated to the above-mentioned clusters on a pro rata basis. The allocation of subsidies to ÖBB-Infrastruktur AG to the clusters is based on the electrified kilometres travelled by public/private passenger and by freight trains on the ÖBB network (data provided by ÖBB-Infrastruktur AG). The co-financing of rail infrastructure investments by private railways and contributions to the provision of rail infrastructure is allocated 100% to the cluster rail passenger transport non-commercial. For the allocation of freight transport to subsidised and non-subsidised freight transport, the subsidised share, according to the annual evaluation of rail freight funding, is used.

3) Passenger and freight transport services

The services are composed of public services in rail passenger transport, private services in rail passenger transport and freight transport services. In each case, only the electric rail transport services, in freight transport also excluding the share of fossil fuel transport (9.7% in 2022 according to Statistics Austria), are considered. Public services in rail passenger transport are financed via the budget for ordering of public services in rail passenger transport, which is allocated 100% to the cluster rail passenger transport non-commercial. Freight transport can be split in subsidised and non-subsidised transport. The rail freight funding is allocated 100% to the cluster rail freight transport subsidised. Data on the ordered public services in rail passenger transport as well as on the subsidised freight transport was provided by the responsible funding institution.

The quality assurance of this data is based on a multi-stage approach, in which audits are carried out at specific intervals by a number of institutions (responsible funding institution, Ministry/Auditor, Parliament, Court of Auditors).

4) Determination of avoided GHG emissions

To determine the avoided GHG emissions, it is assumed that the transport performance (passenger-kilometres and tonne-kilometres) in passenger and freight transport by rail would otherwise have been covered by car or heavy goods vehicle. A safety discount of 15% for rail passenger and 30% for freight transport is applied, taking into account the uncertainties involved in converting mileage into transport capacity. The avoided GHG emissions can be calculated from the difference between the emissions that would have been produced if the transport service had been carried out by car or heavy goods vehicle and the emissions produced by rail transport. The calculation of emissions is based on the current emission factors per passenger kilometre or tonne-kilometre according to the Environment Agency Austria¹⁰³.

¹⁰³ Umweltbundesamt, [Emissions overview means of transport](#) (only available in German)

Green Investor Report 2023

For the Green Investor Report 2023 a new methodology for the impact assessment was developed (see description above). The new methodology is fully applied for the 2023 data. 2022, from the methodological point of view, is a transitional year. As in the Green Investor Report 2022 only (limited) performance indicators were reported for passenger and freight transport services and no avoided GHG-emissions. It is assured that no double-counting is performed.

Outlook Green Investor Report 2024

As the evaluation of rail freight funding is only available with two years lag, investments in rail freight transport and the related GHG-emissions avoided for 2023 will be reported in the Green Investor Report 2024.

7.1.2 Public transport

Public transport - Climate Ticket Austria

The indicator refers to the enabled effects with regard to the overall investment volumes of the supported projects.

Aggregated data is provided by the responsible funding institutions. The quality assurance of this data is based on a multi-stage approach in which audits are carried out at specific intervals by a number of institutions (responsible funding institution, Ministry/Auditor, Parliament, Court of Auditors).

7.1.3 Funding Programmes for a Transition to Zero Emission Mobility

The avoided tonnes of CO₂e per project category were provided by the responsible body and by the institution responsible for the processing.

The methodology depends on the funding category. The basis for determining the environmental effects is that the subsidy results in a reduction in diesel/gasoline mileage. As baseline, the average emissions of Diesel/Gasoline cars are used (50:50). The average mileage as well as the emission factors are the values published annually by the Environment Agency Austria.

Indicators refer to the enabled effects with regard to the overall investment volumes of the supported projects.

Basis for the calculation: Standard national methodology applied by the operational agency for the annual reporting for the funding, according to the Environmental Subsidies Act of the Republic of Austria. This (long-standing) methodology was reported to the European Commission in connection with the introduction of the EU “Financing not linked to costs” approach within the framework of the *ERDF programme*.

Since there is a time lag between the funding approved and the funding paid out, the impact of the funding paid out has been estimated based on the reported impact per EUR of funding approved per sub-category. As a consequence, the reporting figures are not directly comparable to other publications addressing the respective funding instruments due to the different scope.

