United Nations FCCC/IDR.8/AUT–FCCC/TRR.5/AUT

Framework Convention on Climate Change

Distr.: General
23 August 2023

English only

# Report on the technical review of the eighth national communication and the technical review of the fifth biennial report of Austria

Parties included in Annex I to the Convention were requested by decision 6/CP.25 to submit their eighth national communication to the secretariat by no later than 31 December 2022. According to decision 15/CMP.1, Parties included in Annex I to the Convention that are also Parties to the Kyoto Protocol are required to include in their national communications supplementary information under Article 7, paragraph 2, of the Kyoto Protocol. This report presents the results of the technical review of the eighth national communication and relevant supplementary information under the Kyoto Protocol 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" and the "Guidelines for review under Article 8 of the Kyoto Protocol".

Developed country Parties were requested by decision 6/CP.25 to submit their fifth biennial report to the secretariat by no later than 31 December 2022. This report presents the results of the technical review of the fifth 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 of these submissions took place in Vienna, Austria, from 8 to 12 May 2023.

# Contents

# Abbreviations and acronyms

| | |
|---|---|
| AEA | annual emission allocation |
| AR | Assessment Report of the Intergovernmental Panel on Climate Change |
| BR | biennial report |
| CER | certified emission reduction |
| $CH_4$ | methane |
| $CO_2$ | carbon dioxide |
| $CO_2$ eq | carbon dioxide equivalent |
| COVID-19 | coronavirus disease 2019 |
| CTF | common tabular format |
| DAC | Development Assistance Committee of the Organisation for Economic Co-operation and Development |
| ERT | expert review team |
| ESD | European Union effort-sharing decision |
| ESR | European Union effort-sharing regulation |
| EU | European Union |
| EU ETS | European Union Emissions Trading System |
| F-gas | fluorinated gas |
| GDP | gross domestic product |
| GHG | greenhouse gas |
| GWP | global warming potential |
| HFC | hydrofluorocarbon |
| ICAO | International Civil Aviation Organization |
| IMO | International Maritime Organization |
| IPCC | Intergovernmental Panel on Climate Change |
| IPPU | industrial processes and product use |
| LULUCF | land use, land-use change and forestry |
| $N_2O$ | nitrous oxide |
| NA | not applicable |
| NC | national communication |
| NE | not estimated |
| $NF_3$ | nitrogen trifluoride |
| NIR | national inventory report |
| NO | not occurring |
| non-Annex I Party | Party not included in Annex I to the Convention |
| ODA | official development assistance |
| OECD | Organisation for Economic Co-operation and Development |
| PaMs | policies and measures |
| PFC | perfluorocarbon |
| reporting guidelines for supplementary information | “Guidelines for the preparation of the information required under Article 7 of the Kyoto Protocol. Part II: Reporting of supplementary information under Article 7, paragraph 2” |
| $SF_6$ | sulfur hexafluoride |
| TIMES | The Integrated Market Allocation–Energy Flow Optimization Model System |
| TRR | technical review report |
| UNFCCC reporting guidelines on BRs | “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 in-country technical review of the NC8 and BR5 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" and "Part V: UNFCCC guidelines for the technical review of national communications from Parties included in Annex I to the Convention" (annex to decision 13/CP.20), and the "Guidelines for review under Article 8 of the Kyoto Protocol" (annex to decision 22/CMP.1 and annex I to decision 4/CMP.1).

2. In accordance with decision 13/CP.20, a draft version of this report was transmitted to the Government of Austria, which provided comments that were considered and incorporated into this final version of the report.

3. The review was conducted from 8 to 12 May 2023 in Vienna, Austria, by the following team of nominated experts from the UNFCCC roster of experts: Lesley Maree Andrew (Australia), Maryna Bereznytska (Ukraine), Diana Harutyunyan (Armenia), Rumbidzai Damita Mhunduru (South Africa), Maggie Golie Munthali (Malawi) and Gwenaël Podesta (France). Maryna Bereznytska and Diana Harutyunyan were the lead reviewers. The review was coordinated by Nalin Srivastava and Stefania D'Annibali (secretariat).

## B. Summary

4. The ERT conducted a technical review of the information reported in the NC8 of Austria in accordance with the UNFCCC reporting guidelines on NCs,[1] the reporting guidelines for supplementary information, in particular the supplementary information required under Article 7, paragraph 2, and on the minimization of adverse impacts under Article 3, paragraph 14, of the Kyoto Protocol[2] and of the information reported in the BR5 of Austria in accordance with the UNFCCC reporting guidelines on BRs.[3]

### 1. Timeliness

5. The NC8 was submitted on 29 December 2022, before the deadline of 31 December 2022 mandated by decision 6/CP.25. The NC8 was resubmitted on 7 April 2023. The resubmission included changes to section 7.2 (technology development and transfer) of the NC8. Unless otherwise specified, the information and values from the latest submission are used in this report.

