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

Austria's
FIRST BIENNIAL TRANSPARENCY REPORT

under the United Nations Framework Convention on Climate Change

and the Paris Agreement.

Vienna, 2024

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Legend

Text from the MPGs

Common text in the BTRs of EU Member States.

I National inventory report of anthropogenic emissions by sources and removals by sinks of greenhouse gases

The National Inventory Report (NID and CRT) has been submitted separately and is available on the UNFCCC website.

II Information necessary to track progress made in implementing and achieving nationally determined contributions under Article 4 of the Paris Agreement

II.A National circumstances and institutional arrangements

59. Each Party shall describe its national circumstances relevant to progress made in implementing and achieving its NDC under Article 4 of the Paris Agreement, including: (a) Government structure; (b) Population profile; (c) Geographical profile; (d) Economic profile; (e) Climate profile; (f) Sector details.

60. Each Party shall provide information on how its national circumstances affect GHG emissions and removals over time.

II.A.1 Government structure

- State structure: The federal state comprises nine federal provinces. Government responsibilities are shared by three levels of territorial authority, the federation ("Bund"), the nine federal provinces ("Länder") and the local authorities ("Gemeinden", municipalities).
- Authorities: Head of the Austrian state is the federal president („Bundespräsident"), who is directly elected by the people and represents the Republic of Austria internationally. He appoints the federal chancellor („Bundeskanzler"), who is the head of the Federal Government and, at the suggestion of the Bundeskanzler, the federal ministers. The "Nationalrat" and the "Bundesrat" are the two houses of Parliament, the main legislative body. The Nationalrat is elected every five years on the basis of an electoral system of proportional representation; the members of the Bundesrat are nominated by the parliaments of the provinces, the "Landtage". Every federal province ("Land") has its own regional government ("Landesregierung") headed by the provincial governor ("Landeshauptmann"); the members of the Länder governments corresponding to the federal ministers are the "Landesräte".
- Competences: Legislative and executive competences are distributed between federation and federal provinces based on the Federal Constitution Act. Whenever a

national approach is required but the federal government does not have the authority of policy making the parties involved may conclude a treaty of state ("Staatsvertrag") according to Art. 15a of the Federal Constitution Act in which they agree to undertake certain actions, jointly or separately.

- EU membership: Austria has become a Member State of the European Union in 1995. Part of the decisions and legislation in, a. o. the areas of climate change, energy, transport and agriculture, are made at EU level.
- "social partnership": A characteristic of Austria's political structure is the so-called "social partnership", a system of co-operation and co-ordination of interest between different interest groups, especially employers and employees. Several national federations are key players in the system, like the Federal Chamber of Labour, the Austrian Economic Chamber, the Austrian Chambers of Agriculture and the Austrian Trade Union Federation. The umbrella federations of the social partners also have influence as regards political opinion forming and decision-making.

II.A.2 Population profile

- Total permanent population: 9.13 million inhabitants 2023; +1.45million (+19 %) since 1990, due to immigration and increasing life expectancy. Age distribution in 2023 shows about 60 % with age between 20 and 64 years, about 20 % each with age below 20 years and with more than 64 years. Population is ageing, as in 1990 only 15 % were older than 64 years.
- Population projection: Increase to 9.4 million in 2030 and 9.7 million in 2040; the share of inhabitants older than 64 years is expected to increase to 27 % in 2040. Future trends of Austrian population growth and age structure will be primarily determined by immigration policies.
- Households: 4.12 million in 2023; +1.21 million since 1990 – the 41 % increase is two times higher than increase of population. The share of single person households is 38 % in 2023 and has increased from 28 % in 1990.
- Population density: Average density 107 inhabitants/km² total area or 276 inhabitants/km² settlement area.
- Increase in population and number of households is an important driver for residential energy demand.

II.A.3 Geographical profile

- Location: Southern central Europe, between 49°01' and 46°22' north and from 9°32' to 17°10' east, covering part of the eastern Alps and the Danube region. Land-locked and has common borders with eight other countries. Due to its situation in the centre of Europe, Austria is quite exposed to activities of its neighbouring countries, e. g. to

cross-border air pollution and to transit traffic, the latter having direct influence on emissions from transport.

- Landscape: Total surface area 83,858 km² with a share of 38.8 % settlement area. The landscape falls into five main sections: The dominating Eastern Alps (63 % of total area), the Alpine and Carpathian foothills (11 %), the eastern foreland which is part of the low-lying Pannonic plains (11 %), the Vienna basin (4 %) and the Granite and Gneiss Highland north of the Danube which is part of the Bohemian massif (10 %).
- Orography: About 70 % of Austria's surface is situated higher than 500 m above sea level (a.s.l.), 40 % higher than 1000 m; the landscape shows a very distinct orographic structure. Given the fact that ecosystems in mountainous regions are highly sensitive to changes, it is obvious that large parts of Austria are highly vulnerable to climatic changes. Due to the mountainous orography, only 37% of the national territory are permanently inhabitable.

II.A.4 Economic profile

- Austria has the characteristics of a small open economy; export and imports of goods are at a comparable level, the balance of trade in services shows high surplus. Export quota (goods and services) was more than half of GDP during the last years; it has considerably increased from 34% in 1995.
- Austria's main trading partners are within the EU (about two third of imports and exports), most important is neighbour Germany (about one third of total imports/exports).
- Economic performance: GDP at current prices was € 478 billion in 2023, GDP per capita was € 52,359 in 2023. Since 1995 GDP (at real prices) has increased by more than half.
- Sectors: Tertiary sector had highest share (69.2 %) in gross value added (GVA) in 2023, the secondary sector held 29.4% with a continuously decreasing trend (32.1 % in 1995, 30.5 % in 2005), and the primary sector has currently a share of just 1.5 %.
- GVA of manufacturing was dominated by manufacturing of metals and metal products, followed by manufacturing of electronic and electric equipment, of machinery and of chemical and pharmaceutical products; these activities account for 55 % of the GVA of manufacturing.
- Tourism: Relevant economic activity for Austria, responsible for 7 to 8 % of GDP (direct and indirect effects) and 6 % of employment (pre-pandemic data).

II.A.5 Climate profile

- Climatic zone: Central European transitional climatic zone; climate is crucially influenced by the Alps, which are situated in a transitional area of the Mediterranean, the Atlantic Ocean and continental Europe. As Austria is a country with a highly

structured relief, a lot of small-scale climatic processes occur caused by orographic conditions, but in general Austria can be divided into three climatic zones:
  - The eastern part shows a continental Pannonian climate (mean temperature for July usually above 19°C, annual rainfall often less than 800 mm),
  - The central Alpine region has the characteristic features of the Alpine Climate (high precipitation, short summers, long winters).
  - The remaining part of the country belongs to the transitional central European climatic zone, which is characterised by a wet and temperate climate (mean temperature for July 14–19°C, annual precipitation 700–2000 mm, depending on location, exposure and altitude).
- Mean values (period 1991–2020): Daily mean temperature in Vienna (eastern Austria, 200 m a.s.l.) in January is 0.7°C and in July 21.7°C, the number of days per year with minimum temperature below 0°C is 71. In alpine regions temperatures can become considerably lower, e.g. in St. Jakob at 1,400 m a.s.l. daily mean temperature in January is -7.5°C and in July 13.2°C, the number of days per year with minimum temperature below 0°C is 197. Space heating is required in buildings throughout the winter season (partly from autumn to spring – depending on altitude and year-to-year variations in temperature). Winter temperatures are an important driver for residential energy consumption – about one fourth of final energy consumption in Austria is used for space heating (see also Section III.A.6). The use of air conditioning in summer is increasing.

II.A.6 Sector details – Energy

- Gross energy consumption 2022: 1/3 share of renewables in energy supply, but still 1/3 share of oil products and 1/5 of gas; per capita consumption 151 GJ and per GDP consumption 3.6 MJ/€.
- Gross energy consumption trend: Increase by almost 1/3 since 1990 (increase until 2005, stagnation since then); consumption of renewables doubled, due to a more than threefold increase of other renewables apart from hydro power;
- Final energy consumption 2022: Oil products at the top with slightly more than 1/3 share, followed by electricity with 1/5 and gas and renewables with 1/6 each, coal not relevant any longer. Dominating sector is transport with about 1/3 share, followed by industry with slightly less than 1/3 and households with about 1/4.
- Final energy consumption trend: Increase by 2/5 since 1990 (increase until 2005, stagnation since then); all energy sources but coal show an increase since 1990, consumption of renewables has doubled; consumption of oil products has fallen by 1/4 since 2005. Consumption of the transport sector has increased by 3/5, of industry by half, moderate increase in the household sector with diverging trends for individual energy sources (decrease coal and oil, increase renewables, electricity, gas and district heating).

Table II.A.1: Gross energy consumption 1990–2022 in PJ (Data: Statistics Austria)

	1990	1995	2000	2005	2010	2015	2022
Coal	172	145	153	168	142	137	103
Oil	444	478	513	606	546	502	475
Gas	219	270	276	339	340	289	288
Hydro	113	133	151	134	138	134	125
Other Renew.	98	114	127	166	258	287	306
Electricity	-2	-9	-5	9	9	36	31
Waste	8	9	11	17	26	28	29
Total	1,052	1,140	1,225	1,438	1,458	1,412	1,357

Table II.A.2: Final energy consumption by fuels 1990–2022 in PJ (Data: Statistics Austria)

	1990	1995	2000	2005	2010	2015	2022
Coal	50	37	33	25	20	18	16
Oil	328	365	402	496	434	410	379
Gas	114	144	167	195	198	191	179
Electricity	152	166	183	207	216	220	229
District heating	25	35	42	51	66	70	70
Renewables	89	93	103	123	172	178	181
Waste	4	5	6	8	10	10	12
Total	**763**	**845**	**936**	**1,105**	**1,116**	**1,097**	**1,066**

Table II.A.3: Final energy consumption by sectors 1990–2022 in PJ (Data: Statistics Austria)

	1990	1995	2000	2005	2010	2015	2022
Industry	213	220	250	301	317	309	319
Transport	209	245	293	380	370	384	340
Households	244	264	261	276	296	278	278
Services	72	94	110	126	110	104	106
Agriculture	25	23	22	22	23	23	22
Total	**763**	**845**	**936**	**1,105**	**1,116**	**1,097**	**1,066**

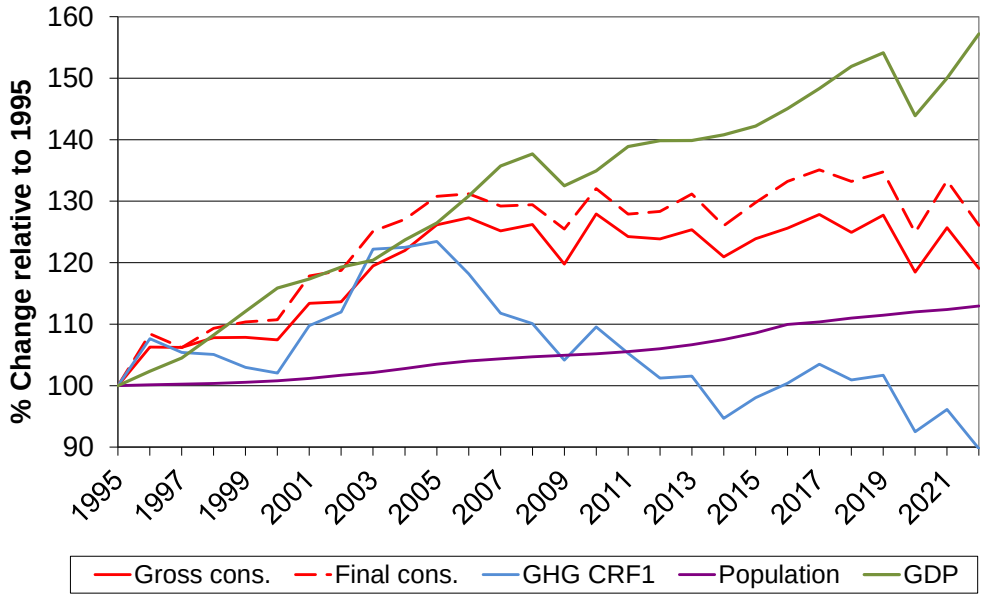

Figure II.A.1: Gross inland and final energy consumption, GHG emissions from CRF sector 1, population und GDP at constant prices 2015; development relative to 1995 values
(Data: Statistics Austria, Umweltbundesamt)

Energy industries – public electricity and heat production:

- accounts for 8 % of total GHG emissions and 12 % of emissions from fuel combustion in 2022;
- increasing demand is most important driver for emissions – electricity consumption has increased by almost half from 1990 to 2020, district heating demand has triplicated; decreasing electricity production from industrial autoproducers has been substituted by public plants;
- increasing use of biomass and fuel switch from coal to gas (improved fossil carbon intensity) as most important decreasing drivers have more than compensated the increase in demand; supported by efficiency improvement (incl. cogeneration) and growing electricity imports;
- see also Figure II.A.2.

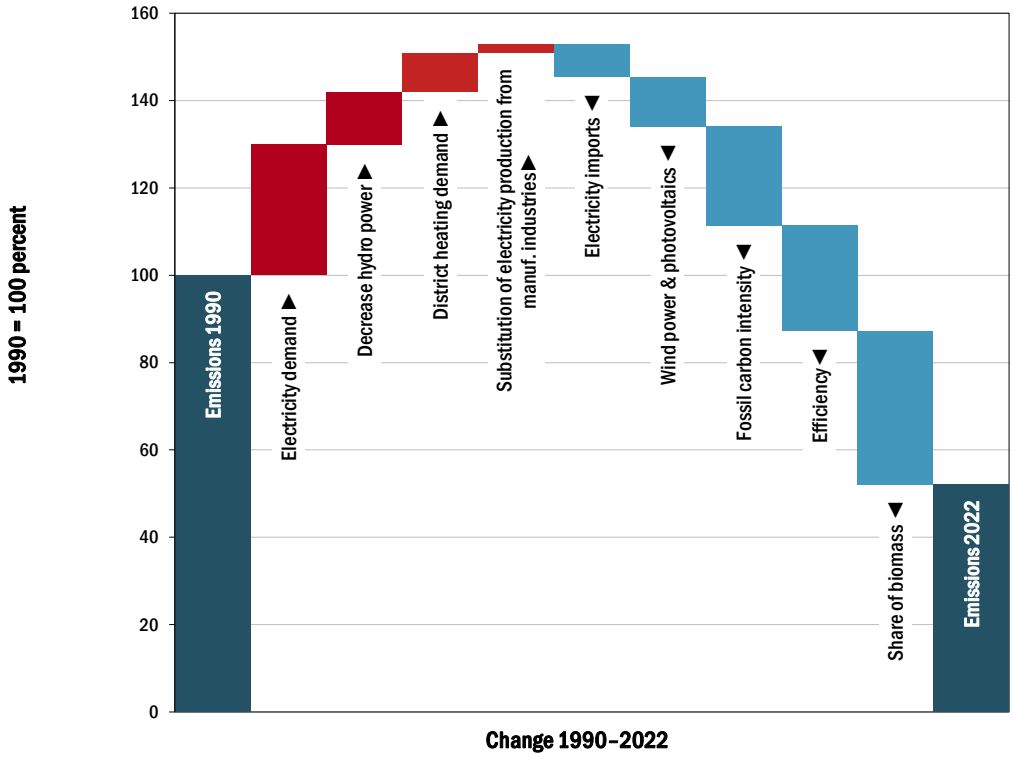

Figure II.A.2: Decomposition analysis of sectoral GHG emissions – public electricity and heat production

Energy industries – petroleum refining:

- one refinery in Austria, accounts for most of the rest of emissions from energy industries;
- emissions have been about 15 % higher than 1990 during the last decade, due to increase of the amount of crude oil processed and a change of product mix in favour of more energy intensive products;
- emission decrease in 2022 due to an incident.

II.A.7 Sector details – Industry

- Status 2022: About one fifth of Austria's economic productivity is derived from manufacturing industries, 6 % from construction. The most important branches of the production of goods are metals and metal products, electrical and electronic appliances, machinery and equipment, food and beverages, chemicals and pharmaceuticals, vehicles and transport equipment. Industry's energy and process emissions account for more than one third of total national GHG emissions. Compared to other industrialized countries basic materials industries still play a relevant role in Austria; iron and steel production accounts for about half of the GHG emissions of

manufacturing industries, production of cement and lime, pulp and paper and basic chemicals account for almost another third of emissions.

- Trend: Gross value added of manufacturing industries (at constant prices) almost doubled from 1996 to 2022, GVA of construction showed a decrease by more than one tenth. From 1990 to 2010 steel production increased by 3/4, whereas GHG emissions from iron- and steel production increased half as much;
- driving force for emission increase of iron and steel industry was the increase of steel production, weakened by reduced energy intensity of raw iron and steel production (efficiency improvement of plants, increasing input of scrap iron);
- driving force for emissions increase in the rest of manufacturing industry was the increase in value added, weakened by a shift to fossil fuels with lower carbon content (carbon intensity), reduced share of fuels in total energy consumption (i.e. increasing share of electricity from the public grid) and decreasing energy intensity of production (less energy demand per unit of value added).

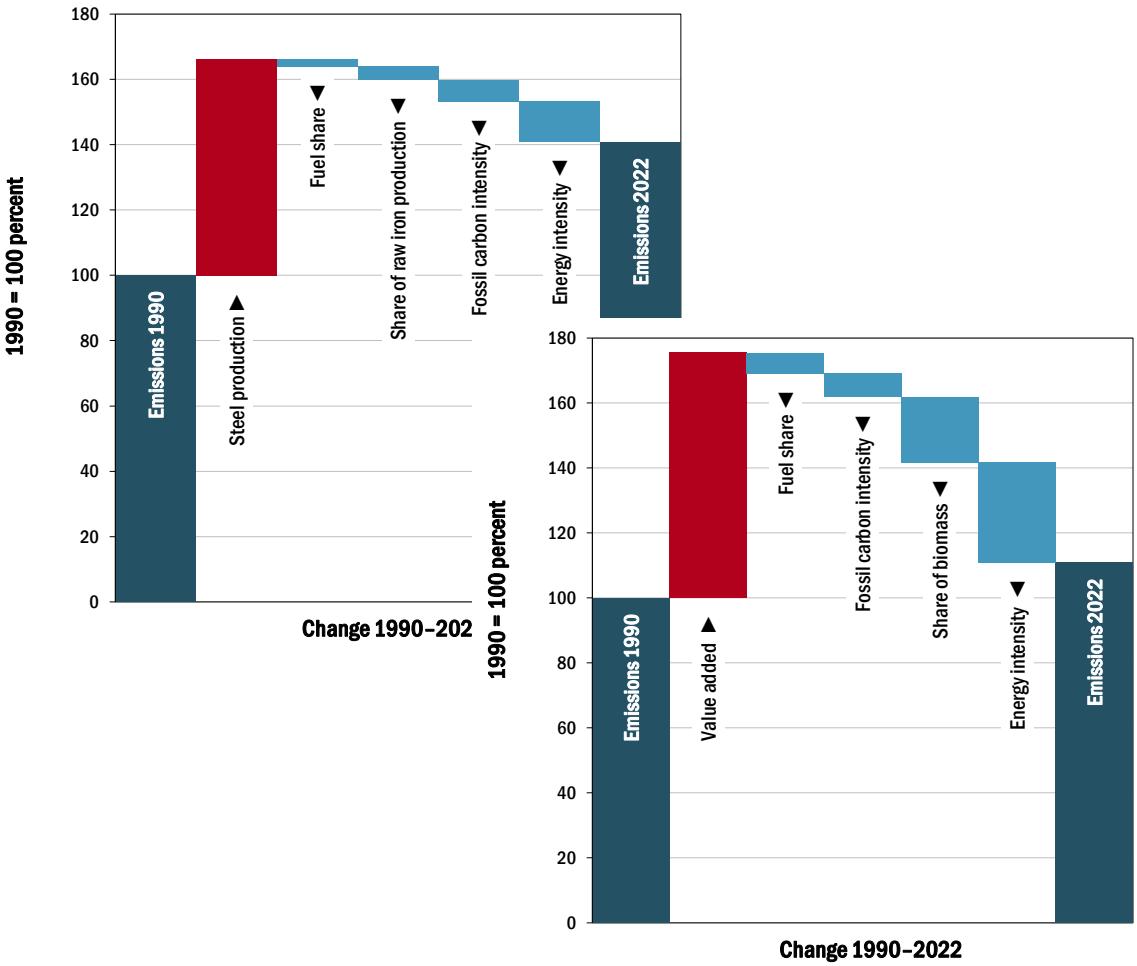

Figure II.A.3 Decomposition analysis of sectoral GHG emissions – iron and steel production (top) and rest of manufacturing industries (bottom)

II.A.8 Sector details – Transportation

- General: Transport accounts for one third of final energy demand and for more than one fourth of GHG emissions, with passenger cars causing almost 3/5 and light and heavy duty vehicles 2/5 of emissions. Strong increase of transport demand after 1990 results in increase of transport GHG emissions by half; mainly because Europe grew closer together (fall of the iron curtain, Austria's accession to the European Union, introduction of the common currency, accession of eastern European countries to the Union).
- Passenger transport 2022: 5.2 million registered passenger cars in Austria (1.3 cars per household, range from 0.8 in Vienna to 1.6 in Burgenland); with a share of 4 % hybrid cars and 2 % electric cars. New registrations of electric cars amounted to 16 % of all new registrations of cars. About 2/3 of passenger-km travelled by car, slightly more than 1/4 by public transport, no relevant share of aviation in inland travel.
- Passenger transport trend: Passenger-km travelled have increased by 1/3 since 1990, stock of passenger cars has grown by more than 4/5, no significant change of modal split in the last decades.
- Freight transport 2022: 87 billion ton-km in Austria, modal split dominated by road transport with 3/4 followed by rail with 1/4, shipping and aviation < 0.1 %; domestic transport, transit and import/export transport have comparable shares in road transport of about 1/3; vehicles registered in Austria account only for 1/3 of transport service (mainly domestic transport).
- Freight transport trend: Increase from 34 to 87 billion ton-km since 1990; moderate shift of modal split from rail to road transport in the early 1990ies and once again in the last years.
- Fuel sold in Austria and used abroad: GHG inventory shows a disproportionately high increase of GHG emissions from road transport after the mid 1990ies (compared to the inland transport demand) due to an increasing share of the fuel sold in Austria and used abroad ("fuel export in the vehicle tank"); reasons are on the one hand transit traffic on important routes for long-distance freight traffic crossing Austria and on the other hand increasing transport demand due to the integration of eastern neighbour states into the European economic area (transit as well as import/export traffic), and at the same time slightly lower fuel prices in Austria than in many neighbouring countries.

Table II.A.4: Passenger transport 1990– 2022– passenger-km on Austrian territory and modal split (Source: Umweltbundesamt)

	1990	1995	2000	2005	2010	2015	2022
Billion passenger-km	**76.7**	**86.0**	**92.9**	**97.9**	**99.5**	**106.5**	**102.6**
Passenger cars	70.0%	69.1%	69.7%	70.0%	68.7%	68.5%	68.0%
Motorcycles	1.2%	1.1%	1.3%	1.3%	1.6%	1.6%	1.6%
Public transport	24.6%	26.0%	25.5%	25.2%	26.4%	26.8%	26.4%
Walking & cycling	4.1%	3.6%	3.4%	3.2%	3.1%	2.9%	3.9%
Aviation	0.1%	0.1%	0.2%	0.2%	0.2%	0.1%	0.0%

Table II.A.5: Freight transport[1] 1990–2022 – ton-km on Austrian territory and modal split (Source: Umweltbundesamt)

	1990	1995	2000	2005	2010	2015	2020
Billion ton-km	**33,9**	**42,5**	**54,0**	**62,5**	**65,6**	**72,1**	**86,5**
Road	66%	71%	71%	72%	72%	72%	74%
Rail	34%	29%	28%	28%	28%	28%	26%

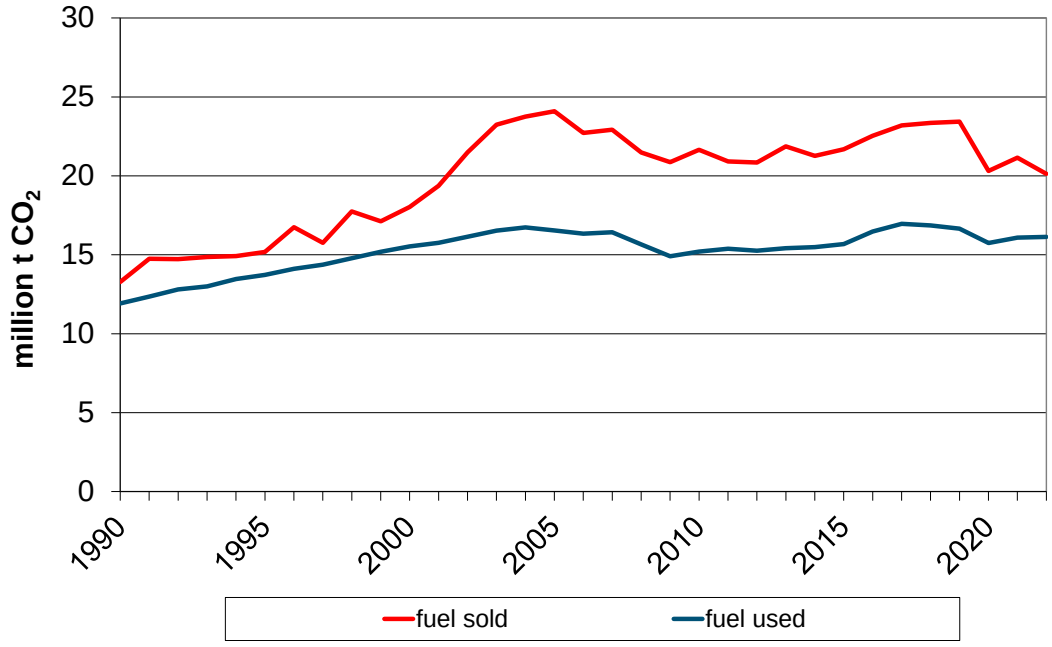

Fig II.A.4: GHG emissions of road transport – calculation based on fuel sales in Austria ("fuel sold") and on inland fuel use ("fuel used"). (Source: Umweltbundesamt)

[1] Net freight – without weight of lorries transported by rail (piggyback transport) and without weight of containers

- Driving forces for emission increase in passenger transport are increasing transport demand and fuel export in the vehicle tank, the emission increase has been slowed down by the compulsory blending of diesel and petrol with biofuels, by a decreasing share of road transport and by efficiency improvements (technical progress, occupancy rate, purchase and driving behaviour);
- driving forces for emission increase in freight transport are increasing transport demand and fuel export in the vehicle tank as well as a shift in modal split to road transport, the emission increase has been slowed down by the compulsory blending of diesel and petrol with biofuels and by efficiency improvements (mainly due to technical progress).

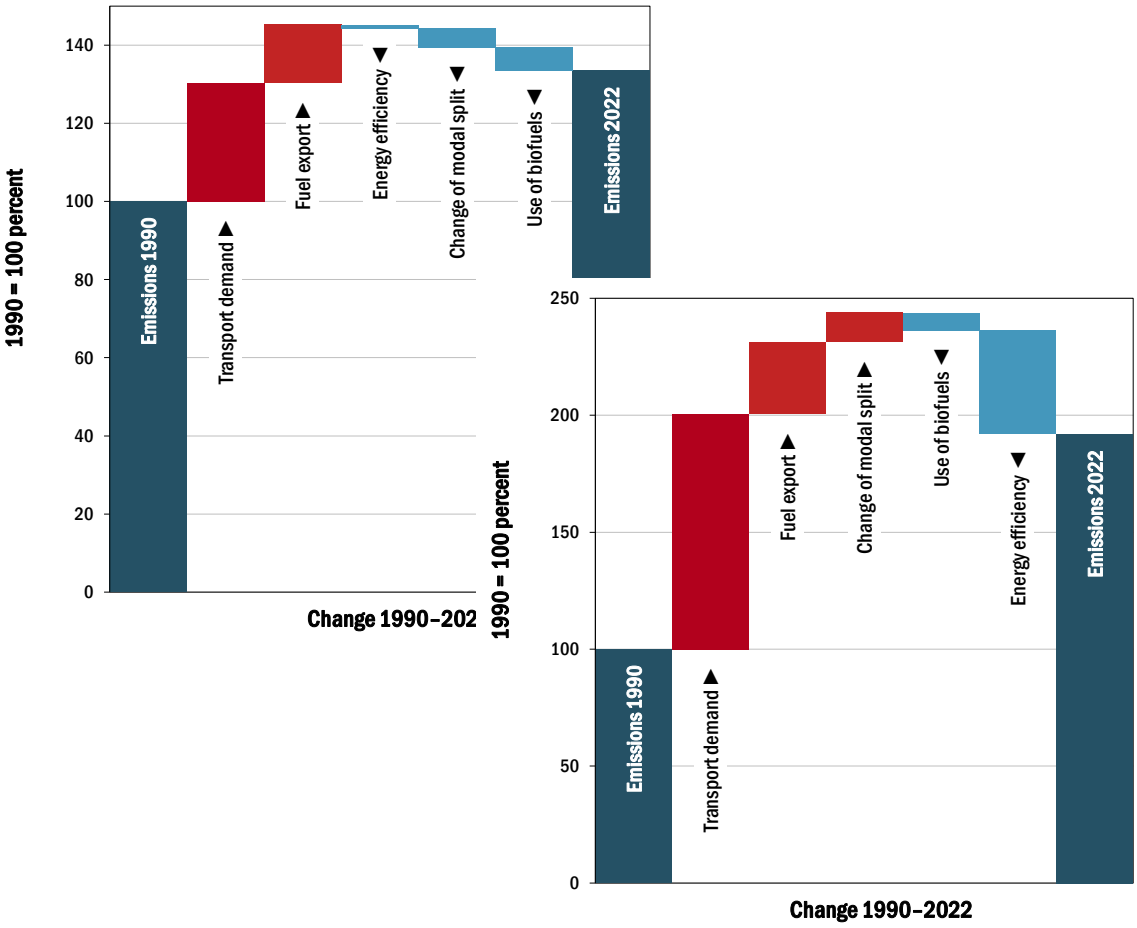

Figure II.A.5: Decomposition analysis of sectoral GHG emissions – passenger transport (top) and freight transport (bottom)

II.A.9 Sector details – Settlement structure and housing

- General: Land use planning is a competence of municipalities and federal provinces. At municipal level the local council is responsible for land use designation.
- Geographical distribution: About one fifth of the Austrian population lives in Vienna, the only city with a population exceeding one million, and about one third in the metropolitan region of Vienna; but more than half all Austrians live in municipalities with less than 10,000 inhabitants and especially in the northern and south-eastern parts of Austria there are rural municipalities with a quite low density of population and buildings (resulting in high share of single family homes and unfavourable conditions for public transport).
- Housing 2022: 4.07 million dwellings with principal residences, 2.2 persons per dwelling in average. More than 2/5 of the dwellings are located in buildings with only one or two dwellings, about one third in buildings with more than 10 dwellings; average useful floor space per dwelling was slightly below 130 m² for the former and slightly more than half of that value for the latter. More than 90 % of the dwellings are equipped with central heating (including single storey heating and district heating). One fifth of the dwellings was built before 1945, more than one third between 1945 and 1980 (when thermal efficiency was no priority), and almost one quarter is quite modern (built after 2000).
- Housing trend: Number of dwellings increased by more than 1/3 and useful floor space even by more than half, whereas population increased by 1/6 since 1990. The number of persons per dwelling has decreased (from 2.6 in 1990).

