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Report on the technical review of the fourth biennial report of Austria

Developed country Parties were requested by decision 2/CP.17 to submit their fourth biennial report to the secretariat by 1 January 2020. This report presents the results of the technical review of the fourth biennial report of Austria, conducted by an expert review team in accordance with the "Guidelines for the technical review of information reported under the Convention related to greenhouse gas inventories, biennial reports and national communications by Parties included in Annex I to the Convention". The review took place from 27 April to 1 May 2020 in Bonn remotely.

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Contents

Abbreviations and acronyms

ADC	Austrian Development Cooperation
AEA	annual emission allocation
Annex I Party	Party included in Annex I to the Convention
AR	Assessment Report of the Intergovernmental Panel on Climate Change
BR	biennial report
CH_4	methane
CO_2	carbon dioxide
CO_2 eq	carbon dioxide equivalent
CTF	common tabular format
DAC	Development Assistance Committee
ERT	expert review team
ESD	European Union effort-sharing decision
EU	European Union
EU ETS	European Union Emissions Trading System
F-gas	fluorinated gas
GDP	gross domestic product
GHG	greenhouse gas
HFC	hydrofluorocarbon
IPCC	Intergovernmental Panel on Climate Change
IPPU	industrial processes and product use
LULUCF	land use, land-use change and forestry
NA	not applicable
NC	national communication
NE	not estimated
NECP	National Energy and Climate Plan
NF_3	nitrogen trifluoride
NO	not occurring
non-Annex I Party	Party not included in Annex I to the Convention
N_2O	nitrous oxide
ODA	official development assistance
OECD	Organisation for Economic Co-operation and Development
PaMs	policies and measures
PFC	perfluorocarbon
SF_6	sulfur hexafluoride
UNFCCC reporting guidelines on BRs	“UNFCCC biennial reporting guidelines for developed country Parties”
UNFCCC reporting guidelines on CTF tables	common tabular format for the “UNFCCC biennial reporting guidelines for developed country Parties”
UNFCCC reporting guidelines on NCs	“Guidelines for the preparation of national communications by Parties included in Annex I to the Convention, Part II: UNFCCC reporting guidelines on national communications”
WAM	‘with additional measures’
WEM	‘with measures’
WOM	‘without measures’

I. Introduction and summary

A. Introduction

1. This is a report on the centralized technical review of the BR4[1] of Austria. The review was organized by the secretariat in accordance with the "Guidelines for the technical review of information reported under the Convention related to greenhouse gas inventories, biennial reports and national communications by Parties included in Annex I to the Convention", particularly "Part IV: UNFCCC guidelines for the technical review of biennial reports from Parties included in Annex I to the Convention" (annex to decision 13/CP.20).

2. In accordance with the same decision, a draft version of this report was transmitted to the Government of Austria, which did not provide any comments.

3. The review was conducted together with the review of five other Annex I Parties from 27 April to 1 May 2020 in Bonn remotely[2] by the following team of nominated experts from the UNFCCC roster of experts: Niculina Mihaela Balanescu (Romania), Federico Brocchieri (Italy), Ngozi Eze (Nigeria), Elizabeth Adobi Okwuosa (Kenya), Robert Pismo (Cameroon), Sukhjit Singh (Trinidad and Tobago), Vicente Paolo Yu (Philippines) and Sumaya Ahmed Zakieldeen (Sudan). Mr. Brocchieri and Ms. Eze were the lead reviewers. The review was coordinated by Karin Simonson and Davor Vesligaj (secretariat).

B. Summary

4. The ERT conducted a technical review of the information reported in the BR4 of Austria in accordance with the UNFCCC reporting guidelines on BRs (annex I to decision 2/CP.17).

1. Timeliness

5. The BR4 was submitted on 30 December 2019, before the deadline of 1 January 2020 mandated by decision 2/CP.17. The CTF tables were also submitted on 30 December 2019. The CTF tables were resubmitted on 7 May 2020 to address issues raised during the review. The resubmission included changes to CTF table 7(b). Unless otherwise specified, the information and values from the latest submission are used in this report.

2. Completeness, transparency of reporting and adherence to the reporting guidelines

6. Issues and gaps identified by the ERT related to the reported information are presented in table 1. The information reported by Austria in its BR4 mostly adheres to the UNFCCC reporting guidelines on BRs.

Table 1
Summary of completeness and transparency of mandatory information reported by Austria in its fourth biennial report

Section of BR	*Completeness*	*Transparency*	*Reference to description of recommendation(s)*
GHG emissions and removals	Complete	Transparent	
Quantified economy-wide emission reduction target and related assumptions, conditions and methodologies	Complete	Transparent	
Progress in achievement of targets	Complete	Mostly transparent	Issues 1 and 3 in table 4

[1] The BR submission comprises the text of the report and the CTF tables, which are both subject to the technical review.

[2] Owing to the circumstances related to the coronavirus disease 2019, the technical review of the BR submitted by Austria had to be conducted remotely.

Section of BR	*Completeness*	*Transparency*	*Reference to description of recommendation(s)*
Provision of support to developing country Parties	Mostly complete	Partially transparent	Issues 1–5 in table 12

Note: A list of recommendations pertaining to the completeness and transparency issues identified in this table is included in chap. III below. The assessment of completeness and transparency by the ERT in this table is based only on the "shall" reporting requirements.

II. Technical review of the information reported in the fourth biennial report

A. Information on greenhouse gas emissions and removals related to the quantified economy-wide emission reduction target

1. Technical assessment of the reported information

7. Total GHG emissions[3] excluding emissions and removals from LULUCF increased by 0.6 per cent between 1990 and 2018, whereas total GHG emissions including net emissions or removals from LULUCF increased by 11.0 per cent over the same period. The changes in total emissions were driven mainly by factors such as an increased volume in both freight and passenger road transport, coupled with the rising trend of transport fuels being sold in Austria but consumed in neighbouring countries; the growth of activities related to the manufacturing and construction industries; and increased iron and steel production. However, considering the substantial growth in population, GDP and energy demand, a much higher increase in emissions was avoided through measures such as shifting fuel consumption from solid and liquid fuels to gas and biomass sources, increasing production of renewable energy sources, improving energy efficiency, particularly in the residential sector, and improving agricultural and waste management practices.

8. Table 2 illustrates the emission trends by sector and by gas for Austria. Note that information in this paragraph and table 2 is based on Austria's 2020 annual submission, version 2, which has not yet been subject to review. All emission data in subsequent chapters are based on Austria's BR4 CTF tables unless otherwise noted. The total GHG emissions excluding emissions and removals from LULUCF reported in the 2020 annual submission differ from the data reported in CTF table 1, but this difference is not significant; for the years included in table 2, the data vary by 0.22 per cent on average.

Table 2
Greenhouse gas emissions by sector and by gas for Austria for 1990–2018

	GHG emissions (kt CO_2 eq)					*Change (%)*		*Share (%)*	
	1990	*2000*	*2010*	*2017*	*2018*	*1990–2018*	*2017–2018*	*1990*	*2018*
Sector									
1. Energy	52 815.50	55 299.82	59 448.34	56 013.09	54 693.38	3.6	–2.4	67.3	69.3
A1. Energy industries	14 034.43	12 369.85	13 844.48	10 967.87	10 097.52	–28.1	–7.9	17.9	12.8
A2. Manufacturing industries and construction	9 844.11	10 025.71	11 336.51	10 713.54	10 933.26	11.1	2.1	12.5	13.8
A3. Transport	13 976.50	18 822.45	22 577.14	24 312.05	24 425.87	74.8	0.5	17.8	30.9
A4. and A5. Other	14 258.65	13 585.34	11 222.38	9 592.56	8 866.38	–37.8	–7.6	18.2	11.2
B. Fugitive emissions from fuels	701.81	496.47	467.83	427.08	370.34	–47.2	–13.3	0.9	0.5
C. CO_2 transport and storage	NO	NO	NO	NO	NO	NA	NA	NA	NA
2. IPPU	13 662.34	14 610.27	15 923.56	17 209.27	15 613.09	14.3	–9.3	17.4	19.8
3. Agriculture	8 088.51	7 386.87	7 079.65	7 313.78	7 224.35	–10.7	–1.2	10.3	9.2

[3] In this report, the term "total GHG emissions" refers to the aggregated national GHG emissions expressed in terms of CO_2 eq excluding LULUCF, unless otherwise specified.

	GHG emissions (kt CO_2 eq)					*Change (%)*		*Share (%)*	
	1990	*2000*	*2010*	*2017*	*2018*	*1990–2018*	*2017–2018*	*1990*	*2018*
4. LULUCF	–11 988.44	–16 391.44	–5 777.06	–4 851.86	–5 152.67	–57.0	6.2	NA	NA
5. Waste	3 926.27	2 965.02	2 161.30	1 487.22	1 419.52	–63.8	–4.6	5.0	1.8
6. Other[a]	NO	NO	NO	NO	NO	NA	NA	NA	NA
Gas[b]									
CO_2	62 124.70	66 162.89	72 011.84	69 628.86	66 719.68	7.4	–4.2	79.1	84.5
CH_4	10 391.46	8 393.11	7 308.66	6 626.11	6 438.63	–38.0	–2.8	13.2	8.2
N_2O	4 320.62	4 319.46	3 388.64	3 561.80	3 526.08	–18.4	–1.0	5.5	4.5
HFCs	2.44	713.63	1 485.66	1 750.56	1 834.76	75 170.3	4.8	0.0	2.3
PFCs	1 182.79	87.87	78.05	44.09	32.52	–97.3	–26.2	1.5	0.0
SF_6	470.61	574.53	335.87	399.93	382.15	–18.8	–4.4	0.6	0.5
NF_3	NO, NA	10.51	4.12	12.01	16.51	NA	37.5	NA	0.0
Total GHG emissions excluding LULUCF	**78 492.61**	**80 261.99**	**84 612.84**	**82 023.36**	**78 950.34**	**0.6**	**–3.7**	**100.0**	**100.0**
Total GHG emissions including LULUCF	**66 504.17**	**63 870.54**	**78 835.78**	**77 171.50**	**73 797.67**	**11.0**	**–4.4**	**NA**	**NA**

Source: GHG emission data: Austria's 2020 annual submission, version 2.
[a] Emissions and removals reported under the sector other (sector 6) are not included in the total GHG emissions.
[b] Emissions by gas without LULUCF. The Party did not report indirect CO_2 emissions.

9. In brief, Austria's national inventory arrangements were established in accordance with the Environmental Control Act. According to this law, the Environment Agency Austria is solely responsible for all activities relating to Austria's inventory planning, preparation and management. The Environment Agency Austria strongly prioritizes the production of transparent, accurate and consistent inventories and therefore established the Inspection Body for Emission Inventories, which is autonomous and free from external financial and commercial influences. The Inspection Body for Emission Inventories plans and operates a quality management system in accordance with International Organization for Standardization/International Electrotechnical Commission standard 17020 and the *2006 IPCC Guidelines for National Greenhouse Gas Inventories*. There have been no changes in these arrangements since the BR3.

2. Assessment of adherence to the reporting guidelines

10. The ERT assessed the information reported in the BR4 of Austria and recognized that the reporting is complete, transparent and thus adhering to the UNFCCC reporting guidelines on BRs. No issues relating to the topics discussed in this chapter of the review report were raised during the review.

B. Quantified economy-wide emission reduction target and related assumptions, conditions and methodologies

1. Technical assessment of the reported information

11. For Austria the Convention entered into force on 29 May 1994. Under the Convention Austria committed to contributing to the achievement of the joint EU economy-wide emission reduction target of 20 per cent below the 1990 level by 2020.