6. The BR5 was submitted on 29 December 2022, before the deadline of 31 December 2022 mandated by decision 6/CP.25. The CTF tables were also submitted on 29 December 2022. The BR5 and the CTF tables were resubmitted on 7 April 2023 and the CTF tables were resubmitted again on 22 May 2023. The resubmission made on 7 April included changes to section 7.2 (technology development and transfer) of the NC8, which was referred to in the BR5, and to CTF table 8. The resubmission made on 22 May addressed issues raised during the review. The resubmission included changes to CTF tables 6(a) and 6(c). Unless otherwise specified, the information and values from the latest submission are used in this report.

[1] Decision 6/CP.25, annex.
[2] Decision 15/CMP.1, annex, and decision 3/CMP.11, annex III.
[3] Decision 2/CP.17, annex.

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

7. Issues and gaps identified by the ERT related to the information reported by Austria in its NC8 are presented in tables 1–2. The information reported, including the supplementary information under the Kyoto Protocol, mostly adheres to the UNFCCC reporting guidelines on NCs.

8. Austria made improvements to the reporting in its NC8 compared with that in its NC7, including by addressing many recommendations and encouragements from the previous review report. The ERT noted that the Party has improved:

(a) The completeness of the information reported on PaMs by providing information on policies and practices which encourage activities that lead to greater levels of GHG emissions; describing its processes for monitoring and evaluating the progress of its PaMs over time; and reporting on the costs and non-GHG mitigation benefits of PaMs. Austria also improved the transparency of its reporting on PaMs by providing information on implemented and planned PaMs at the provincial and municipal level and, when describing the overall policy context, providing targets for GHG emission reduction for renewable energy and energy efficiency; explaining the reason, which relates to national circumstances, for not providing a quantitative estimate of the impact of individual PaMs, or collections of PaMs; and describing how it believes its PaMs are modifying the country's longer-term emission trends;

(b) The completeness of the information reported on projections and the total effects of PaMs by presenting a WAM scenario; explaining why it did not prepare a WOM scenario; and providing the total effect of implemented, adopted and planned PaMs. Austria also improved the transparency of its reporting on projections and the total effects of PaMs by providing additional information on the key drivers and activities for each sector to enable an understanding of emission trends at the sectoral level;

(c) The completeness of the information reported on vulnerability assessment, climate change impacts and adaptation measures by reporting on actions taken to implement Article 4, paragraph 1(b) and (e), of the Convention with regard to adaptation;

(d) The completeness of the information reported on research and systematic observation by providing information on the opportunities for and barriers to free and open international exchange of data, and the action taken to overcome such barriers; and on exchange and archiving of data in the area of supporting developing countries in establishing and maintaining observation systems and related data and monitoring systems;

(e) The completeness of the information reported on education, training and public awareness by specifying the extent of public participation in the process of preparing and reviewing its NC;

(f) The completeness of the supplementary information related to the Kyoto Protocol reported by providing information on the steps it has taken to promote and/or implement any ICAO and IMO decisions at the national level. Austria also improved the transparency of its reporting of the supplementary information related to the Kyoto Protocol reported by including in its NC specific, detailed information on how the enforcement procedures it has in place to meet its commitments under the Kyoto Protocol will be implemented; the procedures for addressing cases of non-compliance under domestic law; how it strives to implement PaMs under Article 2 of the Kyoto Protocol in such a way as to minimize adverse effects, including the adverse effects of climate change, effects on international trade, and social, environmental and economic impacts on other Parties; and the support provided for the purpose of assisting developing country Parties that are particularly vulnerable to the adverse effects of climate change in meeting the costs of adaptation to those adverse effects.

Table 1
**Assessment of completeness and transparency of mandatory information reported by Austria in its eighth national communication**

| *Section of NC* | *Completeness* | *Transparency* | *Reference to description of recommendations* |
|---|---|---|---|
| Executive summary | Complete | Transparent | |
| National circumstances relevant to GHG emissions and removals | Complete | Transparent | |
| GHG inventory | Complete | Transparent | |
| PaMs | Complete | Transparent | |
| Projections and the total effect of PaMs | Complete | Transparent | |
| Vulnerability assessment, climate change impacts and adaptation measures | Complete | Transparent | |
| Financial resources and transfer of technology | Complete | Mostly transparent | Issues 1–2 in table I.3 |
| Research and systematic observation | Complete | Transparent | |
| Education, training and public awareness | Complete | Transparent | |

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

Table 2
**Assessment of completeness and transparency of mandatory supplementary information under the Kyoto Protocol reported by Austria in its eighth national communication**

| *Supplementary information under the Kyoto Protocol* | *Completeness* | *Transparency* | *Reference to description of finding(s)* |
|---|---|---|---|
| National system | Complete | Transparent | |
| National registry | Complete | Transparent | |
| Supplementarity relating to the mechanisms pursuant to Articles 6, 12 and 17 | Complete | Transparent | |
| PaMs in accordance with Article 2 | Complete | Transparent | |
| Domestic and regional programmes and/or arrangements and procedures | Complete | Transparent | |
| Information under Article 10[a] | Complete | Transparent | |
| Financial resources | Complete | Transparent | |
| Minimization of adverse impacts in accordance with Article 3, paragraph 14 | Complete | Transparent | |

*Note*: A list of findings pertaining to the completeness and transparency issues identified in this table is included in annex I. The assessment of completeness and transparency by the ERT in this table is based only on the "shall" reporting requirements.