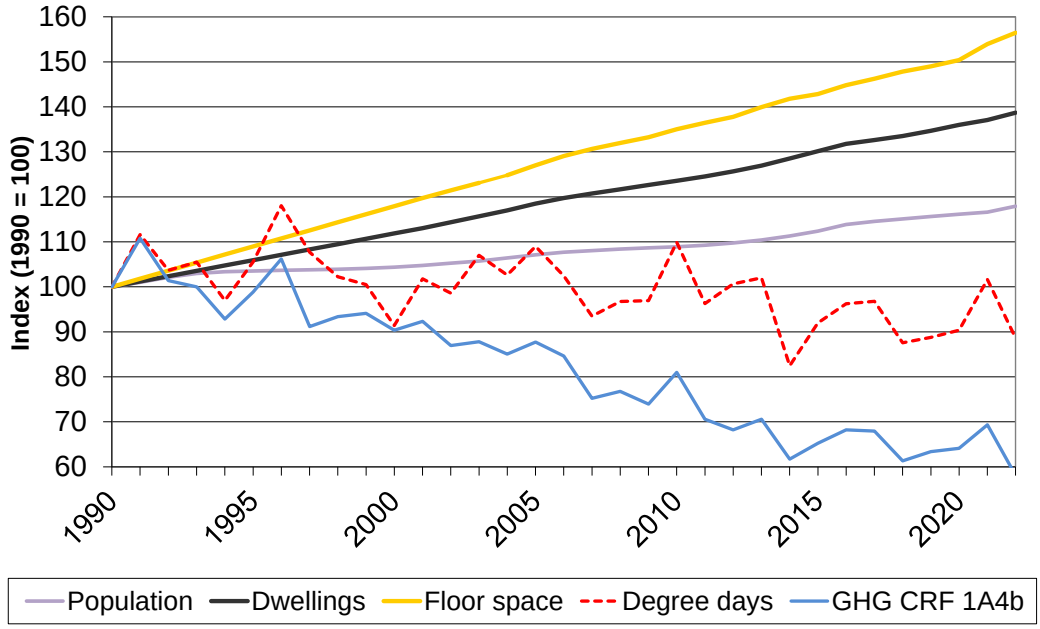

Fig. II.A.6: Development of population, number of dwellings (principal residences), floor space, heating degree days and GHG emissions from households 1990–2022 (Data: Statistics Austria, Umweltbundesamt)

- Emissions from space heating in the household sector would have increased by almost 2/5 due to the increase of dwellings and average floor space per dwelling;
- drivers for the reduction are the increased efficiency of buildings and heating systems (i.e. lower final energy demand per m² due to renovation of existing buildings and better thermal standards of new buildings), increased share of biomass and district heating in the final energy demand for heating; lower fossil carbon intensity (i.e. shift to gas), increased use of ambient heat (solar thermal and heat pumps) and an increasing share of electricity in final energy demand as well as a decrease of heating degree days.

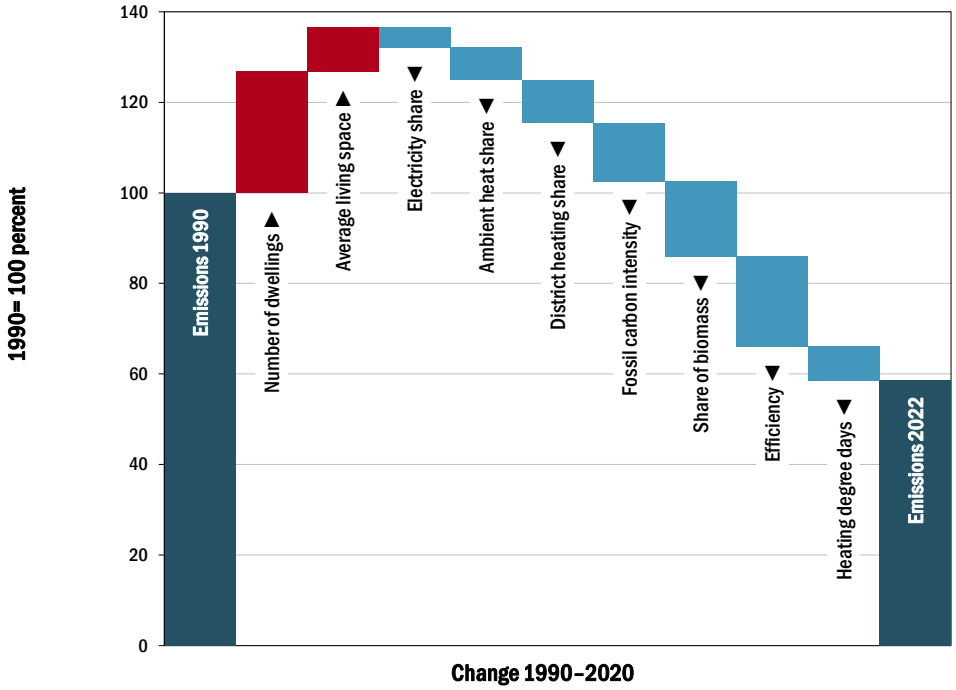

Figure II.A.7: Decomposition analysis of sectoral GHG emissions from households

II.A.10 Sector details – Agriculture and forestry

- General: 1.1 % share in GDP. About 1/3 of the Austrian territory is used for agriculture, extensive grassland production with cattle stocking dominates in the alpine regions, while arable farming is concentrated on the lowlands and basins and especially in the east of the country; overall grassland and arable land have comparable shares and other areas used in agriculture account only for about 3 %. Support for agricultural practices to reduce environmental and climate impacts of agriculture is granted through the agri-environmental programme ÖPUL, with a support of more than € 500 million annually for 2023 to 2027; in the past 4/5 of all agricultural holdings participated in the programme. Almost half of total area is forest land. Regulations for sustainable forestry have been laid down in the Forestry Act of

1975, whose predecessor dates back to 1852[2] and had harmonised preceding forestry orders of the various parts of the empire.

- Farm structure: Still small structured agriculture, but clear trend to increasing farm size – share of holdings with area below 10 ha has decreased from 60 % in 1990 to 38 % in 2020; holdings with area above 30 ha increasing (share and absolute numbers). Number of agricultural holdings was about 110,000 in 2020 and has decreased significantly throughout the last decades: -58 % since 1990 (holdings with land used for agriculture).
- Livestock: Cattle have a share of more than 3/5 of total livestock units, swine make up more than another quarter. Cattle stock has decreased by 14 % from 2000 to 2022, swine have decreased as well. 15 % of cattle are kept in farms with up to 20 head, 1/5 in farms with more than 100 head. Average milk yield of dairy cows has increased from 5.2 t/animal.year in 2000 to 7.3 in 2022 (+40 %) and total milk production has increased by more than one fifth; emission intensity of milk production has decreased.
- Forest structure: Coniferous trees make up about 3/5 of the forest area (3/4 of them spruce), steadily declining from more than 2/3 coniferous trees in the 1990s; deciduous trees about 1/4 with beech as the most abundant species (rest: shrub and clearance); about 1/3 of forest area has protective function against natural hazards;
- Forest ownership: number of holdings with forests was 137,000 in 2020, five sixth of the holdings have less than 20 ha forest and account for about one fifth of forest area (most of them holdings with forestry as well as agriculture); about one fifth of Austrian forests is publicly owned.
- Forest stock and stock change: Almost 1.2 billion solid cubic meter of standing timber in Austrian forests, less than 90 % of annual increment have been harvested throughout the last years; 16.8 million solid cubic meter wood (w/o bark) harvest in 2020, which is a slightly above the average of the last ten years; high volume of damaged wood throughout the last years (wind throw as a consequence of extreme weather events, bark beetle calamities).

Table II.A.6: Farm structure – number of holdings (with land used for agriculture) [1000]

Farm size [ha]	1990	2000	2010	2020
< 10	156.3	112.7	77.4	41.3
10 to < 30	80.3	65.5	49.7	40.7
30 to < 100	21.7	20.3	23.6	25.8
>= 100	3.3	2.9	2.8	2.4
Total [1000]	261.7	201.5	153.5	110.2

[2] https://alex.onb.ac.at/cgi-content/alex?aid=rgb&datum=1852&page=1139&size=45

- About 2/3 of GHG emissions from agriculture stem from cattle rearing.
- Main driving forces for increasing emissions from cattle rearing are increasing emissions per cattle and an increase of milk production, which have been more than compensated by the decreasing cattle stock.

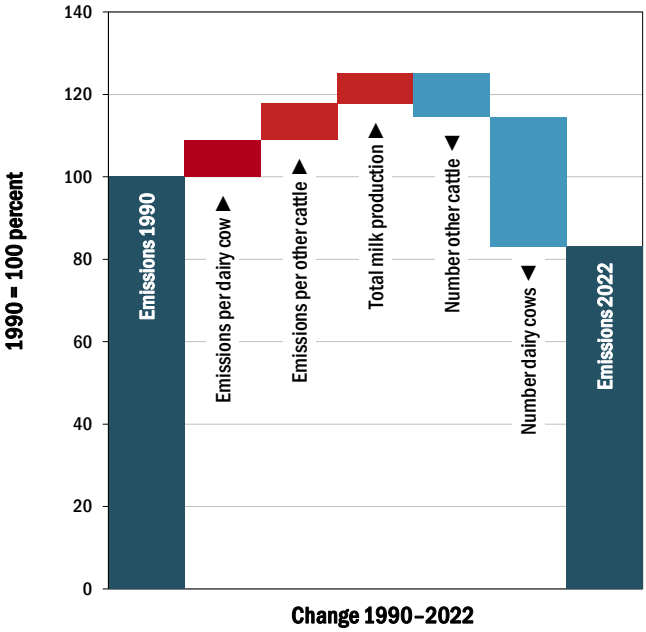

Figure II.A.8: Decomposition analysis of sectoral GHG emissions from cattle.

II.A.11 Sector details – Waste

- General: Total amount of waste generated in Austria in 2022 was about 74 million tonnes; excavation material accounted for 3/5 of that amount, waste from construction for another 16 %. There was a considerable increase by half since 2000, which is mainly due to the increase of excavation material (because of large railway tunnel construction projects). Municipal waste made up 1/10 of total waste, other waste (from production, waste water treatment, medical waste etc.) had a comparable share.
- Municipal waste: Waste from households (6 % of total waste and about 500 kg waste per capita) and waste with similar composition from other sources. Almost half was secondary material (glass, paper, metal, …) and more than 1/5 organic waste; about 1/4 was residual waste. Secondary material und organic waste are collected and treated separately (recycling, composting/digestion). Residual waste is mostly incinerated; there is practically no deposition of untreated municipal waste in landfills any longer due to law and no input of reactive carbon, therefore CH_4 emissions from landfills result from material deposited before 2005.
- Treating of organic waste by composting and in biogas plants has increased since 1990, leading to some increase in emissions of CH4 and N2O from this subsector.

- Waste water treatment: Rate of connection to municipal sewage plants has increased from about 70 % of the population in 1990 to 96 % in 2022, leading to a strong decrease of CH_4 emissions from cesspits (by more than 4/5 compared to 1990) and an increase of N_2O emissions from wastewater treatment plants by 4/5 (also due to the population increase).

> 61. Each Party shall provide information on the institutional arrangements in place to track progress made in implementing and achieving its NDC under Article 4, including those used for tracking internationally transferred mitigation outcomes, if applicable, along with any changes in institutional arrangements since its most recent biennial transparency report.

II.A.12 Institutional arrangements to track progress

The EU's Regulation (EU) 2018/1999 on the Governance of the Energy Union and Climate Action ('Governance Regulation')[3] establishes a governance mechanism and specific arrangements to track the progress of the Union and its Member States towards the implementation and achievement of the EU's climate and energy targets and commitments under the UNFCCC and the Paris Agreement. These arrangements include the monitoring of GHG emissions and removals, the reporting of policies and measures, projections of GHG emissions and removals and progress on adaptation to climate change.

Under the Governance Regulation, the EU has established a Union Inventory System to ensure the timeliness, transparency, accuracy, consistency, comparability and completeness of the data reported by the EU and its Member States. This inventory system includes a quality assurance and quality control programme, procedures for setting emission estimates, and comprehensive reviews of national inventory data to enable the assessment of compliance towards climate goals.

Each EU Member State compiles its GHG inventory in accordance with the requirements of the Paris Agreement[4] and the relevant Intergovernmental Panel on Climate Change (IPCC) guidelines[5]. Inventory data on GHG emissions and removals, including information on methods, are submitted electronically using a reporting system managed by the

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[3] Regulation (EU) 2018/1999 on the Governance of the Energy Union and Climate Action, http://data.europa.eu/eli/reg/2018/1999/oj.

[4] Chapter II of the annex to decision 18/CMA.1, https://unfccc.int/documents/193408; and decision 5/CMA.3, https://unfccc.int/documents/460951.

[5] 2006 IPCC Guidelines for National Greenhouse Gas Inventories, https://www.ipcc-nggip.iges.or.jp/public/2006gl/; and on a voluntary basis: 2019 Refinement to the 2006 IPCC Guidelines for National Greenhouse Gas Inventories, https://www.ipcc.ch/report/2019-refinement-to-the-2006-ipcc-guidelines-for-national-greenhouse-gas-inventories/.

European Environment Agency (EEA). The submitted data are subject to quality control procedures and feed into the compilation of the GHG inventory of the EU. Net GHG emissions, calculated from emissions and removals reported in the GHG inventory of the EU, are the key information used for tracking progress towards the EU NDC target of a least –55% net emission reduction by 2030 compared to 1990.

Given the scope of the EU NDC related to international aviation and navigation, a specific share of international aviation and navigation emissions as reported in the GHG inventory data is calculated based on the Joint Research Centre's Integrated Database of the European Energy System (JRC-IDEES) [6].Details on the methodology applied to identify GHG emissions from international aviation and navigation in the scope of the EU NDC, which are added to the national totals from the EU GHG inventory, are given in Annex 2 to this BTR.

Under the Governance Regulation each Member State must report to the Commission biennially on the status of implementation of its integrated national energy and climate plans (NECPs). This process allows the Commission to ensure that the EU and the Member States remain on track to achieve the climate-neutrality objective and progress on adaptation. Under the Governance Regulation, Member States further operate national systems for policies and measures and projections and submit and report standardised information, which is subject to quality and completeness checks. Based on the submitted data, the EEA compiles projections of GHG emissions and removals for the EU. The EU-wide information is summarised annually in the Climate Action Progress Report[7] by the European Commission and in the 'Trends and projections' report by the EEA.[8] Both the Union and the national systems are subject to continuous improvements.

The national energy and climate plans (NECPs) were introduced by the Governance Regulation. For Member States, the NECP for 2021-2030 play a key role to enabling the tracking of progress towards the 2030 climate and energy targets. The update of the NECPs provides an opportunity for Member States to assess their progress, identify gaps and revise existing measures or plan new ones where needed. Member States were due to submit their final updated NECPs, taking account of the Commission's assessment and recommendations, by 30 June 2024.

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[6] European Commission, Joint Research Centre, Rózsai, M., Jaxa-Rozen, M., Salvucci, R., Sikora, P., Tattini, J. and Neuwahl, F., JRC-IDEES-2021: the Integrated Database of the European Energy System – Data update and technical documentation, Publications Office of the European Union, Luxembourg, 2024, https://publications.jrc.ec.europa.eu/repository/handle/JRC137809.

[7] Climate Action Progress Report 2024, https://climate.ec.europa.eu/document/download/d0671350-37f2-4bc4-88e8-088d0508fb03_en?filename=COM_2024_498_F1_REPORT_FROM_COMMISSION_EN_V4_P1_3729454.PDF

[8] Trends and Projections in Europe 2024, https://www.eea.europa.eu/en/analysis/publications/trends-and-projections-in-europe-2024

On national level, Environment Agency Austria is responsible for the preparation of the GHG inventory.) The agency is identified as the single national entity with overall responsibility for the national inventory by law. The responsibilities for the inventory planning, preparation and management are specified and are all allocated within the agency. The national greenhouse gas inventory is prepared by the inspection body for GHG inventories within the agency, an inspection body accredited according to the International Standard ISO 17020 General Criteria for the operation of various types of bodies performing inspections. The agency also annually publishes a report with sectoral details of emission trends and reasons for emission changes.

Austria's Climate Change Act sets the general framework for the evaluation and progress documentation of Austria's climate policies. A progress report has to be prepared by the Minister for Climate Action on an annual basis for presentation and discussion both in the National Climate Committee and the Parliament. Co-ordination of the preparation of the NECP and reporting under the Governance Regulation is task of the Federal Ministry for Climate Action.

62. Each Party shall provide information on legal, institutional, administrative and procedural arrangements for domestic implementation, monitoring, reporting, archiving of information and stakeholder engagement related to the implementation and achievement of its NDC under Article 4.

II.A.13 Arrangements for implementation, monitoring, reporting, archiving of information and stakeholder engagement

The EU and its Member States have set up a comprehensive system for the implementation of the EU climate change mitigation targets. The European Climate Law[9] sets the goal of climate neutrality by 2050 and the intermediate target of reducing net greenhouse gas emissions by at least 55% by 2030 compared to 1990 levels. These targets cover emissions and removals that are regulated in the Union law.

To ensure that the EU and its Member States achieve their target, the 2030 Climate and Energy Framework was put in place. The main policies of this framework are the EU Emissions Trading System (EU ETS)[10], which caps GHG emissions in energy, industry,

[9] Regulation (EU) 2021/1119 establishing the framework for achieving climate neutrality and amending Regulations (EC) No 401/2009 and (EU) 2018/1999 ('European Climate Law'), http://data.europa.eu/eli/reg/2021/1119/oj.

[10] This refers to the ETS1, i.e. the Emission Trading System for stationary sources (Chapter III of the ETS Directive) and for aviation and maritime transport (chapter II of the ETS Directive). Note that the

aviation and maritime transport; the LULUCF Regulation which includes national net removal targets for the LULUCF sector; and the Effort Sharing Regulation (ESR) which establishes national reduction targets for GHG emissions not covered by the EU ETS or the LULUCF Regulation, i.e. domestic transport (excluding aviation), buildings, agriculture, small industry and waste. The implementation of the ESR is supported by additional sectoral policies and measures (details can be found in this BTR in the chapter on mitigation policies and measures). The legislative acts under the 2030 Climate and Energy Framework require the European Commission and the EU Member States to set up the institutional arrangements for implementing the specific policies and measures.

The revised EU ETS Directive increases the level of ambition in the existing system from 43% to 62% emissions reductions by 2030, compared to 2005 levels and extend the system to also apply to international maritime transport. A separate carbon pricing system will apply to fuel combustion in road transport and buildings and small-emitting sectors (ETS2) with a 42% emission reduction target compared to 2005 across the sectors covered. The amended Effort Sharing Regulation (ESR) increased, for the sectors that it covers, the EU-level GHG emission reduction target from 29% to 40% by 2030, compared to 2005, which translates in updated 2030 targets for each Member State. The new LULUCF Regulation sets an overall EU-level objective of 310 Mt CO_2 equivalent of net removals in the LULUCF sector in 2030.

The ESR sets national targets for the reduction of GHG emissions in the Member States by 2030. Member States are also subject to gradually decreasing annual emission limits for each year from 2021 to 2030. The annual progress towards the national targets under the Effort Sharing Legislation is assessed by comparing GHG emission levels from the sectors covered by the ESR with the relevant annual emission allocations under the legislation (AEAs). To achieve compliance under the ESR, Member States are permitted to use flexibility options to a certain extent.

Progress in the implementation of these policies and measures is monitored under the Governance Regulation. Relevant information which is reported regularly and archived at the EEA include GHG inventories, approximated GHG inventories for the previous year, information on policies and measures, projections, and progress towards the implementation of integrated National Energy and Climate Plans (NECP). This information helps the EU and its Member States to correct their course if progress towards the targets of the 2030 Climate and Energy Framework is behind schedule. As an example, the European Commission assesses the drafts of new or updated NECPs and provides recommendations for improved planning and implementation. In addition, the reported

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'Emissions trading system for buildings, road transport and additional sectors' (ETS2), added in 2023 as Chapter IVa of the ETS Directive, forms an instrument under the Effort Sharing Regulation (ESR).

information is subject to quality checks, and the GHG inventories reported by EU Member States are subject to comprehensive reviews in 2025, 2027 and 2032.[11]

All EU legislation, including the legislation under the 2030 Climate and Energy Framework, is subject to a stakeholder engagement process. So-called 'better regulation tools' ensure that policy is based on evidence and the best available practice[12]. During the preparation of legislative proposals, the European Commission invites citizens, businesses and stakeholder organisations to provide their views on the subject of the new legislation. These comments are documented in a dedicated portal[13], and the European Commission reports on how it takes these comments into account in the development of the legislative proposals. Furthermore, the Governance Regulation sets requirements for Member States to ensure that the public is given early and effective opportunities to participate in the preparation of the NECPs.

Policy making and implementation in Austria is shaped by Austria's federal structure. Decisions related to policies and measures can be taken at different levels: Legislative measures at the Federation level and the level of the federal provinces ("Länder"), administrative measures at both levels, and decision-making of districts and municipalities. Due to the membership in the European Union an additional level of legislation exists since 1995. The Federal Constitution Act contains detailed provisions on the distribution of legislative and executive power between the Federation and the federal provinces.

Responsibility for important policies related to GHG emissions and climate change, and therefore relevant for Austria's contribution to the achievement if the joint EU NDC, is shared among the different levels as well. , e. g.

- Federal jurisdiction for issues of taxation, industry and trade, crisis management for energy, highway and railway infrastructure and motor vehicles;
- Jurisdiction of the federal provinces for buildings construction, small-scale heating systems, regional land-use planning, road construction at regional level;
- Shared jurisdiction of Federation and federal provinces for energy policy, waste management, agriculture;
- Jurisdiction of municipalities for local land-use planning, public transport, local road construction;
- Private business affairs of Federation, Länder and municipalities (e.g. procurement, public buildings) are managed independently.

[11] Consolidated text (2023) of Regulation (EU) 2018/1999 on the Governance of the Energy Union and Climate Action, https://eur-lex.europa.eu/eli/reg/2018/1999/2023-11-20.

[12] Decision-making process, https://ec.europa.eu/info/strategy/decision-making-process/how-decisions-are-made_en.

[13] Have your say – Public consultation and feedback, https://ec.europa.eu/info/law/better-regulation/have-your-say_en.

There are institutional arrangements specific for climate change issues, covering also Austria's contribution to the EU climate change mitigation targets:

- At the level of the Federation, the Minister for Climate Action, Environment, Energy, Mobility, Innovation and Technology is responsible for issues of climate change as well as for the important sectors energy and transport (responsibilities had been distributed over different ministries before). The responsibilities are stipulated by the *Federal Ministries Act*.
- The *Climate Change Act* has established the National Climate Change Committee, which supports the co-ordination of climate change related measures. It comprises high level representatives of the federal ministries involved in climate change and the Länder, of the "Social Partners", as well as representatives from science, energy and industry interest groups, environmental NGOs and the political parties represented in the first chamber of the Parliament.
- For the development of plans and strategies like the National Energy and Climate Plan (NECP) temporary committees and working groups have been established.

Legislative arrangements for the implementation of national measures to mitigate climate change are quite different, as there is no uniform legal basis in this area. Responsibility is spread among federal ministries as well as between the Federation, provinces and municipalities. The legal basis for the individual instruments ranges from legislation for public subsidies or taxation to market regulation to technical regulations of motor vehicles or buildings. Administrative procedures for implementation and monitoring are different for the diversity of measures.

Archiving of information related to the GHG inventory and its preparation is task of Environment Agency Austria (cf. Section II.A.12). Information related to legislation and administration is filed by the responsible authorities.

Regarding stakeholder involvement: Draft legal acts are in general published for comment and everyone may submit comments or suggestions; relevant institutions and interest groups are usually explicitly invited to comment. As far as the development of plans and programmes is concerned, stakeholders get usually involved during their development. The draft National Energy and Climate Plan was subject to public consultation before it was adopted by the Federal Government. The development of the Long Term Strategy 2050 in 2019 was based on a public consultation regarding targets and areas of action; three stakeholder workshops (with the participation of representatives of a. o. local governments, social partners, science and the civil society) were part of the development.

63. In reporting the information referred to in paragraphs 59–62 above, a Party may reference previously reported information.

Not applicable.

II.B Description of a Party's nationally determined contribution under Article 4 of the Paris Agreement, including updates

64. Each Party shall provide a description of its NDC under Article 4, against which progress will be tracked. The information provided shall include the following, as applicable, including any updates to information previously provided:

(a) Target(s) and description, including target type(s) (e.g. economy-wide absolute emission reduction, emission intensity reduction, emission reduction below a projected baseline, mitigation co-benefits of adaptation actions or economic diversification plans, policies and measures, and other);

(b) Target year(s) or period(s), and whether they are single-year or multi-year target(s);

(c) Reference point(s), level(s), baseline(s), base year(s) or starting point(s), and their respective value(s);

(d) Time frame(s) and/or periods for implementation;

(e) Scope and coverage, including, as relevant, sectors, categories, activities, sources and sinks, pools and gases;

(f) Intention to use cooperative approaches that involve the use of internationally transferred mitigation outcomes under Article 6 towards NDCs under Article 4 of the Paris Agreement;

(g) Any updates or clarifications of previously reported information (e.g. recalculation of previously reported inventory data, or greater detail on methodologies or use of cooperative approaches).

Under their updated NDC[14] the EU and its Member States, acting jointly, are committed to a legally binding target of a domestic reduction of net greenhouse gas emissions by at least 55% compared to 1990 by 2030. The term 'domestic' means without the use of international credits.

The NDC consists of a single-year target, and the target type is 'economy-wide absolute emission reduction'. The scope of the NDC covers the 27 Member States of the EU.

[14] The update of the nationally determined contribution of the European Union and its Member States, https://unfccc.int/sites/default/files/NDC/2023-10/ES-2023-10-17%20EU%20submission%20NDC%20update.pdf.

The 17 October 2023 updated NDC scope is supplemented by additional information to clarify the precise amount of international aviation and maritime emissions which are covered under the EU NDC. Details on the EU NDC can be found in Table II.B.1 and in the annex.

Table II.B.1: Description of the NDC of the EU

Information	**Description**
Target and description	Economy-wide net domestic reduction of at least 55% in greenhouse gas emissions by 2030 compared to 1990. The term 'domestic' means without the use of international credits.
Target type	Economy-wide absolute emission reduction.
Target year	2030 (single-year target)
Base year	1990
Base year value	Net greenhouse gas emissions level in 1990: 4 699 405 kt CO_2eq.
Implementation period	2021-2030
Geographical scope	EU Member States (Belgium, Bulgaria, Czechia, Denmark, Germany, Estonia, Ireland, Greece, Spain, France, Croatia, Italy, Cyprus, Latvia, Lithuania, Luxembourg, Hungary, Malta, the Netherlands, Austria, Poland, Portugal, Romania, Slovenia, Slovakia, Finland, Sweden) including EU outermost regions (Guadeloupe, French Guiana, Martinique, Mayotte, Reunion, Saint Martin (France), Canary Islands (Spain), Azores and Madeira (Portugal)).
Sectors	Sectors as contained in Annex I to decision 5/CMA.3: Energy, Industrial processes and product use, Agriculture, Land Use, Land Use Change and Forestry (LULUCF), Waste. International Aviation: Emissions from civil aviation activities as set out for 2030 in Annex I to the EU ETS Directive are included only in respect of CO_2 emissions from flights subject to effective carbon pricing through the EU ETS. With respect to the geographical scope of the NDC these comprise emissions in 2024-26 from flights between the EU Member States and departing flights to Norway, Iceland, Switzerland and the United Kingdom. International Navigation: Waterborne navigation is included in respect of CO_2, methane (CH_4) and nitrous oxide (N_2O) emissions from maritime transport voyages between the EU Member States.
Gases	Carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulphur hexafluoride (SF_6), nitrogen trifluoride (NF_3)
LULUCF categories and pools	The included LULUCF categories and pools are as defined in decision 5/CMA.3.

Information	Description
Intention to use cooperative approaches	The EU's at least 55% net reduction target by 2030 is to be achieved through domestic measures only, without contribution from international credits. The EU will account and report for cooperation with other Parties in a manner consistent with the guidance adopted by CMA1 and any further guidance agreed by the CMA.
Any updates or clarifications of previously reported information, as applicable	The information on the NDC scope contains clarifications/further details compared to the information provided in the updated NDC of the EU.

Note: This table is identical to table 'Description of a Party's nationally determined contribution under Article 4 of the Paris Agreement, including updates,' which has been submitted electronically together with this BTR. This table is also annexed to this BTR.

Source: Updated NDC of the EU[15]

II.C Information necessary to track progress made in implementing and achieving nationally determined contributions under Article 4 of the Paris Agreement

65. Each Party shall identify the indicator(s) that it has selected to track progress towards the implementation and achievement of its NDC under Article 4. Indicators shall be relevant to a Party's NDC under Article 4, and may be either qualitative or quantitative.

66. These indicators could include, as appropriate, for example: net GHG emissions and removals, percentage reduction of GHG intensity, relevant qualitative indicators for a specific policy or measure, mitigation co-benefits of adaptation actions and/or economic diversification plans or other (e.g. hectares of reforestation, percentage of renewable energy use or production, carbon neutrality, share of non-fossil fuel in primary energy consumption and non-GHG related indicators).

67. Each Party shall provide the information for each selected indicator for the reference point(s), level(s), baseline(s), base year(s) or starting point(s), and shall update the information in accordance with any recalculation of the GHG inventory, as appropriate.

[15] The update of the nationally determined contribution of the European Union and its Member States, https://unfccc.int/sites/default/files/NDC/2023-10/ES-2023-10-17%20EU%20submission%20NDC%20update.pdf.

68. Each Party shall provide the most recent information for each selected indicator identified in paragraph 65 above for each reporting year during the implementation period of its NDC under Article 4.

69. Each Party shall compare the most recent information for each selected indicator with the information provided pursuant to paragraph 67 above to track progress made in implementing its NDC under Article 4.

70. For the first biennial transparency report that contains information on the end year or end of the period of its NDC under Article 4, each Party shall provide an assessment of whether it has achieved the target(s) for its NDC under Article 4 based on the relevant information described in paragraphs 59–69 above and paragraph 78 below, as applicable, and the most recent information for each selected indicator relevant to tracking progress towards the implementation and achievement of its NDC under Article 4.

71. For the first NDC under Article 4, each Party shall clearly indicate and report its accounting approach, including how it is consistent with Article 4, paragraphs 13 and 14, of the Paris Agreement. Each Party may choose to provide information on accounting of its first NDC consistent with decision 4/CMA.1.

72. For the second and subsequent NDC under Article 4, each Party shall provide information referred to in chapter III.B and C above consistent with decision 4/CMA.1. Each Party shall clearly indicate how its reporting is consistent with decision 4/CMA.1.

73. Each Party shall provide any definitions needed to understand its NDC under Article 4, including those related to each indicator identified in paragraph 65 above, those related to any sectors or categories defined differently than in the national inventory report, or the mitigation co-benefits of adaptation actions and/or economic diversification plans.

74. Each Party shall provide a description of each methodology and/or accounting approach used, as applicable for:

(a) Target(s), as described in paragraph 64 above;

(b) The construction of baselines, as described in paragraph 64 above, to the extent possible;

(c) Each indicator identified in paragraph 65 above.

75. The information referred to in paragraph 74 above shall include, as applicable and available to the Party's NDC under Article 4:

(a) Key parameters, assumptions, definitions, data sources and models used;

(b) IPCC guidelines used;

(c) Metrics used;

(d) Where applicable to its NDC, any sector-, category- or activity-specific assumptions, methodologies and approaches consistent with IPCC guidance, taking into account any relevant decision under the Convention, including as applicable:

(i) The approach used to address emissions and subsequent removals from natural disturbances on managed lands;

(ii) The approach used to account for emissions and removals from harvested wood products;

(iii) The approach used to address the effects of age-class structure in forests;

(e) Methodologies used to estimate mitigation co-benefits of adaptation actions and/or economic diversification plans;

(f) Methodologies associated with any cooperative approaches that involve the use of internationally transferred mitigation outcomes towards its NDC under Article 4, consistent with CMA guidance on cooperative approaches under Article 6;

(g) Methodologies used to track progress arising from the implementation of policies and measures;

(h) Any other methodologies related to its NDC under Article 4;

(i) Any conditions and assumptions relevant to the achievement of its NDC under Article 4.

76. Each Party shall also:

(a) Describe, for each indicator identified in paragraph 65 above, how it is related to its NDC under Article 4;

(b) Explain how the methodology in each reporting year is consistent with the methodology or methodologies used when communicating the NDC;

(c) Explain methodological inconsistencies with its most recent national inventory report, if applicable;

(d) Describe how double counting of net GHG emission reductions has been avoided, including in accordance with guidance developed in relation to Article 6, if relevant.