12. The target for the EU and its member States is formalized in the EU 2020 climate and energy package. The legislative package regulates emissions of CO_2, CH_4, N_2O, HFCs, PFCs and SF_6 using global warming potential values from the AR4 to aggregate the GHG emissions of the EU until 2020. Emissions and removals from the LULUCF sector are not included in the quantified economy-wide emission reduction target under the Convention. The EU generally allows its member States to use units from the Kyoto Protocol mechanisms for compliance purposes, subject to a number of restrictions in terms of origin and type of project and up to an established limit. Operators and airline operators can use such units to fulfil their

requirements under the EU ETS, and member States can use such units for their national ESD targets, within specific limitations.

13. The EU 2020 climate and energy package includes the EU ETS and the ESD (see paras. 23–25 below). The EU ETS covers mainly point emissions sources in the energy, industry and aviation sectors. An EU-wide emission cap has been put in place for 2013–2020 with the goal of reducing emissions by 21 per cent below the 2005 level by 2020. Emissions from ESD sectors are regulated through member State specific targets that add up to a reduction at the EU level of 10 per cent below the 2005 level by 2020.

14. The European Commission set out its vision for a climate-neutral EU in November 2018, and in December 2019 presented the European Green Deal as a road map with actions for making the EU economy sustainable. The European Council endorsed in December 2019 the objective of making the EU climate-neutral by 2050. As part of the European Green Deal, the Commission proposed in March 2020 to enshrine the 2050 climate-neutrality target into the first European Climate Law. The European Green Deal calls for increased ambition in the 2030 emission reduction target to at least 50 per cent below the 1990 level. Member States will set out any increased ambition in the update of their NECPs.

15. Austria has a national target of reducing its emissions to 16 per cent below the 2005 level by 2020 for sectors under the ESD. This target has been translated into binding quantified AEAs for 2013–2020. Austria's AEAs change following a path from 52,625.04 kt CO_2 eq in 2013 to 47,750.11 kt CO_2 eq in 2020.[4]

2. Assessment of adherence to the reporting guidelines

16. The ERT assessed the information reported in the BR4 of Austria and recognized that the reporting is complete, transparent and thus adhering to the UNFCCC reporting guidelines on BRs. No issues relating to the topics discussed in this chapter of the review report were raised during the review.

C. Progress made towards achievement of the quantified economy-wide emission reduction target

1. Mitigation actions and their effects

(a) Technical assessment of the reported information

17. Austria provided information on its package of PaMs implemented and adopted, by sector and by gas, in order to fulfil its commitments under the Convention. Austria reported on its policy context and legal and institutional arrangements in place for implementing its commitments and monitoring and evaluating the effectiveness of its PaMs.

18. Austria provided information on a set of PaMs identical to those previously reported. Austria also indicated that there have been no changes since its previous submission to its institutional, legal, administrative and procedural arrangements used for domestic compliance, monitoring, reporting, archiving of information and evaluation of progress towards its target. The Climate Change Act forms the legal basis for these arrangements, with the National Climate Change Committee as a key coordinating body for climate change mitigation actions.

19. In its reporting on its PaMs, Austria provided the estimated emission reduction impacts for many of its PaMs in the energy sector, but did not do so for any other sectors. The Party explained that it had not yet been possible to establish uniform regulations for monitoring and reporting the effect of PaMs and individual instruments. This is mainly because the responsibility for implementation and monitoring of mitigation actions is distributed among relevant authorities at the State, provincial and municipal level. Many PaMs have multiple targets in addition to GHG mitigation (e.g. air pollution mitigation, road safety, noise prevention, improved health, liveable cities, tax yield, affordable housing,

[4] European Commission decision 2017/1471 amended decision 2013/162/EU to revise member States' AEAs for 2017–2020.

sustainable buildings), and given the different areas of expertise of the relevant authorities, establishing common reporting rules would require considerable additional resources at all levels of administration.

20. Austria reported on its self-assessment of compliance with its emission reduction targets and national rules for taking action against non-compliance. The Federal Minister of Sustainability and Tourism reports annually to the National Climate Change Committee and to the Austrian Parliament on progress made against the targets contained within the Climate Change Act. If the targets have not been met, the Climate Change Act triggers negotiations for additional measures to meet the targets.

21. The key overarching related cross-sectoral policy in the EU is the 2020 climate and energy package, adopted in 2009, which includes the revised EU ETS and the ESD. The package is supplemented by renewable energy and energy efficiency legislation and legislative proposals on the 2020 targets for CO_2 emissions from cars and vans, the carbon capture and storage directive, and the general programmes for environmental conservation, namely the 7th Environment Action Programme and the clean air policy package. The 2030 climate and energy framework, adopted in 2014, includes more ambitious targets that will be updated as part of the European Green Deal.

22. The achievement of the Energy Union objectives and targets is ensured through a combination of Energy Union initiatives and national policies set out in integrated NECPs. The NECPs are periodically updated to reflect changes to EU policy, such as the implementation of the European Green Deal. Under the Federal Ministry of Sustainability and Tourism of Austria, a steering committee was established with representatives of the Federal Government and the provinces. In addition, sectoral working groups for the NECP discussions have been set up, featuring representatives of the federal provinces. The steering committee also advises the National Climate Change Committee.

23. In operation since 2005, the EU ETS is a cap-and-trade system that covers all significant energy-intensive installations (mainly large point emissions sources such as power plants and industrial facilities), which produce 40–45 per cent of the GHG emissions of the EU. It is expected that the EU ETS will guarantee that the 2020 target (a 21 per cent emission reduction below the 2005 level) will be achieved for sectors under the scheme. The third phase of the EU ETS started in 2013 and the system now includes aircraft operations (since 2012) as well as N_2O emissions from chemical industry, PFC emissions from aluminium production and CO_2 emissions from some industrial processes that were not covered in the previous phases of the EU ETS (since 2013). Auctioning is the default method for allocating allowances; however, harmonized rules for free allocations, based on benchmark values achieved by the most efficient 10 per cent of installations, are still in place as a safeguard for the international competitiveness of industrial sectors at risk of carbon leakage. For 2030, an emission reduction target of 43 per cent below the 2005 level has been set for the EU ETS.

24. The ESD became operational in 2013 and covers transport (excluding domestic and international aviation, and international maritime transport), residential and commercial buildings, agriculture and waste, together accounting for 55–60 per cent of the GHG emissions of the EU. The aim of the ESD is to decrease GHG emissions in the EU by 10 per cent below the 2005 level by 2020, and it includes binding annual targets for each member State for 2013–2020. The EU effort-sharing regulation, successor to the ESD, was adopted in 2018. It sets national emission reduction targets for 2030 ranging from 0 to 40 per cent below the 2005 level, and trajectories with annual limits for 2021–2030, for all member States, and keeps many of the flexibilities of the ESD.

25. Austria introduced national-level policies to achieve its target under the ESD. The key cross-sectoral domestic policies reported are the Domestic Environmental Support Scheme and the Austrian Climate and Energy Fund. The former provides financial support for projects which improve environmental performance beyond mandatory standards in energy, manufacturing and the service industry. Projects may be related to all GHGs. The main areas of focus in the context of climate change are projects aiming to improve energy efficiency, support the use of renewable energy sources and promote sustainable transport.

26. The Austrian Climate and Energy Fund focuses on research into and development of renewable energy systems, the development and testing of new transport and mobility systems and market penetration of GHG mitigation measures. Two examples of funding concepts from recent years are Model Regions, which helps climate-friendly energy and mobility systems to succeed at the regional level, and Flagship Projects, which helps to ensure that new technical developments are actually tested and implemented. A total of EUR 87 million of support was awarded in 2017 and again in 2018. A number of sectoral mitigation actions are also under implementation and are described below. The mitigation effect of PaMs related to the promotion of renewable energy is the most significant, followed by that of PaMs related to energy efficiency. PaMs in the transport sector are expected to have significant mitigation impacts in 2030.

27. Austria highlighted that planned mitigation actions had not been included in the BR4 because a WAM scenario that incorporates planned PaMs is being developed in parallel to the NECP, which was still being prepared during the preparation of the BR4. Table 3 provides a summary of the reported information on the implemented PaMs of Austria.

Table 3
Summary of information on policies and measures reported by Austria

Sector	*Key PaMs*	*Estimate of mitigation impact in 2020 (kt CO_2 eq)*	*Estimate of mitigation impact in 2030 (kt CO_2 eq)*
Policy framework and cross-sectoral measures	EU ETS	NE	NE
	Domestic Environmental Support Scheme	NE	NE
	Austrian Climate and Energy Fund	NE	NE
Energy		NE	NE
Transport	Fuel Ordinance	NE	4 490
	Mineral Oil Tax Act	NE	2 020
	Federal and regional programmes to encourage environmentally friendly transport modes (Klimaaktiv Mobil Programme)	NE	480
Renewable energy	Green Electricity Act	NE	NE
	Climate and Energy Fund and Domestic Environmental Support Scheme to increase the share of renewable energy for heating	3 500	4 900
	District Heating and Cooling Act	655	1 437
Energy efficiency	Energy Efficiency Act, Combined Heat and Power Act	476	698
	Construction standards for energy efficiency and heat demand	NE	NE
IPPU	F-gas regulations	NE	NE
Agriculture	Agri-environmental Programme	NE	NE
LULUCF	Forest Act	NE	NE
	Austrian LULUCF Action Plan	NE	NE
Waste	Waste Management Act	NE	NE
	Landfill Ordinance	NE	NE

Note: The estimates of mitigation impact are estimates of emissions of CO_2 eq avoided in a given year as a result of the implementation of mitigation actions.

(b) Policies and measures in the energy sector

28. **Energy efficiency.** Austria has implemented effective PaMs for promoting energy efficiency, most notably the Energy Efficiency Act and national energy efficiency action plans, leading to significant improvements in this area in recent years. From a long-term perspective, it is notable that while Austria's GDP grew by 140.9 per cent between 1973 and 2015, the country's energy intensity or relative energy consumption decreased by 36.3 per cent. The Second National Energy Efficiency Action Plan of the Republic of Austria was

prepared in 2017 in accordance with the EU directive on energy efficiency (directive 2012/27/EU). This directive was implemented through the adoption of the Energy Efficiency Act, which aims to increase cost-effective energy efficiency in businesses and households by 2020. The Energy Efficiency Act is expected to save a combined total of approximately 60 PJ for all sectors in 2020 through an energy efficiency obligation scheme and strategic measures. Large businesses are required to conduct mandatory external energy audits every four years or introduce mandatory energy or environmental management systems, including regular energy audits. Energy suppliers are expected to deliver annual energy savings (either themselves or through measures taken by their end users) totalling 0.6 per cent of their annual energy supply. Financial support is granted for heat and power cogeneration with a view to supporting the efficient use of primary energy for electricity production. Energy efficiency PaMs targeting individual sectors are discussed below.

29. **Energy supply and renewables.** The Green Electricity Act has set quantitative targets for increasing the share of electricity generated by wind power, photovoltaics, small hydropower plants and biomass/biogas, which are to be achieved through fixed feed-in tariffs. In 2017, the Green Electricity Act was amended to provide support to wind and small hydropower projects and reduce waiting lists. It is reported that by 2018 an additional capacity of 3,000 MW had been reached compared with 2010 figures, and this is expected to reach 3,900 MW by the end of 2020. The estimated mitigation impact of these measures amounts to 3,500 kt CO_2 eq in 2020 and 4,900 kt CO_2 eq in 2030.