Aggregated data were provided by the responsible funding institutions. The quality assurance of this data is based on a multi-stage approach, in which audits are carried out at specific intervals by a number of institutions (responsible funding institution, Ministry/Auditor, Parliament, Court of Auditors)

7.2 Renewable energy

Renewable Energy – biomass, PV, heat pumps, solar thermal, power storage and other renewable energy technologies

Annual renewable energy generation/use (megawatt hours, MWh):

The “annual renewable energy generation/use” corresponds to the energy supplied and/or distributed by the measure (“distributed”: heat or electricity from new renewable-based generators, additional distributed energy from renewable generators, consumption of additional connected buildings etc.) and/or used (substituting energy from fossil sources).

The value is calculated individually per subsidised project. For renewable heat generators, the net energy consumption after implementation of the measure is predicted by planned figures; after the measure has been implemented, the operator must keep records of operations to prove the success of the renewable energy measure for review by means of spot checks. The consumption before implementation of the measure is based on energy consumption records of the operator of the heat generator. Photovoltaic (PV) systems are assumed to annually yield a standardised value of 1,000 kWh of electricity per installed kilowatt hour peak (kWp). For small solar thermal systems and for heat pumps below 100 kilowatts thermal capacity (100 kWth), the calculation is carried out with standardised values, including the assumption of 1,100 full load hours per year for heat pumps. However, for large-scale solar thermal systems, for “model and lighthouse projects” of PV and solar thermal heat generation and for PV systems in agriculture, individual calculations, for PV using power yield forecasts, are used for calculating the annual renewable energy yield.

Annual GHG emissions reduced/avoided (tonnes CO₂e):

The reduced/avoided CO₂e-emissions are calculated as the difference between emissions before and after the implementation of the measure. The emissions before and after the implementation are calculated by multiplying the energy consumption with the CO₂e emission factor of the respective energy source. The baseline is the energy source used in the individual project before implementation of the funded measure, or for programmes with standardised smaller measures, a standardised baseline is used (Austrian electricity mix; heating oil for heating measures). The applied emission factors are from Guideline 6 on Energy savings and thermal insulation of the Austrian Institute of Construction Engineering¹⁰⁴, only for energy carriers not covered in these Guidelines (e.g. renewable electricity with the Austrian ecolabel) emission factors by the Federal Environment Agency Austria¹⁰⁵ are used. For biomass emissions, emission factors by the Federal Environment Agency Austria are used. To normalise the energy consumption in case of a capacity change, a factor to adjust the previous capacity to the changed capacity of the heat generator is used.

¹⁰⁴ <https://www.oib.or.at/de/oib-richtlinien/richtlinien/2019/oib-richtlinie-6>

¹⁰⁵ Calculation of GHG emissions of different energy sources, updated 2022, <https://secure.umweltbundesamt.at/co2mon/co2mon.html>

Annual energy savings (megawatt hours, MWh):

If the project yields energy savings in addition to renewable energy generation, the savings are calculated as the difference between energy consumption before and after implementation (methodology: see section 7.3).

Additional methodological information:

Impact indicators refer to the enabled effects with regard to the overall investment volumes of the supported projects.

Projects and infrastructure investments are, in principle, eligible to receive funding and grants from more than one responsible funding body. In order to avoid an overestimation of the impact, performance and impact metrics are presented only with regard to the funding instruments of the Federal Ministry for Climate Action, Environment, Energy, Mobility, Innovation and Technology (BMK).

Basis for the calculation: Standard national methodology applied by the operational agency for the annual reporting for the funding according to the Environmental Subsidies Act of the Republic of Austria. This (long-standing) methodology was reported to the European Commission in connection with the introduction of the EU “Financing not linked to costs” approach within the framework of the *ERDF programme*.

Aggregated data were provided by the responsible funding institutions. The quality assurance of this data is based on a multi-stage approach, in which audits are carried out at specific intervals by a number of institutions (responsible funding institution, Ministry/Auditor, Parliament, Court of Auditors).

Since there is a time lag between the funding approved and the funding paid out, the impact of the funding paid out has been estimated based on the reported impact per EUR of funding approved per sub-category. As a consequence, the reporting figures are not directly comparable to those of other publications addressing the respective funding instruments due to the different scope.

7.3 Energy efficiency

Energy efficiency – processes, heat reuse, lighting, building renovation, new buildings, cooling**Annual energy savings (megawatt hours, MWh)**

The “annual energy savings” are calculated for every individual project as the difference between energy consumption before and after implementation. The net energy consumption after implementation of the measure is predicted by planned figures. After the measure has been implemented, the operator must keep records of operations to prove the success of the energy efficiency measure and that are reviewed by means of spot checks.