77. Each Party shall provide the information referred to in paragraphs 65–76 above in a structured summary to track progress made in implementing and achieving its NDC under Article 4, including:

(a) For each selected indicator:

(i) Information for the reference point(s), level(s), baseline(s), base year(s), or starting point(s) referred to in paragraph 67 above;

(ii) Information for previous reporting years during the implementation period of its NDC under Article 4, identified in paragraph 68 above, as applicable;

(iii) The most recent information identified in paragraph 68 above;

(b) Where applicable, information on GHG emissions and removals consistent with the coverage of its NDC under Article 4;

(c) Contribution from the LULUCF sector for each year of the target period or target year, if not included in the inventory time series of total net GHG emissions and removals, as applicable;

(d) Each Party that participates in cooperative approaches that involve the use of internationally transferred mitigation outcomes towards an NDC under Article 4, or authorizes the use of mitigation outcomes for international mitigation purposes other than achievement of its NDC, shall also provide the following information in the structured summary consistently with relevant decisions adopted by the CMA on Article 6:

(i) The annual level of anthropogenic emissions by sources and removals by sinks covered by the NDC on an annual basis reported biennially;

(ii) An emissions balance reflecting the level of anthropogenic emissions by sources and removals by sinks covered by its NDC adjusted on the basis of corresponding adjustments undertaken by effecting an addition for internationally transferred mitigation outcomes first-transferred/transferred and a subtraction for internationally transferred mitigation outcomes used/acquired, consistent with decisions adopted by the CMA on Article 6;

(iii) Any other information consistent with decisions adopted by the CMA on reporting under Article 6;

(iv) Information on how each cooperative approach promotes sustainable development; and ensures environmental integrity and transparency, including in governance; and applies robust accounting to ensure inter alia the avoidance of double counting, consistent with decisions adopted by the CMA on Article 6.

II.C.1 Indicator

For the tracking of progress towards implementing and achieving the NDC of the EU, an indicator is used which has the same unit and metric as the NDC base year and target values. The chosen indicator is 'annual total net GHG emissions consistent with the scope of the NDC in CO_2eq'. Table II.C.1 provides more information on this indicator.

Table II.C.1: Indicator for tracking progress

Information	**Description**
Selected indicator	Annual total net GHG emissions consistent with the scope of the NDC in CO_2eq.
Reference level and base year	The reference level is total net GHG emissions of the EU in the base year (1990). The reference level value for the EU is 4 699 405 kt CO_2eq.
Updates	This is the first time the reference level is reported, hence there are no updates. The value of the reference level may be updated in the future due to methodological improvements to the EU GHG inventory and to the determination of international aviation and navigation emissions in the NDC scope.
Relation to the NDC	The indicator is defined in the same unit and metric as the target of the NDC. Hence it can be used directly for tracking progress in implementing and achieving the NDC target.
Definitions	Definition of the indicator 'annual total net GHG emissions in CO_2eq': Total net GHG emissions correspond to the annual total of emissions and removals reported in CO_2 equivalents in the latest GHG inventory of the EU. The totals comprise all sectors and gases listed in the table entitled 'Reporting format for the description of a Party's nationally determined contribution under Article 4 of the Paris Agreement, including updates.' Indirect CO_2 emissions are included from those Member States that report these emissions.

Note: The information in this table is identical to the information in Common Tabular Format (CTF) tables 1 ('Description of selected indicators') and 2 ('Definitions needed to understand the NDC'), which were submitted electronically together with this BTR.

Source: The reference level is based on the Annual European Union GHG inventory 1990-2022.

II.C.2 Methodologies and accounting approach

The EU use the following accounting approach for tracking progress towards the joint EU NDC: annual GHG data from the national GHG inventory of the EU, complemented for international aviation and navigation with estimations from the Joint Research Centre's Integrated Database of the European Energy System[16] The total net GHG emissions are provided in the scope of the EU NDC and are compared to the economy-wide absolute emission reduction target as defined in the NDC. The EU will account for its cooperation with other Parties in a manner consistent with guidance adopted by the CMA.

As far as emissions and removals from the LULUCF sector are concerned, net emissions are used for tracking progress towards the 2030 target of the NDC based on all reported emissions and removals.

Details on methodologies and accounting approaches consistent with the accounting guidance[17] under the Paris Agreement can be found in CTF table 3 ('Methodologies and accounting approaches'), which was submitted electronically together with this BTR.

II.C.3 Structured summary – status of progress

An important purpose of the BTR is to demonstrate where the EU and its Member States stand in implementing their NDC, and which progress they have made towards achieving it. The most recent information on GHG emissions and removals in the scope of the NDC constitutes the key information for tracking this progress. Table II.C.2 summarises the current status of progress.

[16] European Commission, Joint Research Centre, Rózsai, M., Jaxa-Rozen, M., Salvucci, R., Sikora, P., Tattini, J. and Neuwahl, F., JRC-IDEES-2021: the Integrated Database of the European Energy System – Data update and technical documentation, Publications Office of the European Union, Luxembourg, 2024, https://publications.jrc.ec.europa.eu/repository/handle/JRC137809.

[17] Decision 4/CMA.1, Further guidance in relation to the mitigation section of decision 1/CP21, https://unfccc.int/documents/193407.

Table II.C.2: Summary of progress towards implementing and achieving the NDC

	Unit	Base year value	Values in the implementation period			Target level	Target year	Progress made towards the NDC
			2021	2022	2030			
Indicator: Total net GHG emissions consistent with the scope of the EU NDC	kt CO_2eq	4 699 405	3 272 650	3 205 223	NA	at 55% below base year level	2030	The most recent level of the indicator is 31.8 % below the base year level.

NA: Not Applicable.

Note that an annual emissions balance consistent with chapter III.B (Application of corresponding adjustment) will be provided in a subsequent BTR upon finalisation of relevant further guidance by the CMA, based on the annual information reported under Article 6.2.

Note: More detailed information can be found in CTF table 4 ('Structured summary: Tracking progress made in implementing and achieving the NDC under Article 4 of the Paris Agreement'), which has been submitted electronically together with this BTR.

Source: The indicator values are based on the Annual European Union GHG inventory 1990-2022.

Based on the GHG inventory data and data on international aviation and navigation for 2022, the EU and its Member States reduced net GHG emissions by 31.8 % compared to 1990. The EU and its Member States made progress towards implementing and achieving their NDC. The legal and institutional framework is in place to make further progress in the years ahead and to achieve the NDC target by 2030.

78. Each Party with an NDC under Article 4 that consists of adaptation actions and/or economic diversification plans resulting in mitigation co-benefits consistent with Article 4, paragraph 7, of the Paris Agreement shall provide the information necessary to track progress on the implementation and achievement of the domestic policies and measures implemented to address the social and economic consequences of response measures, including:

(a) Sectors and activities associated with the response measures;

(b) Social and economic consequences of the response measures;

(c) Challenges in and barriers to addressing the consequences;

(d) Actions to address the consequences.

Not applicable.

79. Each Party shall report the information referred to in paragraphs 65–78 above in a narrative and common tabular format, as applicable. Such common tabular formats should accommodate all types of NDC under Article 4, as appropriate.

See above.

II.D Mitigation policies and measures, actions and plans, including those with mitigation co-benefits resulting from adaptation actions and economic diversification plans, related to implementing and achieving a nationally determined contribution under Article 4 of the Paris Agreement

80. Each Party shall provide information on actions, policies and measures that support the implementation and achievement of its NDC under Article 4 of the Paris Agreement, focusing on those that have the most significant impact on GHG emissions or removals and those impacting key categories in the national GHG inventory. This information shall be presented in narrative and tabular format.

81. To the extent possible, Parties shall organize the reporting of actions by sector (energy, transport, industrial processes and product use, agriculture, LULUCF, waste management and other).

82. Each Party shall provide the following information on its actions, policies and measures, to the extent possible, in a tabular format: (a) Name; (b) Description; (c) Objectives; (d) Type of instrument (regulatory, economic instrument or other); (e) Status (planned, adopted or implemented); (f) Sector(s) affected (energy, transport, industrial processes and product use, agriculture, LULUCF, waste management or other); (g) Gases affected; (h) Start year of implementation; (i) Implementing entity or entities.

On EU level a framework for the implementation is in place (cf. Section II.A.13). In addition, sectoral policies have been enacted on EU level – these policies are described in detail in the BTR of the EU.

On national level, a multitude of policies has a GHG mitigation effect. They are either a result of or the national implementation of EU policies or originate at the different levels of national legislation and administration. All of them are essential to meet the ESR target and thus contribute to achieving the joint EU NDC.

N.B.: Policies are either taken into account in the “with additional measures” (WAM) scenario only or already in the “with measures” (WM) scenario. The latest scenario update is based on the scenarios calculated in 2023; the cut-off date for adopted and implemented measures in the scenario calculations therefore dates back to 1. 1. 2022.

Several instruments, which are mentioned in policies marked as “WAM”, have already been adopted at EU level or at national level in the meantime – this is mentioned in the policy descriptions below.

II.D.1 Cross-cutting Policies and Measures

EU Emission Trading Scheme (WM)

The EU Emission Trading Scheme is the most important policy for installations with high energy demand and CO_2 emissions in energy industries, manufacturing industries and industrial processes, as well as N_2O emissions from chemical industry. Its objective is to limit emissions by means of trading allowances, which have initially been allocated for free or auctioned. More than 200 Austrian installations are covered by the EU ETS; in total about 11,000 installations are covered in the EU. The EU ETS (Directive 2003/87/EC as amended) is implemented in Austrian law with the Emissions Allowance Trading Act (Emissionszertifikategesetz 2011 – Federal Law Gazette I No. 118/2011 as amended).

From 2013 onwards, a fully harmonised system for allocation of free allowances is being applied, based on the revision of the ETS Directive (2009/29/EC). Rules on free allocation for stationary installations covered by the scheme are strictly harmonised within the EU, combined with a Union-wide cap, which is characterised by a linear factor that provides for the reduction of GHG emissions by 62% to be achieved in 2030 relative to 2005. So called “National Implementation Measures” need to strictly follow the rules for free allocation, laid down in the Delegated regulation (EU/2019/331) as amended. For most activities, free allocation is calculated on the basis of product or heat benchmarks, which are derived from the 10 % most efficient installations in Europe.

For the last years, data for Austria show that free allocation amounted to only about two third of total emissions in the EU ETS, requiring installations to buy allowances to cover their remaining emissions (in Mt CO_2eq):

	2013	2014	2105	2016	2107	2018	2019	2020	2021	2022	2023
verified emissions	29.9	28.1	29.5	29.0	30.6	28.4	29.6	27.0	27.0	28.7	26.6
free allocation	22.5	21.9	21.1	20.5	19.9	19.3	18.8	18.2	18.2	18.4	18.8

Revision of the EU Emission Trading Scheme (WAM)

The Union-wide quantity of ETS allowances has been reduced by Directive (EU) 2023/959 due to a reduction of allowances in 2024 and 2026 and a steeper cap trajectory afterwards. This revision of the ETS has entered into force in June 2023 and will lead to higher certificate prices.

National Carbon Pricing Scheme (WAM)

The carbon pricing scheme applies for sectors outside the EU Emission Trading System and is therefore expected to set price signals especially for fossil fuels in the buildings and transport sector. It is based on the National GHG Certificate Act (Federal Law Gazette I No. 10/2022 as amended). In the period 2022 to 2026 the suppliers of fossil energy have to surrender certificates at fixed prices. The price started at € 30 / tonne CO_2 in 2022 and will increase up to € 55 / tonne CO_2 in 2025. The revenues are used for a uniform per capita compensation for private households, however differentiated by regions according to the availability of public transport. The national scheme will be replaced by an EU scheme ("ETS II") from 2027 onwards.

Domestic Environmental Support Scheme (WM)

The *Domestic Environmental Support Scheme* in general provides financial support for projects which improve environmental performance beyond mandatory standards in energy, manufacturing as well as service industry. Projects may be related to all greenhouse gases. Focus areas in the climate change context comprise mainly projects to improve energy efficiency, support the use of renewable energy sources and promote sustainable transport. The legal basis is the Austrian Environmental Support Act, the scheme is administered by Kommunalkredit Public Consulting (www.publicconsulting.at/eng).

In 2023 federal support granted for projects with relevance for GHG mitigation was EUR 164 million; compared to 2020 this is an increase by 4/5. 75 % of the support in 2023 was dedicated to renewables, the rest mostly for energy efficiency. The projects granted in 2023 are expected to bring about a current emission reduction of about 430 kt CO_2 p. a. and of 8 million tonnes over their whole life time. (An evaluation of the effect of all projects implemented in previous years for a specific target year is not available.)

Austrian Climate and Energy Fund (WM)

The *Austrian Climate and Energy Fund (KLI.EN)* has been established in order to support the reduction of GHGs, mainly CO_2, in Austria in the short, medium and long term. It focuses on research in and development of renewable energy systems, development and testing of new transport and mobility systems and market penetration of GHG mitigation measures. The legal basis of the Fund is the Climate and Energy Fund Law ('Klima- und Energiefondsgesetz' Federal Law Gazette I No. 40/2007), its objective is to contribute to meeting Austria's climate change commitments by funding of climate and energy related projects.

The funding should bring about a long-term transformation to a climate-friendly energy system. Two relevant funding concepts of the recent years are "Model Regions" to help climate-friendly energy and mobility systems to be successful at the regional level and "Flagship Projects" to help new technical developments to be actually tested and implemented. A budget of EUR 580 million has been foreseen in 2023; compared to 2020 this is a growth by a factor of five.

II.D.2 Energy (power sector, industry)

Increase the share of renewable energy in power supply and district heating (WM)

Increasing the share of renewable energy sources in the public power and heat supply is the main policy to reduce climate impacts of the energy system. This has been recognised at EU level laying to targets and provisions in the Renewable Energy Directive (Directive 2009/28/EG; Directive (EU) 2018/2001 "RED II"). In Austria large-scale hydro power for electricity generation has already delivered a significant contribution to power supply since the first half of the last century. In the meantime, Austria's renewable electricity generation has become more diversified.

In order to provide for further growth of renewable sources, quantitative targets and provisions for feed-in tariffs have been laid down in the previous decades, like in the Green Electricity Act 2012 and its predecessors. The current regulation is the Renewable Energy Expansion Act (Federal Law Gazette I No. 150/2021). It provides for a harmonised system for promoting electricity production from renewable energy sources by granting market premiums and investment support, respectively, for various forms of electricity generated from renewable sources, e.g. biomass, wind power, hydropower and photovoltaics. It includes a 27 TWh expansion target for renewables for 2030 (Hydropower +5 TWh, Wind power +10 TWh, Photovoltaics +11 TWh, Biomass and biogas +1 TWh; compared to 2020).

For biomass-based district heating systems investment support is granted under the Domestic Environmental Support Scheme and serves to increase the share of biomass in heat supply.

Increase energy efficiency in energy and manufacturing industries (WM)

Efficiency increases are essential to limit growing demand for energy and fuels and their environmental impacts. Austria had implemented EU legislation (Energy efficiency Directive 2012/27/EU) through the Energy Efficiency Act (Federal Law Gazette I No. 72/2014), which specified an energy efficiency target for 2020 and obligations for large companies and energy suppliers. The revised Energy Efficiency Directive 2018/2002/EU has been transposed into national law by the revision of the Energy Efficiency Act (Federal Law Gazette I No. 59/2023), which a. o. sets a target to reduce final energy consumption by 650 PJ (2030 compared to 2021) and provides for measures and monitoring.

Further enhancement of renewable energy in energy supply (WAM)

At EU level the Renewable Energy Directive has been revised by Directive (EU) 2023/2413 ("RED III"). The overall EU target is to increase the share of renewable energy in the EU in 2030 to at least 42.5 %. Austria's draft 2024 NECP states a national target of 57 %. The NECP lists several sub-targets and instruments:

- Increased electricity demand in transport, industry and housing is projected to be satisfied by an increase of production beyond the target of the Renewable Expansion Act (from 27 to 35 TWh). New instruments to boost photovoltaics currently are
  - VAT exemption for plants below 35 kW peak[18] (leading to expected savings for customers of more than € 600 million in 2024 and 2025), and
  - More than € 1 billion investment subsidies in 2023–2026 are provided through the Climate and Energy Fund.
- "Green gas" is planned to increasingly replace fossil methane:
  - The Austrian Hydrogen Strategy stipulates a target of 1 GW hydrogen production capacity by 2030.
  - The share of liquid manure treated in biogas plants should be increased to 30 % of all liquid manure from agriculture.
  - Investment subsidies, operating cost subsidies and streamlining of permit procedures are, among others, planned to reach the targets.
- Heat from geothermal sources currently has a share of 2 % only; the Roadmap Geothermal Energy[19] identifies necessary progress in RTD. A large scale project for district heating has been started recently in Vienna.

[18] Federal Law Gazette I No. 152/2024

[19] https://nachhaltigwirtschaften.at/resources/nw_pdf/BMK_Geothermie_Roadmap.pdf

Growth of supply and demand of electricity and green gas requires an expansion of electricity and hydrogen networks. The Integrated Austrian Network Infrastructure Plan[20] outlines the potential for additional national renewable electricity and gas (especially hydrogen) production and the necessary infrastructure extension at the transmission level. The plan has undergone a strategic environmental assessment and is expected to facilitate permitting procedures for individual transmission projects.

Further enhancement of energy efficiency in energy and manufacturing industries (WAM)

At EU level the revised Energy Efficiency Directive (EU) 2023/1791 has entered into force, which needs to be transposed into national law by October 2025. It lays down a. .o more ambitious requirements for a reduction of EU energy demand (including corresponding indicative targets for the Member States), the “energy efficiency first” principle in planning, policy and major investment decisions for infrastructure projects, strengthened targets for the energy consumption reduction of the public sector, as well as several provisions for consumer information and empowerment.

II.D.3 Energy (buildings)

The policies relevant for the buildings sector focus on the reduction of CO2 emissions from fossil fuels.

Towards climate neutral new buildings (WM)

Increasing the energy efficiency of buildings is one of the most effective means of reducing the carbon footprint of the Austrian population. Construction standards with respect to the energy demand of new residential and non-residential buildings and criteria for the renovation of buildings are laid down in guidelines by the Austrian Institute for Constructional Engineering (“OIB Guideline 6 – Energy saving and thermal insulation”); they are based on Energy Performance of Buildings Directive (EPBD; 2010/31/EU, (EU) 2018/844) and have to be transposed into regional laws by the federal provinces. Standards for the heat demand have been supplemented by standards for the total energy demand of buildings; standards are regularly updated. The standards do not yet provide for fully climate neutral buildings.

The installation of heating systems using renewable energy sources is the other key to climate neutral new buildings (regarding the energy use for space heating and hot water

[20] https://www.bmk.gv.at/dam/jcr:d4d6888b-8e57-4ec6-87c3-0ffec220d83f/Integrierter-oesterreichischer-Netzinfrastrukturplan.pdf

preparation). The installation of fossil fuel boilers for coal and oil in new buildings is prohibited since 2020 (BGBl. I Nr. 6/2020).

Subsidies for constructions going beyond mandatory standards are granted by the federal provinces (housing support schemes for residential buildings) and by the Federation (Environmental Support Schemes for the commercial/institutional sector).

Thermal improvement of building stock (WM)

Due to the lifetime of buildings the improvement of the existing building stock is essential for an accelerated reduction of emissions in this sector. One of the instruments are mandatory standards for buildings undergoing a major renovation, laid down in "OIB Guideline 6 – Energy saving and thermal insulation" in transposition of the EPBD (see above). Several funding opportunities exist for renovation measures in residential buildings (housing support of the federal provinces, "Sanierungsoffensive für Private" of the Federation) und in institutional/commercial buildings (Environmental Support Scheme and "Sanierungsoffensive für Betriebe", both Federation). In addition, the Austrian Climate Protection Iniative "klimaaktiv" and energy agencies of the federal provinces provide consulting and advice in this issue. A further incentive for owners of buildings is the obligation to provide a buyer/tenant with an energy certificate of the building or apartment upon sale or leasing; this obligation has been enacted in 2012 as a consequence of the EPBD.

Replacement of Fossil Fuels in Building Stock (WM)

Apart from the efficiency of buildings, the type of energy source is crucial for greenhouse gas emissions from this sector. Financial support for the replacement of fossil fuel boilers was increasingly provided by federal funding; the current initiative "Raus aus Öl und Gas" ("stepping out of oil and gas") provides up to 75 % of the costs for the connection to district heating or by heat pumps / biomass boilers and up to 100 % for low income households; some billion € are reserved for that purpose. Support for commercial and industrial applications is provided by the Environment Support Scheme. Funding is supplemented by awareness raising measures at the level of Federation (klimaaktiv programme) and of the federal provinces.

The District Heating and Cooling Act (Federal Law Gazette I No. 113/2008, last amended in 2021) aims at the construction of district cooling systems in order to reduce electricity demand for air conditioning, as well as at the expansion of district heating networks based on waste heat from industry and renewable energy sources; subsidies are provided for that purpose.

Energy efficiency measures for residential electricity demand (WM)

An increase of energy efficiency in residential electricity demand as a further policy target is achieved mainly by instruments at EU level, especially the eco-design requirements for energy using products (Directive 2009/125/EC and implementing acts) and the mandatory labelling of household appliances according to energy consumption (Directive (EU) 2017/1369 and delegated acts). These instruments are supported by awareness raising measures at national level with respect to energy efficient products and by advice provided by regional energy agencies.

Accelerated path to climate neutral new buildings (WAM)

As a consequence of the new Energy Performance of Buildings Directive (EU) 2024/1275, the guidelines by the Austrian Institute for Constructional Engineering ("OIB Guideline 6 – Energy saving and thermal insulation") will be revised. New standards for the energy demand of buildings will require zero emission new buildings from 2028 (public buildings) and 2030 respectively (all new buildings). Continuation and extension of subsidies for zero emission buildings is expected.

The installation of fossil fuel boilers including gas boilers in new buildings is prohibited since March 2024 (Renewable Heat Act, BGBl. I Nr. 8/2024).

Accelerated thermal improvement of building stock (WAM)

The mandatory standards for buildings undergoing a major renovation, laid down in "OIB Guideline 6 – Energy saving and thermal insulation" in transposition of the new EPBD are tightened, resulting in zero emission buildings (see above). National building renovation plans have to be developed by the Federal Provinces with the objective to transform the existing building stock into zero-emission buildings by 2050, including interim milestones for the reduction of the average primary energy demand of the residential building stock. Renovation obligations for non-residential buildings will come into effect. Regarding buildings owned by public bodies 3 % of total floor area shall be renovated annually.

The new standards and targets are to be supplemented by initiatives for training in order to provide a sufficient workforce with the appropriate level of skills corresponding to the needs in the building sector, and by fiscal and support instruments for the realisation of renovation projects.

Accelerated replacement of Fossil Fuels in Building Stock (WAM)

Federation and federal provinces are developing a joint heat strategy aiming at a phase-out of fossil fuels for heating purposes in buildings by 2040. The phase-out path will be reflected in the National Building Renovation Plans according to the EPBD. Fossil fuel boilers shall be replaced by highly-efficient district heating or renewable energy systems; for gas boilers the switch to green gas supply may be an alternative. Funding instruments shall provide enough resources to incentivise the transformation of the heat sector.

II.D.4 Transport

The policies relevant for transport focus on the reduction of CO_2 emissions from fossil fuels.

Increase the share of renewable energy sources in transport (WM)

The substitution of fossil fuels by clean energy sources is an important and well established policy in the transport sector. Starting with the Biofuels Directive 2003/30/EC, the EU has in place legislation on the promotion of renewable energy sources in transport. Currently the Renewable Energy Directive (Directive 2018/2001/EC) requires Member States to replace at least 14% of the fossil fuels used in transport by renewables by 2030 (including electricity from renewable energy sources). The Directive has been transposed into national law by the Austrian Fuel Ordinance (Federal Law Gazette II No. 398/2012 as amended). The provisions include a. o. requirements for the reduction of the life cycle emissions of fuels, sustainability criteria and minimum shares of advanced biofuels.

As additional instrument, funding is provided for electric mobility in different programmes for individuals, companies and municipalities, covering vehicles as well as charging infrastructure. RTD-funding of the Climate and Energy Fund (e.g. Zero Emission Mobility plus) is expected to contribute to an expansion of zero emission road mobility in the longer term.

Increase fuel efficiency in road transport (WM)

Increasing fuel efficiency of vehicles can contribute to an emission reduction, as far as technical efficiency gains are not compensated by counter-productive behavioural changes. Efficiency gains of motors and vehicles due to technical progress become visible in real world performance of vehicles especially in road freight transport (due to cost sensitivity of that sector). In passenger transport, however, consumer behaviour (i.e. desire for larger cars and higher engine power) has weakened or counteracted that trend. Measures must therefore be targeted not only at technical progress but also at consumer behaviour.

Whereas CO_2 performance standards for vehicles have been enacted at EU level and have been tightened over time (Regulation (EU) 2019/631) Regulation (EU) 2019/1242), cost related provisions have been set on national level in order to induce behavioural changes. Price signals are due to mineral oil taxation (which is directly related to fuel consumption on the road) and the fuel consumption based car registration tax (the tax rate for new cars increases with higher standard fuel consumption).

Awareness raising and training programmes for fuel-efficient driving improve performance of drivers, fuel-efficient driving has also become part of the education in driving schools. Trainings for drivers of passenger cars, buses and heavy duty vehicles have been established by the programme “klimaaktiv mobil”. Other instruments like speed limits (which have been established due to other environmental concerns) and the kilometre based toll for heavy vehicles (lorries and buses) on motorways and expressways (with lower rates for modern – and more efficient – vehicles, , which cause less emissions) have delivered some contribution to reduced fuel consumption.

Modal shift in passenger and freight transport (WM)

Although Austria belongs to the EU Member States with the highest share of rail transport in the modal split, a further shift to environmentally friendly transport modes with a lower energy demand is essential for decreasing GHG emissions. Considerable investments in railway infrastructure are ongoing, as increased capacity is a prerequisite for enhancing rail transport and as railway stations have to be modernised to become an attractive place for passengers. The Federal Railways Act provides for a regularly updated framework plan for the extension of the railway infrastructure. An extension of the metropolitan public transport network is under implementation in Vienna, especially with respect to the underground lines. In order to provide a sufficient service offer in public transport, the federal provinces order and pay for certain train (and bus) services which would be uneconomical for the service providers otherwise.

The programme “klimaaktiv mobil” for active mobility and mobility management promotes environmentally friendly and healthy transport modes like cycling and walking, public transport, alternative vehicles etc. It is funded by the Federal Ministry for Climate Action. The cornerstones of “klimaaktiv mobil” are the funding programme for communities, businesses and associations, target group-oriented counselling programmes, awareness-raising initiatives, partnerships, and training and certification initiatives. Extensive support for planning and implementation of walking and cycling infrastructure is a central part of the programme too.

A noteworthy impetus for public passenger transport is the “climate ticket”, which allows passengers to use all scheduled services (public and private rail and other transport) either nation-wide or at provincial level, for one year at an affordable price.

With respect to rail freight transport, Austria offers several support programs and measures. Rail freight subsidies are for example provided for rail freight transport services (single-wagon transport, unaccompanied combined transport, transport of trucks and trailers by train called “Rollende Landstraße”). Additionally, railway sidings are often a prerequisite for freight transport by rail instead of road, therefore investment support for sidings and terminals is provided. Investment funding is also available for the purchase of equipment for combined transport by rail and inland shipping.

Accelerate increase of renewable energy sources and fuel efficiency in transport (WAM)

In order to speed up the replacement of fossil fuel by renewable energy in the transport sector, at EU level the Renewable Energy Directive has been revised by Directive (EU) 2023/2413. It introduces a more ambitious minimum share of renewable energy used in the transport sector of 29 %, together with specific calculation rules. The CO_2 performance standards for vehicles at EU level have been tightened once again recently (Regulation (EU) 2023/851, Regulation (EU) 2024/1610) and contribute to an accelerated increase of the share of zero emission vehicles in the vehicle fleet.

On national level a co-ordinated approach regarding renewable energy for all transport modes needs to be established in order to reach the renewable target. For the aviation sector, the Austrian SAF-Roadmap from 2024 sets the path for the introduction of sustainable aviation fuels. A focus will also be set on the extension of electricity produced by the Austria Federal Railways in their own plants.

Regulation (EU) 2023/1804 on the deployment of alternative fuels infrastructure, which replaces Directive 2014/94/EU, now sets binding expansion targets for the establishment of charging and refueling infrastructure for alternative fuels. The ambitious implementation of the regulation will further accelerate the expansion of the charging infrastructure for electric vehicles in Austria. Currently (status September 2024), there are 25,000 public charging points available for 188,000 electric cars (3.6% of the total fleet).

The funding programmes for zero emission buses and commercial vehicles and their infrastructure further accelerate the rollout of heavy duty vehicles. Taking into account the external costs of CO_2 emissions in the kilometre based toll for heavy vehicles on motorways and expressways (according to the latest revision of Directive 1999/62/EC) should provide for an additional price signal to incentivise the use of zero emission vehicles.

Active mobility and mobility management (WAM)

Active mobility (walking, cycling) is important for short distances not only but especially in the urban environment and to be combined with public transport. In 2022 an agreement between Federation, federal provinces and municipalities has been reached in order to increase the share of cycling in modal split from 7 to 13 %; it targets a. o. improved infrastructure, improvements in law, increased funding and awareness. The updated "Master Plan Cycling 2030" with 26 measures has been published 2024. The "Master Plan Walking 2030" has been published in 2022 and contains a total of 50 recommended actions to promote pedestrian mobility by improving the awareness of walking, the infrastructure and by increasing road safety for pedestrians.

The "Sharing Strategy" (published in 2023) envisages improved conditions for car sharing and ride sharing, a. o. an improved legal framework, financing options, easy access to services and information. There is already considerable demand for mobility management consulting and support from business and municipalities in the programme "klimaaktiv".

Accelerated modal shift (WAM)

In order to provide improved passenger transport services outside of urban and suburban settlements, minimum criteria for the station density, frequency and operating hours of public transport systems shall be established, to be achieved either with scheduled or with on demand services. Funding programmes for rail freight transport shall be extended in order to reach the target of a 32 % share of ton-km in total freight transport until 2030.

II.D.5 IPPU

EU Emission Trading Scheme and the *Environmental Support Scheme* – both described under "cross-cutting" – are the leading policies and measures with respect to CO_2 and N_2O mitigation in this sector. Further policies listed in this section focus on the use of F-gases, as other measures relevant for the industry sector are covered in the energy sector.

Decrease emissions of F-gases and emissions from other product use (WM)

Mitigation of F-gas emissions has been early targeted by national policy. National bans for certain uses have been enacted since 2002: The used of SF_6 is prohibited for most applications, the use of HFCs and PFCs banned e.g. for the production of foam materials.

National regulations have been complemented by EU law at a later stage: Provisions for the maintenance of refrigeration and air conditioning systems aim at a minimisation of emissions, Regulation (EU) 517/2014 has introduced a quota system for production and imports and enhanced use restrictions. Placing on the market of F-gases must be reduced to 63 % (compared to the average 2009–2012) by 2020 and to 21 % by 2030. For air conditioning systems in passenger cars the use of refrigerants with GWPs higher than 150

has been prohibited for new models since 2013 and is completely banned for new cars since 2017.

CO_2 emissions from organic solvents are of limited relevance; it may be mentioned that legislation to reduce emissions from solvent use in industry and due to paint application exists at national and EU level.

Accelerated decrease of F-gas emissions (WAM)

Due to the Kigali Amendment of the Montreal Protocol, which has been signed by Austria and the EU, the F-Gas Regulation (EU) 517/2014 has been replaced by Regulation (EU) 2014/573. The new regulation takes into account the phase-down requirements of the Kigali Amendment. Provisions have been tightened with respect to quotas (quotas for HFCs will be reduced to 9 Mt by 2030; 2015: 177 Mt) and new installations and appliances.