30. The Domestic Environmental Support Scheme provides investment support for biomass-based district heating systems. In 2017 and 2018, EUR 20 million was distributed among some 200 projects covering district heating systems, the extension of heat distribution networks, microgrids and the optimization of systems. An additional sum of EUR 7 million was provided in the budget for 580 individual plants during the same period.

31. **Residential and commercial sectors.** PaMs relevant to the buildings sector focus on the reduction of CO_2 emissions from fossil fuels and increasing the share of renewable energy for space heating. Compliance with the EU directive on the energy performance of buildings is achieved through regional building law, and housing support is only granted for the construction of buildings with improved energy efficiency. Support for the thermal renovation of buildings is provided under several programmes, including the federal 'renovation cheque' initiative for residential buildings. Particular emphasis is placed on the replacement of fossil fuel oil-fired heating systems. In 2018, EUR 36 million in federal support was granted for about 6,000 renovation projects. The 2012 Energy Performance Certificate Act requires sellers and landlords to provide energy performance certificates in the course of real estate transactions or when renting property. Commercial and industrial buildings are supported under the Domestic Environmental Support Scheme fund, which provides approximately EUR 9 million per year for renovation purposes. The mitigation impact of increased energy efficiency in buildings is estimated to amount to 476 kt CO_2 eq in 2020 and 698 kt CO_2 eq in 2030.

32. The use of renewable energy for space heating is promoted through the provision of financial support for biomass and solar heating systems for households using funding from the federal provinces and the Austrian Climate and Energy Fund. Support for commercial and industrial applications is provided under the Domestic Environmental Support Scheme. The District Heating and Cooling Act promotes the construction of district cooling systems and the expansion of district heating networks with a view to reducing electricity demand. The estimated mitigation impact of an increased share of renewable energy for space heating amounts to 655 kt CO_2 eq in 2020 and 1,437 kt CO_2 eq in 2030.

33. **Transport sector.** The growth in transport emissions (74 per cent) is caused by increasing demand for inland road transport, for passenger transport and for freight transport in particular. The introduction of biofuels in 2005 and the use of more efficient vehicles in freight transport have attenuated emission growth. The electric mobility initiative envisaged under the national Climate and Energy Strategy (#mission2030, E-mobility Offensive) stipulates different ways of promoting electric mobility with a view to increasing the share of electric vehicles in the Austrian passenger car and truck fleet. An action plan is in place to promote electric mobility and renewable energy in Austria (including a package for 2017 and 2018) and to provide financial incentives for purchasing electric vehicles. The plan has been

extended to 2019 and 2020. The share of electric vehicles among registered new cars exceeded 2.5 per cent in 2018. The funding programme has been renewed for 2019 and 2020, providing EUR 93 million.

34. The EU directives on the promotion of the use of energy from renewable sources require member States to replace at least 10 per cent of the fuels used in transport with renewables (biofuels and electricity from renewable energy sources) by 2020, rising to 14 per cent by 2030. The minimum share target for biofuel in diesel and gasoline sold in Austria reached 6.3 per cent in 2018 and is set at 8.5 per cent from 2020 onward. The transport fleets of municipalities and companies have been converted to run on pure biofuels or on fuel with a share of biofuels of more than 40 per cent. This has been promoted especially by the Klimaaktiv Mobil Programme, an initiative of the Federal Ministry of Sustainability and Tourism. Austria plans to use its high share of renewable electricity in the electric mobility sector as a powerful lever in achieving the mandatory target of a 10 per cent share of renewable energy in transport by 2020. The estimated mitigation impact of the increased share of clean energy sources in transport is 4,490 kt CO_2 eq in 2030.

35. A fuel tax mandated by the Mineral Oil Tax has had a significant impact on increased fuel efficiency in vehicles. The Standard Consumption Levy Act promotes the sale of fuel-efficient cars as the tax rate increases with the vehicle's fuel consumption. The estimated mitigation impact of increased fuel efficiency in road transport is 2,020 kt CO_2 eq by 2030. Under the Klimaaktiv Mobil Programme, every year more than 80,000 learner drivers take part in a fuel-efficiency training session held at various driving schools.

36. Austria's modal split has one the highest shares of rail transport (passenger and freight) among EU member States. Funded by the Federal Ministry of Sustainability and Tourism, the Klimaaktiv Mobil Programme promotes environmentally friendly means of travel such as public transport, cycling and walking. Support for corporate feeder lines aims to shift transport activities from road to rail. The estimated mitigation impact of supporting a modal shift to environmentally friendly transport is 480 kt CO_2 eq by 2030.

37. **Industrial sector.** The majority of Austria's industrial sector is covered by the EU ETS. The Domestic Environmental Support Scheme provides financial support to projects which improve the environmental performance of the energy, manufacturing and service industries beyond mandatory standards. Based on the sectoral gross value added, energy demand in the industrial sector is expected to steadily increase from 2015 to 2035.

(c) Policies and measures in other sectors

38. **Industrial processes.** Austria's key PaMs in industrial processes are the EU ETS and the Domestic Environmental Support Scheme, which aim to reduce CO_2 and N_2O emissions. PaMs related to the reduction of F-gas emissions have been in place since 2002 and were amended to meet the provisions of EU-wide regulation, for example, regulations on the maintenance of refrigeration and air conditioning systems, a quota system for production and imports and further restrictions on the use of F-gases. The use of SF_6 is not permitted in most equipment.

39. **Agriculture.** The Agri-environmental Programme (2014–2020) is considered to be the key policy instrument with regard to the mitigation of CH_4 and N_2O emissions from the agricultural sector in Austria. This programme provides financial support to promote measures such as reducing the use of mineral fertilizers and organic farming, improving feed for pigs and poultry, covering manure storage, ensuring low-loss application of manure and biogas slurry and the promotion of grazing. The future development of the Agri-environmental Programme will largely depend on the reforms of the EU-wide Common Agricultural Policy that will commence in 2020.

40. **LULUCF.** Austria's key strategy for mitigating GHG emissions in this sector involves sustainable forest management. Austria's Forest Act provides the regulatory basis for the sustainable management of forests to reduce emissions and preserve the forest area for sustained productivity (timber yield), protect drinking water and protect against erosion and natural hazards, and ensure their continued availability for recreational use. This Act stipulates and regulates the implementation of principles and measures for protecting Austria's forests from destructive practices such as clearing and deforestation and

disturbances from fires and pests, in addition to ensuring sustainable use of the forest and harvesting of timber. Other PaMs that overlap with the LULUCF sector by promoting the increase of net ecosystem carbon stock include implementing sustainable management of agricultural lands through the Common Agricultural Policy reform 2013 and providing funding for the installation of efficient biomass heating systems in households (2012–2019). The newly revised LULUCF Action Plan provides detailed information on PaMs and underlying assumptions for the sector.

41. **Waste management.** The waste sector recorded emission reductions of 63.8 per cent (excluding LULUCF) in 2018 compared with the sector's 1990 levels. These reductions in emissions were achieved by implementing solid waste management measures, such as waste recycling and energy recovery from waste, and through the Austrian Landfill Ordinance, which enables the compulsory collection and use of CH_4 from landfills and the treatment of all biodegradable waste before deposition. In the coming years, the focus will be on managing the water balance and the aerobic in situ stabilization of closed landfills and increasing efforts to collect landfill gas.

(d) Response measures

42. Austria did not report on its assessment of the economic and social consequences of its response measures. During the review, Austria explained that a lack of resources meant that its efforts were limited to improving the reporting of mandatory requirements, and as a result, it has neither assessed nor reported on this requirement.

(e) Assessment of adherence to the reporting guidelines

43. The ERT assessed the information reported in the BR4 of Austria and identified issues relating to completeness and transparency and thus adherence to the UNFCCC reporting guidelines on BRs. The findings are described in table 4.

Table 4
Findings on mitigation actions and their effects from the review of the fourth biennial report of Austria

No.	*Reporting requirement, issue type and assessment*	*Description of the finding with recommendation or encouragement*
1	Reporting requirement specified in paragraph 7 Issue type: transparency Assessment: recommendation	Austria reported that there had been no changes in its domestic institutional arrangements since its previous BR. However, compared with the BR3, the BR4 reports a different ministry responsible for annual reporting to the National Climate Change Committee and to the Austrian Parliament on progress made against the targets of the Climate Change Act. In addition, the NC7 of Austria under the Convention was prepared by the Federal Ministry of Sustainability and Tourism, which was known as the Federal Ministry of Agriculture, Forestry, Environment and Water Management until 8 January 2018. During the review Austria explained that when a new Government was formed on 18 December 2017, some responsibilities were transferred from the former Ministry of Economy, Science and Research to the former Federal Ministry of Agriculture, Forestry, Environment and Water Management. The latter was renamed the Federal Ministry of Sustainability and Tourism, but its responsibilities with regard to climate change remained unchanged. Procedures and the role of the Ministry have not changed compared with the description in the NC7 of Austria. The ERT recommends that Austria include in its next BR information on any such changes to its domestic institutional arrangements, including to institutional, legal, administrative and procedural arrangements used for domestic compliance, monitoring, reporting, archiving of information and evaluation of the progress towards its economy-wide emission reduction target.
2	Reporting requirement specified in paragraph 8 Issue type: completeness	Austria did not report information on its assessment of the economic and social consequences of response measures. During the review Austria explained that it has neither assessed nor reported information on the economic and social consequences of response measures in its

No.	Reporting requirement, issue type and assessment	Description of the finding with recommendation or encouragement
	Assessment: encouragement	BR4 as this was not a mandatory requirement and a lack of resources had obliged Austria to focus on meeting the mandatory requirements. The ERT reiterates the encouragement from the previous review report for the Party to include, to the extent possible, in its next BR information on its assessment of the economic and social consequences of response measures.
3	Reporting requirement specified in CTF table 3 Issue type: transparency Assessment: recommendation	Austria reported quantified mitigation impacts as "NE" for many of its mitigation actions in CTF table 3 as well as in table 3.1 of its BR4. The BR4 states that it has not yet been possible to establish any uniform regulations for monitoring and reporting the effect of PaMs and individual instruments; however, no footnote is provided underneath CTF table 3 to explain the use of "NE". Some quantitative information on estimates of the effects of some policy instruments is provided in the form of a reference to the document *GHG Projections and Assessment of Policies and Measures in Austria* (Environment Agency Austria, 2019). During the review Austria explained that in several cases, responsibility for implementing policies is distributed over different administration levels and departments; there are no uniform regulations for monitoring and reporting the effects of policies, which makes it very difficult in some cases to reliably calculate the mitigation impact of policies. The ERT recommends that Austria include in CTF table 3 estimates of the impacts of all mitigation actions or adequately explain in the text of the BR or in a footnote to CTF table 3 why this is not possible owing to national circumstances, in accordance with the information provided during the review.

Note: Item listed under reporting requirement refers to the relevant paragraph of the UNFCCC reporting guidelines on BRs or to the CTF table number from the UNFCCC reporting guidelines on CTF tables. The reporting on the requirements not included in this table is considered to be complete, transparent and thus adhering to the UNFCCC reporting guidelines on BRs.