[a] The assessment refers to information provided by the Party on the provisions contained in Article 4, paras. 3, 5 and 7, of the Convention, as reported under Article 10 of the Kyoto Protocol, which is relevant to Annex II Parties only. An assessment of the information on the other provisions of Article 10 of the Kyoto Protocol is provided under the relevant substantive headings under the Convention, for example research and systematic observation.

9. Issues and gaps identified by the ERT related to the reported information by Austria in its BR5 are presented in table 3. The information reported mostly adheres to the UNFCCC reporting guidelines on BRs. The ERT notes that issue 1 in table II.2 has been identified in three successive reviews.

10. Austria made improvements to the reporting in its BR5 compared with that in its BR4, including by addressing some recommendations and encouragements from the previous review report. The ERT noted that the Party has improved:

(a) The completeness of the information reported on progress in achievement of quantified economy-wide emission reduction targets and relevant information by providing details on the changes to institutional arrangements and on the assessment of the economic and social consequences of response measures. Austria also improved the transparency of its reporting on this matter by explaining in the BR the reason, which related to national circumstances, for not providing a quantitative estimate of the impact of individual PaMs, or collections of PaMs;

(b) The completeness of the information reported on projections by presenting a WAM scenario and explaining why it did not prepare a WOM scenario;

(c) The completeness of the information reported on the provision of financial, technological and capacity-building support to developing country Parties by reporting on the financial support it has provided, committed and/or pledged for assisting non-Annex I Parties in reducing their GHG emissions and adapting to the adverse effects of climate change, and any economic and social consequences of response measures in this regard; on the private finance 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. Austria also improved the transparency of its reporting on the provision of financial, technological and capacity-building support to developing country Parties by including the total amount of support provided to non-Annex I Parties in CTF tables 7 and 7(b); comprehensively describing its national approach to tracking the provision of financial, technological and capacity-building support, including the methodologies used for tracking financial support provided; clearly describing how it seeks to ensure that the resources it provides effectively address the needs of non-Annex I Parties with regard to climate change adaptation and mitigation; and 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.

Table 3
**Summary of completeness and transparency of mandatory information reported by Austria in its fifth biennial report**

| *Section of BR* | *Completeness* | *Transparency* | *Reference to description of finding(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 | Transparent | |
| Provision of support to developing country Parties | Complete | Mostly transparent | Issue 1 in table II.2 |

*Note*: A list of findings pertaining to the completeness and transparency issues identified in this table is included in annex II. The assessment of completeness and transparency by the ERT in this table is based only on the "shall" reporting requirements.

11. The CTF table resubmissions made in response to the review by the ERT improved the reporting of the WEM and WAM scenarios by including in CTF tables 6(a) and 6(c) the projections under the respective sectors instead of under "other".

# II. Technical review of the information reported in the eighth national communication and fifth biennial report

## A. National circumstances relevant to greenhouse gas emissions and removals

### 1. Technical assessment of the reported information

12. The NC8 contains key data on legislation, population trends, geography and land use, climate and climate change, economic developments, energy, transport, the buildings sector, industry, trade, the services sector, agriculture, forestry, waste and wastewater. The report provides information on the drivers of emissions and on how national circumstances and changes to them affect GHG emissions and removals over time. The energy profile of Austria shows that the country depends on fossil fuels for its energy supply (34 per cent oil, 23 per cent natural gas and 8 per cent coal in 2020). Total gross energy consumption increased by 37 per cent from 1990 to 2005, with the total consumption of coal, oil and gas increasing by 33 per cent. During 2005–2020, total energy consumption decreased by 6 per cent, with the total consumption of coal, oil and gas decreasing by 22 per cent. The dominant sector in terms of final energy consumption is transport (under the energy sector) (32 per cent in 2020). Other large consumers of energy in 2020 were industry (29 per cent), households (27 per cent) and the service sector (10 per cent). In addition to having the largest final energy consumption, the transport sector has shown the strongest increase in consumption since 1990. One significant reason for the rise is an increase in the amount of fuel sold in Austria but consumed abroad (known as "fuel tourism"), which stems from the country having the lowest tax rate on road fuels (diesel and gasoline) of neighbouring EU countries. Public transport comprises a significant share of the transport sector, accounting for about one quarter of all passenger-kilometres in 2020. Railways account for nearly a quarter of freight transport. In 2020, renewable energy sources had a share in Austria's energy supply of 32 per cent, comprising 11 per cent hydropower and 21 per cent other renewables (more than half of which is biomass).

13. Austria saw a significant decrease in GHG emissions between 2019 and 2020 stemming from the COVID-19 pandemic, the largest effects of which were on transport and industry. In 2019–2020, energy sector emissions decreased by 9.2 per cent owing to lower diesel oil and motor gasoline sales for transport, the decommissioning of coal-fired power plants and less electricity production from natural gas power plants; and IPPU sector emissions decreased by 6.2 per cent owing to a reduction in iron and steel production and to a decline in the use of F-gases.