II.D.6 Agriculture

The policies relevant for agriculture focus on the reduction of CH_4 and N_2O as well as of CO_2 emissions. The

Implementation of EU agricultural policies (WM)

The common agricultural policy (CAP) is an essential part of EU policy. It is designed to provide a level playing field for farmers in the EU, contributing to food security as well as to rural development and is intended to promote agricultural practices beneficial for the climate and the environment. The latest release of Austria's CAP Strategic Plan (now for the period 2023-2027) was approved in September 2022. Under the plan a total of 98 interventions are jointly implemented. Austria puts, i. a., a focus on environmental sound farming practices for Austria's largely small-structured agricultural system. Relevant actions with respect to the mitigation of greenhouse gas emissions (CH_4, N_2O) are e.g. improved feeding of pigs and poultry, covering of manure storages, low-loss application of manure and biogas slurry, promotion of organic farming, promotion of grazing and reduced use of mineral fertilisers, which are part of the Austrian agri-environmental programme.

Livestock and feeding management (WAM)

Improved feed quality according to the animals' needs and adapted to local conditions, and the use of methane-reducing feed additives is expected to decrease CH_4 emissions from enteric fermentation. Optimisation of feeding with respect to N content should result in lower N species emissions along the entire farmyard manure chain.

Optimised manure and fertilizer management (WAM)

An improved promotion of grazing should also result in lower emissions of both greenhouse gases compared to indoor housing of animals. Improved animal housing has a potential to reduce emissions and should receive investment support. The Ammonia Emissions Reduction Act entered into force in 2023 and provides for mandatory cover of large liquid manure pits. The Nitrate Action Programme Ordinance limits the use of fertilizer in certain regions. Smart farming technology and precision farming should allow to optimize fertilizer use and reduce nitrogen loss.

Increase biogas production from manure (WAM)

The planned increase of biogas production from manure (see Section II.D.2, "green gas") does not only replace fossil methane as fuel in the energy sector, but does also reduce methane emissions from manure storage and use in the agriculture sector.

II.D.7 LULUCF

PaMs attributed to other sectors have some influence on emissions/removals in the LULUCF sector. In agriculture, the Austrian agri-environmental programme covers instruments that promote the enhancement of carbon stocks in the agricultural environment (e.g. reduced tillage, organic farming), especially in soils. With respect to the sectors energy and transport, policies for increasing the share of biomass need to be mentioned, which may have indirect impacts on LULUCF. Main policy focus in this sector is on forestry.

Forest Management (WM)

Sustainable forest management has been a guiding principle of Austrian forest management policy for centuries. The overall principles of forest management in Austria are stipulated in the Forest Act (Federal Law Gazette I No. 1975/440, as amended) and cover the preservation of forest area, the preservation of the productivity of forest sites and their functions, and the preservation of yields for future generations; i.e. sustainable management – balancing the relevant ecological, economic and social functions of forests. The Austrian Forest Dialogue – a participative and transparent and on-going public dialogue on the forests – has developed the Austrian Forest Strategy 2020+ (in 2018)[21]; its first field of action is "Forests and Climate", describing several strategic targets with respect to climate action and climate change.

Measures specifically related to the targets of EU LULUCF Regulation are listed in Austria's draft updated National Energy and Climate Plan. They cover a. o. climate-efficient timber

[21] https://info.bml.gv.at/en/topics/forests/the-austrian-forest-dialogue/austrian-forest-strategy-2020.html

harvesting, targeted forest management and care measures to increase growth and resilience as well as specific support, building and maintaining stable carbon pools, improving the framework conditions for increasing the long-lived material use of sustainable indigenous wood resources, evaluation of the energy use of domestic woody biomass and assessment of the potential for additional carbon storage in Austria in line with the EU initiative on sustainable carbon cycles.

II.D.8 Waste

Emissions from the waste sector are clearly dominated by solid waste disposal, the policy focus has therefore been on the avoidance of emissions from landfills.

Reduce emissions from landfills (WM)

Due to the Austrian Landfill Ordinance (Federal Law Gazette II No. 39/2008) the deposition of untreated biodegradable waste has been banned completely. The carbon content of waste is reduced – besides separate collection of biowaste – through incineration or mechanical-biological treatment before deposition (pre-treatment options). Methane emissions from old landfills are reduced by the mandatory collection and use of landfill gas.

Strengthen waste prevention & increase recycling (WM)

Main principles of the Austrian Waste Management Act (Federal Law Gazette I No. 102/2002 as amended) are a. o. the prevention of waste and waste recovery/recycling. Projects, awareness raising campaigns and networks (e.g. '*Lebensmittel sind kostbar*' i.e. 'Food is prescious' and "United against waste') have been established to minimise food waste and to promote the re-use of waste. The Austrian Waste Prevention Programme 2023[22] lists about 90 waste reduction measures useful for individuals, business and institutions.

EU waste legislation (Waste Framework Directive 2008/98/EC as amended, Single-Use Plastics Directive (EU) 2019/904) a. o. provides for restrictions on single-use plastics (e.g. take-away food boxes and cups) and targets for the share of recycled waste. In Austria a ban on plastic carrier bags has been enacted in 2020 and a deposit system for single-use beverage bottles and cans will start operation in 2025; thus the combustion of fossil plastics in the residual waste fraction should be reduced with the co-benefit of less littering.

[22] https://www.bmk.gv.at/dam/jcr:67c5234f-e542-4a48-8489-e23282a3de00/Bundes-Abfallwirtschaftsplan_Teil-3.pdf

II.D.9 Further measures listed in the National Energy and Climate Plan

The policies listed above have been taken into account in the scenario modelling and their effect is shown in the scenarios “with measures” and “with additional measures” respectively.

In the final phase of the negotiations on the NECP a further package of measures has been included in the plan. It is based on a reduction of counter-productive subsidies on the one hand and a carbon management strategy for CCS/CCU on the other hand and has not been taken into account in the modelling work. A reduction effect of 2.5 Mt CO_2equ in addition to the scenario “with additional measures” has been expected according to expert judgement. (Section 5.1.1 of the Draft NECP.)

Table II.D.1: Policies and measures

Name	*Description*	*Objectives*	*Type of instrument*	*Status**	*Sectors affected*	*Gases affected*	*Start year of implement.*	*Implementing Entities*	*Estimated reduction 2030 (kt CO_2eq)*
EU Emission Trading Scheme (ETS)	Limiting emissions of energy intensive stationary installations and aviation through a trading mechanism for emission certificates.	Reduce fossil fuel combustion and process emissions	Economic, Regulatory	Implemented	Energy, Industry/IPPU	CO2, N2O	2005	Federal government	NE
Revision of the ETS	Accelerate mitigation by reduction of the Union wide quantity of ETS allowances	Reduce fossil fuel combustion and process emissions	Economic, Regulatory	Planned	Energy, Industry/IPPU	CO2, N2O		Federal government	NE
National Carbon Pricing Scheme	National system based on carbon certificates with fixed prices, to be replaced by EU scheme from 2027 onwards	Reduce fossil fuel combustion	Economic, Regulatory	Planned	Energy, Transport	CO2		Federal government	NE
Domestic Environmental Support Scheme	Financial support to GHG mitigation projects (energy efficiency, renewables, waste,…)	Reduce energy use and GHG emissions in industry/business	Economic	Implemented	Energy, Industry/IPPU, Transport	all gases, focus on CO2	1993	Federal government	NE
Austrian Climate and Energy Fund (KLI.EN)	Financial support to energy-relevant research projects, to climate friendly transport projects and to market launch of new climate friendly technologies.	Support research and implementation	Economic, Other (research)	Implemented	Energy, Transport	CO2	2007	Federal government	NE
Increase the share of renewable energy in energy supply and district heating	feed-in tariffs for various forms of electricity generation from renewable sources, support for non-fossil district heating	Increase renewable energy	Regulatory, Economic	Implemented	Energy	CO2	2002	Federal government	NE

Increase energy efficiency in energy and manufacturing industries	Set energy efficiency targets and obligations for energy suppliers and large consumers	Improve energy efficiency	Regulatory	Implemented	Energy	CO2	2008	Federal government, federal provinces	NE
Further enhancement of renewable energy in energy supply	Tightened targets for renewables share, support for electricity and heat generation from renewables, expansion of distribution networks	Increase renewable energy	Economic, Regulatory	Planned	Energy	CO2		Federal government	NE
Further enhancement of energy efficiency in energy and manufacturing industries	Tightened targets, “energy efficiency first” principle in planning, and instruments for consumer information and empowerment	Reduce energy consumption	Regulatory	Planned	Energy	CO2		Federal government	NE
Towards climate neutral new buildings	Mandatory construction standards for new buildings, ban of coal and oil for space heating, funding instruments	Reduce emissions of new buildings	Regulatory, Economic	Implemented	Energy	CO2	2006	Federal government, federal provinces	NE
Thermal improvement of building stock	Construction standards for major renovations, funding for thermal insulation of existing buildings, introduction of energy certificates for buildings, service s for information and advice	Reduce energy consumption of buildings	Regulatory, Economic, Other (Information)	Implemented	Energy	CO2	2006	Federal government, federal provinces	NE
Replacement of fossil fuels in building stock	Stepping up the replacement of heating systems by information and funding	Increase share of renewable energy	Economic, Regulatory	Implemented	Energy	CO2	2000	Federal government, federal provinces	NE
Increased energy efficiency in residential electricity demand	implementation of eco-design requirements, introduction of energy labelling for energy consuming products, advice and information on energy efficient products	Reduce electricity consumption of appliances in household and service sector	Regulatory, Other (Information)	Implemented	Energy	CO2	2007	Federal government, federal provinces	NE

Accelerated path to climate neutral new buildings	Implementation of zero emission standards of the EU Energy Efficiency Directive, ban of all fossil energy sources for space heating	Reduce emissions of new buildings	Regulatory, Economic	Planned	Energy	CO2		Federal government, federal provinces	192
Accelerated thermal improvement of building stock	Tightened construction standards for major renovations, development of national renovation plans, continued funding, training of workforce	Reduce energy consumption in buildings	Regulatory, Economic, Other (Training)	Planned.	Energy	CO2		Federal government, federal provinces	2232
Accelerated replacement of fossil fuels in building stock	Heat strategy for phase-out of fossil fuels, continued funding	Increase share of renewable energy	Regulatory, Economic	Planned	Energy	CO2		Federal government, federal provinces	IE
Increase share of renewable energy sources in road transport	Mandatory minimum share of biofuels in transport fuels with sustainability criteria, support for electric mobility	Increase share of renewable energy	Economic, Regulatory	Implemented	Transport	CO2	2004	Federal government	NE
Increase fuel efficiency in road transport	CO2 fleet standards, fiscal instruments to penalise cars with high fuel consumption, initiatives to promote fuel-efficient driving	Reduce energy consumption of transport	Economic, Regulatory, Other (Information, Training)	Implemented	Transport	CO2	2004	Federal government	NE
Modal shift in passenger and freight transport	Reduction of individual motorised transport and a shift towards public transport by mobility management, awareness raising, training; improving railway infrastructure and intermodal freight transport logistics	Improve modal split of transport	Economic, Other (Information, Training)	Implemented	Transport	CO2	2005	Federal government, federal provinces, business	NE
Accelerate increase of renewable energy sources and fuel efficiency in transport	Increase of minimum share of renewables in transport, tightened CO2 fleet standards, enhanced support for electric mobility	Reduce energy consumption of transport and increase share of renewables	Economic, Regulatory, Other (Information)	Planned	Transport	CO2		Federal government	2172

Active mobility and mobility management	Improved planning and investments for walking and cycling infrastructure, improved conditions for car and ride sharing, extended resources for mobility management	Improve modal split of transport	Economic, Regulatory, Other (Information)	Planned	Transport	CO2		Federal government, federal provinces, business	663
Accelerated modal shift	Criteria for public transport services (station density and frequency), extended funding programmes for rai freight transport	Improve modal split of transport	Economic, Regulatory	Planned	Transport	CO2		Federal government, provinces	218
Decrease emissions from F-gases and other product use	Reduction of F-gases in stationary applications and products, restriction of HFC used in mobile air conditions, quota system on EU level	Reduce use and GWP of fluorinated gases	Regulatory	Implemented	Industry/IPPU	HFCs, PFCs, SF6, NF3	2002	Federal government	NE
Accelerated decrease of F-gas emissions	Revision of the EU F-Gas Regulation	Reduce use and GWP of fluorinated gases	Regulatory	Planned	Industry/IPPU	HFCs, PFCs, SF6, NF3		Federal government	87
Implementation of EU agricultural policies	Implementation of Austria's CAP Strategic Plan, which includes instruments for environemental sound farming practices, including actions relevant for the mitigation of GHG emissions and enhancements of soil carbon stock	Improvements in cropland and grassland management, livestock and manure management; enhancement of carbon stock	Economic, Other (Information)	Implemented	Agriculture	CH4, N2O, CO2	2007	Federal government, federal provinces	NE
Livestock and feeding management	Optimized feeding with respect to enteric CH4 emissions and N2O emissions from manure	Improvements in livestock management	Economic, Other (Information)	Planned	Agriculture	CH4, N2O		Federal government, federal provinces	87
Optimised manure and fertilizer management	Support for improved animal housing, precision farming, mandatory provisions regarding manure pits and fertilizer use (regional)	Improvements in manure management and fertilizer use	Regulatory, Economic, Other (Information)	Planned	Agriculture	CH4, N2O		Federal government, federal provinces	165

Increase biogas production from manure	"Green gas" initiative to replace fossil gas in the gas grid	Improvements in manure management	Regulatory, Economic	Planned	Agriculture	CH4		Federal government, federal provinces	203
Forest management	Sustainable forest management according to the Forest Act, implementation of the "Austrian Forest Strategy 2020+" and of measures related to the targets of EU LULUCF Regulation	Building and maintaining stable carbon pools	Regulatory, Other (information)	Implemented	Forestry/LULUCF	CO2	1975	Federal government, federal provinces	NE
Reduce emissions from landfills	Landfilling of untreated biodegradable waste banned. Mandatory landfill gas collection and use/flaring.	Minimise emissions from landfills	Regulatory	Implemented	Waste management/waste	CH4	1997	Federal government, federal provinces	NE
Strengthen waste prevention and increase recycling	Awareness measures regarding waste reduction, reuse and recycling, restrictions for single use plastics and recycling targets	Waste prevention / recycling	Regulatory, Other (Information)	Implemented	Waste management/waste	CH4	1997	Federal government, federal provinces	NE

* Regarding "Status", see the note at the beginning of Section II.D with respect to scenarios

II.D.10 General information on policies and measures

83. Each Party may also provide the following information for each action, policy and measure reported: (a) Costs; (b) Non-GHG mitigation benefits; (c) How the mitigation actions as identified in paragraph 80 above interact with each other, as appropriate.

85. Each Party shall provide, to the extent possible, estimates of expected and achieved GHG emission reductions for its actions, policies and measures in the tabular format referred to in paragraph 82 above; those developing country Parties that need flexibility in the light of their capacities with respect to this provision are instead encouraged to report this information.

86. Each Party shall describe the methodologies and assumptions used to estimate the GHG emission reductions or removals due to each action, policy and measure, to the extent available. This information may be presented in an annex to its biennial transparency report.

- Available estimates of expected GHG emission reductions shown in the tabular format are based on the sectoral models used for the scenario calculations. Descriptions of the models can be found in Section II.F.
- It is particularly difficult to collect robust information on the achieved effects of individual mitigation actions, as no uniform regulations for estimating, monitoring and reporting the effect of PaMs and individual instruments could be established up to now. This is because the responsibilities for policies are distributed between Federation, federal provinces and municipalities, and jurisdiction in these fields is laid down in the Constitution Act (cf. Section II.A.13). Many measures have multiple targets besides GHG mitigation, e.g. air pollution mitigation, road safety, noise prevention, health, livable cities, tax yield, affordable housing, sustainable buildings etc.; actors in the administrations in these different fields have quite different background and focus. Forcing GHG reporting requirements upon these different actors and establishing common rules would not only require considerable additional resources at all levels of administration, but would also suffer from a missing legal basis in the Constitution Act and would meet heavy resistance.
- For the same reason quantifications of non GHG benefits are missing in general (unless the effect is related to a main policy area of the measure). But even if quantifications are not available, positive effects besides GHG mitigation are obvious for many measures, e.g.:
  - A change from fuel combustion to water power, wind power and PV or to electric power-train as well as reduced energy demand through improved efficiency in industry, transport and buildings reduces emissions of air pollutants from fuel combustion;

- Reducing the share of cars and lorries in road transport in favour of public transport, cycling and walking reduces noise, air pollution and road accidents, and active mobility by cycling and walking has positive health effects.

84. For each Party with an NDC under Article 4 of the Paris Agreement that consists of mitigation co-benefits resulting from Parties' adaptation actions and/or economic diversification plans consistent with Article 4, paragraph 7, information to be reported under paragraphs 80, 82 and 83 above includes relevant information on policies and measures contributing to mitigation co-benefits resulting from adaptation actions or economic diversification plans.

Not applicable.

87. Each Party should identify those actions, policies and measures that are no longer in place compared with the most recent biennial transparency report, and explain why they are no longer in place.

Not applicable.

88. Each Party should identify its actions, policies and measures that influence GHG emissions from international transport.

Austria is aware of the need to reduce GHG emissions from aviation and shippin**g**. Austria supports EU work on that subject in ICAO and IMO.

- The EU, with active support from Austria, succeeded to include aviation CO_2 emissions into the EU emissions trading scheme from 2012 onwards. The EU scheme includes emissions from flights European Economic Area. Agreements with Switzerland, Iceland, Norway and the UK have been signed since 2017 to link the EU ETS with the respective trading scheme.
- The EU is the driving force behind the ICAO agreement on a global market-based measure to limit GHG emissions from international aviation (Carbon Offsetting Scheme for International Aviation – CORSIA) and its ambitious implementation, which is in place since 2021.
- Even though for the period 2021 -2023 no compensation obligations arose due to the not very ambitious baseline and the crisis induces reduction in emissions, European airlines are expected to actually compensate CO_2 emissions in the coming period and compensation obligations are supposed to significantly increase in 2027 when CORSIA will become legally binding at global level.

- On the national level, Austria published 2022 its Aviation Strategy 2040+[23],which focuses on mitigating CO2 emissions. As part of this strategy, a SAF (Sustainable Aviation Fuels) Roadmap[24] has been developed to create suitable framework conditions in and for Austria for the introduction and market ramp-up of SAF.
- For maritime transport, appropriate action has also been implemented at European level. Since January 2024, the EU's Emissions Trading System (EU ETS) has been extended to cover CO_2 emissions from all large ships (of 5 000 gross tonnage and above) entering EU ports, regardless of the flag they fly. As a land locked country, Austria has no EU port falling under the EU ETS. The system covers CO_2 (carbon dioxide), CH_4 (methane) and N_2O (nitrous oxide) emissions, but the two latter only as from 2026. Emissions from maritime transport are included in the overall ETS cap, which defines the maximum amount of greenhouse gases that can be emitted under the system. The cap is reduced over time. This will incentivise energy efficiency, low-carbon solutions, and reductions of the price difference between alternative fuels and traditional maritime fuels.
- Austria signed the most important international Agreements dealing with martime issues and is member of the International Maritime Organisation (IMO). Due to the high administrative burden for a land-locked country to provide a modern administration, in compliance with the provisions of the EU Regulations concerned, to register maritime ships and authorise them to sail under Austrian flag, the Austrian maritime navigation act was adopted in 2012. Since then no maritime shipping registry exists in Austria anymore. Despite that, the Austrian membership to the IMO and its legal instruments continues but the practical effect is limited in scope.

89. Each Party should, to the extent possible, provide information about how its actions, policies and measures are modifying longer-term trends in GHG emissions and removals.

All policies are expected to modify the long term emission trend by sustainable structural and behaviour changes and by reducing emission intensity and improving efficiency in the sector affected, e.g. by increasing the stock of power generation units and heating systems based on renewable energy, by changes to more energy efficient production processes, or by establishing efficient building stock and environmentally sound transport infrastructure:

- The EU ETS is considered a driving factor for efficiency improvements in plants and the Environmental Support Scheme as well as the Climate and Energy Fund provide support for changes in plants, infrastructure and buildings; an increased number of

[23] https://www.bmk.gv.at/en/topics/transport/aviation/aviation-strategy/aviation-strategy-2040.html
[24] https://www.bmk.gv.at/en/topics/transport/aviation/aviation-strategy/saf-roadmap.html

power/heat plants based on renewables (infrastructure) as well as efficiency improvements in industrial infrastructure have still an effect many years later.

- In the transport sector changes of the fleet (efficiency, renewable energy) do not only effect fleet emissions in the longer term, but demand changes (e.g. electric cars) will change production structures and prices; extension of infrastructure (rail transport, charging of electric vehicles) will persist.
- Buildings and their heating systems usually have a long lifetime, thus low energy buildings, thermal renovation and installation of heating systems based on renewable energy sources have effect on emissions over a long time.
- Systems with F-gas are phased out and are replaced by alternative solutions.
- In agriculture the conversion of holdings to organic farming or the construction of low emission manure systems and the enhancement of soil carbon can be expected to have effects in the longer term, as well as forest management practices for the forest carbon stock.
- The ban of the deposition of untreated waste avoids long-term methane emissions from landfills.

90. Each Party is encouraged to provide detailed information, to the extent possible, on the assessment of economic and social impacts of response measures.

- At the national level, there are mandatory government-wide impact assessments for federal legislative acts, which cover economic, environmental and social consequences of proposed legislation, as appropriate. These assessments target all policies and measures, including measures to combat climate change, and require information on: The Austrian Federal budget, economic impacts (GDP, employment, costs for SMEs, etc.), social impacts (consumers, youth, etc.), environmental impacts (climate change; air and water quality; biodiversity; energy and waste), gender equality. The level of detail of the assessment depends on the extent of the expected impacts. Impact assessment are prepared by the administrative units responsible for the proposal, supported by a common IT tool; resulting documents are published on the website of the Austrian Parliament as part of the package of accompanying materials of legislative proposals.
- Austrian policies are determined by EU policies to a considerable extent. EU legislation is subject to extensive impact assessments (preparation usually supported by external consultants). Information on these impact assessments may be found in EU documents.

II.E Summary of greenhouse gas emissions and removals

91. Each Party that submits a stand-alone national inventory report shall provide a summary of its GHG emissions and removals. This information shall be provided for those reporting years corresponding to the Party's most recent national inventory report, in a tabular format.

Table II.E.1: Summary table of greenhouse gas emissions trend and removals in 2022 (in kt CO_2 eq)

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	CO_2	CH_4	N_2O	HFCs	Total
Total (net emissions)	**56,860**	**6,526**	**3,168**	**1,816**	**68,370**
1. Energy	**47,340**	**576**	**548**		**48,464**
1.A. Fuel combustion	47,260	345	548		48,153
1.A.1. Energy industries	8,364	28	85		8,476
1.A.2. Manufact. industries and constr.	10,477	23	119		10,619
1.A.3. Transport	20,472	21	219		20,712
1.A.4. Other sectors	7,920	273	125		8,318
1.A.5. Other	27	0	0		28
1.B. Fugitive emissions from fuels	80	231	IE,NA,NO		311
1.B.1. Solid fuels	IE,NA,NO	IE,NA,NO	IE,NA,NO		IE,NA,NO
1.B.2. Oil and natural gas and other	80	231	IE,NA,NO		311
1.C. CO_2 transport and storage	NO				NO
2. Industrial processes and product use	**13,998**	**60**	**55**	**1,816**	**15,929**
2.A. Mineral industry	2,918				2,918
2.B. Chemical industry	600	55	23		677
2.C. Metal industry	10,308	5			10,315
2.D. Non-energy prod. from fuels, solvent use	172	NA	NA		172
2.E. Electronic Industry			NO	55	55
2.F. Product uses as ODS substitutes				1,409	1,409
2.G. Other product manufacture and use	NA	NA	32	350	382
2.H. Other	NA,NO	NA,NO	NA,NO		NA,NO
3. Agriculture	**149**	**4,915**	**2,213**		**7,277**
3.A. Enteric fermentation		4,284			4,284
3.B. Manure management		631	470		1,101
3.C. Rice cultivation		NO			NO
3.D. Agricultural soils		NA	1,743		1,743
3.E. Prescribed burning of savannahs		NO	NO		NO
3.F. Field burning of agricultural residues		NO	NO		NO
3.G. Liming	99				99
3.H. Urea application	26				26
3.I. Other carbon-containing fertilizers	24				24
3.J. Other	NA	NA	NA		NA

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	CO_2	CH_4	N_2O	HFCs	Total
4. Land use, land-use change and forestry (1)	**-4,629**	**27**	**127**		**-4,474**
4.A. Forest land	-4,612	1	18		-4,594
4.B. Cropland	317	IE,NO	23		341
4.C. Grassland	444	27	0		470
4.D. Wetlands	70	0	0		70
4.E. Settlements	746	NO	74		820
4.F. Other land	517	NO	13		529
4.G. Harvested wood products	-2,110				-2,110
4.H. Other					
5. Waste	**2**	**947**	**225**		**1,174**
5.A. Solid waste disposal		846			846
5.B. Biological treatment of solid waste		77	72		149
5.C. Incineration and open burning of waste	2	0	0		2
5.D. Waste water treatment and discharge		24	152		177
5.E. Other					
6. Other *(as specified in summary 1)*					

Memo items:					
1.D.1. International bunkers	1,999	0	17		2,017
1.D.1.a. Aviation	1,967	0	14		1,982
1.D.1.b. Navigation	32	0	3		35
1.D.2. Multilateral operations	NO	NO	NO		NO
1.D.3. CO_2 emissions from biomass	24,584				24,584
1.D.4. CO_2 captured	NO				NO
5.F.1. Long-term storage of C in waste disposal sites	30,460				30,460
Indirect N_2O			NA,NE,NO		

Indirect CO_2	IE,NA,NE,NO				

Total CO_2 equivalent emissions without LULUCF	**72,844**
Total CO_2 equivalent emissions with LULUCF	**68,370**
Total CO_2 equivalent emissions, including indirect CO_2, without LULUCF	**72,844**
Total CO_2 equivalent emissions, including indirect CO_2, with LULUCF	**68,370**

Table II.E.2: Time series of greenhouse gas emissions trend and removals by gas (in kt CO_2 eq)

Year	CO_2 w/o LULUCF	CO_2 with LULUCF	CH_4 w/o LULUCF	CH_4 with LULUCF	N_2O w/o LULUCF	N_2O with LULUCF	F-Gases	**Total w/o LULUCF**	**Total with LULUCF**
1990	62,184	50,332	11,321	11,348	4,028	4,171	1,550	79,083	67,401
1991	65,782	46,921	11,202	11,228	4,054	4,199	1,708	82,746	64,056
1992	60,283	51,082	10,895	10,922	3,859	4,007	1,140	76,177	67,152
1993	60,709	43,952	10,938	10,965	3,865	4,015	1,039	76,551	59,972
1994	61,083	51,697	10,607	10,633	3,812	3,961	1,256	76,759	67,548
1995	64,061	44,555	10,515	10,542	3,871	4,016	1,539	79,986	60,652
1996	67,405	48,795	10,169	10,196	3,887	4,028	1,684	83,145	64,703
1997	67,302	44,850	9,839	9,865	3,897	4,035	1,714	82,752	60,465
1998	66,937	47,889	9,651	9,677	3,937	4,071	1,522	82,046	63,160
1999	65,668	45,379	9,453	9,479	3,913	4,046	1,434	80,468	60,339
2000	66,177	52,061	9,218	9,245	3,885	4,017	1,360	80,640	66,683
2001	70,166	40,905	9,022	9,049	3,761	3,893	1,575	84,524	55,422
2002	71,969	58,948	8,865	8,892	3,749	3,882	1,695	86,279	73,417
2003	77,396	62,252	8,785	8,812	3,734	3,868	1,732	91,647	76,664
2004	77,694	55,427	8,780	8,807	3,201	3,334	1,768	91,443	69,336
2005	79,092	60,833	8,519	8,546	3,200	3,333	1,794	92,605	74,506
2006	76,812	67,898	8,400	8,427	3,208	3,342	1,774	90,193	81,441
2007	74,112	68,591	8,280	8,307	3,226	3,361	1,812	87,430	82,070
2008	73,490	61,270	8,132	8,159	3,380	3,517	1,839	86,841	74,785
2009	67,307	59,403	8,024	8,051	3,184	3,322	1,708	80,223	72,484
2010	72,008	52,404	7,917	7,944	3,014	3,152	1,854	84,793	65,354
2011	69,901	54,702	7,684	7,711	3,108	3,245	1,914	82,607	67,572
2012	67,274	61,667	7,551	7,578	3,082	3,219	1,982	79,889	74,446
2013	67,767	61,693	7,431	7,458	3,066	3,201	2,046	80,310	74,399
2014	64,166	56,720	7,274	7,301	3,148	3,281	2,134	76,721	69,436
2015	66,357	59,962	7,188	7,215	3,163	3,297	2,227	78,935	72,701
2016	67,217	60,389	7,110	7,137	3,251	3,385	2,285	79,863	73,196
2017	69,598	66,508	7,081	7,107	3,196	3,329	2,321	82,195	79,265
2018	66,562	71,624	6,853	6,880	3,156	3,288	2,333	78,903	84,125
2019	67,946	70,225	6,711	6,738	3,149	3,280	2,252	80,058	82,495
2020	62,176	56,176	6,607	6,634	3,105	3,234	2,143	74,030	68,187
2021	65,757	54,526	6,622	6,649	3,143	3,271	1,837	77,360	66,284
2022	61,489	56,860	6,498	6,526	3,040	3,168	1,816	72,844	68,370

Table II.E.3: Time series of greenhouse gas emissions trend and removals by sector (in kt CO_2 eq)

Year	1. Energy	2. IPPU	3. Agricul-ture	4. LULUCF	5. Waste	6. Other
1990	52,666	13,633	8,416	-11,682	4,367	NO
1991	56,275	13,699	8,327	-18,690	4,445	NO
1992	51,741	12,061	7,984	-9,025	4,391	NO
1993	52,087	12,014	8,088	-16,579	4,361	NO
1994	51,614	12,845	8,050	-9,211	4,249	NO
1995	54,161	13,625	8,145	-19,334	4,055	NO
1996	58,179	13,116	8,009	-18,442	3,842	NO
1997	57,034	14,093	7,950	-22,288	3,676	NO
1998	56,887	13,693	7,925	-18,886	3,540	NO
1999	55,790	13,472	7,801	-20,129	3,405	NO
2000	55,290	14,417	7,657	-13,958	3,277	NO
2001	59,455	14,337	7,575	-29,102	3,157	NO
2002	60,621	15,060	7,453	-12,862	3,145	NO
2003	66,129	15,081	7,298	-14,983	3,139	NO
2004	66,229	14,751	7,264	-22,106	3,198	NO
2005	66,714	15,653	7,196	-18,099	3,041	NO
2006	63,921	16,181	7,185	-8,752	2,906	NO
2007	60,488	16,930	7,250	-5,360	2,762	NO
2008	59,531	17,307	7,366	-12,056	2,636	NO
2009	56,389	13,973	7,411	-7,739	2,449	NO
2010	59,279	15,938	7,287	-19,439	2,289	NO
2011	56,970	16,130	7,363	-15,035	2,143	NO
2012	54,829	15,732	7,312	-5,443	2,016	NO
2013	55,004	16,122	7,311	-5,911	1,873	NO
2014	51,279	16,248	7,447	-7,286	1,747	NO
2015	53,062	16,750	7,479	-6,234	1,644	NO
2016	54,285	16,437	7,595	-6,667	1,546	NO
2017	55,999	17,191	7,549	-2,930	1,457	NO
2018	54,553	15,535	7,435	5,222	1,381	NO
2019	54,935	16,470	7,324	2,437	1,329	NO
2020	49,994	15,461	7,297	-5,843	1,278	NO
2021	51,916	16,892	7,322	-11,076	1,230	NO
2022	48,464	15,929	7,277	-4,474	1,174	NO

II.F Projections of greenhouse gas emissions and removals, as applicable

92. Each Party shall report projections pursuant to paragraphs 93–101 below; those developing country Parties that need flexibility in the light of their capacities are instead encouraged to report these projections.

93. Projections are indicative of the impact of mitigation policies and measures on future trends in GHG emissions and removals, and shall not be used to assess progress towards the implementation and achievement of a Party's NDC under Article 4 of the Paris Agreement unless the Party has identified a reported projection as its baseline as identified in chapter III.B above.

94. Each Party that reports pursuant to paragraph 92 above shall report a 'with measures' projection of all GHG emissions and removals and may report a 'with additional measures' projection and a 'without measures' projection.