2. Estimates of emission reductions and removals and the use of units from market-based mechanisms and land use, land-use change and forestry

(a) Technical assessment of the reported information

44. Austria reported "0" for the use of units from market-based mechanisms in CTF tables 4 and 4(b) and stated in the text of the BR4 that it intends to reach its 2020 mitigation target under the ESD through domestic measures alone and does not currently plan to make use of flexibility provisions under the ESD, except to carry forward part of its AEA to subsequent years if necessary. Given that the contribution of LULUCF activities is not included in the joint EU target under the Convention, reporting of contributions of LULUCF activities is not applicable for Austria. Table 5 illustrates Austria's ESD emissions and the use of units from market-based mechanisms to achieve its ESD target.

Table 5
Summary of information on the use of units from market-based mechanisms by Austria to achieve its target

Year	ESD emissions ($kt\ CO_2\ eq$)	AEA ($kt\ CO_2\ eq$)	Use of units from market-based mechanisms ($kt\ CO_2\ eq$)[a]	Annual AEA surplus/deficit ($kt\ CO_2\ eq$)[b]	Cumulative AEA surplus/deficit ($kt\ CO_2\ eq$)
2013	50 097.32	52 625.04	0	2 527.72	2 527.72
2014	48 194.33	52 079.04	0	3 884.71	6 412.43
2015	49 295.42	51 533.04	0	2 237.62	8 650.05
2016	50 618.90	50 987.04	0	368.14	9 018.19
2017	51 651.77	49 502.69	0	–2 149.08	6 869.11
2018	NA	48 918.50	NA	NA	NA

Sources: Austria's BR4 and CTF table 4(b), information provided by the Party during the review and EU transaction log (AEAs).

[a] The use of "NA" indicates that the Party stated in its BR that it does not intend to use market-based mechanisms to achieve its target.

[b] A positive number (surplus) indicates that ESD emissions were lower than the AEA, while a negative number (deficit) indicates that ESD emissions were greater than the AEA.

45. In assessing the progress towards achieving the 2020 joint EU target, the ERT noted that Austria's emission reduction target for the ESD is 16 per cent below the base-year level (see para. 15 above). In 2017, Austria's emissions covered by the ESD were 4.3 per cent (2,149.08 kt CO_2 eq) above the AEA under the ESD and this was the first time when emissions covered by the ESD exceeded the AEA. However, Austria has a cumulative surplus of 6,869.11 kt CO_2 eq with respect to its AEAs between 2013 and 2017.

46. The ERT noted that Austria is making progress towards its ESD target by implementing mitigation actions that are delivering significant emission reductions. However, on the basis of the results of the projections under the WEM scenario, the ERT also noted that Austria may face challenges in achieving its target under the ESD, in which case it would need to further strengthen its mitigation actions. Austria indicated in its BR4 that it may take advantage of the flexibility provided by the ESD to carry forward part of its cumulative AEA surplus to meet its 2020 target.

(b) Assessment of adherence to the reporting guidelines

47. The ERT assessed the information reported in the BR4 of Austria and recognized that the reporting is complete, transparent and thus adhering to the UNFCCC reporting guidelines on BRs. No issues relating to the topics discussed in this chapter of the review report were raised during the review.

3. Projections overview, methodology and results

(a) Technical assessment of the reported information

48. Austria reported updated projections for 2020 and 2030 relative to actual inventory data for 2017 under the WEM scenario. The WEM scenario reported by Austria includes implemented and adopted PaMs until January 2018.

49. The projections are presented on a sectoral basis, using the same sectoral categories as those used in the reporting on mitigation actions, and on a gas-by-gas basis for CO_2, CH_4, N_2O, PFCs, HFCs and SF_6 (treating PFCs and HFCs collectively in each case) as well as NF_3 for 1990–2035. The projections are also provided in an aggregated format for each sector and for a Party total using global warming potential values from the AR4.

(b) Methodology, assumptions and changes since the previous submission

50. The methodology used for the preparation of the projections is identical to that used for the preparation of the emission projections for the NC7. Austria provided information on the changes since the submission of its NC7 in the assumptions, methodologies, models and approaches used in the projection scenarios. To project GHG emissions, Austria applied the same methodologies used for the national GHG inventory, using sectoral forecasts of activities based on several models and methods. Austria summarized these models and methods in the BR4, providing a more detailed description in an annex to the NC7 and in an accompanying report entitled *GHG Projections and Assessment of Policies and Measures in Austria* (Environment Agency Austria, 2019). Differences from previous submissions mainly concern changes in the base data (i.e. GHG inventory and emission factors, energy balance, recent market developments), revised assumptions for activity scenarios (i.e. owing to revised economic scenarios linked to higher growth rates for some relevant industrial sectors) and changes to assumptions on the efficiency of vehicles and availability of electric cars or assumptions on subsidies. Austria reported in CTF table 5 the key variables and assumptions used in the preparation of the projection scenarios

51. To prepare its projections, Austria relied on key underlying assumptions relating to GDP growth rate (decreasing from 3.10 per cent in 2017 to 1.15 per cent in 2020 and 1.82 per cent in 2030), population (increasing by almost 6 per cent from 2017 to 2030), number of households (increasing by about 9 per cent from 2017 to 2030), heating degree days (decreasing by about 3 per cent from 2020 to 2030), the USD/EUR exchange rate (remaining constant at a value of 1.2 USD/EUR from 2017 to 2030), international energy prices for oil, coal and gas (price for each fuel increasing between 27 and 110 per cent between 2017 and 2030) and prices for CO_2 certificates (increasing by a factor of approximately five between

2015 and 2030). These variables and assumptions were reported in CTF table 5. The assumptions were updated on the basis of the most recent economic developments known at the time of the preparation of the projections.

52. Austria provided information on sensitivity analyses. While sensitivity analyses were limited to the energy sector, they were conducted for a number of important assumptions, such as economic growth, energy prices and prices for CO_2 certificates. As these assumptions are interdependent, Austria provided two sensitivity scenarios. In the first scenario, a higher GDP growth rate of 2.5 per cent per year (and higher prices for fuels and CO_2 certificates) was used, leading to a projected 9 per cent increase in emissions in 2030 compared with the WEM scenario. In the second scenario, a lower GDP growth rate of 0.8 per cent per year (and lower prices for fuels and CO_2 certificates) was used, leading to a 4 per drop in projected 2030 emissions compared with the WEM scenario.

(c) Results of projections

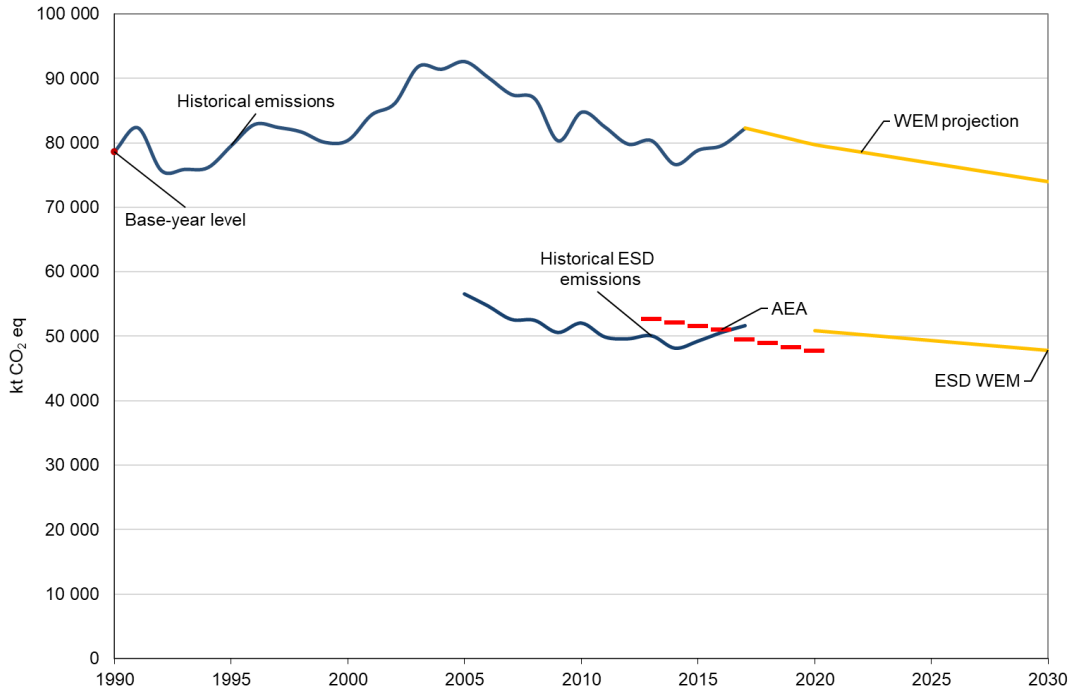
53. The projected emission levels under the WEM scenario and information on the quantified economy-wide emission reduction target are presented in table 6 and figure 1.

Table 6
Summary of greenhouse gas emission projections for Austria

	Total GHG emissions		*Emissions under the ESD*	
	GHG emissions (kt CO_2 eq per year)	*Change in relation to 1990 level (%)*	*ESD emissions (kt CO_2 eq per year)*	*Comparison to 2020 AEA (%)*
2020 AEA under the ESD[a]	NA	NA		100.0
Inventory data 1990	78 670.34	NA	NA	NA
Inventory data 2017	82 261.49	4.6	51 651.77	8.2
WEM projections for 2020	79 668.88	1.3	50 903.00	6.6
WEM projections for 2030	73 961.24	–6.0	47 851.00	NA

Source: Austria's BR4 and CTF table 6.
Note: The projections are for GHG emissions excluding LULUCF.
[a] The quantified economy-wide emission reduction target under the Convention is a joint target of the EU and its member States. The target is to reduce emissions by 20 per cent compared with the base-year (1990) level by 2020. Austria's target under the ESD is 16 per cent below the 2005 level by 2020.

Figure 1
Greenhouse gas emission projections reported by Austria



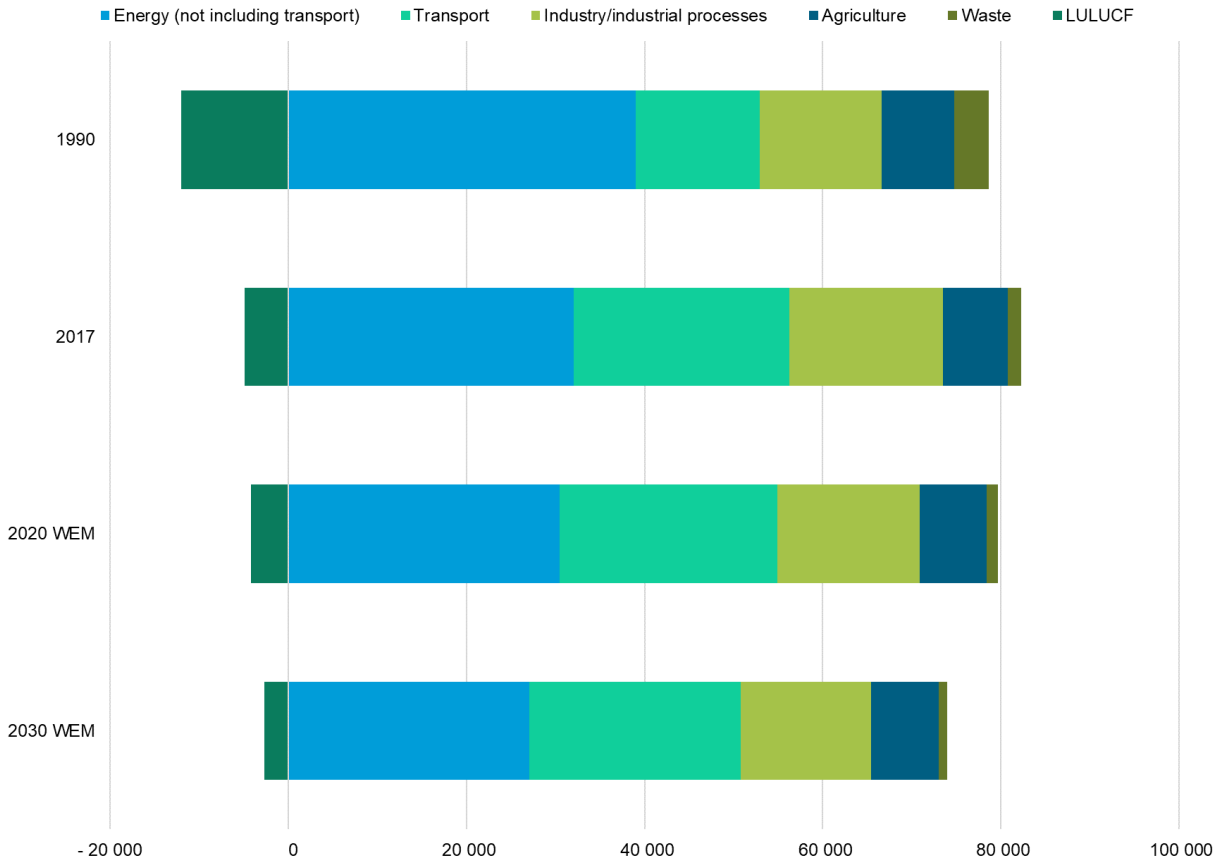
Sources: EU transaction log (AEAs) and Austria's BR4 and CTF tables 1 and 6.