14. The ERT noted that during 1996–2020, Austria's GDP per capita increased by 85 per cent, while GHG emissions per GDP unit and GHG emissions per capita decreased by 37.3 and 11.0 per cent respectively, showing a clear decoupling of GHG emissions from GDP and energy consumption.

### 2. Assessment of adherence to the reporting guidelines

15. The ERT assessed the information reported in the NC8 of Austria and recognized that the reporting is complete and transparent, and thus adheres to the UNFCCC reporting guidelines on NCs. There were no issues raised during the review relating to the topics discussed in this chapter of the review report.

## B. Greenhouse gas inventory information[4]

### 1. Technical assessment of the reported information

16. Austria reported information in its BR5 and NC8 on its historical GHG emissions and inventory arrangements. Based on data in its 2022 NIR, Austria reported that total GHG

[4] GHG emission data in this section are based on Austria's 2023 annual submission, version 2. All emission data in subsequent chapters are based on Austria's BR5 CTF tables unless otherwise noted.

emissions[5] excluding emissions and removals from LULUCF decreased by 6.2 per cent between 1990 and 2020, whereas total GHG emissions including net emissions or removals from LULUCF increased by 9.0 per cent over the same period. Following its NC8 and BR5 submission, Austria submitted its 2023 NIR, which contains updated emission data. According to these updated data, emissions excluding LULUCF decreased by 6.5 per cent between 1990 and 2020 and emissions including LULUCF increased by 2.8 per cent in the same period. Changes in emission data reported in the 2023 NIR compared with the 2022 NIR stem from methodological updates, including the transition from the use of GWP values from the AR4 for the 2022 inventory to those from the AR5 for the 2023 inventory. These changes do not significantly alter the trends in emissions, except for the LULUCF sector, which is presented as a stronger sink in the 2023 NIR (5.2 Mt $CO_2$ eq removals in 2020) than in the 2022 NIR (1.3 Mt $CO_2$ eq removals in 2020). The changes in LULUCF sector removals result mainly from recalculations made for the forestry sector arising from the incorporation into the GHG inventory of the results of the national forest inventory 2016–2021 and from a change in the emission calculation method for the soil carbon pool involving new simulations made with the Yasso20 model.

17. Emissions peaked in 2005 (92.6 Mt $CO_2$ eq), decreased in 2006–2014, remained nearly constant until 2019, and decreased sharply in 2020 owing to the impacts of the COVID-19 pandemic. Data from the 2023 NIR indicate a rebound in GHG emissions (excluding LULUCF) in 2021, that is, a 4.9 per cent increase between 2020 and 2021, which is largely attributable to economic recovery from the pandemic. The total emissions were driven upward by a growth in road transport emissions, which, in turn, were driven by increases in demand for inland transport and in fuel sold for road transport in Austria but consumed in neighbouring countries. At the same time, emissions of some other sectors decreased, with waste sector emissions decreasing mainly owing to a reduction in organic waste deposited in landfills, agriculture sector emissions decreasing owing to the adoption of more sustainable farming practices, and energy sector emissions decreasing mainly owing to the use of gas instead of solid and liquid fuels and to energy efficiency gains in the sector.

18. Table 4 illustrates the emission trends by sector and by gas for Austria. The emissions reported in the 2022 annual submission are the same as those reported in CTF table 1.

Table 4
**Greenhouse gas emissions by sector and by gas for Austria for 1990–2021**

| | *GHG emissions (kt $CO_2$ eq)* | | | | | *Change (%)* | | *Share (%)* | |
|---|---|---|---|---|---|---|---|---|---|
| | *1990* | *2000* | *2010* | *2020* | *2021* | *1990–2020* | *2020–2021* | *1990* | *2021* |
| *Sector* | | | | | | | | | |
| 1. Energy | 52 664.96 | 55 291.16 | 59 281.15 | 49 930.23 | 52 141.96 | –5.2 | 4.4 | 66.6 | 67.3 |
| A1. Energy industries | 14 007.51 | 12 314.54 | 13 747.13 | 8 799.60 | 8 854.59 | –37.2 | 0.6 | 17.7 | 11.4 |
| A2. Manufacturing industries and construction | 9 609.32 | 10 023.42 | 11 188.46 | 10 522.10 | 10 923.19 | 9.52 | 3.8 | 12.2 | 14.1 |
| A3. Transport | 13 951.91 | 18 792.05 | 22 566.96 | 24 507.72 | 21 932.19 | 51.6 | 3.7 | 17.6 | 28.3 |
| A4. and A5. Other | 14 322.24 | 13 624.64 | 11 276.44 | 9 097.53 | 10 100.65 | –42.6 | 11.0 | 18.1 | 12.0 |
| B. Fugitive emissions from fuels | 773.98 | 536.51 | 502.16 | 355.38 | 331.35 | –54.1 | –6.8 | 1.0 | 0.4 |
| C. $CO_2$ transport and storage | NO | NO | NO | NO | NO | – | – | – | – |
| 2. IPPU | 13 615.38 | 14 407.62 | 15 934.62 | 15 523.86 | 16 958.65 | 14.0 | 9.2 | 17.2 | 21.9 |
| 3. Agriculture | 8 399.71 | 7 643.63 | 7 188.18 | 7197.46 | 7 221.16 | –14.3 | 0.3 | 10.3 | 9.3 |
| 4. LULUCF | –12 207.43 | –14 284.03 | –19 759.10 | –5 222.20 | –10 401.70 | –57.2 | 99.2 | NA | NA |
| 5. Waste | 4 367.18 | 3 276.96 | 2 289.35 | 1 259.29 | 1 210.58 | –71.2 | –3.9 | 5.0 | 1.6 |
| 6. Other[a] | NO | NO | NO | NO | NO | – | – | – | – |