95. Projections shall begin from the most recent year in the Party's national inventory report and extend at least 15 years beyond the next year ending in zero or five; those developing country Parties that need flexibility in the light of their capacities with respect to this provision have the flexibility to instead extend their projections at least to the end point of their NDC under Article 4 of the Paris Agreement.

… (see below)

98. Each Party shall include projections on a sectoral basis and by gas, as well as for the national total, using a common metric consistent with that in its national inventory report.

99. Projections shall be presented relative to actual inventory data for the preceding years.

100. Emission projections shall be provided with and without LULUCF.

101. Projections shall be presented in graphical and tabular formats.

The scenarios shown below have been calculated in spring/summer 2024; they are an updated of the scenarios which had been calculated in the regular biennial scenario modelling cycle (finished in March 2023) and they take into account the version of the National Energy and Climate Plan (NECP), which has been submitted to the European Commission in September 2024 ("official draft").

II.F.1 National total

- **Scenario "with measures":** Total GHG emissions (excluding LULUCF) decrease from 72.8 Mt CO_2 eq in 2022 to 65.8 Mt in 2030 and 50.0 in 2040 (-10 % and -22 % respectively).
- Long-term decrease driven by transport with a decrease of 10.3 Mt CO_2 eq or 50 % 2020–2040, and by energy industries and "other sectors" (1.A.4) (33 % 3 and 27 %

respectively); strong decrease also in the waste sector, but marginal in absolute terms (33 % or -0.4 Mt).

- Share of fuel combustion (about two third in 2022) shows a slow decrease in the longer term;
- **Scenario "with additional measures":** Total GHG emissions (excluding LULUCF) decrease to 54.4 Mt in 2030 and 36.7 Mt in 2040 (-25 % and -50 % respectively).
- Additional reduction compared to the WM scenario (20.4 Mt in 2040) mainly stems from the sectors IPPU (-6.6 Mt), manufacturing industries (-3.4 Mt), "other sectors" and transport sector (about -4 Mt each).

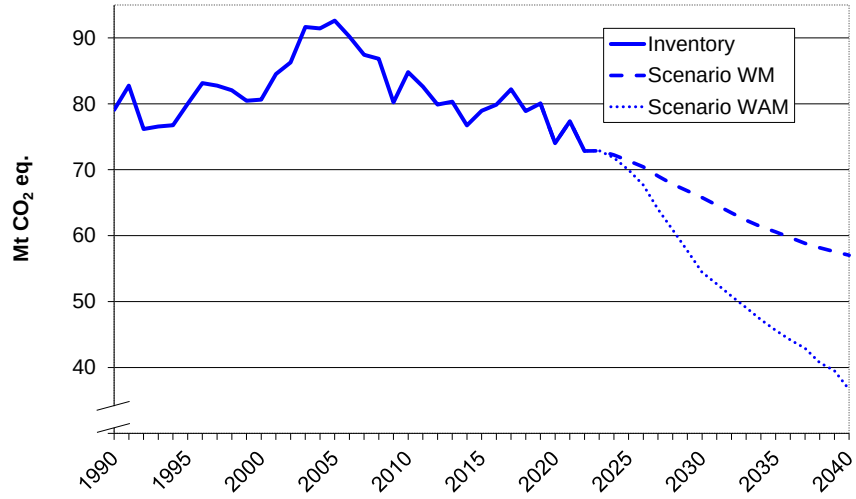

Figure II.F.1: Actual and projected total GHG emissions (without LULUCF)

II.F.2 By sector

- Emissions of the energy sector decrease moderately from 2022 to 2040 in the WM scenario (13 %) and much more in the WAM scenario (45 %). Trends and driving forces are different in the subsectors:
  - Despite increasing electricity demand, emissions from energy industries are expected to decrease further (about one quarter from 2022 to 2030 and one third from 2022 to 2040 in WM, somewhat more in WAM); the main reason is a further shift from fossil fuels to renewable energy sources.
  - The WM scenario shows an emission increase in several branches of manufacturing industries and construction due to the expected economic development (production increases), in total +14 % by 2040. The WAM scenario shows a turnaround with a decrease of more than one quarter by 2040, caused a. o. by enhanced energy efficiency, the use of green gases and implementation efforts for circular economy.

  - Emissions from “other sectors” (CRF 1.A.4) show a significant further decrease in the WM scenario (-27 % by 2040), mainly because of ongoing improvement of energy efficiency of the building stock and heating systems, shift from fossil fuels to biomass, district heat and ambient heat (including heat pumps). In the WAM scenario concerted replacement of fossil heating systems and mandatory efficiency measures boost the emission decrease to 75 %.
- The transport sector shows the largest emission decrease in both scenarios: 15 % by 2030 and 50 % by 2040 in the WM scenario, 16 % and 69 % respectively in the WAM scenario. More biofuels and increasing electric mobility triggered by the announced phase-out of the registration of fossil-fuel driven vehicles after 2035 show effects already in 2030 in the WM scenario. In the WAM scenario the emission decrease is accelerated by more ambitious policies for renewable energy (including electric mobility), resolute promotion of active mobility and improved services in public transport.
- In contrast to the past trend, emissions from industrial processes and product use are expected to show a slight decrease in the WM scenario (6 % by 2040), due to decreasing emissions of F-gases. The WAM scenario exhibits a much stronger decrease (47 % by 2040) as a result of the provisions of the new EU F-gas regulation.
- The sector agriculture shows decreasing emissions (by 10 %) from 2022 to 2030 in the WEM scenario and stagnation afterwards, mainly influenced by livestock development. A stronger decrease (20 % by 2020) in the WAM scenario is caused by improved feeding strategies, increased efficiency of fertilizer application and manure treatment in biogas plants.
- The LULUCF sector is projected to remain a net sink with slight fluctuations until 2035 and a decreasing sink after 2035. Driving factors are changes in biomass growth and biomass use in the dominating subsector “forest”; there is no difference between the scenarios. Almost until the end of the period the sink strength is projected to be higher than the average of the last years, which have been influenced by forest calamities.
- Emissions from the waste sector decrease further (35% by 2040 in both scenarios), mainly because of the decreasing carbon content of historically landfilled waste as well as because of a decrease in the amount of waste deposited in landfills.

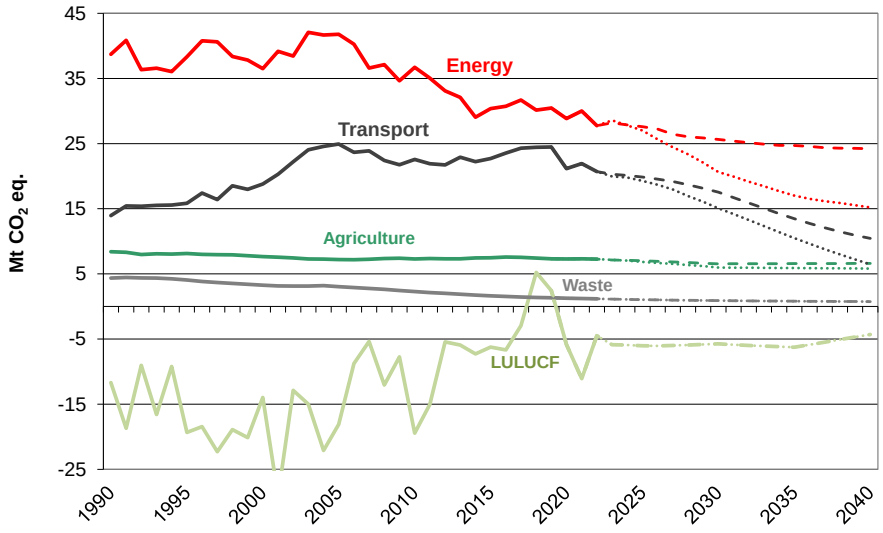

Figure II.F.2: Actual and projected GHG emissions by sector

II.F.3 By gas

- The share of F-gases decreases from 3 to 1 % in both scenarios from 2022 to 2040, that of CO_2 only in the WAM scenario (by 5 %); the share of the other gasses increases slightly.
- CO_2 emissions trend (WM: -22 %, WAM: -53 %, by 2040) due to decrease in fuel combustion as well as in industrial processes.
- CH_4 emissions: Decrease by 17 % from 2022 to 2040 in the WM scenario and by 25 % in WAM, trends caused by the developments in the sectors agriculture and waste.
- N_2O emissions decrease by 4 % in WM and by 17 % in WAM, mainly due to falling emissions from agriculture;
- F-gas emissions are expected to decrease by more than half in WM and by three quarters in WAM (by 20240, a large part of the reduction occurring before 2030 already), mainly because of legal restrictions for HFCs on EU level and the increased availability of low GWP alternatives.

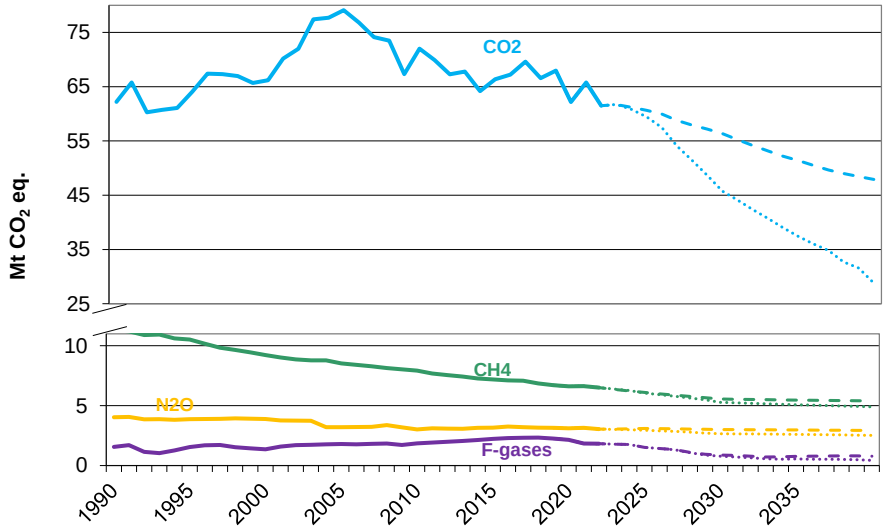

Figure II.F.3: Actual and projected GHG emissions by gas (without LULUCF)

II.F.4 Tables

Table II.F.1: Projections of greenhouse gas emissions and removals under a 'with measures' scenario

	Inventory data			Projections			
	(kt CO2 eq)			(kt CO2 eq)			
	1990	2005	2022	2025	2030	2035	2040
Sector							
Energy	38,716	41,786	27,752	27,601	25,642	24,694	24,213
Transport	13,949	24,928	20,712	19,856	17,543	13,466	10,447
Industry/industrial processes	13,633	15,653	15,929	15,814	15,133	15,015	14,988
Agriculture	8,416	7,196	7,277	7,016	6,552	6,584	6,611
Forestry/LULUCF	-11,682	-18,099	-4,474	-6,016	-5,727	-6,255	-4,297
Waste management/waste	4,367	3,041	1,174	1,049	902	815	758
Gas							
CO_2 including LULUCF	50,332	60,833	56,860	54,467	50,474	44,984	43,464
CO_2 excluding LULUCF	62,184	79,092	61,489	60,636	56,346	51,379	47,905
CH_4 including LULUCF	11,348	8,546	6,526	6,126	5,583	5,490	5,425
CH_4 excluding LULUCF	11,321	8,519	6,498	6,099	5,556	5,463	5,398
N_2O including LULUCF	4,171	3,333	3,168	3,219	3,119	3,082	3,048
N_2O excluding LULUCF	4,028	3,200	3,040	3,093	3,000	2,968	2,932
HFCs	2	1,109	1,411	1,232	748	636	646
PFCs	1,063	150	26	28	28	28	28
SF_6	485	509	365	236	80	87	94
NF_3	NO,NA	26	14	13	13	13	13
Total with LULUCF	67,401	74,506	68,370	65,321	60,046	54,320	52,718
Total without LULUCF	79,083	92,605	72,844	71,337	65,773	60,574	57,016

Table II.F.2: Projections of greenhouse gas emissions and removals under a 'with additional measures' scenario

	Inventory data			Projections			
	(kt CO2 eq)			(kt CO2 eq)			
	1990	2005	2022	2025	2030	2035	2040
Sector							
Energy	38,716	41,786	27,752	26,992	20,641	17,031	15,201
Transport	13,949	24,928	20,712	19,278	15,076	10,503	6,484
Industry/industrial processes	13,633	15,653	15,929	15,793	11,856	11,387	8,389
Agriculture	8,416	7,196	7,277	6,832	5,973	5,904	5,818
Forestry/LULUCF	-11,682	-18,099	-4,474	-6,016	-5,727	-6,255	-4,297
Waste management/waste	4,367	3,041	1,174	1,049	902	815	758
Gas							
CO_2 including LULUCF	50,332	60,833	56,860	53,261	39,863	31,018	24,352
CO_2 excluding LULUCF	62,184	79,092	61,489	59,430	45,735	37,413	28,792
CH_4 including LULUCF	11,348	8,546	6,526	6,080	5,307	5,106	4,927
CH_4 excluding LULUCF	11,321	8,519	6,498	6,053	5,280	5,080	4,901
N_2O including LULUCF	4,171	3,333	3,168	3,075	2,769	2,715	2,640
N_2O excluding LULUCF	4,028	3,200	3,040	2,949	2,650	2,601	2,523
HFCs	2	1,109	1,411	1,235	660	430	324
PFCs	1,063	150	26	28	28	28	28
SF_6	485	509	365	236	81	75	68
NF_3	NO,NA	26	14	13	13	13	13
Total with LULUCF	67,401	74,506	68,370	63,928	48,720	39,384	32,353
Total without LULUCF	79,083	92,605	72,844	69,944	54,448	45,639	36,650

96. Each Party should provide information in describing the methodology used to develop the projections. This information should include:

(a) Models and/or approaches used and key underlying assumptions and parameters used for projections (e.g. gross domestic product growth rate/level, population growth rate/level);

(b) Changes in the methodology since the Party's most recent biennial transparency report;

(c) Assumptions on policies and measures included in the 'with measures' projections and 'with additional measures' projections, if included;

(d) Sensitivity analysis for any of the projections, together with a brief explanation of the methodologies and parameters used.

II.F.5 Models

Emission projections for CO_2, CH_4, N_2O and F-gases are generally calculated by the Environment Agency Austria (Umweltbundesamt). Basically, the same methodologies as for the national GHG inventory are applied, as reported in Austria´s National Inventory Reports. The projections are consistent with the historical emission data of the latest Austrian Emission Inventory submission, with emission data up to the data year 2022.

The underlying sectoral forecasts of activities are based on the use of several models and methods and have been carried out in close collaboration with several institutions:

- The energy forecast is based on the National Energy Balance of Statistics Austria and on the econometric input-output model MIO-ES, supported by calculations based on bottom-up models:
  - Energy Economics Group of the Technical University Vienna with INVERT/EE-Lab, for domestic heating (incl. district heating demand) & hot water supply,
  - Institute of Transportation of the Technical University Vienna with the model MARS, which simulates passenger transport and the spatial distribution of residents and workplaces,
  - Technical University of Graz with the models NEMO, which was developed for the calculation of emission inventories for road transport in larger areas, and GEORG, a fleet based model for the calculation of energy consumption and emissions of mobile off-road sources,
- The forecast of emissions from industrial processes and solvents are based on expert judgements of Umweltbundesamt and on projections of respective gross value added (NACE codes), for emissions from steel production on the EISSEE model, a bottom-up cost model for technology decisions for the iron and steel industry.
- Emissions for fluorinated gases are extrapolated in the inventory model considering EU legislation in force.
- In sector agriculture, activities (livestock, crop yields, mineral fertilizers, agricultural area) have been modelled with the PASMA model of the Austrian Institute of

Economical Research, and emissions have been calculated with the model of the national inventory, taking into account expcted changes of agricultural practice.

- The waste forecast is generally based on Umweltbundesamt expert judgements on waste amount and waste treatment.
- Several models have been used for the different LULUCF subsectors:
  - For forest growth the model CALDIS was used, for soil organic carbon the YASSO 15 model;
  - for cropland and grassland the PASMA model model of the Austrian Institute of Economical Research;
  - expert judgements have been used for wetlands, settlements and other land;
  - the forest sector model FOHOW2 has been used for projections of harvested wood products.

Details on the models can be found in Chapter 3 of the draft report on Austria's GHG emission projections submitted to the European Commission in March 2023.[25]

Main strength of the modelling approach is the set of bottom-up models which provide a very detailed description of the Austrian situation and its combination with an economic top-down model; however, the approach needs considerable resources (time, staff and budget) for each individual scenario.

The data structure of activities, input data, emission factors and emission calculations is based on the detailed SNAP categories (Selected Nomenclature for sources of Air Pollution). The structure of output data is presented and aggregated in the Common Reporting Format (CRF) of the UNFCCC. Sectoral definitions align fully with the IPCC.

[25] http://api.reportnet.europa.eu/dataset/exportPublicFile/dataflow/890/dataProvider/2?fileName=AT-Attachments.zip

II.F.6 Key parameters

Table II.F.3: Key parameters for scenario “with measures”

		Historical	Projection			
Parameter	*Unit*	2022	2025	2030	2035	2040
GDP growth rate	%	4.8	1.6	1.1	1.6	1.4
Population	thousands	9 053	9 114	9 251	9 367	9 670
No. of households	thousands	4 067	4 140	4 274	4 403	4 527
Heating degree days		2 868	3 260	3 210	3 160	3 110
Exchange rate USD	USD/EUR	1.05	1.2	1.2	1.2	1.2
International oil price	EUR/GJ *	15.4	15.36	15.36	15.36	16.24
International coal price	EUR/GJ *	5.25	3.06	3.10	3.13	3.32
International gas price	EUR/GJ *	33.2	13.23	11.30	11.30	11.30
CO_2 certificate price ETS	EUR/t CO_2	73	80.00	80.00	82.00	85.00
	* 2020 prices					

Table II.F.4: Key parameters for scenario “with additional measures”

		Historical	Projection			
Parameter	*Unit*	2022	2025	2030	2035	2040
GDP growth rate	%	4.8	1.9	1.3	1.6	1.4
Population	thousands	9 053	9 114	9 251	9 367	9 670
No. of households	thousands	4 067	4 140	4 274	4 403	4 527
Heating degree days		2 868	3 260	3 210	3 160	3 110
Exchange rate USD	USD/EUR	1.05	1.2	1.2	1.2	1.2
International oil price	EUR/GJ *	15.4	15.36	15.36	15.36	16.24
International coal price	EUR/GJ *	5.25	3.06	3.10	3.13	3.32
International gas price	EUR/GJ *	33.2	13.23	11.30	11.30	11.30
CO_2 certificate price ETS	EUR/t CO_2	73	90.00	140.00	170.00	200.00
	* 2020 prices					

II.F.7 Changes in methodology

Changes since the most recent BTR can only be reported from the second BTR onwards.

II.F.8 Assumptions on policies and measures

Policies and measures, as described in Section II.D, have been taken into account in the scenarios. PaMs marked “WAM” are measures in the planning stage and are included in the “with additional measures” scenario only; PaMs marked “WM” are implemented and adopted policies and are included in both scenarios.

II.F.9 Sensitivity analysis

A sensitivity analysis is not available for the current projections, but is planned for the next round of scenario work.

> 97. Each Party shall also provide projections of key indicators to determine progress towards its NDC under Article 4 of the Paris Agreement.

Progress towards the joint EU NDC can only be determined at EU level; information on projections of respective key indicators can be found in the BTR of the EU.

Austria contributes to achieving the joint EU NDC 2030 within the 2030 Climate and Energy Framework, i. e. by achieving its targets under the Effort Sharing Regulation (ESR) and the LULUCF regulation. An indicator for Austria's progress towards the ESR target can be calculated straightforward: Calculate for every year from 2021 to 2030 the distance of projected annual emissions to the annual ESR target and add/subtract 1) surplus or debt from previous ESR year, 2) surplus/debt from annual LULUCF target, 3) ETS flexibility and 4) any planned transfers from/to other Member States. The calculation of this indicator is, however, not possible yet as the target path for the second half of the decade has been fixed neither for the ESR nor for the LULUCF Regulation. Decisions on the target paths can be expected in 2025; the indicator will therefore be available for the second BTR.

> 102. Those developing country Parties that need flexibility in the light of their capacities with respect to paragraphs 93–101 above can instead report using a less detailed methodology or coverage.

Not applicable.

II.G Other information

> 103. Each Party may provide any other information relevant to tracking progress made in implementing and achieving its NDC under Article 4 of the Paris Agreement.

Not available.

III Information related to climate change impacts and adaptation under Article 7 of the Paris Agreement

104. Each Party should provide information related to climate change impacts and adaptation under Article 7 of the Paris Agreement, as appropriate. Providing such information is not mandatory.

105. The information referred to below could facilitate, inter alia, recognition of the adaptation efforts of developing country Parties.

III.A National circumstances, institutional arrangements and legal frameworks

Section II.A. provides a general overview of national circumstances and information provided in this Section will supplement this information.

Austria's division into different climatic zones – and especially into different precipitation regimes – by the Alpine main ridge, together with the rather complex orography of large parts of Austria, has major implications for the development and implementation of adaptation actions and hampers the assessment of prospective precipitation changes and respective adaptation measures.

An ageing society will have to cope with the effects of climate change. Population growths occur in urban regions, while many rural municipalities are affected by population losses and have at the same time challenges regarding adaptation.

Tourism has a relevant share in GDP. Tourism is more exposed to the risks of climate change than many other branches of the economy.

Austria has a dense transport infrastructure as regards both the road and railway network. The total length of the Austrian road network amounts to approximately 140,000 km, of which more than 2,249 km are high-ranking federal road connections (motorways). The railway network has a total length of nearly 5,600 km. Austria is the EU Member State with the highest per capita investments in rail infrastructure, exceeding the investment rates in road infrastructure.

Austria also has a very well developed physical supply and disposal infrastructure. Close to 100% of the Austrian settlement area are connected to public supply infrastructures as regards e.g. electricity, drinking water, sewage disposal and treatment systems.

Institutional frameworks and funding mechanisms support climate adaptation across sectors.

According to the Federal Ministries Act competences regarding climate change in general are assigned to the Federal Ministry for Climate Action (BMK). BMK therefore takes the lead in the further development of strategies and planning tools regarding adaptation, in monitoring their implementation as well as in coordinating with regional governments and municipal authorities to ensure cohesive action nationwide. Sectoral participation is determined by the competences of the other federal ministries and the departments of the provincial governments.

Since 2017, the National Climate Committee (NKK) includes questions of adaptation in its principal debate on national climate policies, in light of the long-term goals of the Paris Agreement. The NKK is the highest-ranking national coordination body for climate policies. Important semi-formal bodies for vertical cooperation are the Conference of Provincial Environmental Ministers (LURK), whose resolutions in recent years have paved the way for stronger cooperation between the Federal government and the Provinces on adaptation to climate change. In addition, a Conference of Provincial Climate Ministers (LKRK) deals with both mitigation and adaptation topics. The nine climate coordinators of the Provinces are the main agents of vertical coordination and cooperation towards national as well as regional and local levels, and are in charge of horizontal coordination within the Provincial governments and administrations.

The Environment Agency Austria (EAA) regularly acts as a semi-public support unit providing expertise and policy support along all stages of the adaptation policy cycle to the BMK, the Climate and Energy Fund as well as the Provinces. EAA is a “bridging” or “boundary organisation” that is deeply involved in knowledge generation and capacity-building as well as in practice-related decision support (manual, work aids, etc.) for stakeholders, linking science, administration and policy-making.

A stakeholder network involving national and provincial representatives, NGOs, and academia has been established during the development of the Austrian adaptation strategies. Members of the network participate in the process of formulating and updating strategies and adaptation plans as well as in developing the progress reports. Regular consultation sessions allow for input from diverse sectors, enhancing policy relevance and engagement.

The Austrian Climate and Energy Fund provides substantial financing for local and regional adaptation initiatives, including projects under the KLAR! (Climate Change Adaptation Model Regions) program, which equips regions with manpower and tools to address

specific climate risks. In addition, funding provided to the Climate and Energy Fund is available for scientific studies on climate change and its impacts as well as for the development of national assessment reports (comparable to IPCC ARs) by the scientific community.

The Climate Change Centre Austria (CCCA) is a research network supported by Austria's most important research institutions and supports its members in the scientific examination of climate change, its systemic causes, the consequences of climate change for society, the economy and the environment as well as strategies for mitigation and adaptation.

Adaptation action in Austria is supported by an extensive data and research infrastructure, with institutions like the Environment Agency Austria and the Geosphere Austria (the national meteorological service) in cooperation with the Wegener Center for Climate and Global Change and the interfaculty department of geoinformatics at the University of Salzburg supplying detailed climate data, modelling, and projections. Research programs such as StartClim and the Austrian Climate Research Programme (ACRP) as well as the Austrian Climate Research Programme Implementation (ACRPI) generate insights into climate impacts and effective adaptation practices, supporting evidence-based policy and planning. It must also be noted that there is no federal competence for land use planning as well as nature conservation.

Austria´s adaptation action is guided by provisions of global Agreements, in particular the Paris Agreement on Climate Change and its Art 7 and the UAE Framework for Global Climate Resilience, the Sendai Framework for Disaster Risk Reduction, and the Sustainable Development Goals.

In line with EU legislation, including the 2021 EU Adaptation Strategy and the EU Climate Law (Regulation (EU) 2021/1119), Austria aligns its policies with EU-wide targets for climate resilience, mandating adaptation measures across energy, transportation, and environmental sectors.

Some legal acts explicitly stipulate provisions in context with adaptation action, e.g.:

- Environmental Impact Assessment Act (EIA Act): This act requires consideration of climate risks in environmental impact assessments for significant projects, ensuring adaptation measures are included in project approvals to mitigate environmental and reduce climate vulnerabilities.
- Water Rights Act: The Water Rights Act integrates climate adaptation requirements for water management, focusing on sustainable water use, flood protection, and drought preparedness to address water-related climate impacts.
- Disaster Risk Management Framework: Under the Civil Protection Law, Austria has established regulations for natural disaster preparedness and response, including

climate-related hazards like floods, landslides, and heatwaves, mandating risk assessments and emergency planning.

- The Forest Act requires the development of hazard zone plans; these plans show zones within a municipality where relevant natural hazards have been identified.

III.B Impacts, risks and vulnerabilities, as appropriate

Climate change is becoming increasingly tangible in Austria and it is confirmed by measurement and observation and is proceeding faster than the global average. The increase of annual mean temperature in Austria since 1880 has almost reached 2°C. The increase was strongest in the period after 1980, when an increase by more than 1°C has been observed. Some of the years of the last two decades had the highest average temperature since the beginning of measurements in 1775. Since 2000, heating degree days above the long-term average have been measured only in three years. The summer of 2024 was the second warmest summer in recorded history over the entire area of Austria, while in Austria´s lowlands, the same year was the warmest summer in the 258-year measurement history. The number of nights with a minimum temperature >= 20°C has significantly increased.

Precipitation shows no homogeneous trend: In the western part, a rising tendency was observed during the 20th century; in the east and south precipitation has shown a falling tendency since the 1940ies. In a country-wide evaluation, the meteorological summer of 2024 brought 13 % less precipitation than an average summer while during the same summer several heavy rainfall events caused mudslides and flooding. For example, on 17 August 2024, rainfall was 94 litres/m² in just one hour at in Vienna (Hohe Warte). This was the highest amount of rainfall ever measured at this station in one hour.

All observed glaciers in Austria have clearly shown a reduction in surface area and in volume in the period since 1980. Small and medium-sized glaciers will have disappeared by the end of the 21st century. By the middle of the 21st century, the volume will be reduced by half compared to 2017, with an area loss of around 45 %. Duration of snow cover has been reduced in recent decades, especially at altitudes around 1,000 m a.s.l.

Available climate scenarios26 show a continuation of temperature trends and less reliable trends for precipitation. Based on the IPCC RCP4.5 scenario, in comparison of the mean values 1971–2000 to 2071–2100, annual mean temperature increases by 2.3°C, the number of days with temperature exceeding 30 C by more than 10 days in the north- and southeastern lowlands.

[26] https://klimaszenarien.at/oeks-15/

III.C Adaptation priorities and barriers

Austria is committed to a comprehensive, strategic, and long-term adaptation approach to climate change. The Austrian Adaptation Strategy provides a robust framework, emphasizing extensive collaboration among stakeholders at federal, provincial, and municipal levels, including NGOs, research institutions, and other involved actors. The process is designed to be iterative, fostering ongoing engagement, information sharing, and consultation across all sectors.

Key adaptation priorities include:

- Broad, inclusive collaboration: Effective adaptation requires intensive coordination across sectors to address the diverse impacts of climate change. Continuous cooperation is essential to optimize resources and avoid maladaptation.
- Strategic, Long-Term Adaptation Measures: Unlike mitigation, which has clear quantitative emission reduction targets, adaptation aims to enhance the resilience of natural, social, and economic systems—a goal that is qualitative and focuses on reducing vulnerability.
- Regular Progress Monitoring: Adaptation is an ongoing process, with systematic monitoring and iterative learning forming the foundation for success. Austria plans adaptation evaluations on a five-year cycle, with the next progress report due in 2026.
- Avoidance of Maladaptation: Ensuring adaptation efforts do not lead to unintended negative impacts on society or the environment is a core principle. Ex-ante quality checks help secure the effectiveness of actions and prevent costly missteps.
- Regional Adaptation Efforts: Municipalities play a vital role in adaptation, as climate impacts are often felt most intensely at the local level. Tools like the "Natural Hazard Preparedness Check" support local decision-makers, and the "KLAR!" (Climate Change Adaptation Model Regions) initiative provides 91 regions with resources to mitigate climate impacts and capitalize on new opportunities.
- Research and Knowledge Sharing: Austria supports climate research through initiatives like StartClim, ACRP, ACRPI and the Climate Change Centre Austria (CCCA), which enhance the scientific basis for adaptation and enable close cooperation between researchers and policymakers.

These priorities position Austria to address the complex and long-term challenges posed by climate change, with a focus on resilient development across regions and sectors.

Adaptation to climate change is however a complex task and challenges comprise amongst others:

- Uncertainties of future climate change – dealing with these uncertainties is undoubtedly a key challenge for the planning and implementation of any adaptation measure.

- Adaptation as a cross-cutting issue: A multitude of areas for action (e.g., infrastructure, energy supply, water management, and protection from natural hazards) and of stakeholders from various fields all are part of this complex system.
- Relationship between mitigation and adaptation; Mitigation and adaptation are closely linked and must therefore be considered together. Adaptation action cannot replace ambitious mitigation actions. Maladaptation can only be avoided if adaptation measures do not conflict with mitigation action. Successful mitigation contributes to the reduction of the costs of adaptation.
- Widely distributed competences: Responsibility on adaptation action is shared by different levels and offices of public administration (from federal to local level), various economic sectors as well as individuals.
- Transformation of the economy and society: Tackling climate change also requires a rapid transformation of the economy and society. This includes: new types of institutional cooperation, changes in the economic system, changes in prevailing consumption and behaviour patterns, participatory processes and long-term policy measures and decisions. A conscious creation of environmentally and climate-friendly structures for sustainable lifestyles is needed.
- Security dimension: Increasing extreme weather events, slow onset events and the fundamental destruction of the environment pose an increasing risk to national, European and international security.

III.D Adaptation strategies, policies, plans, goals and actions to integrate adaptation into national policies and strategies

Austria aims to integrate (“mainstream”) climate adaptation into all key policies and sectors, aligning adaptation goals with economic, social, and environmental development frameworks. Through cross-sectoral initiatives.

Furthermore, the process of adaptation to climate change is not a guaranteed success; it must be organised under a strategic umbrella. Otherwise, there is a risk that the adaptation measures will be viewed from a narrow sectoral perspective, promising only short-term success but having a detrimental effect on nature or society in other ways, resulting in maladaptation. It is imperative that efforts to avoid maladaptation remain a key priority, with the Austrian Adaptation Strategy providing a framework for this. In order to guarantee the effectiveness of adaptation measures and to prevent maladaptation, it is essential to implement ex-ante quality assurance procedures during the planning and implementation phases. The avoidance of maladaptation and cost-intensive misinvestments (stranded assets) represents an essential and central task across all sectors.