54. Austria's total GHG emissions excluding LULUCF in 2020 and 2030 are projected under the WEM scenario to decrease by 1.3 and 6.0 per cent, respectively, below the 1990 level.

55. Austria's target under the ESD is to reduce ESD emissions by 16 per cent below the 2005 level by 2020 (see para. 15 above). Austria's AEAs, which correspond to its national emission target for ESD sectors, change from 52,625.04 kt CO_2 eq in 2013 to 47,750.11 kt CO_2 eq for 2020. The projected level of emissions under the WEM scenario is 6.6 per cent above the AEAs for 2020. The ERT noted that the Party's cumulative surplus of AEAs is 6,869.11, which suggests that Austria may need to use the flexibility allowed under the ESD to meet its target under the WEM scenario.

56. Austria presented the WEM scenarios by sector for 2020 and 2030, as summarized in figure 2 and table 7.

Figure 2
Greenhouse gas emission projections for Austria presented by sector



Source: Austria's BR4 CTF table 6.

Table 7
Summary of greenhouse gas emission projections for Austria presented by sector

	GHG emissions and removals (kt CO_2 eq)			*Change (%)*	
Sector	*1990*	*2020 WEM*	*2030 WEM*	*1990–2020 WEM*	*1990–2030 WEM*
Energy (not including transport)	38 970.99	30 451.73	27 088.67	–21.9	–30.5
Transport	13 975.24	24 478.04	23 668.55	75.2	69.4
Industry/industrial processes	13 662.34	15 978.22	14 657.44	17.0	7.3
Agriculture	8 136.75	7 466.60	7 625.64	–8.2	–6.3
LULUCF	–11 988.44	–4 201.64	–2 670.66	–65.0	–77.7
Waste	3 925.02	1 294.28	920.92	–67.0	–76.5

	GHG emissions and removals (kt CO_2 eq)			*Change (%)*	
Sector	*1990*	*2020 WEM*	*2030 WEM*	*1990–2020 WEM*	*1990–2030 WEM*
Other	38 970.99	30 451.73	27 088.67	–21.9	–30.5
Total GHG emissions excluding LULUCF	**78 670.34**	**79 668.88**	**73 961.24**	**1.3**	**–6.0**

Source: Austria's BR4 CTF table 6.

57. According to the projections reported for 2020 under the WEM scenario, the most significant emission reductions are expected to occur in the energy (not including transport) and waste sectors, amounting to projected reductions of 21.9 and 67.0 per cent between 1990 and 2020, respectively. The pattern of projected emissions reported for 2030 under the same scenario remains the same. Transport is an important sector that has seen increasing emission levels in the past and the projections indicate that emission trends will stabilize and then emissions will start to decrease between 2020 and 2030.

58. Austria presented the WEM scenarios by gas for 2020 and 2030, as summarized in table 8.

Table 8
Summary of greenhouse gas emission projections for Austria presented by gas

	GHG emissions and removals (kt CO_2 eq)			*Change (%)*	
Gas	*1990*	*2020 WEM*	*2030 WEM*	*1990–2020 WEM*	*1990–2030 WEM*
CO_2[a]	62 322.64	67 772.72	63 420.82	8.7	1.8
CH_4	10 363.02	6 427.92	6 086.54	–38.0	–41.3
N_2O	4 328.84	3 597.60	3 597.65	–16.9	–16.9
HFCs	2.44	1 348.62	678.61	55 171.3	27 711.9
PFCs	1 182.79	40.46	30.53	–96.6	–97.4
SF_6	470.61	471.96	136.85	0.3	–70.9
NF_3	–	9.6	10.24	–	–
Total GHG emissions without LULUCF	**78 670.34**	**79 668.88**	**73 961.24**	**1.3**	**–6.0**

Source: Austria's BR4 CTF table 6.
[a] Austria did not include indirect CO_2 emissions in its projections.

59. For 2020, the most significant reductions are projected for CH_4 and PFC emissions: 3,935.10 kt CO_2 eq (38.0 per cent) and 1,142.33 kt CO_2 eq (96.6 per cent, i.e. only minor emissions of PFCs remain) between 1990 and 2020, respectively. N_2O emissions are projected to decrease by 731.24 kt CO_2 eq (16.9 per cent) between 1990 and 2020. Over the same period, CO_2, HFC and SF_6 emissions are projected to increase by 5,450.08 kt CO_2 eq (8.7 per cent), 1,346.18 kt CO_2 eq (55,171.3 per cent) and 1.35 kt CO_2 eq (0.3 per cent), respectively. Projections indicate that NF_3 emissions will remain of minor importance.

60. Between 1990 and 2030 almost all emissions are projected to decrease: CH_4 emissions by 4,276.48 kt CO_2 eq (41.3 per cent), PFC emissions by 1,152.26 kt CO_2 eq (97.4 per cent), N_2O emissions by 731.19 kt CO_2 eq (16.9 per cent) and SF_6 emissions by 333.76 CO_2 eq (70.9 per cent). Over the same period, CO_2 and HFC emissions are projected to increase by 1,098.19 kt CO_2 eq (1.8 per cent) and 676.17 kt CO_2 eq (27,711.9 per cent), respectively. Projections indicate that NF_3 emissions will remain of minor importance.

(d) Assessment of adherence to the reporting guidelines

61. The ERT assessed the information reported in the BR4 of Austria and identified issues relating to completeness and thus adherence to the UNFCCC reporting guidelines on BRs. The findings are described in table 9.

Table 9
Findings on greenhouse gas emission projections reported in the fourth biennial report of Austria

No.	*Reporting requirement, issue type and assessment*	*Description of the finding with recommendation or encouragement*
1	Reporting requirement specified in paragraph 28 Issue type: completeness Assessment: encouragement	Austria did not report a WOM or a WAM scenario in its BR4. The WAM scenario was not reported owing to the ongoing preparation and adoption of the NECP, which includes a set of planned mitigation actions for achieving the 2030 target. No explanation was provided as to why a WOM scenario was not reported. During the review Austria explained that it could not justify the development and regular update of a WOM scenario in its modelling system for budgetary reasons. The ERT reiterates the encouragement from the previous review report for the Party to report WAM and WOM scenarios in its next BR. If Austria decides not to provide a WOM scenario, it should adequately explain this decision.
2	Reporting requirement specified in paragraph 35 Issue type: completeness Assessment: encouragement	Austria did not report projections for indirect GHGs such as carbon monoxide, nitrogen oxides and non-methane volatile organic compounds or for sulfur oxides. During the review, Austria explained that it does not calculate projections for carbon monoxide. However, it informed the ERT that projections for nitrogen oxides, non-methane volatile organic compounds and sulfur oxides have been reported under the Convention on Long-Range Transboundary Air Pollution. The ERT reiterates the encouragement from the previous review report for the Party to report projections for indirect GHGs in its next submission.
5	Reporting requirement specified in paragraph 43 Issue type: completeness Assessment: encouragement	Austria stated in its BR4 that for the GHG projections, it utilized a combination of bottom-up models that provide a very detailed description of the Austrian situation and economic top-down models. No information was provided on how the models or approach used could account for any overlap or synergies that may exist between different PaMs. During the review Austria provided the ERT with consistent information considering the ways in which these potential problems were being addressed (i.e. meetings to discuss policies, input parameters, the chains of input–output between several models). The overlaps and synergies between PaMs, such as the synergy between subsidies for efficiency measures and energy efficiency legislation, are incorporated in the model architecture. The ERT encourages Austria to provide information about how the models or approaches used account for any overlap or synergies that may exist between different PaMs.

Note: Item listed under reporting requirement refers to the relevant paragraph of the UNFCCC reporting guidelines on NCs, as per paragraph 11 of the UNFCCC reporting guidelines on BRs. The reporting on the requirements not included in this table is considered to be complete, transparent and thus adhering to the UNFCCC reporting guidelines on NCs and on BRs.

D. Provision of financial, technological and capacity-building support to developing country Parties

1. Technical assessment of the reported information

(a) Approach and methodologies used to track support provided to non-Annex I Parties

62. In its BR4 Austria reported information on its provision of financial, technological and capacity-building support to non-Annex I Parties.

63. Austria provided details on how the support it has provided is “new and additional”, including how it has determined resources as being “new and additional”. Austria’s approach involves a gradual scaling up of support over time, with new programmes, projects and focus areas supplementing and/or extending existing initiatives over time and the overall amount of support provided increasing in the longer term. During the review, Austria clarified that this definition does not imply that support increases every year.

64. Austria reported the support that it has provided to non-Annex I Parties, distinguishing between support for mitigation and adaptation activities and recognizing the capacity-building

elements of such support. It explained how it tracks finance for adaptation and mitigation using OECD DAC methodologies, including the use of the DAC Rio markers and national guidelines for tracking the provision of climate finance, in order to ensure consistency with its ODA reporting as well as comparability with other climate finance provided.

65. The BR4 includes information on the national approach to tracking the provision of support, indicators, delivery mechanisms used and allocation channels tracked. The national approach is based on Austria's international climate finance strategy, implemented by an interministerial working group dedicated to climate finance tasked with regularly taking stock of national and international developments on the provision of support to developing countries and responding to emerging developments, including those related to tracking provision of support. Austria did not include information on how it has refined its approach to tracking climate support and methodologies as compared with what was reported in its NC7. There have been no changes to the national approach according to the reporting in its NC7 and BR4.

66. Austria described the methodology and underlying assumptions used for collecting and reporting information on financial support, including guidelines. The methodology used for preparing information on international climate support is based on Austria's International Climate Finance Strategy for 2013–2020.[5] Specifically, the methodology identified eligible recipient countries using the most current DAC list of non-Annex I Parties eligible for ODA; identified climate-relevant projects using DAC Rio markers for mitigation and adaptation and a bottom-up approach; sought not to double-count DAC Rio markers; identified climate-specific contributions to multilateral organizations using the latest available DAC data on imputed multilateral shares; used official DAC EUR–USD exchange rates for a given reporting year; and reported all flows on a commitment basis.