[5] 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* | *2020* | *2021* | *1990–2020* | *2020–2021* | *1990* | *2021* |
| *Gas*[b] | | | | | | | | | |
| $CO_2$ | 62 167.16 | 66 171.72 | 72 017.32 | 62 121.25 | 66 018.63 | –0.1 | 6.3 | 78.6 | 85.1 |
| $CH_4$ | 11 318.85 | 9 217.85 | 7 835.56 | 6 502.90 | 6 499.26 | –42.5 | –0.1 | 14.3 | 8.4 |
| $N_2O$ | 4 011.19 | 3 871.50 | 2 994.28 | 3 088.92 | 3 122.74 | –23.0 | 1.1 | 5.07 | 4.0 |
| HFCs | 2.04 | 676.69 | 1 425.57 | 1 704.97 | 1 485.82 | 83 383.4 | –12.9 | 0.0 | 1.9 |
| PFCs | 1 062.93 | 79.61 | 70.51 | 27.02 | 23.40 | –97.5 | –13.4 | 0.1 | 0.0 |
| $SF_6$ | 485.06 | 592.17 | 346.18 | 454.52 | 370.53 | –6.30 | –18.5 | 0.6 | 0.5 |
| $NF_3$ | NO, NA | 9.84 | 3.85 | 11.27 | 11.96 | 100.00 | 6.1 | – | 0.0 |
| **Total GHG emissions excluding LULUCF** | **79 047.23** | **80 619.36** | **84 693.29** | **73 910.84** | **77 532.35** | **–6.50** | **4.9** | **100.0** | **100.0** |
| **Total GHG emissions including LULUCF** | **66 839.80** | **66 335.33** | **64 934.19** | **68 688.65** | **67 130.65** | **2.77** | **–2.3** | **NA** | **NA** |

*Source*: GHG emission data: Austria's 2023 annual submission, version 2.
[a] Emissions and removals reported under the sector other (sector 6) are not included in total GHG emissions.
[b] Emissions by gas without LULUCF. The Party did not report indirect $CO_2$ emissions.

19. In brief, Austria's national inventory arrangements were established in accordance with the Environmental Control Act, which entered into force on 1 January 1999. Under this Act, Environment Agency Austria was designated as the single national entity with overall responsibility for inventory preparation. In addition, the Act regulates the responsibilities of environmental control in Austria and lists the tasks of the Agency. Environment Agency Austria has established an autonomous inspection body for emission inventories, which has developed 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 BR4.

### 2. Assessment of adherence to the reporting guidelines

20. The ERT assessed the information reported in the NC8 and BR5 of Austria and recognized that the reporting is complete and transparent, and thus adheres to the UNFCCC reporting guidelines on NCs and 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. National system for the estimation of anthropogenic emissions by sources and removals by sinks

#### (a) Technical assessment of the reported information

21. Austria provided in the NC8 a description of how its national system for the estimation of anthropogenic emissions by sources and removals by sinks of all GHGs not controlled by the Montreal Protocol is performing the general and specific functions defined in the annex to decision 19/CMP.1 in conjunction with decisions 3/CMP.11 and 4/CMP.11. The description includes all the elements mandated by paragraph 30 of the annex to decision 15/CMP.1. The NC8 also contains a reference to the description of the national system provided in the NIR of the 2022 annual submission. The ERT took note of Austria's statement that its national system has not changed since the BR4.

#### (b) Assessment of adherence to the reporting guidelines

22. The ERT assessed the information reported in the NC8 of Austria and recognized that the reporting is complete and transparent, and thus adheres to the reporting guidelines for supplementary information. No issues relating to the topics discussed in this chapter of the review report were raised during the review.

### 4. National registry

#### (a) Technical assessment of the reported information

23. In its NC8 Austria provided information on how its national registry performs the functions in accordance with the annex to decision 13/CMP.1 in conjunction with decision 3/CMP.11 and the annex to decision 5/CMP.1 and complies with the requirements of the technical standards for data exchange between registry systems.

#### (b) Assessment of adherence to the reporting guidelines

24. The ERT assessed the information reported in the NC8 of Austria and recognized that the reporting is complete and transparent, and thus adheres to the reporting guidelines for supplementary information. No issues relating to the topics discussed in this chapter of the review report were raised during the review.