Nevertheless, the implementation of adaptation measures remains contingent upon a number of challenges. As an issue with a broad scope that cuts across many fields of action and involves a diverse range of stakeholders from various sectors, adaptation is a complex and multifaceted challenge.

The first Austrian Strategy for Adaptation to Climate Change was adopted in 2012, the first revision in 2017, the second revision in 2024. The Austrian Strategy for adaptation to climate change consists of two parts: a Strategic Framework (NAS) and an Action Plan (NAP).

The objective of the Austrian Adaptation Strategy is to avoid adverse effects of climate change on the environment, society and economy, and to take advantage of opportunities, which may arise. The adaptation strategy aims at strengthening the natural, social and technical capacity to adapt. Adaptation measures should thus cause no social disadvantages; rather, they should minimize risks to democracy, health, security, and social justice. Another key objective is to increase awareness at all levels and make the complex issue of adaptation to climate change more tangible. Another important objective is to identify linkages between the areas of action and related recommendations, in order to avoid negative impacts in other areas and possible conflicts in the implementation process. Adaptation activities conflicting with other key objectives – such as environmental protection or climate change mitigation – or causing disadvantages for certain social groups should also be precluded.

The current NAP presents a catalogue of 124 adaptation options for the following-fields of action: Agriculture, forestry, water management, tourism, energy (with a focus on the electricity industry), construction and housing, protection against natural hazards, crisis and disaster management, health, ecosystems and biodiversity, transport infrastructure including aspects of mobility, spatial planning, economy, and cities (urban green and open spaces). Each measure described follows the same structure: Content items elaborated for each recommendation – Goal – Relevance – Relation to other activity fields – Relation to existing instruments – Status of implementation – Recommended further steps – Possible resource needs – Conflict potentials – Implementing actors – time horizon – and possible resources needed.

Both national policy documents – NAS and NAP – are based on comprehensive meta-analysis of latest scientific knowledge available for the Austrian context. Many of these scientific projects are financed by the Austrian Climate Research Programme (ACRP and ACRPI) of the Climate and Energy Fund and StartClim, three important climate research programs providing more than 5 Mio Euro of funding each year.

Austria’s adaptation strategy incorporates gender-specific needs by prioritizing measures that address vulnerabilities unique to women, particularly in health and social services sectors. Gender-sensitive data collection and impact assessments ensure that adaptation policies consider differences in climate impact on various demographic groups.

The strategy emphasizes protection for vulnerable groups, including low-income households, the elderly, and those in rural or high-risk areas. Tailored adaptation measures, such as targeted public health initiatives during heatwaves and flood preparedness programs, ensure that these groups receive additional support.

While Austria has no recognized indigenous populations, adaptation efforts integrate traditional agricultural practices, like soil management and crop rotation, which enhance resilience to local climate variability.

Austria actively involves local communities in adaptation planning, drawing on region-specific insights, especially in flood management, alpine forestry, and water conservation. Local stakeholder consultations are integral to policy development, ensuring that adaptation measures reflect practical, locally-informed approaches for resilience.

The national energy and climate plan 2024 (NECP) was developed and implemented in close coordination with the Austrian strategy for adaptation to climate change, due to direct links between climate change and the target dimensions of the Energy Union, particularly with regard to decarbonisation and security of energy supply.

III.E Progress on implementation of adaptation

Regarding implementation, the Austrian NAS and NAP provides concrete recommendations in the 14 areas for action. A lot of effort is being made to ensure best possible cooperation between all actors concerned. In terms of provision of resources, the following premises apply for the implementation of the Austrian NAS and NAP:

- The implementation of the recommendations must be achieved within the existing jurisdictions of all governmental authorities (federal, provincial states, local);
- All recommendations listed in the NAP are to be covered by the resources available in the applicable financial frameworks of the public sector (federal, provincial states, local);
- The costs of implementing the recommendations are to be covered by prioritization and shifting within the available budget.

The NAP is implemented in collaboration with a wide range of fellow federal ministries, regional government actors and sector stakeholders from the public and private sector. The National Climate Committee is the relevant institutional body, set up by law, to provide vertical (and sectoral) coordination of adaptation and mitigation measures. Furthermore, the Environment Agency Austria (EAA) fulfilled an important role as a semi-public support unit regarding several strands of activities throughout the entire NAS/NAP process. This support included the provision of technical expertise (as author, contributor or coordinator of preparatory expert studies), the drafting and editing of the first policy

paper in cooperation with the ministry, and implementation of various information activities towards the public. A broad participatory process conducted by the EAA was accompanying the strategy development and all results gained from the participatory process are considered in the development of the NAS/NAP.

In recent years, a number of country-wide implementation initiatives has been launched to support implementation of the NAS/NAP and of state-level adaptation strategies in Austrian regions and municipalities. These initiatives are mostly initiated and financed by the federal level (BMK, Climate and Energy Fund) and usually implemented in a multi-level governance approach.

In 2016, the KLAR! programme for Climate Adaptation Model Regions has been launched to support Austrian regions and municipalities in preparing for climate change by implementing adaptation measures in a structured way. This Europe-wide unique climate adaptation funding programme is financed by the Climate and Energy Fund and has been initiated in cooperation with the BMK. The programme requires the instalment of a climate adaptation manager in each model region and 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. The programme cycle is structured in four phases: i) submitting draft adaptation concept (funding application); ii) elaborating detailed adaptation concept, awareness-raising and agenda setting in the regions; iii) implementation of adaptation measures according to the concept, monitoring and evaluation; and iv) re-adjustment of measures, dissemination of best practices, and continuation. In the continuation phase, existing model regions can apply for new funding for additional measures.

A service platform operated by the EAA supports the KLAR!-regions with specific information packages, direct counselling and via organizing regular peer-group learning and networking meetings of all regions. Model regions have to consider the NAS and the relevant provincial adaptation strategies (RAS) in their activities, and they are required to coordinate their concepts and actions with the climate coordinator of the respective provinces. A reporting and monitoring system is in place to evaluate progress in implementation and effectiveness of adaptation actions.

Currently 91 model regions are active in planning and implementing adaptation measures, addressing a broad range of climate impacts and sectors. Altogether, at present the model regions encompass more than 800 municipalities with a total population of around 2.2 million inhabitants, covering a wide range of Austrian climatic conditions and most federal provinces.

As part of a supportive governance framework, further multi-level implementation initiatives have been established to support awareness-raising, agenda-setting, capacity-

building and implementation of adaptation at regional and local level. A selection of respective efforts is listed below:

- Dialogue events: A series of more than 40 multi-purpose face-to-face events with different stakeholder groups has been conducted from 2014 onwards. Designed as interactive dialogue formats, these events fulfilled important communication, agenda-setting, capacity-building and coordination functions. The foci of target groups so far was on state administrations (2014/2015), regional stakeholders (2016/2017), sector-specific actors, (2018/2019) and on the networking of adaptation initiatives and their actors (2020/2021; 2022/2024).
- Adaptation advisory services for municipalities: Jointly financed by the BMK and the federal state governments, a series of training programmes for qualifying local adaptation advisors have been implemented from 2017 onwards.
- Preparedness check “Natural hazards under climate change” for municipalities: Developed by a cross-sectoral and multi-level working group of the federal and state governments (2017-2018), the ‘natural hazards check’ is both a policy counselling tool and a governance model to strengthen the risk preparedness of municipalities. It covers a broad range of climate-driven natural hazards and meteorological/climatic extreme events and is applied by specifically trained experts together with municipal decision makers during on-site visits. Implementation of the tool has been launched from 2019 onwards.
- Information provision, guidance and decision support: Covering both print products and online resources, a portfolio of knowledge resources, capacity-building tools, guidance documents and work aids for decision makers and stakeholders at different government levels are being provided on behalf of the responsible Ministry, the Climate and Energy Funds and research projects. E.g. Creation of Information materials ("Climate Change - What To Do?" (2014), "Our Communities in Climate Change – Good Practice Brochure" (2016), "Why we have to adapt to the consequences of climate change" (2018), "Misconceptions About Climate Change"(2018), etc.
- The website www.klimawandelanpassung.at (cooperation BMK, Climate and Energy Fund, EAA) serves as a central and thematically focused adaptation portal, offering an overview of climate change adaptation in Austria and insight into activities and measures. The website offers information on current topics from the realms of politics, research, practice and events.
- The Climate Change Adaptation newsletter (cooperation BMK, Climate and Energy Fund, EAA) is closely linked to the Adaptation portal. It references significant political decisions on the topic, provides information on current research results, news from KLAR!-regions and presents examples of adaptation practice.
- For the EU Mission on Adaptation, potential signatories were mobilized and the Mission on Adaptation is continuously promoted nationally.

Austria has established a structured approach to formulating, implementing, publishing, and updating its Adaptation Strategy. These processes are conducted through a

comprehensive and inclusive participatory approach, with the active engagement of the scientific community. The NAS provides guidelines for sectoral adaptation across 14 key areas, with ongoing assessments and progress tracked through Progress Reports. Each of Austria's nine provincial states has developed regional adaptation strategies aligned with the NAS, enabling localized responses to climate risks.

The first progress report gives the following examples of relevant adaptation successes:

- A decline in the proportion of spruce and an increase in the proportion of hardwood has already been observed in the forestry sector.
- Numerous measures have been and are being taken to improve water ecology, such as restoring the continuity of rivers.
- Additionally created retention areas contribute significantly to protection against natural hazards. The demand must be: "More space for the rivers".
- Organic farming is based on goals that are also in line with adaptation to climate change. Some progress can be seen as the area dedicated to organic farming has increased significantly since 2000.
- A large number of promotional measures in tourism are consistent with adaptation to climate change, e.g. measures to extend the season and the promotion of sustainable development.
- The population's access to relevant information has also been significantly improved and this is very well received, especially in times of "crisis".

The second progress report shows that climate change adaptation has gained momentum and activities for the implementation of measures have increased all over Austria. The topic is increasingly recognised as important in the different sectors as well as on regional and local level. Relevant results:

- Awareness for the need of adaptation measures in agriculture is continuously increasing. A considerable share of the measures of the Austrian Agri-Environmental Programme contributed to adaptation; although there is high acceptance of the support measures by farmers there is still room for extension.
- In the forest sector the decrease of the share of spruce in favour of mixed forests with a high share of deciduous wood continues, but at a slightly lower pace compared to the period of the previous forest inventory.
- In the water sector progress has been made regarding flood risk management and aquatic ecology.
- Forecast and early warning systems are important with respect to the protection against natural hazards as well as for the transport infrastructure. Early warning systems have been established for many relevant parameters.
- Early warning systems are also relevant for the protection of human health. Heat protection plans have been developed at federal level as well as in the majority of the federal provinces; they are targeted at information and warning of the population.

There is, however, still need for accelerated action, especially with respect to the integration of adaptation aspects into all kinds of other sectoral strategies, plans and programmes at federal, regional and local level.

In general, the following premises apply for the implementation of the Austrian Adaptation Strategy: The costs of implementing the recommendations are to be covered by prioritization and shifting within the available budget in line with political objectives regarding climate. To ensure fair burden sharing, cooperation within the public sector and between the public and private sectors is recommended and expedient.

Also progress in the meteorological services, meteorological data and climate scenarios have been achieved and progressed:

- The Austrian meteorological service (GeoSphere Austria) runs a dense weather monitoring network[27], recording relevant meteorological parameters. The longest temperature and air pressure series extend back to 1760, precipitation to 1800, cloudiness to the 1840s and sunshine to the 1880s in the alpine region. GeoSphere Austria provides a. o. homogenised climate time series for the greater alpine region[28].
- Meteorological data is supplemented by data on hydrology, avalanches, land slides etc. collected by other public institutions. Information about natural hazards and recorded events is made available online on high-resolution maps[29].
- The latest regional climate scenarios for Austria (ÖKS15) have been available since 2016. The scenarios are based on 13 regional climate models (EURO-CORDEX) and two greenhouse gas scenarios (RCP4.5 and RCP8.5). They provide information for the near future (2021–2050) and for the distant future (2071–2100) compared to the 1971–2000 period. Spread of ensemble results gives information on associated uncertainties. Currently the new climate scenarios “Austrian Climate Scenarios 2026 “(ÖKS26) are under development.
- Based on the above mentioned climate scenarios, climate change impact maps at local level (incl. communication of uncertainties) have been developed (project CLIMAMAP). These maps support municipalities in understanding climate change impacts, in building capacities and in implementing adaptation measures. Co-developing the impact maps with the end-users ensures that information needs of municipalities are met.

[27] https://www.zamg.ac.at/cms/en/climate/meteorological-network
[28] http://www.zamg.ac.at/histalp/
[29] https://hora.gv.at

III.F Monitoring and evaluation of adaptation actions and processes

The methodological concept for monitoring and evaluation is pragmatic and comprises two work streams: 1) a self-assessment approach using a stakeholder survey based on the NAP and sent to the key actors mentioned therein; 2) an indicator-based approach with qualitative and quantitative data collections. Based on these results, sector goals were introduced in the revised NAS and NAP. One of the lessons learned was that not all aspects of adaptation processes are 'measurable'; thus, the analysis of quantitative and qualitative data and information only provides input for partial or indirect statements. As there are different ways of interpreting quantitative and qualitative data, a common understanding is needed and can be ensured with strong stakeholder engagement during MRE and NAS/NAP revision. The results were of high relevance for the first updated version of the NAS/NAP as of 2017.

The methodology employed for the evaluation of the progress report underwent further refinement in subsequent years, with the involvement of federal ministries, federal states, and other pertinent institutions. Nevertheless, the fundamental approaches, encompassing the criteria and expert assessment, were maintained.

Conversely, a total of 47 quantitative and qualitative criteria were collated, with some criteria being attributed to multiple fields of activity. The criteria were subjected to a systematic analysis and interpretation from the perspective of adaptation. Furthermore, the second progress report included an increasing number of illustrative examples of best practice.

The regular presentation of progress is an essential basis for identifying the necessity for further action and the subsequent evolution of the adaptation strategy. A five-year cycle has been established.

For Austria, the ÖKS15 data provide comprehensive, high-resolution and error-corrected data and information on climate change and is publicly available at the online data portal of the CCCA. Based on ÖKS15 climate scenario data, regional climate change and impact fact sheets have been produced for all climate adaptation model regions of the KLAR! funding programme, and fine-scaled climate scenarios are available for Austrian municipalities on demand. Regional climate impact maps generated on the basis of the ÖKS15 climate modelling data are provided at no cost to the user community at the CCCA data portal.

Disaster management is well reflected in the NAS and NAP with the objective of a “rapid and professional management of disasters through better networking and preparation of all actors involved, especially with regard to changing climatic conditions”.

Due to uncertainties in predicting the impacts of climate change on floods and natural hazard processes, up to now climate scenarios have not been used explicitly in calculating hazard maps of the federal water engineering service and the federal torrent and avalanche control service of the Federal Ministry (BML). However, they are increasingly taking climate change impacts and adaptation needs into account in their strategic planning and prevention measures. Especially the second flood risk management plan (2021) reflects on changes in pluvial and fluvial flood risk due to climate change.

The provinces are closely connected and coordinating with the Federal level, but pursue different approaches when creating policies for adapting to climate change, in line with the Austrian Adaptation Strategy and Action Plan. The states of Upper Austria (2013), Styria (2015), Vorarlberg (2016) and Salzburg (2017) currently have their own strategies for adapting to climate change. Upper Austria has adopted an integrated climate and energy strategy in 2023, which also includes climate change adaptation. Tyrol has published a new sustainability and climate strategy 2021 (integrated adaptation and climate mitigation strategy). The Lower Austria climate and energy program 2030 (2021) includes measures for climate mitigation, the expansion of renewable energy sources and adaptation to climate change. Carinthia has integrated adaptation measures as part of the Carinthian climate agenda into its existing climate mitigation strategies. In Vienna, adaptation to climate change is integrated into the overarching strategies (Smart City Framework Strategy, etc.). The Vienna Climate Roadmap (2022) aims at decarbonization by 2040 and considers climate mitigation and adaptation to climate change to be equally important. In Burgenland, adaptation measures are directly integrated into other sectoral programs and strategies.

Depending on the time-line of the adaptation measures, they are revised, the strategies, plans or measures renewed or modified depending on monitoring information and latest scientific findings.

III.G Information related to averting, minimizing and addressing loss and damage associated with climate change impacts

Success in climate action is a key factor in determining whether and when adaptation limits are exceeded. An increasing number of natural and socio-economic systems are already reaching the limits of adaptation as a result of a changing climate. Exceeding these limits leads to loss and damage of a financial, health and non-material nature. According to the IPCC, the limits of adaptation are defined by the fact that these systems can no longer be protected from intolerable risks through adaptation measures. Risks become intolerable when they jeopardise public safety and health (e.g. the availability of clean drinking water). A distinction is made here between hard and soft limits to adaptation. In the case of hard limits, adaptation measures are no longer able to avoid intolerable risks.

All ecosystems on land and in the sea are currently within the immediate reach of hard adaptation limits, as climate change is currently progressing too quickly and too strongly for most species to be able to adapt to it. In contrast, soft limits are characterised by the fact that appropriate political or technical adaptation measures are not yet available, but can still be found. According to the IPCC, many socio-ecological systems are already reaching their soft adaptation limits on a global scale, such as coastal communities, drinking water supplies, agricultural production and health care in hot weather.

Rapid melting of glaciers, thawing of permafrost soils, an increasing number of hot days, longer vegetation periods, increased risk of forest fires, etc. are documented worldwide and also in Austria. These consequences are already causing billions of Euros in damage per year due to weather and climate change.

Due to the currently foreseeable socio-economic development and climate change, the potential loss due to climate change in Austria will increase. A variety of factors determines the future costs of climate change. In addition to the possible change in the distribution of extreme events and gradual climate change, mainly socio-economic and demographic factors will ultimately determine the damage and costs. These include, amongst others, the age structure of the population in urban areas, the value of exposed assets, the development of infrastructure for example in avalanche or landslide endangered areas, as well as overall land use, which largely influence the vulnerability to climate change

In order to improve the basis for planning, implementing and weighing up the costs and benefits of measures, it is necessary to look at the economic damage caused by climate change. Results on the financial impacts of climate change are available for Austria from the COIN (Cost of Inaction) project. Knowledge of future financial damage caused by extreme events is still inadequate. It is difficult to make statements about the future intensity and frequency of extreme events. However, as these are highly relevant in terms of damage, there is a particular need for future research in this area.

The TransLoss research project[30] shed light on adaptation limits in Europe and Austria in particular. Depending on the extent, global warming means increasing loss and damage for certain sectors and households. Flooding and a lack of rainfall in particular could lead to intolerable risks and lasting damage in the future. Although no hard adaptation limits are currently expected in Austria, case studies indicate soft limits in some regions. Consequently, there is still a clear need for research in this area.

- Observed and Potential Impacts: Austria closely monitors climate impacts for example through the *EEA* and *GeoSphere Austria*, focusing on extreme events like floods, droughts, and heatwaves, and assessing slow-onset impacts on ecosystems and

[30] https://transloss.wordpress.com/

different sectors. Updated climate projections (e.g., ÖKS26) guide adaptation recommendations based on the best available science.

- Austria integrates risk management into sectors prone to climate impacts, prioritizing early warning systems, resilient infrastructure, and community-based adaptation programs, including nature-based solutions and urban greening initiatives to mitigate urban heat. The ongoing project CESARE aims at developing a national damage and event database.

III.H Cooperation, good practices, experience and lessons learned

Austria has set out necessary principles for good adaptation practice. This set of principles includes the synergies between climate change adaptation, climate change mitigation, biodiversity conservation and health, as well as the avoidance of maladaptation. Effective adaptation measures must be well-planned, aligning with sustainable development and climate mitigation goals. They should reduce climate vulnerability effectively and long-term, without increasing greenhouse gas emissions, and avoid shifting impacts to other regions, sectors or vulnerable groups. Additionally, good adaptation practices should preserve and enhance the environment and biodiversity, consider social aspects by ensuring that vulnerable groups aren't disproportionately impacted, and promote a fair distribution of costs and benefits. Broad public and stakeholder acceptance is essential, as is financial feasibility, effectiveness, and efficiency. Adaptation measures should remain flexible for easy adjustments if needed and ideally offer broader benefits to society and the environment beyond climate change. Such well-designed adaptation minimizes costs from poor adaptation, creates new opportunities, and leverages synergies, as seen in nature-based approaches for flood protection and urban planning.

In Austria, an EIA 'climate-fit portal' (UVPklimafit Infoportal) was created to support project developers, consultants and competent authorities with knowledge on the impacts of climate change on different infrastructure types and environmental issues. The portal helps to anticipate the consequences of climate change in the design and development of major infrastructure projects (often subject to EIA). By adapting projects to the consequences of climate change, subsequent costs and negative effects on people, society and the environment can be reduced. The EIA 'climate-fit portal' is also recommended to project developers in the EIA guidance document.

The Austrian Strategy for Adaptation to Climate Change includes a dedicated chapter on ecosystems and biodiversity, emphasizing the crucial role of nature-based solutions in enhancing resilience, conserving natural habitats, and supporting biodiversity as key components of effective climate adaptation. Nature-based solutions (NBS) represent an effective approach to utilising synergies between climate change adaptation, climate

change mitigation and biodiversity conservation. They simultaneously contribute to the preservation, improvement or restoration of functioning ecosystems, habitat connectivity and adaptation to climate change and/or climate change mitigation.

Examples of how Austria promotes nature-based solutions:

- Floodplain and Wetland Restoration: Austria focuses on restoring and conserving floodplains and wetlands to manage flood risks. The Austrian Biodiversity Fund supports projects that strengthen natural water retention areas, mitigating the impacts of heavy rainfall.
- Urban Greening: Austria promotes urban greening initiatives, including green roofs and city parks, to reduce urban heat and improve stormwater absorption. The national klimaaktiv mobil program and the different programs assist municipalities and cities in implementing these green infrastructure projects.
- Sustainable Forestry: Adaptation in the forestry sector includes planting climate-resilient tree species and promoting sustainable forest management. The Austrian Forest Program (Österreichische Waldprogramm) and the Forest Fund (Waldfonds) offer financial and technical support for forestry projects that enhance carbon sequestration, biodiversity, and forest climate resilience.
- Biodiversity Corridors: Establishing biodiversity corridors to connect protected natural areas allows species to adapt to climate changes. Initiatives such as the Austrian Natura 2000 Network (Österreichische Netzwerk Natura 2000) and the Alpine Biotope Network (Biotopverbund Alpenbogen) support the development and protection of these corridors.
- In The Austrian Recovery and Resilience Plan (ARF) (BMF 2021), a share of 46% is earmarked for climate action purposes, which should also address synergies with climate change adaptation goals. For example, the Austrian Biodiversity Fund supports nature-based adaptation measures and strengthening the resilience of ecosystems. Functioning, intact ecosystems are essential for adapting to climate change. The Austrian Biodiversity Fund focusses in particular on the conservation of biodiversity in areas that are extremely sensitive in terms of climate impacts. In addition, the ARF consistently takes into account the "do no significant harm" principle as defined in the Taxonomy Regulation. This means ensuring that none of the measures contradict the EU's environmental objectives (one of which is adaptation to climate change).

Austria engages in international, European and transnational networks, working groups and cooperation structures such as the OECD Task Force on Climate Change Adaptation, EU Working Group on Adaptation, and the EU Mission on Adaptation. The EAA collaborates in the Interest Group Climate Change Adaptation of the Network of European Environmental Protection Agencies (EPA IG CCA), has been a member of the European Topic Centre on Climate Adaptation (ETC CA) since the beginning, and continues in the current ETC CA (2022-2026).

Austria is also a Contracting Party to the Alpine Convention. Members of its thematic working bodies regularly work on cross-sectoral aspects of adaptation and have co-produced a range of specific transnational knowledge and policy outputs. Austria is chairing the Alpine Climate Board (ACB) of the Alpine Convention, which bundles all activities on climate change in the context of the Alpine Convention, has delivered the Alpine Climate Target System 2050 and an updated Climate Action Plan. Both continue to be at the centre of the Alpine Climate Board's (ACB) activities in the current mandate period 2023-2024. In doing so, an additional focus will be set on cross-cutting issues and on promotion of cross-sectoral cooperation to strengthen synergies and develop solutions to potential conflicts.

Upon an Austrian initiative, a transnational network of the national adaptation policymakers of the Alpine countries has been established in the frame of the Alpine Space project C3-Alps from 2012 onwards. It is an informal platform for regular knowledge exchange and joint learning between countries about adaptation policy making, implementation of adaptation strategies and common governance challenges.

EEA manages the transnational online knowledge portal 'CAPA – Climate Adaptation Platform for the Alps'. As a flagship initiative under the umbrella of EUSALP AG8, the CAPA portal is the central infrastructure for knowledge transfer and dissemination of knowledge resources on climate adaptation and disaster risk reduction in the Alpine macro-region.

To shed light on the expected impacts of climate change on extreme events caused by alpine natural hazards, a comprehensive assessment report presenting the state-of-the-art knowledge was published on behalf of the Ministry responsible for natural hazard management (BMLRT) in 2020.

Findings from research projects conducted to date, the preparation of the First Progress Report and the Assessment Report Climate Change 2014 (APCC 2014) show that further action is required, including in research. It should be focussed on applied research as well as socioeconomic questions. In addition, accompanying research is to be strengthened in order to support the implementation of local and regional adaptation measures and to develop adaptation measures that are as effective and as closely tailored to target groups as possible. Research needs to include, among other things, the necessary socio-ecological transformation of society and the economy. For this reason, the relevant research programs are to be adequately financed in the future as well. Improved communication between research, public administration, and practical application is required and the findings of national and international research have to be considered in the adaptation process at all levels of public administration.

In 2024, the BMK initiated the Austrian State Prize for Climate Change Adaptation (CliA). This prize recognizes and honours innovative projects that address climate change adaptation. A total of twelve finalists have been selected, showcasing initiatives that address a range of challenges related to climate change adaptation, including flood

protection, drought resilience, and urban cooling solutions. The public was invited to participate in the voting process. The winners received cash prizes, and the award served to highlight Austria's commitment to sustainable adaptation, with the aim of inspiring broader action and recognition for climate resilience efforts.

III.I Any other information related to climate change impacts and adaptation under Article 7 of the Paris Agreement

Not available.

IV Information on financial, technology development and transfer and capacity-building support provided and mobilized under Articles 9–11 of the Paris Agreement

This chapter contains information on financial, technology development and transfer, and capacity-building support provided and mobilised by Austria under Articles 9, 10 and 11 of the Paris Agreement. To ensure consistency and continuity in our reporting, information is aligned with and builds on, inter alia, Austria's Fifth Biennial Report and the European Union's First Biennial Transparency Report.

> 118. Developed country Parties shall provide information pursuant to Article 13, paragraph 9, of the Paris Agreement in accordance with the MPGs contained in this chapter. Other Parties that provide support should provide such information and, in doing so, are encouraged to use the MPGs contained in this chapter.

Austria is pleased to provide information based on the different elements in the MPGs as referenced in the boxes throughout this chapter.

IV.A National circumstances and institutional arrangements

The European Union (EU) and its Member States are the world's biggest contributors of climate finance as well as development assistance. Austria is firmly committed to delivering its share of financial, technology development and transfer, and capacity-building support in the larger context of meeting the long-term goals of the Paris Agreement.

> 119. Information on national circumstances and institutional arrangements relevant to reporting on the provision and mobilization of support, including:
>
> (a) Description of the systems and processes used to identify, track and report on support provided and mobilized through public interventions;

Austria tracks the provision of its support through a project-based tracking and reporting system. The system is built around the Creditor Reporting System (CRS) of the Organisation for Economic Co-operation and Development (OECD) Development

Assistance Committee (DAC) and uses the Rio markers[31] set up by OECD DAC to categorise and track the extent to which a project is deemed to provide support for climate change mitigation and adaptation, alongside additional project markers that allow for further support tracking, e.g. by geographical location, economic sector, financial instrument or funding source. Consistency between, and transparency of, reporting under OECD DAC and under the Paris Agreement is a key reporting objective for Austria.

119. Information on national circumstances and institutional arrangements relevant to reporting on the provision and mobilization of support, including:

(b) Description of challenges and limitations;

Existing reporting systems such as the OECD DAC's CRS database[32] do not currently enable the systematic tracking of the impacts related to capacity building and the technology development and transfer of projects.

Many projects contribute to these objectives, but it is not possible to apply tracking metrics such as the Rio markers for these areas. In the absence of such systems, the information provided in this report is largely of a qualitative nature, using examples where possible.

Some reporting requirements, such as reporting information on how projects support different stages of the technology cycle, are very in-depth. Significant staff resources would be required for systematic reporting across the full portfolio of projects.

119. Information on national circumstances and institutional arrangements relevant to reporting on the provision and mobilization of support, including:

(c) Information on experience and good practices in relation to public policy and regulatory frameworks to incentivize further private climate financing and investment;

The European Climate Law makes it a legal obligation to fulfil the EU's headline climate target of reducing greenhouse gas emissions by at least 55% by 2030. In addition, the Climate Law enshrines a goal of achieving climate neutrality by 2050. This sends a strong and durable longer-term signal to financial markets and private investors and reduces

[31] https://one.oecd.org/document/DCD/DAC/STAT%282023%299/ADD2/FINAL/en/pdf

[32] https://www.oecd-ilibrary.org/development/data/creditor-reporting-system_dev-cred-data-en

uncertainty about the direction of the EU and Member State economies in the decades ahead.

119. Information on national circumstances and institutional arrangements relevant to reporting on the provision and mobilization of support, including:

(d) Efforts taken to enhance comparability and accuracy of information reported on financial support provided and mobilized through public interventions, such as through use of international standards or harmonization with other countries, institutions and international systems.

Austria bases its reporting on the OECD DAC CRS database, which uses the Rio marker system to identify flows with *principal* (value "2") and *significant* (value "1") climate adaptation and mitigation objectives, respectively.

Austria, as well as all other EU Member States, further reports its climate finance under Article 19 of the Regulation (EU) 2018/1999 on the Governance of the Energy Union and Climate Action and in the formats laid down in Implementing Regulation (EU) 2020/1208. The respective reporting tables in the Annex to this Implementing Regulation were developed with a view towards harmonisation with the Common Tabular Formats (CTFs) for BTRs.

120. Information, if available, on national circumstances and institutional arrangements for the provision of technology development and transfer and capacity-building support.

Austria is a pioneer in environmental technologies. Austrian cutting-edge technologies in the fields of solar energy and photovoltaics (for hot water supply and supplementary heating, but also for environmentally sound refrigeration and the production of cold from heat), wind and hydropower for the generation of electricity, biomass (for the generation of electricity, heat and organic fuels), waste treatment, air and water purification as well as ecological construction are used world-wide.

Austria is committed to a range of actions to advance technology development and transfer. Technology for mitigation and adaptation is a component of many of the programmes and projects supported by Austria's climate finance projects.

IV.B Underlying assumptions, definitions and methodologies

121. In order to enhance the transparency of reporting, a description of the underlying assumptions, methodologies and definitions, as applicable, used to identify and/or report, including:

(a) The chosen reporting year (calendar year, fiscal year);

(b) The conversion between domestic currency and United States dollars;

(c) The status (committed, disbursed);

(d) The channel (bilateral, regional, multi-bilateral, multilateral);

(e) The funding source (official development assistance (ODA), other official flows (OOF), other);

(f) The financial instrument (e.g. grant, concessional loan, non-concessional loan, equity, guarantee, insurance, other (specify));

(g) Information on instruments and funding sources reported, including how a Party has determined finance to be concessional and/or ODA, including by using information such as grant equivalency, institution and/or instrument-based approaches;

(h) The type of support (e.g. adaptation, mitigation, cross-cutting);

(i) The sector;

(j) The subsector;

As mentioned above, consistency between, and transparency of, reporting under OECD DAC and under the Paris Agreement are key considerations for Austria. The underlying assumptions, definitions and methodologies used by Austria are as follows:

(a) We report on the basis of calendar years;
(b) We use official OCED DAC EUR-USD exchange rates[33] for the given reporting year;
(c) We report on commitments;
(d) Channels are identified using agreed OECD DAC methodology;[34]
(e) Funding sources are identified using agreed OECD DAC methodology;
(f) Financial instruments are identified using agreed OECD DAC methodology;
(g) Information on instruments is identified using agreed OECD DAC methodology;
(h) Type of support is identified using OECD DAC Rio markers. We designate a project as supporting mitigation if the Rio mitigation marker has a value of "1" or higher AND the Rio adaptation marker has a value of "0". Conversely, we designate a project as supporting adaptation if the Rio adaptation marker has a value of "1" or higher AND the Rio mitigation marker has a value of "0". We designate a project to be "cross-cutting" if BOTH Rio markers for mitigation and adaptation have a value of "1" or higher;

[33] https://www.oecd.org/en/data/indicators/exchange-rates.html
[34] https://www.oecd.org/en/publications/the-dac-guidelines_19900864.html

(i) Sectors are identified using three-digit OECD DAC sector codes which are then transposed to the ETF sector categories;
(j) Subsectors are identified using five-digit OECD DAC sector codes, as appropriate.