(b) Financial resources

67. Austria reported information on its provision of financial support to non-Annex I Parties as required under the Convention, including on financial support provided, committed and pledged, allocation channels and annual contributions.

68. Austria described how its resources address the adaptation and mitigation needs of non-Annex I Parties. It also described how those resources assist non-Annex I Parties in mitigating GHG emissions and adapting to the adverse effects of climate change, and contribute to technology development and transfer and capacity-building related to mitigation and adaptation. For example, Austria stressed in its BR4 that the country and regional strategies that it jointly develops with its partner countries reflect the current and emerging interests, needs and priorities of its partners, including in the areas of climate change mitigation and adaptation.

69. With regard to the most recent financial contributions aimed at enhancing the implementation of the Convention by developing countries, Austria reported that its climate finance has been allocated on the basis of country and regional strategies, such as those developed with the support of the Austrian Development Agency.[6] Table 10 summarizes the information reported by Austria on its provision of financial support.

Table 10
Summary of information on provision of financial support by Austria in 2017–2018
(Millions of United States dollars)

	Year of disbursement	
Allocation channel of public financial support	*2017*	*2018*
ODA	1 343.86	1 242.75
Climate-specific contributions through multilateral channels, including:	16.40	2.83

[5] Available at https://www.bmlrt.gv.at/umwelt/klimaschutz/internationales/int_klimafinanzierung/strategie_berichte.html, with its 2017 revision available at https://www.bmlrt.gv.at/dam/jcr:eb0ecc2a-e7b8-4a4c-9692-ffc6f32eb351/Revision%20der%20Klimafinanzierungsstrategie_2017.pdf.

[6] For more information, see https://www.entwicklung.at/en/ada/funding/country-and-regional-strategies.

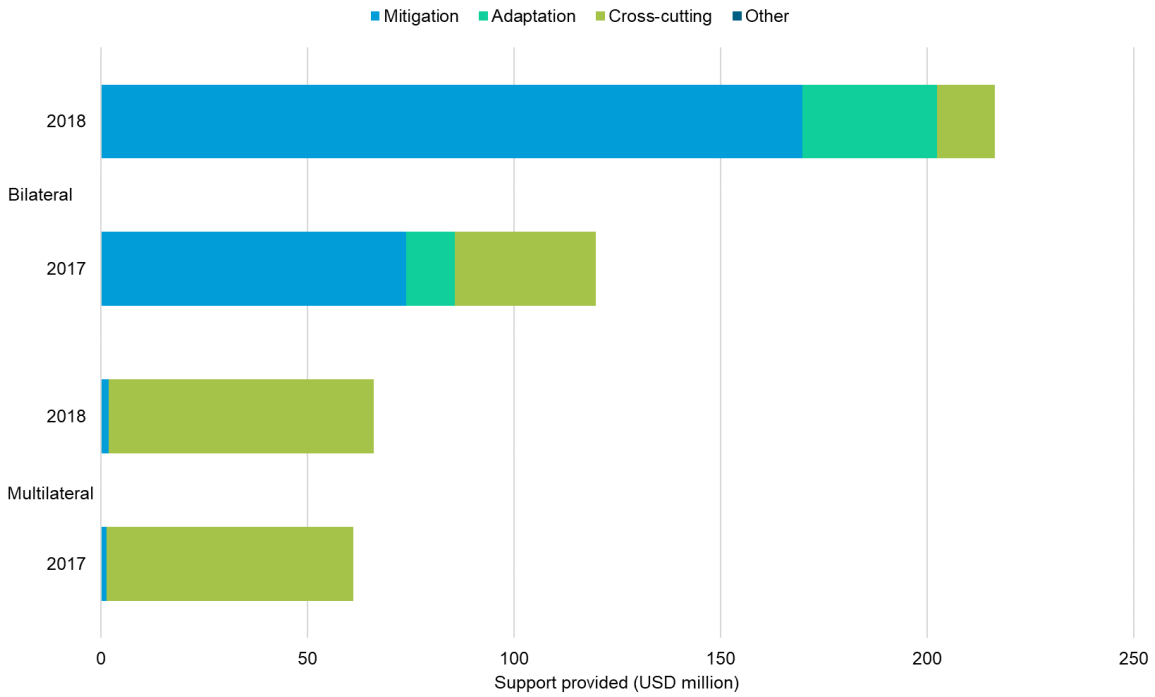
Allocation channel of public financial support	Year of disbursement 2017	2018
Global Environment Facility	9.64	–
Green Climate Fund	6.76	2.83
Financial institutions, including regional development banks	43.18	61.16
United Nations bodies	1.47	1.98
Climate-specific contributions through bilateral, regional and other channels	119.80	216.40

Sources: BR4 CTF tables and Query Wizard for International Development Statistics, available at http://stats.oecd.org/qwids/.

70. Austria reported on its climate-specific public financial support, totalling USD 180.85 million in 2017 and USD 282.37 million in 2018. It reduced the level of its financial support by 15.3 per cent between 2016 and 2017 and increased its contributions by 56.1 per cent between 2017 and 2018, with an overall increase of 26.5 per cent since the BR3, as reported in its local currency.

71. During the reporting period, in 2017, Austria placed a particular focus on Albania, Armenia, Bhutan, Burkina Faso, Egypt, Ethiopia, Georgia, India, Lao People's Democratic Republic, Mozambique, Nigeria, the Republic of Moldova and Uganda. The climate financing provided was in the form of grants, loans or guarantees of more than USD 500,000 for each of these Parties, with allocations totalling USD 70.179 million in 2017. In 2018, the focus was on Bangladesh, Bosnia and Herzegovina, Brazil, Burkina Faso, Ecuador, Ethiopia, Georgia, Ghana, Lao People's Democratic Republic, Moldova, Nepal, Serbia, Uganda and Vanuatu, with allocations totalling USD 120.89 million in that year. The ERT noted that Austria reported in CTF table 7(b) its bilateral support allocated to Annex I Parties in 2017 and 2018. Information on climate-specific financial support from the public sector provided through multilateral and bilateral channels and the allocation of that support by target area is presented in figure 3 and table 11. Note that variances in contribution amounts from year to year can occur that are not reflective of trends due to factors such as biennial or triennial contribution cycles of some multilateral funds, timing of approval of individual bilateral projects or changes in exchange rates.

Figure 3
Provision of financial support by Austria in 2017–2018



Source: Austria's BR4 CTF tables 7, 7(a) and 7(b).

Table 11
Summary of information on channels of financial support used in 2017–2018 by Austria
(Millions of United States dollars)

	Year of disbursement				*Share (%)*	
Allocation channel of public financial support	*2017*	*2018*	*Difference*	*Change (%)*	*2017*	*2018*
Detailed information by type of channel						
Multilateral channels						
Mitigation	1.33	1.83	0.51	38.1	2.2	2.8
Adaptation	–	–	–	–	–	–
Cross-cutting	59.72	64.14	4.42	7.4	97.8	97.2
Other	–	–	–	–	–	–
Total multilateral	**61.05**	**65.97**	**4.92**	**8.1**	**100.0**	**100.0**
Bilateral channels						
Mitigation	73.90	169.79	95.89	129.8	61.7	78.5
Adaptation	11.77	32.57	20.80	176.8	9.8	15.1
Cross-cutting	34.13	14.04	–20.09	–58.9	28.5	6.5
Other	–	–	–	–	–	–
Total bilateral	**119.80**	**216.40**	**96.55**	**80.6**	**100.0**	**100.0**
Total multilateral and bilateral	**180.85**	**282.37**	**101.52**	**56.1**	**100.0**	**100.0**

Source: Austria's BR4 CTF tables 7, 7(a) and 7(b).

72. The BR4 includes detailed information on the financial support provided though multilateral, bilateral and regional channels in 2017 and 2018. More specifically, Austria contributed through multilateral channels, as reported in the BR4 and in CTF table 7(a), USD 61.05 million and 65.97 million for 2017 and 2018, respectively. The contributions were made to specialized multilateral climate change funds, such as the Global Environment Facility and the Green Climate Fund. Other contributions were made to multilateral financial institutions, such as the World Bank, the African Development Bank, the Asian Development Bank and the Inter-American Development Bank, and to specialized United Nations bodies.

73. The BR4 and CTF table 7(b) also include information on the total financial support provided though both bilateral and regional channels, amounting to USD 119.80 million in 2017 and USD 216.40 million in 2018. The ERT notes that the BR4 and CTF table 7(b) do not provide disaggregated information on the total financial support provided through bilateral and regional channels.

74. The BR4 provides information on the types of support provided. In terms of the focus of public financial support, as reported in CTF table 7 for 2017, the shares of the total public financial support allocated for mitigation, adaptation and cross-cutting projects were 41.6, 6.5 and 51.9 per cent, respectively. In addition, 33.8 per cent of the total public financial support was allocated through multilateral channels and 66.3 per cent through bilateral, regional and other channels. In 2018, the shares of total public financial support allocated for mitigation, adaptation and cross-cutting projects were 60.8, 11.5 and 27.7 per cent, respectively. Furthermore, 23.4 per cent of the total public financial support was allocated through multilateral channels and 76.6 per cent through bilateral, regional and other channels.

75. The ERT noted that in 2017 and 2018 Austria did not indicate the sectors to which the financial contributions made through multilateral channels had been allocated (see CTF table 7(a)). In 2017 a majority of financial contributions made through bilateral and regional channels were allocated to the energy, agriculture and water sectors (59.0 per cent, 4.4 per cent and 3.2 per cent, respectively), with 26.9 per cent allocated to cross-cutting sectors and 5.4 per cent to unspecified "other" sectors, as reported in CTF table 7(b). The corresponding allocations for 2018 were directed mostly to the energy, water and industry sectors (68.8 per

cent, 8.2 per cent and 4.6 per cent, respectively), with 3.9 per cent allocated to cross-cutting sectors and 5.5 per cent to unspecified "other" sectors.

76. CTF tables 7(a) and 7(b) include information on the types of financial instrument used for providing assistance to developing countries, which include grants, concessional loans, credit and capital subscriptions. The ERT noted that grants, loans and other instruments accounted for 29.0, 41.7 and 29.2 per cent, respectively, of the total public financial support provided in 2017, and 21.5, 67.3 and 11.2 per cent, respectively, of the total financial support provided in 2018.

77. Austria reported information on the mobilization of private finance. It reported on how it uses public funds to promote private sector financial support for developing countries to increase mitigation and adaptation efforts in developing countries, stating that it tracks mobilized private climate finance through ADC business partnerships, which enable the ADC to co-finance up to 50 per cent of a given business investment (provided that the overall project supports development objectives in line with the priorities of partner countries), and through the Development Bank of Austria. Through these channels, Austria reported mobilizing private climate finance amounting to EUR 21.54 million in 2017 and EUR 88.71 million in 2018. The ERT notes that Austria did not indicate the areas (mitigation or adaptation) or sectors (energy, water, agriculture, transport, etc.) to which the private financial flows leveraged or mobilized by bilateral climate finance for climate activities in non-Annex I Parties were allocated.

78. Austria explained that it is fully committed to promoting the scaling up of private investment in mitigation and adaptation activities in developing countries, in line with the long-term goals of the Paris Agreement, in particular its Article 2.1(c), and on the basis of Austria's 2002 Federal Act on Development Cooperation and Government strategies, including Austria's International Climate Finance Strategy for 2013–2020. Austria indicated in the BR4 (p.65) that the ADC focuses on sustainable energy, in particular hydro and solar power, in addition to the dissemination of decentralized renewable energy solutions, and explained that its interests include renewable energy, particularly solar energy systems, resource efficiency for sustainable consumption and production, and energy-efficient buildings.