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

### 1. Technical assessment of the reported information

25. Austria reported information on its economy-wide emission reduction target in its BR5. 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.

26. 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 GWP 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.

27. The EU-wide targets are primarily implemented through the EU ETS and ESD. The EU ETS covers mainly point emissions sources in the energy, industry and aviation sectors. An EU-wide emission cap was put in place for 2013–2020 for the EU ETS with the goal of reducing emissions by 21 per cent below the 2005 level by 2020. For 2030, a reduction target of 62 per cent below the 2005 level has been set for emissions covered by the EU ETS. The ESD became operational in 2013 and covers sectors outside the EU ETS, including transport (excluding aviation and international maritime transport), residential and commercial buildings, agriculture, small industry and waste. The ESD is regulated through targets for each member State that add up to a reduction at the EU level of 10 per cent below the 2005 level by 2020. The ESR, the successor to the ESD, was adopted in 2018 and amended in 2023 with the target of reducing emissions covered under the ESR by 40 per cent below the 2005 level by 2030.

28. 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.

29. 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 2050 climate-neutrality target was made binding in the first European Climate Law, adopted in 2021. It also increased the ambition of the 2030 emission reduction target to at least 55 per cent below the 1990 level. Member States will set out any increased ambition in the update of their national energy and climate plans.

30. Austria has a national target of reducing its emissions to 16 per cent below the 2005 level by 2020 for ESD sectors. This target has been translated into binding quantified AEAs

for 2013–2020. Austria's AEAs change following a path from 52.63 Mt $CO_2$ eq in 2013 to 47.75 Mt $CO_2$ eq in 2020.[6] Under the ESR, Austria has a national target of reducing emissions from covered sectors to 48 per cent below the 2005 level by 2030.

31. Austria also reported on its longer-term targets. Austria's long-term strategy, which was adopted in 2019 under the previous federal Government, has climate neutrality in 2050 as its main target. The current federal Government aims to achieve climate neutrality by 2040, although it is a declaration of intent by the governing coalition and has no legal status yet. Targets have also been adopted at other levels of administration; for example, in 2020 the provincial government of Vienna declared its intention to reach climate neutrality in 2040. During the review, Austria explained that national GHG targets will be determined by 2023 and that they will comply with EU targets in the Fit for 55 legislative package.

### 2. Assessment of adherence to the reporting guidelines

32. The ERT assessed the information reported in the BR5 of Austria and recognized that the reporting is complete and transparent, and thus adheres 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.

## D. Information on policies and measures

### 1. Technical assessment of the reported information

33. Austria provided in its NC8 and BR5 information on its PaMs[7] implemented and planned to fulfil its commitments under the Convention. Austria's set of PaMs is similar to that previously reported. Austria clearly identified additional developments in certain existing PaMs as "enhancements" or "further enhancements". For example, for the 2008 policy "Increase energy efficiency in energy and manufacturing industries", the planned legislative revision and target update was reported as "Further enhancement of energy efficiency in energy and manufacturing industries (WAM)" and the planned increase of quantitative targets in the Renewable Energy Expansion Act was reported as "Further enhancement of renewable energy in energy supply (WAM)". Austria reported seven such PaMs marked for development, which focus on the energy and transport sectors. Six new planned PaMs were reported for the agriculture and LULUCF sectors. In total, Austria reported 13 new planned PaMs.

34. 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. Austria also provided information on changes to its institutional, legal, administrative and procedural arrangements used for domestic compliance, monitoring, reporting, archiving of information and evaluation of progress towards its target. Institutional, legal, administrative and procedural arrangements with respect to Austria's target under the ESD have been established in accordance with the Climate Change Act. The responsibilities of various ministries are stipulated by the Federal Ministries Act. The overall responsibility for climate change policymaking lies with the Ministry for Climate Action, Environment, Energy, Mobility, Innovation and Technology, which is responsible for issues relating to climate change as well as for those relating to energy and transport. The National Climate Change Committee, which comprises high-level representatives of the federal and provincial governments, political parties from the first chamber of the Austrian Parliament and civil society organizations, supports the coordination of climate change related measures. A separate organization, Environment Agency Austria, is responsible for preparing the national inventory and projections. Austria reported changes to its institutional arrangements arising from the 2020 change in government, namely the creation of the Ministry for Climate Action, Environment, Energy, Mobility, Innovation and Technology and the Department of General Climate Policy thereunder. The new Ministry centralized the responsibilities related to

[6] According to the EU transaction log.

[7] The UNFCCC reporting guidelines on BRs use the term "mitigation actions", whereas the UNFCCC reporting guidelines on NCs use the term "policies and measures". The terms are used interchangeably in this report to refer to the relevant information in either the NC or BR.

climate change issues, including those concerning the most important sectors from a climate change perspective (energy and transport), which had earlier been distributed across different ministries.