The determination of the energy consumption before implementation of the measure is based on energy consumption records of the operators of the process or facility. The baseline is the energy consumption of the individual project before implementation of the funded measure, or for programmes with standardised smaller measures, a standardised baseline is used (waste heat recovery below 100 kilowatts thermal capacity (100 kWth), partial building renovations, LED indoor lighting systems below 20 kilowatts of capacity (20 kW) and beverage coolers).

To normalise the energy consumption in case of a capacity change, a factor to adjust the previous capacity to the changed capacity of the facility or the process is used.

Annual GHG emissions reduced/avoided (tonnes CO₂e)

The reduced/avoided CO₂e emissions are calculated as the difference between emissions of the considered process or the facility before and after the implementation of the measure. To normalise the energy consumption in case of a capacity change, a factor to adjust the previous capacity to the changed capacity of the facility or the process is used.

For building renovations, the CO₂e emissions before renovation are determined from the heating demand for the building, as shown in the building energy certificate before renovation, an average value for the annual efficiency of the heat generator and the CO₂ conversion factor for heating oil.

Annual renewable energy generation (megawatt hours, MWh)

If the project yields renewable energy generation in addition to energy savings, the “annual renewable energy generation” is calculated as the renewable energy supplied and/or distributed by the measure (methodology: see section 7.2).

Additional methodological information:

Impact indicators refer to the enabled effects with regard to the overall investment volumes of the supported projects.

Projects and infrastructure investments are, in principle, eligible to receive funding and grants from more than one responsible funding body. In order to avoid an overestimation of the impact, performance and impact metrics are presented only with regard to the funding instruments of the Federal Ministry for Climate Action, Environment, Energy, Mobility, Innovation and Technology (BMK).

Basis for the calculation: Standard national methodology applied by the operational agency for the annual reportings for the funding according to the Environmental Subsidies Act of the Republic of Austria. This (long-standing) methodology was reported to the European Commission in connection with the introduction of the EU “Financing not linked to costs” approach within the framework of the *ERDF programme*.

Aggregated data were provided by the responsible funding institutions. The quality assurance of this data is based on a multi-stage approach, in which audits are carried out at specific intervals by a number of institutions (responsible funding institution, Ministry/auditor, Parliament, Court of Auditors).

Since there is a time lag between the funding approved and the funding paid out, the impact of the funding paid out has been estimated based on the reported impact per EUR of funding approved per sub-category. As a consequence, the reporting figures are not directly comparable to those of other publications addressing the respective funding instruments due to the different scope.

7.4 Terrestrial and aquatic biodiversity

Austrian Agri-environmental programme

A mix of qualitative and quantitative impact information is presented for the selected measures of the programme.

Indicators available are number of farms funded as well as area funded under different sub-measures of the *Agri-environmental programme*. Those indicators were obtained from the Federal Ministry of Agriculture, Forestry, Regions and Water Management. The selection of the impact information (qualitative and quantitative) for reporting was based on the most recent official scientific evaluation of the programme dating to 2019 (see chapter 8). Those measures were selected that showed the most significant positive impact on species diversity.

All data presented in the impact report was derived from external sources (Federal Ministry of Agriculture, Forestry, Regions and Water Management). No individual or internal calculations were conducted. The information about impact from the programme is derived from the most recent scientific evaluation of the programme. Publishing year of this evaluation was 2019. Baseline in this regard would be the situation in the area if the funding programme would not have taken place. In the scientific evaluation the benchmark used is agricultural land area that does not fall under the specific measures of the programme. The official evaluation of the funding programme is based on rigorous scientific practices.

The quality assurance of this data is based on a multi-stage approach, in which audits are carried out at specific intervals by a number of institutions (responsible funding institution, Ministry/Auditor, Parliament, Court of Auditors).

Austrian National Parks

Impact is presented in a qualitative way, describing the benefits of nature conservation in the Austrian National Parks. All data presented in the impact report was derived from external sources (Federal Ministry for Climate Action, Environment, Energy, Mobility, Innovation and Technology). No individual or internal calculations were conducted.

7.5 Environmentally sustainable management of living natural resources and land use

Austrian compensatory allowance for less-favoured areas

A mix of qualitative and quantitative impact information is presented for the programme.

Indicators available are number of farms funded as well as area funded under the Austrian compensatory allowance for less-favoured areas. Those indicators were obtained from the Federal Ministry of Agriculture, Forestry, Regions and Water Management. The selection of the impact information (qualitative and quantitative) for reporting was based on the most recent official scientific evaluation of the programme dating to 2019 (see chapter 8). Those measures were selected that showed the most significant positive impact on species diversity.