(c) Technology development and transfer

79. Austria provided information on steps, measures and activities related to technology transfer, access and deployment benefiting developing countries, including information on activities undertaken by the public and private sectors. Austria provided examples of support provided for the deployment and enhancement of the endogenous capacities and technologies of non-Annex I Parties. For example, a business partnership funded by the Austrian Development Agency implemented a project called "Atmove – Biomethane Mobility for Brazil", which supported endogenous technology development efforts in Brazil in the field of biogas production, methanation and mobility.

80. The ERT took note of the information provided in CTF table 8 on recipient countries, target areas, measures and focus sectors of technology transfer programmes. Austria indicated in its BR4 that the ADC focuses on key partner least developed countries that are affected by a substantial energy gap and whose energy is mostly produced by fossil fuels or gas or from wooden biomass. According to CTF table 8, recipient countries are from Africa, Asia-Pacific, Latin America and the Caribbean, and south-eastern Europe and the Caucasus, and include Botswana, Chad, Egypt, Fiji, Georgia, Lesotho, Maldives, Mozambique, Namibia, South Africa, the United Republic of Tanzania and Zimbabwe. Of the 21 projects identified in CTF table 8, 13 targeted mitigation, 3 targeted both mitigation and adaptation, and 5 targeted adaptation. The projects focused on the energy sector (14 projects), the agriculture sector (three projects), infrastructure (two projects) and water and sanitation (one project), with one project focused on energy, forestry, water and sanitation.

81. The ERT noted that Austria reported on its measures and activities, including on activities implemented or planned since its NC7 or BR3, as well as success and failure stories in relation to technology transfer, and in particular on measures taken to promote, facilitate and finance the transfer and deployment of climate-friendly technologies. For example, the

ERT noted that Austria reported on the support provided by the ADC for the establishment and programmatic work of the regional centres for renewable energy and energy efficiency under the umbrella of the Global Network of Regional Sustainable Energy Centres, through which the ADC supported applied research and technology transfer within the energy sector. Another example involved an Austrian Development Agency-supported business partnership with Atmove, which involves working on a biogas-based mobility solution (biomethane) for rural areas in Brazil, targeting small- and medium-sized farms and municipalities and the agro-industry with a view to drastically reducing their dependence on fossil fuels. The ERT also noted the other examples provided by Austria during the review, such as its support for the Pacific Centre for Renewable Energy and Energy Efficiency and for the Soltrain project in southern Africa.

82. Austria indicated in its BR4 that it does not have a specific strategic approach for supporting the development and enhancement of the endogenous capacities and technologies of developing countries. However, it indicated that projects and activities are often developed in collaboration with partner countries, and that the work is done through local experts and consultants. The ERT noted that Austria faced a number of issues that affected the completeness and accuracy of its reporting on technology transfer and development, including (a) a lack of definitions and guidance on the basic underlying concepts of technology development in relation to climate change and transfer measures and activities; (b) a lack of parameters for identifying climate finance components in integrated (often project- or programme-based) activities; (c) the challenge of quantifying support, especially for integrated activities which are financed through an intermediary (e.g. a programme by a multilateral organization).

(d) Capacity-building

83. In its BR4 and CTF table 9, Austria supplied information on how it has provided capacity-building support for mitigation, adaptation and technology that responds to the existing and emerging needs identified by non-Annex I Parties. Austria described individual measures and activities related to capacity-building support in textual and tabular format. Examples include providing support for solar skills training and environmental education in Ethiopia and Uganda; holding training courses on the design, installation, maintenance and quality assurance of solar thermal systems through the Soltrain IV project for southern Africa; supporting the ClimaProof project for south-eastern Europe, which seeks to strengthen the capacities of countries in the Western Balkans to climate-proof investments in the infrastructure sector; supporting Aquahub in eastern Africa, which helps universities in the region to strengthen their scientific and research capacity in terms of the sustainable and climate-resilient management of the region's aquatic ecosystems; carrying out a capacity-building project for the Royal Government of Bhutan and other Bhutanese stakeholders in the areas of solar thermal energy and energy efficiency in buildings; and supporting the Vienna University of Natural Resources and Life Sciences to strengthen the capacity of Bluefields Indian and Caribbean University in Nicaragua to carry out climate change research.

84. Austria reported that it has supported climate-related capacity development activities relating to adaptation and mitigation, and explained how it has responded to the existing and emerging capacity-building needs of non-Annex I Parties by following the principles of country ownership of development priorities, a results-focused approach, development partnerships, transparency and shared responsibility. Austria also reported that it recognized the importance of supporting the strengthening of scientific and technical capacities in developing countries. At the policy level, Austria explained that its bilateral country programmes are based on partner countries' national priorities and strategies, such as national development strategies and Sustainable Development Goal processes, while also referring to the priorities and needs identified in the respective nationally determined contributions of its partner countries.

85. At the programme and project level, in order to ensure that the programmes and projects that it supports respond to the existing and emerging capacity-building needs identified by non-Annex I Parties in the areas of mitigation, adaptation and technology development and transfer, Austria encourages the systematic assessment of capacity needs

(strengths and weaknesses of stakeholders) and the identification of capacity gaps, and seeks to ensure that all programmes and projects align with and contribute to the respective national frameworks and strategies of partner countries. Austria gave a number of examples of programmes and projects, including its long-standing support of the national action plan process in the Republic of Moldova, the Austrian Partnership Programme in Higher Education and Research for Development, and a recently launched project that aims to enhance climate resilience in the Republic of Moldova's Lower Prut biosphere reserve.

2. Assessment of adherence to the reporting guidelines

86. The ERT assessed the information reported in the BR4 of Austria and identified issues relating to completeness and transparency and thus adherence to the UNFCCC reporting guidelines on BRs. The findings are described in table 12.

Table 12
Findings on provision of support to developing country Parties from the review of the fourth biennial report of Austria

No.	*Reporting requirement, issue type and assessment*	*Description of the finding with recommendation or encouragement*
1	Reporting requirement specified in paragraph 13 Issue type: transparency Assessment: recommendation	Austria reported in its BR4 that it provided financial, technological and capacity-building support to non-Annex I Parties, referring to the OECD DAC list of countries eligible for ODA. However, BR4 table 5.6 and CTF table 7(b) also included an Annex I Party (Austria), institutions located in Annex I Parties (e.g. International Institute for Sustainable Development and International Union for Conservation of Nature) and activities or projects undertaken in an Annex I Party (e.g. the Vienna Energy Forum and the Post-Paris Navigator). During the review Austria explained that standard definitions of ODA include programmes and projects where support is not delivered within the geographical borders of a developing country, yet nevertheless clearly benefits that country, such as support for international organizations, bilateral and multilateral agencies, expert groups and bodies that can promote the climate change mitigation and adaptation activities of developing countries, or activities that benefit developing countries and are carried out in the donor country itself. Austria also provided explanations and information to correct erroneous entries in BR4 table 5.6 and CTF table 7(b) with respect to project 689 and the Post-Paris Navigator project. The ERT recommends that Austria provide a clear information on the total amount of financial support provided to non-Annex I Parties in CTF tables 7 and 7(b). If support to Annex I Parties is included in the totals of CTF table 7 and in the CTF table 7(b), the Party should clarify this by, for example, including a footnote to the CTF tables and explaining the issue in the text of the BR.
2	Reporting requirement specified in paragraph 14 Issue type: transparency Assessment: recommendation	Austria reported in its BR4 information on the existing tracking system and the methodologies used to track financial support. Austria also provided information on the various instruments in place for tracking support for technology development and transfer. However, Austria noted that there were a number of issues related to the quantified tracking of technology development and transfer and of capacity-building that affect the completeness and accuracy of information. Austria noted that it will continue to qualitatively report on its support in the area of capacity-building. During the review, Austria explained that technology transfer and capacity-building are key components of most Austrian programmes and projects that support developing countries' climate change actions. However, it noted that owing to the cross-cutting nature of technology and capacity-building, and in the absence of an agreed international methodology to quantitatively track technology capacity-building support, it is unable to quantify its support for technology and capacity-building. However, the Party uses various methodologies, such as OECD DAC climate markers with codes and keywords for OECD/DAC type of aid ("modality"), to identify and track projects and programmes that have integrated technological and capacity-building support components. The ERT reiterates the recommendation from the previous review report for Austria to improve its reporting by providing in its next BR a more comprehensive description of its national approach to tracking the provision of technological and capacity-building support to non-Annex I Parties, including, if possible, a description

No.	Reporting requirement, issue type and assessment	Description of the finding with recommendation or encouragement
		of measures taken to financially quantify the technology transfer or capacity-building components of its support programmes and projects.
3	Reporting requirement specified in paragraph 16 Issue type: transparency Assessment: recommendation	Austria reported in its BR4 that its development cooperation is based on the Busan Partnership for Effective Development Cooperation, which it implements through national and regional strategies that are jointly developed with its partner countries and reflect their current and emerging interests, needs and priorities, including those in relation to climate change mitigation and adaptation. However, the information provided did not give the ERT an understanding of how these programmes aim to address the existing and emerging needs of non-Annex I Parties. During the review, Austria explained that it responds to the needs of non-Annex I Parties by following the principles of country ownership of development priorities, a results-focused approach, development partnerships, transparency and shared responsibility. It explained that while the exact modalities and procedures may vary from case to case, a common feature is open dialogue with partner countries (e.g. through drafting meetings, conference calls, email). This results in close collaboration in the development of strategies, programmes and projects, which are based on national priorities and strategies in addition to the priorities and needs identified in the respective nationally determined contributions of partner countries. All country strategies are subject to bilateral agreements with the respective partner government to ensure ownership and partnership. The ERT reiterates the recommendation from the previous review report for Austria to describe, to the extent possible, in its next BR how it seeks to ensure that the resources it provides effectively address the needs of non-Annex I Parties in terms of climate change adaptation and mitigation, such as the further information it provided during the review.
4	Reporting requirement specified in paragraph 17 Issue type: completeness Assessment: recommendation	Austria did not report information on the financial support provided, committed and/or pledged for the purpose of assisting non-Annex I Parties with respect to any economic or social consequences of response measures in its BR4. During the review, Austria explained that it has not provided, committed or pledged financial support for the specific purpose of assisting non-Annex I Parties with respect to any economic or social consequences of response measures, and that, therefore, it has no information to include on this subject in its BR4. The ERT recommends that Austria provide information in its next BR, where appropriate, on the financial support it has provided, committed and/or pledged for the purpose of assisting non-Annex I Parties to reduce GHG emissions and adapt to the adverse effects of climate change and any economic and social consequences of response measures, or provide an explanation if such support was not provided.
5	Reporting requirement specified in paragraph 18 Issue type: transparency Assessment: recommendation	Austria reported summary information in textual and tabular formats in its BR4 on the annual financial support it has provided for the purpose of assisting non-Annex I Parties. However, the information provided in a textual format does not consistently reflect some of the elements listed in the UNFCCC reporting guidelines on BRs (para. 18(a–f)), which are nonetheless included in a tabular format. For example, the text reports financial information only in euros, while the CTF tables report in both euros and United States dollars, and the type of support and sectors are not given in the text, but are reported in the CTF tables. During the review, Austria explained that the summary information on the annual financial support that it provided for the purpose of assisting non-Annex I Parties for 2017–2018 is contained in a textual format in BR4 section 5.1 (pp.34–35). Additional information is contained in BR4 tables 5.2–5.7. Austria noted that, considered as a whole, the information provided in the main text of the BR4 and in the BR4 tables referred to above fully covers elements (a)–(f) of paragraph 18 of the UNFCCC reporting guidelines on BRs. The ERT recommends that Austria provide in its next BR consistent information in textual and tabular formats on the annual financial support it has provided for the purpose of assisting non-Annex I Parties.
6	Reporting requirement specified in paragraph 19	Austria reported in its BR4 that in addition to tracking mobilized private climate finance through ADC partnerships, it is now also in a position to track private climate finance mobilized by the Development Bank of Austria, and that it intends to