121. In order to enhance the transparency of reporting, a description of the underlying assumptions, methodologies and definitions, as applicable, used to identify and/or report, including:

(k) Whether it supported capacity-building and/or technology development and transfer objectives;

Similar to the EU as a whole, Austria uses the following definitions to identify initiatives, programmes and projects that contribute to capacity building and/or technology development and transfer objectives:

Climate-relevant capacity building: Capacity building (CB) is a process which seeks to build, develop, strengthen, enhance and improve existing scientific and technical skills, capabilities and institutions, particularly in developing countries, to enable them to assess, adapt, manage and develop technologies. CB must be country-driven, addressing the specific needs and conditions of the countries concerned and reflecting their national sustainable development strategies, priorities and initiatives (adapted from the UNFCCC definition of capacity-building activities).

Climate-relevant technology development and transfer: A broad set of processes covering exchanges of know-how and experience, and providing equipment, for mitigating and adapting to climate change among various stakeholders such as governments, private sector entities, financial institutions, non-governmental organisations (NGOs) and research/education institutions. The broad and inclusive term 'transfer' comprises the process of learning to understand, use and replicate the technology, including the capacity to the most suitable technology and adapt it to local conditions and integrate it with indigenous technologies (adapted from the IPCC definition of climate-relevant technology transfer).

121. In order to enhance the transparency of reporting, a description of the underlying assumptions, methodologies and definitions, as applicable, used to identify and/or report, including:

(l) The support as being climate-specific;

Support is reported as climate-specific

- for bilateral projects if at least one of the OECD DAC Rio markers for mitigation OR adaptation, respectively, has a value of "1" or higher;
- for multilateral support depending on the imputed multilateral shares of core contributions to multilateral organizations, based on most recent data provided by Multilateral Development Banks (MDBs) and published by OECD DAC.[35]

121. In order to enhance the transparency of reporting, a description of the underlying assumptions, methodologies and definitions, as applicable, used to identify and/or report, including:

(m) Information on the efforts taken to avoid double counting, including on:

(i) How double counting among multiple Parties involved in the provision of support was avoided;

(ii) How double counting among multiple Parties involved in the mobilization of private finance through public interventions was avoided, including the methodologies and assumptions used to attribute the mobilized resources through public interventions reported to the Party that reports them, if possible relative to the type of instrument used for the mobilization;

(iii) How double counting was avoided between the resources reported as provided or mobilized, and the resources used under Article 6 of the Paris Agreement by the acquiring Party for use towards the achievement of its NDC;

(iv) How support is attributed between multiple recipient countries, in cases where a project involves multiple recipient countries and where this information is reported on a country-by-country basis;

Austria undertakes the following efforts to avoid double-counting:

- All bilateral projects only include funding sources from Austria;
- Projects involving multiple recipient countries are treated as a single project and are only accounted for and reported once;
- Austria does not currently use any mechanisms under Article 6 of the Paris Agreement.

121. In order to enhance the transparency of reporting, a description of the underlying assumptions, methodologies and definitions, as applicable, used to identify and/or report, including:

(n) The definition of public and private finance, in particular where entities or funds are mixed;

(o) How private finance was assessed as mobilized through public interventions, including by:

[35] https://one.oecd.org/document/DCD/DAC/STAT(2023)32/REV1/en/pdf

(i) Identifying a clear causal link between a public intervention and mobilized private finance, where the activity would not have moved forward, or moved forward at scale, in the absence of the Party's intervention;

(ii) Providing information on the point of measurement (e.g. point of commitment, point of disbursement) of the private finance mobilized as a result of the public intervention, to the extent possible in relation to the type of instrument or mechanism used for the mobilization;

(iii) Providing information on the boundaries used to identify finance as mobilized by public intervention;

For elements (n) and (o) we use the relevant definitions and methodologies as agreed under OECD DAC.[36]

121. In order to enhance the transparency of reporting, a description of the underlying assumptions, methodologies and definitions, as applicable, used to identify and/or report, including:

(p) How it seeks to ensure that support provided and mobilized through public interventions effectively addresses the needs and priorities of developing country Parties for the implementation of the Paris Agreement, as identified in country-driven strategies and instruments, such as biennial transparency reports, NDCs and national adaptation plans;

(q) How it seeks to ensure that support provided and mobilized through public interventions is in line with the long-term goals of the Paris Agreement;

All bilateral programmes, projects and initiatives supported by Austria are developed and implemented in close cooperation with partner countries. Austria cooperates with partner countries based on the internationally agreed principles of the "Busan Partnership for Effective Development Cooperation". These principles include:

- Ownership of development priorities by developing countries;
- A focus on results;
- Partnerships for development;
- Transparency and shared responsibility.

Austria implements the "Busan Partnership" through country and regional strategies that are jointly developed with our partner countries. These strategies reflect current and emerging interests, needs and priorities of our partners, including in the areas of climate change mitigation and adaptation.

[36] https://www.oecd.org/en/publications/the-dac-guidelines_19900864.html

We seek to ensure that all programmes, projects and initiatives are compatible with other related national development strategies of our partner countries as well as with the long-term goals of the Paris Agreement. We therefore understand that all bilateral programmes, projects and initiatives meet existing and emerging needs and interests expressed by our partner countries at the national level and in the context of concrete policy implementation.

121. In order to enhance the transparency of reporting, a description of the underlying assumptions, methodologies and definitions, as applicable, used to identify and/or report, including:

(r) An indication of what new and additional financial resources have been provided, and how it has been determined that such resources are new and additional;

(s) How the information provided reflects a progression from previous levels in the provision and mobilization of finance under the Paris Agreement;

Austria defines “new and additional” resources as a gradual scaling up of support over the years since the Paris Agreement entered into force, with new programmes, projects and focus areas supplementing and/or extending existing initiatives over time, with the overall volume of support provided increasing in the longer term. The information we provide shows a significant longer term increase of climate finance provided and mobilized.

121. In order to enhance the transparency of reporting, a description of the underlying assumptions, methodologies and definitions, as applicable, used to identify and/or report, including:

(t) Information on reporting on multilateral finance, including:

(i) Whether the multilateral finance reported is based on the Party’s inflow contribution to a multilateral institution and/or on the Party’s share in the outflow of the multilateral institution;

(ii) Whether and how multilateral finance has been reported as climate-specific and how the climate-specific share was calculated, including by, for example, using existing international standards;

(iii) Whether multilateral finance has been reported as core/general, with the understanding that the actual climate finance amount it would transfer into depends on the programming choices of the multilateral institutions;

(iv) Whether and how multilateral finance has been attributed to the reporting Party.

Multilateral finance is reported based on Austria’s inflow contributions to multilateral institutions and reports imputed multilateral shares (based on information from OECD DAC) as climate-specific.

122. A description of the underlying assumptions, definitions and methodologies used to provide information on technology development and transfer and capacity-building support.

As there is no standardized method for tracking technology development and transfer (TT) and CB, Austria advocates for joint approaches to enhance comparability among providers.

While Austria relies on OECD DAC Rio markers for climate finance tracking, there is currently no equivalent system for identifying TT and CB within the OECD DAC's CRS. In response to requests from members, the OECD DAC Secretariat has proposed methodologies for the tracking of CB and TT drawing on already available statistical parameters in the CRS. For CB this methodology combines the FTC flag with Rio marker data, SDG flags, and sector codes followed by manual verification and for TT the proposed methodology combines Rio markers, modalities, sector codes, FTC flag and keyword searches, supplemented by manual checks for verification.

The Austrian Development Agency (ADA) has initiated a test run of this methodology for 2023 data and will refine it in collaboration with Austrian providers, aiming to improve tracking and understanding of TT and CB support.

IV.C Information on financial support provided and mobilized under Article 9 of the Paris Agreement

Bilateral, regional and other channels

123. Relevant information, **in a tabular format**, for the previous two reporting years without overlapping with the previous reporting periods, on bilateral and regional financial support provided, specifying:

(a) Year (calendar year, fiscal year);

(b) Amount (in United States dollars and domestic currency) (the face value and, on a voluntary basis, the grant-equivalent value);

(c) Recipient, including, to the extent possible, information on the recipient region or country and the title of the project, programme, activity or other (specify);

(d) Status (disbursed, committed);

(e) Channel (bilateral, regional, multi-bilateral, other (specify));

(f) Funding source (ODA, OOF, other (specify));

(g) Financial instrument (e.g. grant, concessional loan, non-concessional loan, equity, guarantee, insurance, other (specify));

(h) The type of support (e.g. adaptation, mitigation or cross-cutting);

(i) Sector (e.g. energy, transport, industry, agriculture, forestry, water and sanitation, cross-cutting, other (specify));

(j) Subsector, as available;

(k) Additional information, as available (such as project/programme details, implementing agency and, to the extent possible, link to relevant project/programme documentation);

(l) Whether it contributes to capacity-building and/or technology development and transfer objectives, as available.

Summary information can be found in the tables below. For detailed information see CTF Table III.1 which was submitted separately and is available on the UNFCCC homepage (https://unfccc.int/first-biennial-transparency-reports).

Table IV.C.1: Summary information on financial support provided through bilateral, regional and other channels in 2021

					Amount climate specific / face value	
	Funding source	*Financial instrument*	*Type of support*	*Sector*	*EUR*	*USD*
Total					135,909,291	160,839,398
Subtotals	ODA				86,193,544	102,004,195
	OOF				45,763,622	54,158,133
	Other				3,952,125	4,677,070
Subtotals		Grant			63,216,509	74,812,437
		Conc. loan			62,536,750	74,007,988
		Other			10,156,032	12,018,973
Subtotals			Adaptation		44,891,600	53,126,154
			Mitigation		54,938,569	65,016,058
			Cross-cutting		36,079,122	42,697,185
Subtotals				Energy	58,917,821	69,725,232
				Transport	69,675	82,456
				Industry	58,000	68,639
				Agriculture	19,401,899	22,960,827
				Forestry	1,605,000	1,899,408
				Water & sanit.	26,653,946	31,543,132
				Cross-cutting	20,945,726	24,787,842
				Other	8,257,223	9,771,862

Table IV.C.2: Summary information on financial support provided through bilateral, regional and other channels in 2022

					Amount climate specific / face value	
	Funding source	*Financial instrument*	*Type of support*	*Sector*	*EUR*	*USD*
Total					289,118,074	304,334,815
Subtotals	ODA				142,222,640	149,708,042
	OOF				142,645,434	150,153,088
	Other				4,250,000	4,473,684
Subtotals		Grant			60,531,240	63,717,095
		Conc. loan			212,745,434	223,942,562
		Other			15,841,400	16,675,158
Subtotals			Adaptation		13,982,182	14,718,086
			Mitigation		238,424,786	250,973,459
			Cross-cutting		36,711,107	38,643,270
Subtotals				Energy	162,474,555	171,025,847
				Transport	45,538,870	47,935,653
				Industry	30,459,875	32,063,026
				Agriculture	3,394,590	3,573,253
				Forestry	3,549,180	3,735,979
				Water & sanit.	9,607,809	10,113,483
				Cross-cutting	24,797,724	26,102,867
				Other	9,295,471	9,784,706

Multilateral channels

124. Relevant information, **in a tabular format**, for the previous two reporting years without overlapping with the previous reporting periods, on financial support provided through multilateral channels, specifying:

(a) Year (calendar year, fiscal year);

(b) Institution (e.g. multilateral fund, the operating entities of the Financial Mechanism, entities of the Technology Mechanism, multilateral financial institution, international organization, other (specify));

(c) Amount (in United States dollars and domestic currency) (the face value and, on a voluntary basis, the grant-equivalent value);

(d) Core-general or climate-specific, as applicable;

(e) Inflows and/or outflows, as applicable;

(f) Recipient (e.g. country, region, global, project, programme, activity, other (specify)), as applicable, as available;

(g) Status (disbursed, committed);

(h) Channel (multilateral, multi-bilateral);

(i) Funding source (ODA, OOF, other (specify));

(j) Financial instrument (e.g. grant, concessional loan, non-concessional loan, equity, guarantee, insurance, other (specify));

(k) The type of support (e.g. adaptation, mitigation or cross-cutting), as available;

(l) Sector (e.g. energy, transport, industry, agriculture, forestry, water and sanitation, cross-cutting, other (specify)), as available;

(m) Subsector, as available;

(n) Whether it contributes to capacity-building and/or technology development and transfer objectives, as applicable, as available.

Summary information can be found in the tables below. For detailed information see CTF Table III.2 which was submitted separately and is available on the UNFCCC homepage.

Table IV.C.3: Summary information on financial support provided through multilateral channels in 2021

		Inflows / climate specific / face value	
		EUR	*USD*
Total		113,568,243	134,400,288
Subtotals	Green Climate Fund	25,000,000	29,585,799
	Global Environment Facility	10,581,518	12,522,506
	UNFCCC	105,663	125,045
	Other UN entities and channels	4,057,006	4,801,191
	World Bank Group	58,469,786	69,195,013
	Regional Development Banks	15,317,264	18,126,940
	Other multilateral institutions	37,007	43,795

Table IV.C.4: Summary information on financial support provided through multilateral channels in 2022

		Inflows / climate specific / face value	
		EUR	*USD*
Total		116,930,292	123,084,518
Subtotals	Green Climate Fund	25,000,000	26,315,789
	Adaptation Fund	4,754,500	5,004,737
	Global Environment Facility	10,714,445	11,278,363
	UNFCCC	110,016	115,806
	Other UN entities and channels	4,057,247	4,270,787
	World Bank Group	57,096,934	60,102,036
	Regional Development Banks	15,197,149	15,996,999

Information on finance mobilized through public interventions

125. Relevant information, **in textual and/or tabular format**, for the previous two reporting years without overlapping with the previous reporting periods, on financial support mobilized through public interventions through bilateral, regional and multilateral channels, including the operating entities of the Financial Mechanism and entities of the Technology Mechanism, as applicable and to the extent possible:

(a) Year (calendar year, fiscal year);

(b) Amount (in United States dollars and domestic currency) (the face value and, on a voluntary basis, the grant-equivalent value, if applicable);

(c) Amount of resources used to mobilize the support (in United States dollars and domestic currency);

(d) Type of public intervention used (e.g. grant, concessional loan, nonconcessional loan, equity, guarantee, insurance, policy intervention, capacity-building, technology development and transfer, technical assistance);

(e) Recipient (country, region, global, project, programme, activity, other (specify));

(f) Channel (bilateral, regional, multilateral);

(g) The type of support (e.g. adaptation, mitigation or cross-cutting);

(h) Sector (e.g. energy, transport, industry, agriculture, forestry, water and sanitation, cross-cutting, other (specify));

(i) Subsector;

(j) Additional information.

Austria is committed to mobilise private climate finance and to extend tracking to cover mobilised private climate finance over time. We are currently able to track mobilised private climate finance through

- ADC business partnerships[37]; these partnerships allow for a co-financing of up to 50 percent of a given business investment by ADC, provided the overall project supports development objectives in line with priorities of our partner countries.
- Projects supported by the Development Bank of Austria (OeEB).

For figures for 2021 and 2022, respectively, see Table IV.C.5 below.

[37] https://www.entwicklung.at/en/actors/businesses/business-partnerships

Table IV.C.5: Private climate finance mobilised by Austria

	EUR	USD
2021 Development Bank of Austria, mitigation	48,795,991	57,746,735
2021 Development Bank of Austria, adaptation	3,099,551	3,668,107
2021 ADC business partnerships	20,531	24,297
2021 Total	**51,916,072**	**61,439,139**
2022 Development Bank of Austria, mitigation	88,819,017	93,493,702
2022 Total	**88,819,017**	**93,493,702**

These were bilateral projects; a disaggregation according to type of intervention, recipients and sector is not available.

We continue to closely follow international developments on the issue, e.g. under the OECD Research Collaborative for Tracking Private Climate Finance and intend to expand the scope of reporting on mobilised private climate finance as further guidance is developed.

IV.D Information on support for technology development and transfer provided under Article 10 of the Paris Agreement

126. Information, **in textual format**, on support for technology development and transfer provided under Article 10 of the Paris Agreement, including, to the extent possible, qualitative and/or quantitative information on:

(a) Strategies employed to support technology development and transfer, including case studies;

Austria is committed to the implementation of Article 10 of the Paris Agreement, this includes national measures as well as international cooperation, incl. from the private sector.

Austrian companies are international leaders, particularly regarding hydropower, biomass, solar thermal energy and ecological construction, but also in traditional environmental technology sectors such as water and waste management.

Environmental technology “Made in Austria” are very often highly innovative products and system services. A continuously growing demand for environmental technology products and environmental technology services, strict legal requirements, standards and regulations as well as a large number of relevant funding programs at European, national

and regional level represent essential framework conditions for environmental technology companies.

The development of technological innovations in this area is a key factor for a climate-neutral, resource-efficient and circular economy. Austria implements a transformative innovation policy that is geared towards the overarching goals of climate neutrality, competitiveness and technological sovereignty as well as resilience and well-being.

The Austrian strategy for research, technology and innovation (RTI)[38] combines the various levels and players in the science and innovation system in a comprehensive, holistic intervention logic. The main goals for the Ministry for Climate Action are in the area of climate-neutral cities, energy transition, mobility transition and circular economy. This includes cooperation at the European level (in particular via Horizon Europe) as well as implementation of bilateral and multilateral program calls and financing of Austrian project participations from the thematically relevant RTI activities of the Ministry for Climate Action. For example, in the context of Mission Innovation Austria co-leads together with Australia the Net-Zero Industries Mission. Further core mission members are Canada, China, European Commission, Finland, Republic of Korea and the United Kingdom. Further information can be found under following Link: https://mission-innovation.net/missions/net-zero-industries-mission/

Technology development and transfer is an important aspect in the Austrian development policy. The main strategy is the Three-Year-Programme of the Austrian Development Policy. The Three-Year Programme of the 2022-2024[39] mentions support for technology transfer specifically under the focus area sustainable energy and energy efficiency (p. 16) stating: "*Access to sustainable, modern and affordable energy solutions is a basic requirement for sustainable development and to achieve the obligations under the Paris Agreement. This is why Austria supports partner countries and regions in establishing capacities, knowledge and technology transfer and the creation of favourable conditions for investment in sustainable energy solutions and technologies as well as energy efficiency.*"

The main actors for international climate action projects, including with technology components, are the Austrian Development Agency, the Austrian Development Bank, the Ministry for Climate Action and the Ministry of Finance.

The Ministry of Finance represents Austria in its cooperation with International Financial Institutions (IFIs). IFIs support technology development and transfer, as well as capacity building, for climate change mitigation and adaptation in their recipient countries. The

[38] https://www.bundeskanzleramt.gv.at/themen/forschungskoordination_fti.html
[39] https://www.entwicklung.at/fileadmin/user_upload/Dokumente/Publikationen/3_JP/2022-2024_Dreijahresprogramm.pdf

important role of IFIs as knowledge institutions and for capacity building is acknowledged in the "Strategic Guidelines of the Ministry of Finance for IFIs"[40].

Austria supports the Technology Mechanism for the UNFCCC and the Paris Agreement, through financial contributions and participation in events. In 2024 the Ministry for Climate Action provided EUR 80,000.00 for the work of the Technology Executive Committee.

126. Information, in textual format, on support for technology development and transfer provided under Article 10 of the Paris Agreement, including, to the extent possible, qualitative and/or quantitative information on:

(b) Support provided at different stages of the technology cycle;

In its cooperation with IFIs, the Ministry of Finance places a strong emphasis on climate-related issues across the entire technology cycle. The Ministry of Finance continuously encourages IFIs to increase their climate ambition, set higher climate targets and work together with other IFIs in aligning all activities with the Paris Agreement.

The Ministry of Finance contributions include core funding to IFIs through capital increases (such as to the World Bank Group and Regional Development Banks) and replenishments of funds (such as the International Development Association of the World Bank Group, the soft windows of the Regional Development Banks, the Global Environment Facility and the International Fund for Agricultural Development).

In addition, bilateral programmatic support to IFIs plays an essential role to deliver on climate finance commitments. The "Strategic Guidelines of the MoF for IFIs" highlight sustainable energy and climate action as one of the four priority areas for its programmatic cooperation with IFIs. In this context, the Ministry of Finance also promotes technology development and transfer for climate change mitigation and adaptation through financial contributions to several Trust Fund programmes of IFIs. These include the Global Facility for Disaster Reduction and Recovery (GFDRR) and the Climate Support Facility (CSF) of the World Bank, the ECA Climate Smart Finance program of the International Finance Corporation, the High Impact Partnership on Climate Action (HIPCA) of the European Bank for Reconstruction and Development and the NDC Pipeline Accelerator MDTF of the Inter-American Development Bank.

[40] https://www.bmf.gv.at/themen/wirtschaftspolitik/internationale-finanzinstitutionen/oesterreich-und-internationale-finanzinstitutionen.html

126. Information, in textual format, on support for technology development and transfer provided under Article 10 of the Paris Agreement, including, to the extent possible, qualitative and/or quantitative information on:

(c) Support for the development and enhancement of endogenous capacities and technologies of developing country Parties;

For the purpose of this report, Austria uses the following definition for endogenous technologies and endogenous capacities (TEC report on Building Capacities in Climate Technologies, July 2021):

> *Definition: (a) Endogenous technologies are those that have been: (i) Developed within the country or by a team of in-country and external people, or (ii) Developed elsewhere but modified and adapted within the country or by a team of in country and external people to meet the country's needs and conditions;*
>
> *(b) Endogenous capacities include the capacities to: (i) Assess climate-related technology needs from the individual to the national level; (ii) Identify appropriate technologies to assist in meeting identified needs, and; (iii) Adapt technologies to local needs and conditions*

By supporting the Technology Mechanism (TEC and CTCN) Austria also promotes the development and expansion of endogenous capacities and technologies in developing countries.

From the overall bilateral support for technology development and transfer, the following project is highlighted in support of endogenous technologies:

ICIMOD: Austria provides unearmarked core support (1 Mio EUR/a) to The International Centre for Integrated Mountain Development (ICIMOD) which is an intergovernmental knowledge and learning centre working on climate and biodiversity challenges in the Hindu Kush Himalaya (HKH) region, catering eight regional member countries – Afghanistan, Bangladesh, Bhutan, China, India, Myanmar, Nepal, and Pakistan. ICIMOD aims at creating knowledge to support evidence-based decision making and developing, testing and disseminating locally adapted technologies, in areas such as early warning systems and climate risk monitoring, renewable energies and air quality as well as climate smart agriculture and spring shed management, aiming at improving the livelihoods of mountain communities.

Further projects to be mentioned in the context of endogenous technologies and capacities:

- Support for SOFF – Systematic Observation Finance Facility: https://www.entwicklung.at/projekte/detail/contribution-to-systematic-observations-financing-facility-soff-2022-2031
- Early warning sytems in Mosambique in cooperation with the Technical University Vienna (TU Wien): https://www.entwicklung.at/projekte/detail/verbesserung-von-duerrefruehwarnsystemen-in-mosambik-durch-satellitendaten-zur-unterstuetzung-der-ernaehrungssicherheit
- Support for Soltrain: https://www.entwicklung.at/projekte/detail/solarthermische-ausbildung-und-demonstration-im-sadc-raum-phase-iv
- *Get.Pro: https://www.entwicklung.at/projekte/detail/getpro-transformational-advice*
- *IIASA: https://www.entwicklung.at/projekte/detail/iiasa-accelerating-transition-towards-resilient-water-resources-management*

126. Information, in textual format, on support for technology development and transfer provided under Article 10 of the Paris Agreement, including, to the extent possible, qualitative and/or quantitative information on:

(d) Efforts to encourage private sector activities related to technology development and transfer and how such efforts support developing country Parties;

The Austrian Development Agency supports initiatives by Austrian enterprises in developing countries. Most often, the fields of interests are related to renewable energy, waste management, water and environment. The granted funding by this “business partnerships programme” has to be matched by at least the same amount of the enterprises own funds. Therefore, business partnership projects, can serve as an incubator for private investments. The programme supports projects submitted by enterprises, which are simultaneously committed to pursue a developmental benefit for the beneficiary country’s common welfare as well as an entrepreneurial benefit.

IFIs play an important role in leveraging private sector finance, by supporting the development of bankable climate projects and promoting private sector development. Austria supports relevant programmes of the IFIs.

126. Information, in textual format, on support for technology development and transfer provided under Article 10 of the Paris Agreement, including, to the extent possible, qualitative and/or quantitative information on:

(e) Efforts to accelerate, encourage and enable innovation, including research, development and deployment efforts, and collaborative approaches to research and development;

The main goals for the Ministry for Climate Action in the context of the Austrian strategy for research, technology and innovation are in the area of climate-neutral cities, energy transition, mobility transition and circular economy. This includes cooperation at the bilateral and multilateral level, such as joint program calls and financing of Austrian project participation from the thematically relevant RTI activities of the Ministry for Climate Action. For example, in the context of Mission Innovation Austria co-leads together with Australia the Net-Zero Industries Mission. Further core mission members are Canada, China, European Commission, Finland, Republic of Korea and the United Kingdom. Further information can be found under following Link: https://mission-innovation.net/missions/net-zero-industries-mission/

The Ministry of Finance supports IFIs in their role as knowledge carriers and knowledge promoters, as well as in the development and dissemination of best practices and innovative technologies for climate change mitigation and adaptation.

126. Information, in textual format, on support for technology development and transfer provided under Article 10 of the Paris Agreement, including, to the extent possible, qualitative and/or quantitative information on:

(f) Knowledge generated.

Austria supports the Technology Mechanism (TEC and CTCN) and the dissemination of knowledge through their publications, various reports and events.

127. Quantitative and/or qualitative information **in a common tabular format** on measures or activities related to support for technology development and transfer implemented or planned since their previous report, including, to the extent possible and as relevant:

(a) Title;

(b) Recipient entity;

(c) Description and objectives;

(d) Type of support (mitigation, adaptation or cross-cutting);

(e) Sector;

(f) Type of technology;

(g) Status of measure or activity;

(h) Whether the activity was undertaken by the public and/or private sector.

As there is no standard approach towards tracking technology development and transfer, Austria has been always a strong advocate in supporting work on joint approaches to ensure comparability between providers of technology development and transfer. While for tracking of climate finance, Austria relies on the OECD DAC Rio Markers, no comparable feature to the Rio markers exists to identify technology development and transfer, as there is no obligation to report on technology development and transfer through the OECD DAC´s CRS system. Still, at the request of members, the OECD DAC Secretariat explored potential ways to track technology transfer with the parameters available in the DAC CRS system and came up with a suggestion for members, which consists of a combination of Rio markers, modalities, sector codes and keyword searches, followed by manual check and verification. The Austrian Development Agency (ADA) has started with a test run applying this methodology for 2023 data and will in close cooperation with the Austrian providers further refine this methodology.

Table IV.D.1: Information on activities related to support for technology development and transfer.

Title	*Recipient entity*	*Description and objectives*	*Type*[a]	*Sector*	*Sub-sector* [1)]	*Type of technology*	*Status of measure or activity*[b]	*Activity under-taken by*[c]	*Additional information*[d]
Southern African Training and Demonstration Initiative (SOLTRAIN)	Six SADC Member States: Botswana, Lesotho, Mozambique, Namibia, South Africa, Zimbabwe	Supports implementation of solar thermal systems, strengthening local capacity and reducing emissions. Aims to implement Solar Thermal Roadmaps to increase renewable energy use.	m	Energy	23232	Solar thermal systems for water heating, cooling, and process heat generation	Ongoing	Public and private sector	Involves training 1,200 individuals, installing 100 solar systems, saving 2,500 MWh annually. Six national Solar Thermal Roadmaps to enhance renewable energy capabilities.
Capacity Development for Monitoring of Hydropower Plant Safety	Druk Green Power Corporation (DGPC), Bhutan	Ensures safety of 1,606 MW hydropower capacity, secures energy supply to 160,000 households, and strengthens in-house capacity for plant monitoring and early warning systems.	cc	Energy	23220	Hydropower plant instrumentation and monitoring systems	Ongoing	Public sector	Trains 105 individuals, enhances monitoring systems, and supports geotechnical appraisals to ensure the sustainability of Bhutan's hydropower infrastructure and contribute to national revenue.
Contribution to the Trust Fund of the Energy and Environment Partnership in Southern and	Nordic Development Fund (NDF)	The Trust Fund aims to enhance access to clean energy in 15 countries in Southern and East Africa, focusing on underserved groups. It promotes sustainable and inclusive green growth and climate change mitigation, supporting a transition to	cc	Energy	23210	Clean energy access projects, energy efficiency	Ongoing	Public and private sector	For the period 2018-2025, the fund aims to achieve energy access for 1.5 million households, create 15,700 jobs, reduce 1.4 million tonnes of CO2 emissions

Eastern Africa 2018 – 2025		a climate-resilient, zero-carbon future.							
Amabo	Amabo, Cameroon	Production of roof tiles made from recycled plastic - a loan is provided for a project for the production of roof tiles. The roof tile is made from recyclable plastic and sand. With the loan from OeEB, a photo voltaic system is also to be installed on the roof of the production hall. The energy supply of the factory building is supported by solar modules.	m	Industry	32120	Recycling technology, photovoltaic	Ongoing	Public and private sector	Bricks are environmentally friendly, water-repellent (no mold infestation => no health risk), break-proof, offers heat protection (UV-resistant) and is more durable than corrugated sheets. The brick can be technically "separated" so that the raw material can be recycled.
RIMA Industrial S.A.	RIMA Industrial S.A., Brazil	Loan to finance a melting furnace: The loan will be used to finance a melting furnace, which also includes the construction of a modern oven with an integrated dedusting system and a dedusting system for a stock oven, which will also apply important environmental protection measures and raise the environmental and social standards of the project beyond the Brazilian industry. The new kiln is intended to improve the water and energy efficiency of the client in terms of production facilities, and will be complemented by the new credit line (construction	m	Industry	32169	Transformers and auxiliary systems, de-dusting filter	Ongoing	Public and private sector	Environmental protection and social standards of the project are raised above the Brazilian industry. The investment represents an expansion of the existing production capacity, through the use of new technologies - amongst others efficiency gains and resource efficiency effects are to be achieved. The project thus supports the low carbon development path.

		of a modern melting furnace with integrated dedusting system and a further dedusting system for an existing kiln, investment in job security).							
Rural Electrification NAMA in Vanuatu	Vanuatu, the Wintua, Lorlow and Lalinda Communities	The project is based on the NAMA "Rural Electrification in Vanuatu", the installation of a solar PV micro-grid in Wintua and Lorlow and was extended to the Lalinda village community, Ambrym Island, Vanuatu. Lalinda village is located on the South West Bay of Ambrym Island with approximately 60 households.	m	Energy	23231	Photovoltaic systems	Ongoing	Public sector	The PV solar mini-grid for Lalinda will serve the electricity demand for the following in the Lalinda community: around 60 households, two permanent church buildings, a kindergarten and primary school, three community halls, about eight deep freezers for commercial use, a livestock and fisheries project site, a workshop garage, and a community cooperative.
Facility for Energy Inclusion (FEI)	FEI - ONGRID LP and FEI-OGEF LP	Financing of small IPPs and Minigrids; The objective of the project/partner is to provide green energy for households and companies in Africa by replacing energy obtained from diesel, kerosene or wood. As part of the objective, the project/partner supports small and medium-sized renewable energy projects by providing financing.	m	Energy	23210	On-grid and off-grid technologies, e.g. power plants construction or modernization of existing plants, solar home systems	Ongoing	Public and private sector	Funds are used by the project/partner to finance independant power producers (up to 25 MW by means of new construction or modernization of existing plants). Furthermore decentralized energy solutions, such as projects to generate electricity for self-consumption by companies and mini-grid projects that contribute to electricity

									generation at the point of need and passed on to the respective end borrowers, are part of the activities.
ReNew Power	AMPIN Energy Transition, India	Long term credit line in order to finance construction and operation of two wind parks in India. The wind power project with an installed capacity of 11 OMW consists of two separate project sites (Batakurki 60MW, Bableshwar 50MW).	m	Energy	23240	Wind farm, including power evacuation facilities	Ongoing	Public and private sector	The Project benefits from experienced sponsors with a proven industry track record and good project execution skills The Project is sponsored by the Independent Power Producer (IPP) ReNew Power Ventures Private Limited (RPVPL), which is one of the largest players in the renewable power sector in India (operational capacity of 1.4GW, capacity under development of 1.8GW).