All data presented in the impact report was derived from external sources (Federal Ministry of Agriculture, Forestry, Regions and Water Management). No individual or internal calculations were conducted. The information about impact from the programme is derived from the most recent scientific evaluation of the programme. Publishing year of this evaluation was 2019. Baseline in this regard would be the situation in the area if the funding programme would not have taken place. In the scientific evaluation the benchmark used is agricultural land area that does not fall under the specific measures of the programme. The official evaluation of the funding programme is based on rigorous scientific practices.

The quality assurance of this data is based on a multi-stage approach, in which audits are carried out at specific intervals by a number of institutions (responsible funding institution, Ministry/Auditor, Parliament, Court of Auditors).

Austrian Forest Fund

Impact is presented in a qualitative way.

All data presented in the impact report was derived from external sources (responsible ministry). No individual or internal calculations were conducted.

The quality assurance of this data is based on a multi-stage approach, in which audits are carried out at specific intervals by a number of institutions (responsible funding institution, Ministry/Auditor, Parliament, Court of Auditors).

Other (including Circular Economy, Digitalisation, Green Chemistry, Austrian Biodiversity Strategy and Biodiversity Fund, etc)

Impact is presented in a qualitative way. All data presented in the impact report was derived from external sources (responsible funding institutions). No individual or internal calculations were conducted.

The quality assurance of this data is based on a multi-stage approach, in which audits are carried out at specific intervals by a number of institutions (responsible funding institution, Ministry/Auditor, Parliament, Court of Auditors).

7.6 Sustainable water and wastewater management

Drinking water supply, waste water treatment and sewerage

The indicators were calculated on the basis of data provided by the responsible bodies and agencies involved in the operational processing of the funding. Moreover, selected data were taken from published reports (see chapter 8).

- A standardised collection of input data is done in the course of the project application and evaluation and a standardised national methodology is applied by the operational agency for the annual reportings according to the Environmental Subsidies Act of the Republic of Austria.
- Aggregated data were provided by the agencies responsible for the processing of the funding and by the responsible bodies (Ministries). The quality assurance of this data is based on a multi-stage approach, in which audits are carried out at specific intervals by a number of institutions (responsible funding institution, Ministry/Auditor, Court of Auditors).

Estimates for indicators are based on real data for approved projects in the respective year. Since there is a time lag between the funding approved and the funding paid out, the impact of the funding paid out has been estimated based on the reported impact per Euro of funding approved for the same types or comparable types of projects and infrastructures.

As a consequence of the time lag, the reported figures are not directly comparable to those of other publications addressing the respective funding instruments, in which impacts are usually reported with reference to the year of approval.

For the construction and renovation of water supply and waste water treatment infrastructure it is, in principle, possible to receive subsidies from more than one funding body. Thus, the impact figures are calculated only with regard to one funding instrument (Environmental Subsidy Act).

For funding according to the Municipal Investment Act, no additional impact is reported, in order to avoid an overestimation of the impact.

The presented indicators refer to the enabled effects with regard to the overall investment volumes of the supported projects.

In the current report, impact figures are only presented for the year 2022 as in the reporting period there was no allocation of proceeds in this category for 2023.

Water ecology

For water ecology projects, only performance indicators are presented, since the ecological impact of the measures can only be quantified years after the projects' implementation and no robust assessment methodologies are available at the time of the preparation of the impact report.

The indicators were calculated on the basis of data provided by the responsible body and agency involved in the operational processing of the funding. Moreover, selected data were taken from published reports (see chapter 8).

A standardised collection of input data is done in the course of the project application and evaluation by the operational agency for the annual reportings according to the Environmental Subsidies Act of the Republic of Austria.

Aggregated data were provided by the agency responsible for the processing of the funding and by the responsible body (Ministry). The quality assurance of this data is based on a multi-stage approach, in which audits are carried out at specific intervals by a number of institutions (responsible funding institution, Ministry/Auditor, Court of Auditors).

Estimates for indicators are based on real data for approved projects in the respective year. Since there is a time lag between the funding approved and the funding paid out, the impact of the funding paid out has been estimated based on the reported impact per Euro of funding approved for the same types or comparable types of projects and infrastructures. It is, in principle, possible to receive subsidies from more than one funding body. Thus, the impact figures are calculated only with regard to one funding instrument (Environmental Subsidy Act).