35. Austria's assessment of the economic and social consequences of its response measures includes, at the national level, mandatory government-wide impact assessments of proposed federal legislation, which cover its economic, environmental and social consequences, as appropriate. In addition, Austrian policies are largely determined by EU policies, which are subject to extensive impact assessments under EU legislation. Austria reported that its actions to identify and review its own policies and practices that encourage activities that lead to greater levels of emissions include updating data and information on subsidies and tax exemptions, including those stemming from EU provisions and international regulations, that are counterproductive to climate change mitigation. The key harmful subsidies identified include a cap on energy taxes for energy-intensive industries, which was put in place to avoid national companies being at a disadvantage relative to international competitors; the lower tax rate for diesel fuel relative to gasoline, which was set to support export-oriented Austrian industries; and distance-dependant tax reductions for commuters, which have been applied to facilitate the mobility of workers. The Government has commissioned a study, to be undertaken by the Ministry of Finance and the Ministry for Climate Action, Environment, Energy, Mobility, Innovation and Technology, to serve as a robust basis for further steps to reduce or eliminate these subsidies.

36. In its reporting on PaMs, Austria provided the estimated emission reduction impacts for some of its PaMs. Estimated impacts were provided for some but not all PaMs in the energy sector and were not provided for any PaMs in the IPPU, agriculture, LULUCF and waste sectors. Where estimated impacts were not provided, the Party supplied an explanation applicable to all PaMs. The Party explained that estimated impacts were not provided for some PaMs because information on the effects of individual mitigation actions is available only for a limited number of PaMs, owing to a lack of regulations for estimating, monitoring and reporting the effects of PaMs. This is particularly the case where a policy or measure has been established to achieve a policy goal that is not emission reduction (e.g. air pollution mitigation or road safety) but has emission reduction as a co-benefit or where responsibility for implementation of the policy or measure is shared among national agencies or among federal, provincial and municipal jurisdictions.

37. 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 2021 European Climate Law, which forms part of the European Green Deal, made climate neutrality by 2050 legally binding and raised the EU-wide 2030 emission reduction target to at least 55 per cent compared with the 1990 level. In 2023, the EU adopted several pieces of legislation that were part of the "Fit for 55" package intended to help achieve the new 2030 target. These new laws strengthened both the ESR and EU ETS 2030 targets, extended the EU ETS to include maritime shipping in 2024 and established the Social Climate Fund to address equitability of mitigation impacts. They also created the EU ETS 2 to cover at the point of distribution most fuel used in sectors not covered by the EU ETS, beginning in 2027.

38. The 2021–2030 EU-wide policies are operationalized through the national energy and climate plans of EU member States, which should set out national objectives for each of the five dimensions of the Energy Union, namely energy security; the internal energy market; energy efficiency; decarbonization; and research, innovation and competitiveness. The national energy and climate plans are periodically updated to reflect changes to EU policy, such as the implementation of the European Green Deal. Austria's national energy and climate plan specifies an increase in the share of renewable energy in energy consumption to 46–50 per cent and an improvement in primary energy intensity of 25–30 per cent. Austria's existing national energy and climate plan (for 2030, adopted in December 2019) is to be amended according to Article 14 of the EU regulation on the governance of the Energy Union and climate action (2018/1999); the draft plan is to be submitted to the European Commission

by mid-2023 and the final plan by mid-2024. Austria's key actions under the revised plan will focus on promoting decarbonization, energy efficiency, energy security, the single-energy market, and research, innovation and competitiveness. Its revised plan will align with the EU Fit for 55 legislative package. The ERT noted that Austria did not make use of flexibility provisions under the ESD. The ESD target was reached by domestic measures.

39. Austria introduced national-level policies to achieve its targets under the ESD and domestic emission reduction targets. The key policies reported are the Climate Protection Act (2011) and the national mitigation programme, which provide rules on the development and implementation of the PaMs necessary to meet the 2020 target under the ESD. The mitigation effect of the measure aimed at increasing the share of renewable energy in energy supply and district heating is the most significant for 2020; it will reduce emissions by an estimated 4,200 kt $CO_2$ eq. The mitigation effect of the measure aimed at increasing the share of clean energy sources in road transport is the most significant for 2030; it will reduce emissions by an estimated 4,500 kt $CO_2$ eq. The ERT noted the difficulty in confirming which PaMs delivered the most significant emission reductions for 2020 as the estimated mitigation effects of most PaMs were not provided for 2020. Other policies that are expected to deliver significant emission reductions for 2030 are those aimed at increasing fuel efficiency in road transport; they have a combined estimated mitigation impact of 2,000 kt $CO_2$ eq.

40. The ERT, on the basis of the information provided during the review, identified the KlimaTicket Ö transport ticketing system as a mitigation action of particular interest because it provides a market incentive for the public to use public transport across Austria while raising awareness of climate change and promoting enduring behavioural change. The ticket allows commuters to use all scheduled services (public and private rail and other transport) within specific areas and regions nationwide, for one year at an affordable price. The revenue generated by the system is used to modernize and continually expand climate-friendly transportation.