[a] a/m/cc [b] Planned / Ongoing / Completed [c] Public sector / Private sector / Public and private sector [d] Report, to the extent possible, information on the project/programme and implementing agency and provide a link to any relevant documentation and as appropriate, support to activities related to averting, minimizing and addressing loss and damage associated with the adverse effects of climate change.

[1] DAC CRS purpose code

IV.E Information on capacity-building support provided under Article 11 of the Paris Agreement

128. Information, **in textual format**, on capacity-building support provided under Article 11 of the Paris Agreement, including, to the extent possible, qualitative and/or quantitative information on:

(a) Strategies employed to provide capacity-building support, including case studies;

Austria recognizes that adequate capacities are indispensable for the development of country-owned and participatory policies and strategies, systematic planning, result-oriented execution of interventions, and the effective provision of climate finance. The Austrian approach to capacity building is understood as an endogenous change process, one that must be initiated and owned by the relevant actors—individuals, organizations, and society as a whole within partner countries. While external partners play a crucial supportive role, their function is primarily to accompany and promote these internal processes of change.

Austria's capacity-building support under Article 11 of the Paris Agreement is rooted in a comprehensive framework that seeks to enhance the capacities of partner countries to engage effectively in climate action. This framework is articulated i.a. in the Austrian Development Agency`s (ADA) Manual for Capacity Development, which delineates three pivotal levels of capacity building: individual, organizational, and enabling environment.

At the individual level, capacity building focuses on empowering individuals by enhancing their skills, knowledge, and competencies. Austria employs targeted training programs and capacity building efforts aimed at equipping individuals with practical skills necessary for engaging in sustainable practices and climate resilience initiatives. These programs are designed to create a sense of ownership and responsibility among participants, enabling them to actively contribute to their communities' climate actions.

Moving to the organizational level, Austria recognizes the critical role that regional, national and local organizations play in implementing climate strategies. Thus, capacity building at this level involves strengthening these organizations' capabilities through various means, such as improving governance structures, operational capacities, and technical assistance. By fostering collaboration among different organizations, Austria aims to create a more coordinated and effective response to climate challenges, enabling these entities to operate independently and contribute meaningfully to national climate strategies.

Creating an enabling environment is equally crucial for the success of capacity-building initiatives. This encompasses supporting the development and implementation of policies that facilitate climate action at both local and national levels. Austria places significant

emphasis on engaging stakeholders and promoting dialogue among various actors, including government bodies, non-governmental organizations, the private sector and local communities. This collaborative approach ensures that capacity-building initiatives are reflective of both local needs and national priorities, thereby enhancing the effectiveness of policies intended to serve the communities they impact. In addition, Austria prioritizes capacity-building support at the regional level, often overlooked in climate initiatives, through initiatives like the Regional Renewable Energy and Energy Efficiency Centers, which enhance energy management and sustainable practices via targeted training and knowledge sharing. Regional Economic Commissions (RECs) play a crucial role in this support by facilitating collaboration among countries and aligning efforts with regional priorities.

Austrian-funded capacity-building initiatives aim to address all three levels necessary for effective outcomes. For instance, Austria's support to GN-SEC, the Global Network of Regional Sustainable Energy Centers, integrates individual capacity-building and training with institutional support for member organizations, while also enhancing regional frameworks to drive net-zero energy transitions. Similarly, Austria’s assistance to the six Western Balkan countries through the ClimaProof program, implemented by UNEP, demonstrates a multi-level approach. Experts from line ministries and hydrometeorological services received training on utilizing downscaled, bias-corrected climate projections developed under the program. In parallel, institutional support was extended to hydrometeorological services, and the enabling environment was strengthened by analyzing climate vulnerability integration into national environmental impact assessments and developing a set of core indicators.

In addition, research and university partnerships are integral to Austria’s capacity-building strategies. Collaborations with academic institutions and research organizations not only facilitate knowledge exchange but also promote innovation in climate action. By leveraging scientific expertise, Austria can inform policy and practice in ways that are evidence-based and contextually relevant. The Austrian Partnership Programme in Higher Education and Research for Development (APPEAR) supports well-designed collaborative and innovative partnerships between Austrian and partner country universities that respond to identified needs and demands in the respective countries and in the partner institutions.

These strategies reflect Austria's commitment to fostering sustainable climate action while ensuring local ownership and engagement in the processes. They underscore the importance of a holistic approach that addresses various levels of capacity and aligns with the broader climate goals set forth in NDCs, NAPs and LTS.

128. Information, **in textual format**, on capacity-building support provided under Article 11 of the Paris Agreement, including, to the extent possible, qualitative and/or quantitative information on:

(b) How capacity-building support that was provided responds to the existing and emerging capacity-building needs, priorities and gaps identified by developing country Parties in the areas of mitigation, adaptation, and technology development and transfer;

Austria’s approach to capacity-building support emphasizes a collaborative framework that aligns with the articulated needs of partner countries through their Nationally Determined Contributions (NDCs), National Adaptation Plans (NAPs), and Long-Term Strategies (LTS). By actively engaging with its partner countries, Austria ensures that its support is tailored to their specific contexts, priorities, and emerging challenges.

A fundamental aspect of Austria's capacity-building approach is the implementation of capacity needs assessments. By conducting thorough assessments, Austria identifies existing capacities and capabilities, as well as any gaps. This comprehensive analysis allows for a nuanced understanding of the strengths and weaknesses within a system, ensuring that capacity-building initiatives are targeted effectively. Such a needs-based approach guarantees that efforts are relevant and adaptable, catering to the unique circumstances of each country and context. For example, the capacity building that ADA provides through its support of the Pacific Centre for Renewable Energy and Energy Efficiency is based on the gaps identified during a needs assessment concerning regional capacity building, knowledge management and business development.

128. Information, **in textual format**, on capacity-building support provided under Article 11 of the Paris Agreement, including, to the extent possible, qualitative and/or quantitative information on:

(c) Policies that promote capacity-building support;

Austria’s capacity-building support under Article 11 of the Paris Agreement is anchored in several key documents.

In Austria's "**Three-Year Programme on Development Policy 2022–2024**," climate change capacity-building is prioritized under the section "Preserving the environment and protecting natural resources." Austria aims to strengthen climate resilience by supporting training and capacity development for local institutions, improving access to climate information, and promoting policy frameworks for environmental impact assessments. The program emphasizes sustainable practices, climate-resilient agriculture, and ecosystem restoration to foster regional adaptation and mitigation efforts. Through multi-level cooperation, Austria supports sustainable energy solutions and integrates climate change considerations into various sectors, including agriculture, water, and energy(2022-2024_3-YP). In addition, Austrian Development Cooperation (ADC) **Country and Regional**

Strategies, focus on specific geographic and contextual needs, promoting tailored capacity-building approaches. They prioritize localized capacity building by assessing regional needs and challenges, ensuring that programs are relevant and effective. The strategies emphasize sectors such as renewable energy, agriculture and rural development or disaster risk reduction, which are critical for enhancing resilience.

Austria's revised **2017 Climate Finance Strategy** emphasizes capacity building for developing countries, facilitating access to climate funding and supporting adaptation and mitigation. Through public-private collaboration, Austria aims to strengthen climate resilience and net zero emission development aligned with the Paris Agreement's goals.

128. Information, **in textual format**, on capacity-building support provided under Article 11 of the Paris Agreement, including, to the extent possible, qualitative and/or quantitative information on:

(d) Involvement of stakeholders;

Under Article 11 of the Paris Agreement, Austria emphasizes the active involvement of diverse stakeholders, including government institutions, civil society organizations, academic institutions, the private sector, and local public authorities in its capacity-building efforts. This multi-stakeholder approach is central to Austria's climate financing, aligning with international commitments and the Agenda 2030.

A crucial factor for Austria herby is ensuring the participation women and of vulnerable groups, such as minorities, indigenous peoples, youth, the elderly, and persons with disabilities. For instance, in the Republic of Moldova, ADA supports the development of climate adaptation strategies through collaborative efforts that incorporate local knowledge and practices. This participatory approach actively seeks input from marginalized communities, helping to tailor initiatives to their specific needs and circumstances.

Austria promotes local ownership of development initiatives, encouraging stakeholders, especially those from vulnerable backgrounds, to engage in decision-making processes and implementation. This is achieved through targeted outreach, capacity-building workshops, and partnerships with local organizations that represent these groups. By fostering inclusive dialogues, Austria ensures that the voices of the most affected populations are heard, leading to more equitable and effective climate action.

Through its comprehensive and participatory strategy, Austria aims to enhance climate resilience and sustainability while embedding climate considerations into national and local development plans, ultimately contributing to a more just and inclusive response to climate change challenges.

128. Information, **in textual format**, on capacity-building support provided under Article 11 of the Paris Agreement, including, to the extent possible, qualitative and/or quantitative information on:

(e) How support for capacity-building actions in developing country Parties that was provided promotes the sharing of lessons learned and best practices.

Austria is dedicated to enhancing capacity-building support for developing country Parties under Article 11 of the Paris Agreement, particularly in promoting the sharing of lessons learned and best practices. This is exemplified through Austria's engagement with the **Global Network of Regional Sustainable Energy Centers (GN-SEC)** and the **Climate Learning and Advocacy for Resilience (CLAR)** initiative.

The **Global Network of Regional Sustainable Energy Centres (GN-SEC)** is pivotal in enhancing capacity-building actions in developing countries by fostering the sharing of best practices and lessons learned. Through its established network of regional centres, GN-SEC facilitates collaboration among member states, allowing them to exchange valuable experiences related to the deployment of sustainable energy and climate technologies (SECTs).

This cooperative framework helps countries identify and implement successful strategies tailored to their specific contexts, addressing common challenges such as policy barriers and technical limitations. Furthermore, the network supports knowledge-sharing workshops, training sessions, and collaborative projects that enhance local capacities and foster regional integration, ensuring that lessons learned are effectively disseminated and utilized across borders.

In operation from 2018 to 2021, the CAREs **Climate Learning and Advocacy for Resilience** (CLAR) program aimed to enhance the adaptive capacity of vulnerable communities to climate change. It focused on demonstrating effective practices in climate resilience, strengthening civil society networks to influence climate policies, and facilitating South-South learning and knowledge sharing. By facilitating exchanges between practitioners and civil society advocates in various regions—including the Sahel, Greater Horn of Africa, and parts of Asia—CLAR promoted effective adaptation strategies tailored to local needs. The ultimate beneficiaries included over 2 million individuals, particularly vulnerable communities, who gained access to valuable resources and best practices.

129. Quantitative and/or qualitative information **in a common tabular format** on measures or activities related to capacity-building support implemented or planned since their previous report, including, to the extent possible and as relevant:

(a) Title;

(b) Recipient entity;

(c) Description and objectives;

(d) Type of support (mitigation, adaptation or cross-cutting);

(e) Status of measure or activity.

Table IV.E.1: Information on activities related to capacity building support.

Title	*Recipient entity*	*Description and objectives*	*Type of support* [a]	*Status of measure or activity* [b]	*Additional information* [c]
Enhancing Community Climate Resilience (EcoCare) in Rwanda	Rwanda	The project aims to improve the environmental, health and economic resilience of vulnerable communities and in particular women and youth in Nyamasheke District (Western Province). Specific objectives are: Strengthening institutional capacity for disaster risk reduction, improving disaster risk reduction and environmental restoration knowledge and practices among target households, expanding and diversifying livelihood opportunities for existing women's cooperatives, newly established women's groups and youth clubs, improving access to safe drinking water, improving sanitation facilities, and raising awareness of primary health care and nutrition among the most vulnerable households. Furthermore, the initiative	Cross-cutting	ongoing	

		also includes new strategies of women's cooperatives for climate-friendly cooking solutions.			
Innovative Argentinian-Austrian cooperation for climate-friendly alternatives in protein feed and animal production	Argentina	As part of the cooperation between small scale farms in Argentina, which are negatively affected by the expansion of soy cultivation, and Austrian farms, the participants are looking for practical, sustainable solutions to produce protein animal feed. Within the framework of the project, a catalogue of criteria for assessing the sustainability of farms will be developed. In addition, a total of 12 companies will be selected in both countries (AUT: 6, ARG: 6), which will be considered as lighthouse farms and will be available for regional learning visits. Learning visits will take place in Argentina and also in Austria.	Cross-cutting	ongoing	
Climate change adaptation and food security in rural communities of Mali‘s Ségou and Kayes region - Mali	Mali	The overall objective of the project is to make local vulnerable populations in the Segou and Kayes regions of Mali increasingly resilient to the negative impacts of climate change. To achieve this resilience, the project will make available agroecological and agroforestry methods for an increased quality of life. Farmers will be made increasingly aware of the effects of climate change and adapt by using agricultural best practices and tools based on Farmers' Field Schools approach. By the end of the project, agroecological and agroforestry methods should be valued by the community as the preferred method to improve food production and household income. 9 local communities will have established strategies and institutions to guide their long-term efforts in climate adaptation and mitigation. Women are actively involved in all activities.	Adaptation	ongoing	
Adolescents as Agents of Climate	Armenia	Adolescents become resilient agents of climate action and solutions contributing to create socially and environmentally sustainable communities in Armenia. The project will directly target and benefit 28,058 adolescents	Adaptation	ongoing	

Change in their Communities		aged 12-18 and engage them in exploring the impact of climate change on their wellbeing. 2,470 schoolteachers and administrators), 520 consolidated community staff and 10 regional administrators will be trained on learning methodologies on knowledge, skills and capacities to create safer environments for children and adolescents and enhance the resilience of communities against climate induced hazards			
Semien Gonder Resilience Project, Ethiopia - SEGORP	Ethiopia	The Project goal is to strengthen household and community resilience to climate change in three food insecure woredas (districts) in the Amhara region through the development of adaptive, absorptive, and transformative capabilities.	Adaptation	ongoing	
Digitalization for Resilience	Vietnam	The project will work with hydromet services and local partners to facilitate the digitalization process of CBRDM practices in the three target communes. Capacity of relevant stakeholders on digital technology application in disaster risk reduction and management will be improved.	Adaptation	ongoing	
AQUAHUB II - Education and Research Hubs for the Sustainable Management of Freshwater Ecosystems in Eastern Africa	Eastern African Region	The overall project objective is to foster the sustainable management of freshwater ecosystems and to contribute towards increased climate resilience. Supported are capacity development processes at the individual and institutional level towards the sustainable management of freshwater ecosystems in Eastern Africa. Strengthened are HEST institutions in Eastern Africa, which educate professionals, carry-out relevant research/extension activities, contribute to the development of evidence-based policies and enhance regional and international networking.	Adaptation	ongoing	

Global Energy Transformation Programme (GET.pro)	Sub Saharan Africa	The Global Energy Transformation Programme (GET.pro) aims to contribute to the achievement of the SDGs and the Paris Climate Agreement on sustainable energy and climate change. The Austrian contribution is earmarked to support GET.transform. Activity packages include: A) Transformation support (Implementing Power Sector Reforms in Selected Partner Countries and Regions) through comprehensive technical advice and capacity building; B) Knowledge for the energy transformation through the development of knowledge products and outreach activities.	Mitigation	ongoing	
Southern African Solar Training and Demonstration Initiative, Phase IV	SADC Region	SOLTRAIN is a regional initiative on capacity building and demonstration of solar thermal systems in the SADC region. SOLTRAIN successfully raises awareness and demonstrates what can be done off-grid with solar thermal. SOLTRAIN in its fourth phase targets the SADC Member States Botswana, Lesotho, Mozambique, Namibia, South Africa and Zimbabwe.	Mitigation	ongoing	
Contribution to Systematic Observations Financing Facility (SOFF) 2022-2031	Developing countries unspecified	The Austrian contribution will directly support SOFF operations during the First Implementation Period, therefore contribute to supporting up to 75 countries for its readiness, 50 countries to scale up their infrastructure capabilities through direct investments, and support peer-to-peer technical assistance provided from advanced Meteorogical Offices, including from GeoSphere Austria which serves as a SOFF Peer Advisor. A total population of 210 Mio. in LDCs and SIDS is expected to benefit from the Programme results.	Adaptation	ongoing	
Enhancing Drought Early Warning in Mozambique through Satellite Soil	Mozambique	The project aims to increase food security in Mozambique through improving drought early warning and early action and increasing efficiency of agricultural practices. For this purpose, the Technical University of Vienna (TU Vienna), one of the world's leading research institutes on remote sensing of soil moisture and vegetation, aims to develop together with the Eduardo Mondlane University, the Ministry of Agriculture and Rural Development	Adaptation	ongoing	

Moisture Data to support food security		(MADER), the Red Cross movement and the World Food Programme (WFP) soil moisture and vegetation products and indicators for **Mozambique.** Expected results: 1. Improved capacity for drought early warning and early action. 2. Improved institutional capacity on climate change mitigation and early warning. 3. Improved capacity and starting position for women through obtained qualification to work with satellite data for land and water monitoring with benefits of increased yield and income.			
Contribution to Gobal Network of Sustainable Energy Centres (GN-SEC) Platform	Developing countries unallocated	Within the following preparatory project, UNIDO aims to make the Global Network of Regional Sustainable Energy Centres (GN-SEC) Platform fully operational and sustainable. The regional sustainable energy centres aim to accelerate the energy and climate transformation by creating economies of scales, equal progress and spill-over effects between countries. Integrated and inclusive regional markets for sustainable energy and climate technology (SECT) products and services shall be created by setting common targets, policies, standards and incentives, as well as by de-risking of investments through the provision of reliable data, analytics, bundling of projects and convening power. The GN-SEC centres play an important role in setting domestic priorities, contribute to donor harmonization and coordination, as well as ensuring the sustainability and availability of results and deliverables after project closure.	Mitigation	ongoing	
Pacific Center for Renewable Energy and Energy Efficiency PCREEE - Second	Oceania multi country	improved access to modern, affordable and reliable energy services, energy security and mitigation of negative externalities of the energy system by promoting renewable energy and energy efficiency (RE&EE) investments, markets and industries in Pacific Island Countries and Territories (PICTs).	Mitigation	ongoing	

Operational Phase (2021-2025)					
Forest resilience of Armenia, enhancing adaptation and rural green growth via mitigation	Armenia	The project aims to enhance climate-neutral greenhouse gas emissions by promoting sustainable forest management and energy efficiency, targeting a 7% increase in CO2 removals in the forestry sector by Year 8. Through capacity-building initiatives, the project will restore 2.5% of degraded forestland and optimize fuelwood consumption in rural communities by 30%, while empowering stakeholders to adopt effective governance for climate resilience and adaptive management of forest resources.	Cross-cutting	ongoing	Austrian co-financing to GCF project SAP014
Community-focused Flood Early Warning System for BuPuSa Transboundary River Basins	Mozambique, Zimbabwe	The programme aims to reduce the vulnerability of communities in the Buzi-Pungwe-Save (BuPuSa) Basins through preventive and cross-border flood-control-mechanisms in Mozambique and Zimbabwe. By exposing the targeted beneficiaries to the proposed awareness, tools and capacity building initiatives on flood monitoring and early warning they will be empowered and able to reduce their risks and vulnerabilities to floods and related challenges.	Adaptation	ongoing	
Vocational Education Renewable Energies in Burkina Faso	Burkina Faso	The overall objective is to improve access to energy in Burkina Faso through improved training opportunities and increased employment in the field of renewable energy. This is to be achieved primarily through a sustainable anchoring of a new and high-quality specialisation "Renewable Energy" in vocational high schools (Lycées Professionnels) and collaborations with the private sector to improve job opportunities in the field of renewable energies. The project aims to: • Increase the quality of vocational training in the field of renewable energy (focus on solar energy);	Mitigation	ongoing	

		• Improve access to vocational training and employment opportunities in the field of renewable energy with a focus on girls and disadvantaged groups.			
Promoting innovations for sustainable development in mountain areas (PRIMA)	Developing countries unspecified	PRIMA aims to enhance sustainable mountain development by fostering collaboration among stakeholders and disseminating evidence-based innovative approaches. Through capacity-building initiatives such as the Mountain Innovation Fair and MRD talks, the project will engage over 450 stakeholders, promoting partnerships and the adaptation of successful strategies to address the unique challenges faced by mountain regions.	Cross-cutting	ongoing	
CLIMAPROOF - Enhancing Environmental Performance Through Climate Proofing of Infrastructure Investments in the Western Balkan Region from an EU integration perspective	Six Western Balkan Economies: Albania, BiH, Kosovo, Montenegro, North Macedonia, Serbia	The project aims to enhance the capacities of Western Balkan countries to climate-proof investments in infrastructure, by integrating EU best practices and developing tailored training modules. It will directly train 200 officials from relevant sectors, who will subsequently educate an additional 600 colleagues, ultimately benefiting 1,000 stakeholders. By establishing a regional strategy for climate-resilient infrastructure, the project focuses on improving understanding of climate risks, integrating climate change projections into planning, and fostering regional cooperation to build resilient infrastructure.	Adaptation	closed	

Climate Learning and Advocacy for Resilience (CLAR)	Subsahara Africa	The project aims to enhance the adaptive capacity and resilience of vulnerable communities in targeted African countries by building on existing CARE programs and integrating gender-responsive climate resilience into sector-based initiatives. By improving the capacity of practitioners and civil society organizations to influence climate change adaptation and finance policies, the project will enable at least seven organizations to actively advocate for climate resilience measures, ultimately benefiting an estimated 2 million vulnerable people. Key activities include providing technical assistance, developing advocacy campaigns, and facilitating knowledge sharing to strengthen collaboration and best practices in climate adaptation across multiple stakeholders.	Adaptation	closed	

[a] a/m/cc [b] Planned / Ongoing / Completed [c] Report, to the extent possible, information on the project/programme and implementing agency and provide a link to any relevant documentation and as appropriate, support to activities related to averting, minimizing and addressing loss and damage associated with the adverse effects of climate change.

V Information on financial, technology development and transfer and capacity-building support needed and received under Articles 9–11 of the Paris Agreement

Not applicable.

VI Information to be reported when national communications and biennial transparency reports are submitted jointly every four years

Not applicable.

VII Information on flexibility

Not applicable.

VIII Improvements in reporting over time

7. To facilitate continuous improvement, each Party should, to the extent possible, identify, regularly update and include as part of its biennial transparency report information on areas of improvement in relation to its reporting pursuant to chapters II, III, IV, V and VI of these MPGs, including, as applicable:

(a) Areas of improvement identified by the Party and the technical expert review team in relation to the Party's implementation of Article 13 of the Paris Agreement;

(b) How the Party is addressing or intends to address areas of improvement as referred to in paragraph 7(a) above, as appropriate;

(c) Those developing country Parties that need flexibility in the light of their capacities are encouraged to highlight the areas of improvement that are related to the flexibility provisions used;

(d) Identification of reporting-related capacity-building support needs, including those referred to in paragraph 6 above, and any progress made, including those previously identified as part of the technical expert review referred to in chapter VII below.

Not applicable for the first BTR.

IX Any other information the Party considers relevant to the achievement of the objective of the Paris Agreement, and suitable for inclusion in its biennial transparency report

Not available.

Annex

CTF tables for information necessary to track progress and for information on support provided and mobilised have been submitted separately and are available on the UNFCCC website.

This BTR contains an annex on the Methodology applied for the identification of GHG emissions from international aviation and navigation in the scope of the EU NDC.

A.1 Methodology applied for the identification of GHG emissions from international aviation and navigation in the scope of the EU NDC

The scope of the EU NDC goes beyond national GHG emissions and removals in the scope of the national GHG inventory; it also includes specific emissions from international aviation and navigation. This annex describes the methodology for identifying these emissions.

International aviation and maritime emissions are estimated by using the Joint Research Centre's Integrated Database of the European Energy System (JRC-IDEES).[41] It allows to split the international transport CO2 emissions into intraEU/extraEU and intraEEA/extraEEA and the departing flights from the EU to the UK and Switzerland, categories backwards in time (i.e. 1990) (i.e. for the time period back to 1990).[42]

For international transport, JRC-IDEES applies a decomposition methodology that reconciles the scopes of available primary statistics and harmonises historical data on international aviation and maritime emissions, energy use, and transport activity. The

[41] European Commission, Joint Research Centre, Rózsai, M., Jaxa-Rozen, M., Salvucci, R., Sikora, P., Tattini, J. and Neuwahl, F., JRC-IDEES-2021: the Integrated Database of the European Energy System – Data update and technical documentation, Publications Office of the European Union, Luxembourg, 2024, doi:10.2760/614599.

[42] The JRC-IDEES analytical database is designed to support energy modelling and policy analysis, by combining primary statistics with technical assumptions to compile detailed energy-economy-emissions historical data for each key energy sector. For aviation, EEA emissions includes emissions related to the UK but not to Switzerland, where total CO_2 emissions for the scope are additionally estimated from EUROCONTROL data.

resulting annual dataset covers 1990-2021 and distinguishes domestic, intra-EU/intra-EEA, and extra-EU/extra-EEA activity for each EU Member State, Norway and Iceland.

In aviation, JRC-IDEES distinguishes passenger and freight modes, with three geographical categories of flight origin/destinations for each mode: domestic, intra-EEA + UK, and extra-EEA + UK. Intra-EU, the UK, and EEA[43] categories are also used internally during calibration but aggregated for reporting. For each mode/category combination, JRC-IDEES estimates activity (as passenger-km or tonnes-km), energy use and CO_2 emissions, aircraft stock (expressed as representative aircraft), load factors, and aircraft efficiencies. As country-specific activity statistics are not available, the decomposition first allocates EU-level activity data from the Transport Pocketbook[44] of the European Commission's Directorate-General for Mobility and Transport to each country and flight category.

For passenger modes, this allocation calculates average load factors using Eurostat data on total passengers and flights. These load factors and total flight numbers are combined with average flight distances from EUROCONTROL, the pan-European organisation dedicated to air traffic management, to yield an initial estimate for passenger transport activity. For intra-EU activity, a uniform scaling factor is then applied across Member States to match total EU-level Transport Pocketbook data. Freight activity follows a similar process, using a 'representative flight' concept with a common load factor across all Member States to account for mixed passenger-freight flights.

Next, the decomposition estimates fuel use from EUROCONTROL data, by deriving a distance-dependent average aircraft efficiency, then applying it to the country-specific ensemble of flights and routes. The final step scales the estimates to meet Eurostat energy balances for total domestic and international consumption back to 1990 values, maintaining intra-EEA/extra-EEA fuel use ratios derived from EUROCONTROL. JRC-IDEES additionally reports resulting differences with submissions by Parties to the UNFCCC. The above process is followed throughout the entire decomposition period (1990-2021). Data gaps are estimated from the existing indicators as follows:

- The process iterates backwards towards 1990, starting from the oldest years in which data is available in each Member State.
- Average flight distance is kept constant for early years without EUROCONTROL data (generally before 2004).
- If the load factor (passengers per flight) cannot be calculated due to a lack of passenger and/or flight data, it is estimated from the trend of the existing time series.

[43] In this annex, EEA stands for European Economic Area, which comprises the 27 EU Member States, Iceland, Liechtenstein and Norway.

[44] Statistical pocketbook 2023, https://transport.ec.europa.eu/facts-funding/studies-data/eu-transport-figures-statistical-pocketbook/statistical-pocketbook-2023_en.

- Missing numbers of flights are calculated from the load factor and the passengers carried.
- If no passenger data is available, the total mileage is estimated from the energy consumption, and combined with average flight distance to estimate the number of flights. The number of flights is then combined with the load factor to estimate the total passengers carried.
- For early years without data, constant values are assumed for the factors used to *i)* scale intra-EU activity to the Transport Pocketbook, *ii)* adjust the estimated fuel use to EUROCONTROL data for specific routes, and *iii)* scale this adjusted fuel use to Eurostat energy balances (e.g. before 1995 for Transport Pocketbook data; before 2004 for EUROCONTROL data).

For international maritime transport, JRC-IDEES estimates data both for intra-EU/extra-EU and intra-EEA/extra-EEA geographical categories. The emission estimates in the GHG inventory already include CO_2, CH_4, and N_2O gases. Transport activity (tonnes-km) is estimated from Eurostat data on gross weight of transported goods, using port-level and country-level data for intra-EU and extra-EU categories, respectively. Intra-EU activities are then scaled to match the Transport Pocketbook totals, accounting for domestic coastal shipping (calibrated separately in JRC-IDEES). Next, transport activity is combined with data reported under the monitoring, reporting and verification system for maritime transport under the EU ETS ('THETIS MRV'[45]), namely EU-level mileage data and country-specific vessel sizes to estimate load factors (tonnes per movement). The load factors and resulting annual mileage (km) are calibrated to meet EU-level THETIS MRV mileage. The annual mileage is in turn combined with THETIS MRV average efficiency to yield a total technical energy consumption, with corresponding emissions derived from default emissions factors. This energy consumption is scaled to Eurostat energy balances so as to minimise discrepancy to total intra-EU THETIS MRV emissions. As with aviation, JRC-IDEES reports corresponding differences to submissions under the UNFCCC. Early years with data gaps are estimated from existing indicators as follows:

- The process iterates backwards towards 1990, starting from the oldest years in which data is available in each Member State.
- Average distance of voyages is kept constant for early years without Eurostat activity data (generally before 1997-2000).
- If the load factor (tonnes per movement) cannot be estimated due a lack of activity data, it is kept constant.
- If activity data is not available, it is estimated from Eurostat energy consumption.
- Missing mileage data is derived from the activity and load factor estimates.
- For early years without data, constant values are assumed for the factors used to i) scale intra-EU activity to the Transport Pocketbook, ii) scale estimated mileage to meet

[45] THETIS MRV, https://mrv.emsa.europa.eu/#public/eumrv.

EU-level THETIS MRV mileage, and iii) scale domestic and intra-EU CO_2 emissions estimated from energy consumption so as to match total THETIS MRV CO_2 emissions.

- Finally, the ratios between the estimated MRV emissions and the CO_2 emissions for the reported transport activity (for intra-EU/EEA and extra-EU/EEA categories) between 2018 and 2021 are used to calculate the MRV compliant estimates back to 1990 levels.

For the year 2022, the international navigation and aviation emissions under the EU NDC scope have been estimated by applying the same share of those emissions on the total international navigation and aviation emissions (as reported in the GHG inventory) as in 2021.

Aviation emissions covered by the EU NDC scope:

Emissions	Domestic aviation		Intra-EEA aviation			Extra-EEA aviation
	Domestic EU flights (e.g. Palermo Milan	Domestic "non-EU EEA" flights (e.g. Oslo to Bergen)	Flights between "non-EU EEA" countries (from Oslo to Reykjavik)	Flights within the EEA, departing from EU airports	Flights to/from EU airports to OMRs	Departing flights from EU airports to UK and Switzerland
Current NDC commitment	Yes	No	No	Yes	Yes From Jan 2024	Yes

Maritime navigation emissions covered by the EU NDC:

Emissions	Domestic maritime navigation		International maritime navigation				International maritime navigation	
	Domestic EU flights (e.g. Palermo Milan	Voyages within NO/IS (e.g. Oslo – Bergen	Voyages between two EU MS (e.g. Valencia - Rotterdam)	Voyages between a MS and NO/IS (e.g. Rotterdam - Oslo)	Voyages between an EU MS and a third country	Voyages between NO/IS and a third country (or IS/NO)	Emissions within a port of an EU MS (reported under domestic emissions)	Emissions within a port of NO or IS (or another third country)
Current NDC commitment (CO_2; CH_4; N_2O)	Yes	No	Yes	No	No	No	Yes	No

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