As a consequence of the time lag, the reported figures are not directly comparable to other publications addressing the respective funding instruments, in which impacts are usually reported with reference to the year of approval.

The presented indicators refer to the enabled effects with regard to the overall investment volumes of the supported projects.

In the current report, impact figures are only presented for the year 2022, as in the current reporting period there was no allocation of proceeds in this category for 2023.

7.7 Pollution prevention and control

Remediation of contaminated sites

Input data and indicators were partly taken from published reports of the Environment Agency Austria (Umweltbundesamt) and the Federal Ministry for Climate Action, Environment, Energy, Mobility, Innovation and Technology (BMK). Additional data and information was provided by experts of the responsible body and by the agency involved in the operational processing of the funding on an aggregated level.

- For remediation projects funded according to the Environmental Subsidy Act, data relating to the year of disbursement are available and captured by the processing agency.
- For remediation projects according to §18 of the Act on the Remediation of Contaminated Sites (Altlastensanierungsgesetz, ALSAG), data reporting is different up to now, which is the reason why different indicators are presented.

The indicators refer to the enabled effects with regard to the overall investment volumes of the supported projects.

Basis for the calculation:

- For the sub-category “Remediation of contaminated sites funding according to the Environmental Subsidy Act”: A standardised collection of input data is done in the course of the project application and evaluation and a standardised national methodology is applied by the operational agency for the annual reportings according to the Environmental Subsidies Act of the Republic of Austria.
- For the sub-category “Remediation of contaminated sites: Initial & supplementary investigations, analysis, risk assessment, enforcement and processing”: A standardised collection and calculation of input data is done by the responsible institution for the annual reporting on the status of the remediation of contaminated sites within the framework of the Austrian Act on the Remediation of Contaminated Sites (ALSAG).
- For the sub-category “Remediation of contaminated sites processing according to § 18 ALSAG” a standardised collection of input data is done by the responsible body (Ministry) and by the processing agency.

Estimates for indicators are based on real data for approved projects in the respective year. Since there is a time lag between the funding approved and the funding paid out, the impact of the funding paid out has been estimated based on the reported impact per Euro of funding approved for the same types or comparable types of projects and infrastructure.

As a consequence of the time lag, the reported figures are not directly comparable to those of other publications addressing the respective funding instruments, in which impacts are usually reported with reference to the year of approval.

Aggregated data were provided by the agencies responsible for the processing of the funding and by the responsible body (Ministry). The quality assurance of this data is based on a multi-stage approach, in which audits are carried out at specific intervals by a number of institutions (responsible funding institution, Ministry/Auditor, Parliament, Court of Auditors).

7.8 Climate change adaptation

Climate Change Adaptation Model Regions

Input data and indicators were partly taken from published information of the Climate and Energy Fund, the Environment Agency Austria (EAA) and the Federal Ministry for Climate Action, Environment, Energy, Mobility, Innovation and Technology (BMK). Additional data and information was provided by experts of the above mentioned institutions and by institutions involved in the operational processing of the funding on an aggregated level.

- A standardised collection of input data is done by the operational agency in the course of the project application and evaluation.
- The quality assurance of this data is based on a multi-stage approach, in which audits are carried out at specific intervals by a number of institutions (responsible funding institution, Ministry/Auditor, Parliament, Court of Auditors).

The presented indicators refer to the enabled effects with regard to the overall investment volumes of the supported projects.

The analyses and the methodological approach were prepared specifically for the purpose of the Green Investor Report and cannot be applied one-to-one to those of other publications addressing the respective funding vehicles due to the different scope.

Flood protection

Input data and indicators were partly taken from published information of the Federal Ministry of Agriculture, Forestry, Regions and Water Management (BML), additional data were provided by the institution involved in the operational processing of the funding on an aggregated level. Moreover, selected data were taken from published reports (see chapter 8).

The presented indicators are based on real data for approved projects in the respective year.

- A standardised collection of input data is done by the operational agency in the course of the project application and evaluation and a standardised national methodology is applied

for the annual reportings for the funding according to the Austrian Water Construction Funding Act (Wasserbautenförderungsgesetz).

- The quality assurance of this data is based on a multi-stage approach, in which audits are carried out at specific intervals by a number of institutions (responsible funding institution, Ministry/Auditor, Parliament, Court of Auditors).

Estimates for indicators are based on real data for approved projects in the respective year. Since there is a time lag between the funding approved and the funding paid out, the impact of the funding paid out has been estimated based on the reported impact per Euro of funding approved for the same types or comparable types of projects and infrastructure.