No.	Reporting requirement, issue type and assessment	Description of the finding with recommendation or encouragement
	Issue type: completeness Assessment: encouragement	expand the scope of its reporting on mobilized private climate finance as further guidance is made available. However, Austria did not provide information on the PaMs that promote the scaling up of private investments for mitigation and adaptation activities in developing country Parties. During the review, Austria explained that BR4 section 5.1.3 contains information on private financial flows leveraged by bilateral climate finance towards mitigation and adaptation activities in non-Annex I Parties, and that, in this context, the terms "leveraged" and "mobilized" are treated synonymously. Austria also explained that it is fully committed to promoting the scaling up of private investment in mitigation and adaptation activities in developing countries on the basis of Austria's 2002 Federal Act on Development Cooperation and Government strategies, including Austria's International Climate Finance Strategy for 2013–2020. It provided specific examples of measures for achieving this, including the ADC's business partnerships and the programmes run by the Development Bank of Austria, as both organizations treat climate action as a priority area for their activities. Austria explained that it was only able to provide totals in BR4 table 5.1 owing to restrictions related to business confidentiality which prevent the ADC and the Development Bank of Austria from providing information disaggregated by project or country. The ERT reiterates the encouragement from the previous review report for Austria to report in its next BR on private financial flows leveraged by bilateral climate finance and on PaMs that promote the scaling up of private investment in mitigation and adaptation activities in developing country Parties.

Note: Item listed under reporting requirement refers to the relevant paragraph of the UNFCCC reporting guidelines on BRs or to the CTF table number from the UNFCCC reporting guidelines on CTF tables. The reporting on the requirements not included in this table is considered to be complete, transparent and thus adhering to the UNFCCC reporting guidelines on BRs.

III. Conclusions and recommendations

87. The ERT conducted a technical review of the information reported in the BR4 and CTF tables of Austria in accordance with the UNFCCC reporting guidelines on BRs. The ERT concludes that the reported information mostly adheres to the UNFCCC reporting guidelines on BRs and provides an overview of emissions and removals related to the Party's quantified economy-wide emission reduction target; assumptions, conditions and methodologies related to the attainment of the target; the progress of Austria towards achieving its target; and the Party's provision of support to developing country Parties.

88. Austria's total GHG emissions excluding LULUCF covered by its quantified economy-wide emission reduction target were estimated to be 0.6 per cent above its 1990 level, whereas total GHG emissions including LULUCF were 11.0 per cent above its 1990 level, in 2018. The changes in total emissions were driven mainly by factors such as an increased volume of both freight and passenger road transport, coupled with the rising trend of transport fuels being sold in Austria but consumed in neighbouring countries; the growth of activities related to the manufacturing and construction industries; and increased iron and steel production. However, considering the substantial growth in population, GDP and energy demand, a much higher increase in emissions was avoided owing to measures such as shifting fuel consumption from solid and liquid fuels to gas and biomass sources; increasing production from renewable energy sources; improving energy efficiency, particularly in the residential sector; and improving agricultural and waste management practices.

89. Under the Convention, Austria committed to contributing to the achievement of the joint EU quantified economy-wide emission reduction target of a 20 per cent reduction in emissions below the 1990 level by 2020. The target covers all sectors and CO_2, CH_4, N_2O, HFCs, PFCs and SF_6, expressed using global warming potential values from the AR4. Emissions and removals from the LULUCF sector are not included. The EU generally allows its member States to use units from the Kyoto Protocol mechanisms and new market mechanisms for compliance purposes up to an established limit and subject to a number of restrictions on the origin and the type of project. Operators and airline operators can use such

units to fulfil their requirements under the EU ETS, and member States can use such units for their national ESD targets, within specific limitations.

90. Under the ESD, Austria has a target of reducing its emissions by 16 per cent below the 2005 level by 2020. The 2013–2020 progression in Austria's AEAs (its national emission target for ESD sectors) is 52,625.04–47,750.11 kt CO_2 eq.

91. In 2017, Austria's ESD emissions were 4.3 per cent (2,149.08 kt CO_2 eq) above the AEA under the ESD. Austria indicated that it does not plan to use market-based mechanisms. Austria has a cumulative surplus of 6,869.11 kt CO_2 eq with respect to its AEAs for 2013–2017. Austria indicated that it may use the flexibility provided by the ESD to carry forward part of its cumulative surplus of AEAs to meet its 2020 target.

92. The GHG emission projections provided by Austria in its BR4 correspond to the WEM scenario. Under this scenario, emissions are projected to be 1.3 per cent above the 1990 level by 2020. According to the projections under the WEM scenario, ESD emissions are estimated to reach 50,903.00 kt CO_2 eq by 2020. The projected level of emissions under the WEM scenario is 6.6 per cent above the AEAs for 2020. The ERT noted that the Party's cumulative surplus of AEAs is 6,869.11 kt CO_2 eq, which suggests that under the WEM scenario Austria expects to meet its target using the flexibility provided under the ESD.

93. Austria's main policy framework relating to energy and climate change is the Austrian Climate Change Act, which defines sectoral targets for 2020 and establishes the National Climate Change Committee as the main coordinating body for climate change mitigation actions. The key cross-sectoral policies are the EU ETS; the Domestic Environmental Support Scheme, which provides financial support for energy efficiency improvements, renewable energy promotion and sustainable transport projects; and the Austrian Climate and Energy Fund, which is focused on research and development of renewable energy systems and the development and testing of new transport and mobility systems. The most effective sectoral mitigation actions are those targeting the energy and waste sectors. In the energy sector, despite increased demand for electricity and district heating, emissions from energy industries decreased by 28.1 per cent in the period 1990–2018 owing to a shift from solid and liquid fuels to gas, an increase in the share of renewable energy and cogeneration of the energy supply and district heating. In the waste sector, measures such as waste separation, reuse, recycling and recovery have contributed to the reduction of GHG emissions by 63.8 per cent in the period 1990–2018, which is one of the highest emissions reduction rate among the Annex I Parties.

94. Austria continues to provide climate financing to developing countries in line with its climate finance programmes such as Austria's International Climate Finance Strategy for 2013–2020. It has increased its contributions by 26.5 per cent since the BR3; its public financial support in 2017 and 2018 totalled USD 180.9 million and 282.4 million, respectively. For those years, Austria provided more support for mitigation than for adaptation. The biggest share of financial support went to projects and programmes in the energy sector, followed by projects and programmes in the agriculture, water management and industry sectors and cross-cutting projects.

95. Austria continues to provide information on support for technology development and transfer and capacity-building. Priority in technological support was given to projects and programmes in the energy sector, with most projects targeted at mitigation and some at adaptation, in non-Annex I Parties including Botswana, Chad, Egypt, Fiji, Georgia, Lesotho, Maldives, Mozambique, Namibia, South Africa, the United Republic of Tanzania and Zimbabwe. A notable technology transfer project that enhanced endogenous capacities and technologies in the BR4 was the Austrian Development Agency-supported business partnership with Atmove, which involved working on a biogas-based mobility solution (biomethane) for rural areas in Brazil, targeting small- and medium-sized farms and municipalities and the agro-industry with a view to drastically reducing their dependence on fossil fuels. Austria reported that as part of this project, an innovation hub to "tropicalize" Austrian and European technology in the field of biogas production, methanation and mobility was created, cooperation was built up in the biogas sector among Austrian and Brazilian universities and a prototype biomethane tractor was developed in addition to a prototype truck-based mobile biogas-to-biocompressed natural gas converter.

96. Priority in capacity-building support was given to projects and programmes that respond to the existing and emerging needs identified by non-Annex I Parties (mitigation, adaptation and technology), including Armenia, Bhutan, Ethiopia, Georgia, Nicaragua, the Republic of Moldova and Uganda. A good example of support for capacity-building is the Austrian Partnership Programme in Higher Education and Research for Development, which supports collaborative and innovative partnerships between Austrian universities and universities in developing countries and enables partner countries and universities to respond to identified needs and demands, including through capacity-building, in a context-specific, cooperative and results-oriented manner.

97. In the course of the review, the ERT formulated the following recommendations for Austria to improve its adherence to the UNFCCC reporting guidelines on BRs in its next BR:

(a) To improve the completeness of its reporting by providing information, where appropriate, on the financial support it has provided, committed and/or pledged for the purpose of assisting non-Annex I Parties to reduce GHG emissions and adapt to the adverse effects of climate change and any economic and social consequences of response measures, or providing an explanation if such support was not provided (see issue 4 in table 12);

(b) To improve the transparency of its reporting by:

(i) Elaborating on any changes to its domestic institutional arrangements used for domestic compliance, monitoring, reporting, archiving of information and evaluation of its progress towards its economy-wide emission reduction target (see issue 1 in table 4);

(ii) Providing estimates of impacts of all mitigation actions, or adequately explaining in the text of the BR or in a footnote to CTF table 3 why this is not possible owing to national circumstances (see issue 3 in table 4);

(iii) Providing clear information on the total amount of financial support provided to non-Annex I Parties in CTF tables 7 and 7(b) (see issue 1 in table 12);

(iv) Providing a more comprehensive description of its national approach to tracking the provision of technological and capacity-building support to non-Annex I Parties (see issue 2 in table 12);

(v) Providing, to the extent possible, a more detailed description of how it seeks to ensure that the resources it provides effectively address the needs of non-Annex I Parties in terms of climate change adaptation and mitigation (see issue 3 in table 12);

(vi) Providing consistent information in textual and tabular formats on the annual financial support it has provided for the purpose of assisting non-Annex I Parties (see issue 5 in table 12).

Annex

Documents and information used during the review

A. Reference documents

2019 GHG inventory submission of Austria. Available at https://unfccc.int/process-and-meetings/transparency-and-reporting/reporting-and-review-under-the-convention/greenhouse-gas-inventories-annex-i-parties/national-inventory-submissions-2019.

2020 GHG inventory submission of Austria. Available at https://unfccc.int/ghg-inventories-annex-i-parties/2020.

BR3 of Austria. Available at https://unfccc.int/BRs.

BR4 of Austria. Available at https://unfccc.int/BRs.

BR4 CTF tables of Austria. Available at https://unfccc.int/BRs.

Compilation of economy-wide emission reduction targets to be implemented by Parties included in Annex I to the Convention. Available at https://unfccc.int/topics/mitigation/workstreams/pre-2020-ambition/compilation-of-economy-wide-emission-reduction-targets-to-be-implemented-by-parties-included-in-annex-i-to-the-convention.

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"UNFCCC biennial reporting guidelines for developed country Parties". FCCC/SBSTA/2014/INF.6. Annex I to decision 2/CP.17. Available at http://unfccc.int/resource/docs/2011/cop17/eng/09a01.pdf.

B. Additional information provided by the Party

Responses to questions during the review were received from Martin Kriech (Federal Ministry for Climate Action, Environment, Energy, Mobility, Innovation and Technology), including additional material.