As a consequence of the time lag, the reported figures are not directly comparable to those of other publications addressing the respective funding instruments, in which impacts are usually reported with reference to the year of approval.

The presented indicators refer to the enabled effects with regard to the overall investment volumes of the supported projects.

7.9 Research, development and innovation

RDI project funding

As RDI projects have a key enabling function but do not themselves have a direct environmental impact, the number of funded projects is used as a performance indicator in this category. According to its main research purpose, each project was assigned to the appropriate UoP category. Input data for the categorisation of the allocated amounts according to the UoP categories of the Austrian Green Bond Framework were provided by the Austrian Research Promotion Agency (FFG), which is responsible for processing the funding on behalf of the Federal Ministry for Climate Action, Environment, Energy, Mobility, Innovation and Technology (BMK), the Federal Ministry for Labour and Economy (BMAW), the Federal Ministry of Agriculture, Forestry, Regions and Water Management (BML), the Austrian Climate and Energy Fund and by the operational agency KPC.

Global budget for research infrastructures and fundamental research

Fundamental research activities and research infrastructures are having a key enabling function and leveraging effect, but do not themselves have a direct environmental impact. Therefore, selected KPIs as published in the latest available “Intellectual capital report” (Wissensbilanz)¹⁰⁶ are used as representative proxy figures.

¹⁰⁶ [BOKU Wissensbilanz 2023](#)

8 Literature

The following sources were used for the compilation of the section **5.1 Clean transportation**:

- Umweltbundesamt (2023): Klimaschutzbericht 2023.
<https://www.umweltbundesamt.at/fileadmin/site/publikationen/rep0871.pdf>
- Federal Railway Act. Federal Law Gazette Nr. 825/1992.
<https://www.ris.bka.gv.at/GeltendeFassung.wxe?Abfrage=Bundesnormen&Gesetzesnummer=10007278>
- ÖBB Holding AG (2023): Geschäftsbericht 2023:
<https://presse.oebb.at/de/publikationen/geschaeftsbericht-2023>
- ÖBB Holding AG (202): Geschäftsbericht 2022.
<https://presse.oebb.at/de/publikationen/geschaeftsbericht-2022>
- BMK (2022): Investitionsoffensive Privatbahninfrastruktur 9. MIP. Eine Umsetzungsstrategie des Mobilitätsmasterplans 2030 für den Ausbau des ÖV.
Online: https://www.bmk.gv.at/dam/jcr:80142791-33c1-4026-a181-ffc341a23598/Investitionsoffensive-Privatbahninfrastruktur-9MIP_UA.pdf
- Schienen-Control (2018 + 2022): Jahresbericht 2018+2022.
<https://www.schienencontrol.gv.at/de/publikationen.html>
- Infas (2023): KlimaTicket-Report 2022, Bonn.
<https://www.bmk.gv.at/themen/mobilitaet/1-2-3-ticket/publikationen/klimaticket-report-2022.html>

The following sources were used for the compilation of the section **5.2 Renewable energy**:

- BMK (2023): Federal Environmental Investments. Climate and Environmental Protection Measures 2022.
https://www.umweltfoerderung.at/fileadmin/user_upload/public_consulting/Umweltinvestitionen_des_Bundes_Klima_und_Umweltschutzmassnahmen_2022.pdf

- BMK (2022): Austrian National Forest Inventory of BFW shows increase in broadleaf and mixed forests and biodiversity.
<https://info.bml.gv.at/themen/wald/wald-in-oesterreich/wald-und-zahlen/waldinventur-2022.html>
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- Sonderrichtlinie der Bundesministerin für Landwirtschaft, Regionen und Tourismus zur Gewährung von Zahlungen für aus naturbedingten oder anderen spezifischen Gründen benachteiligte Gebiete im Rahmen des Österreichischen Programms für ländliche Entwicklung 2014 – 2020 "Sonderrichtlinie Ausgleichszulage (AZ)" (BMLRT 2015)

- Sonderrichtlinie des Bundesministers für Land- und Forstwirtschaft, Regionen und Wasserwirtschaft zur Gewährung von Zahlungen für aus naturbedingten oder anderen spezifischen Gründen benachteiligte Gebiete; 2023-0.547.939 (BML/Ausgleichszulage (AZ) 2023)
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- Bewertung der Wirkung relevanter LE Maßnahmen auf Heuschrecken und Tagfalter als Indikatorarten für Biodiversität (Holzer et al, 2019)

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