41. Austria highlighted the domestic mitigation actions that are under development, such as those being revised to align with the more ambitious 2030 target of the EU to reduce domestic emissions by at least 55 per cent compared with the 1990 level. These include measures aimed at further enhancing the share of renewable energy in energy supply with an estimated mitigation impact of 8,500 kt $CO_2$ eq in 2030; those aimed at further enhancing energy efficiency in energy and manufacturing industries with an estimated mitigation impact of 1,700 kt $CO_2$ eq in 2030; those aimed at further enhancing clean energy sources for transport with an estimated mitigation impact of 1,100 kt $CO_2$ eq; and those aimed at promoting the consideration of climate mitigation in spatial planning and mobility management with an estimated mitigation impact of 1,100 kt $CO_2$ eq.

42. During the in-country review, Austria highlighted additional key planned mitigation actions. Among the mitigation actions that provide a foundation for significant additional action are the Renewable Deployment Act, the aim of which is to achieve a 100 per cent share of renewable energy for electricity generation by 2030; the Renewable Heat Act (under the legislative process in parliament), the aim of which is to phase out oil heating by 2035 and natural gas heating by 2040; the Renewable Gas Act (under the legislative process in parliament), by which a quota system for renewable hydrogen and biomethane will be established; public support schemes, which provide approximately EUR 10 billion between 2022 and 2030 to support individual and industry investments in buildings and energy efficiency, among others; and the National Emissions Trading Law, which covers sectors not included in the EU ETS and is supported by Climate Bonus (which provides households with compensation for the new $CO_2$ tax mandated in the National Emissions Trading Law). Table 5 provides a summary of the reported information on the PaMs of Austria.

Table 5
**Summary of information on policies and measures reported by Austria**

| *Sector* | *Key PaMs* | *Estimated mitigation impact in 2020 (kt $CO_2$ eq)* | *Estimated mitigation impact in 2030 (kt $CO_2$ eq)* |
|---|---|---|---|
| Policy framework and cross-sectoral measures | EU ETS (implemented in 2005) | NE | NE |

| *Sector* | *Key PaMs* | *Estimated mitigation impact in 2020 (kt $CO_2$ eq)* | *Estimated mitigation impact in 2030 (kt $CO_2$ eq)* |
|---|---|---|---|
| | Climate Protection Act (implemented in 2011) | NE | NE |
| Energy | | | |
| Electricity efficiency | Further enhance energy efficiency in energy and manufacturing industries (planned) | NA | 1 700 |
| Energy supply and renewable energy | Further enhance renewable energy in energy supply (planned) | NA | 8 500 |
| | Increase the share of renewable energy in energy supply and district heating (implemented in 2002) | 4 200 | NE |
| Transport | Increase the share of clean energy sources in road transport (implemented in 2004) | NE | 4 500 |
| | Improve fuel efficiency in road transport (implemented in 2004) | NE | 2 000 |
| IPPU | Reduce emissions from the use of F-gases and other product use (implemented in 2002) | NE | NE |
| Agriculture | Apply EU agricultural policies (implemented in 2007) | NE | NE |
| LULUCF | Apply sustainable forest management practices (implemented in 1975) | NE | NE |
| Waste | Reduce emissions from waste treatment (implemented in 1997) | NE | NE |

*Note*: The estimated mitigation impacts are estimates of emissions of $CO_2$ eq avoided in a given year as a result of the implementation of mitigation actions, unless otherwise specified.

43. The ERT acknowledged the significant work carried out by Austria in developing and implementing its climate change mitigation PaMs. However, the transparency of the NC8 and BR5 could have been improved by communicating the effect, scope and scale of key instruments under the thematic groups of PaMs (referred to as "principle policies" during the review). For example, under the thematic measure "Increasing share of renewable energy in energy supply and district heating", the Party could include the Renewable Deployment Act, which has a quantitative objective of 100 per cent renewable energy by 2030. Most of the encouragements referred to in tables I.1–I.2 could be addressed by the provision of such information on specific measures.

### 2. Assessment of adherence to the reporting guidelines

44. The ERT assessed the information reported in the NC8 and BR5 of Austria and identified issues relating to transparency, and thus adherence to the UNFCCC reporting guidelines on NCs. The findings are described in table I.1.

### 3. Domestic and regional programmes and legislative arrangements and procedures related to the Kyoto Protocol

#### (a) Technical assessment of the reported information

45. In its NC8, Austria reported that the implementation of the Kyoto Protocol is underpinned by the Climate Protection Act (2011). The overall responsibility for climate change policymaking lies with the Ministry for Climate Action, Environment, Energy, Mobility, Innovation and Technology, which was created in 2020. The Department of General Climate Policy under the new Ministry is responsible for formulating policies on climate change.

46. For the second commitment period of the Kyoto Protocol, from 2013 to 2020, Austria committed to contributing to the joint EU effort to reduce GHG emissions by 20 per cent below the base-year level (see paras. 25–27 above).

47. The Party has arrangements and enforcement procedures to meet its commitments under the Kyoto Protocol, including procedures for addressing non-compliance. There is no

uniform legal framework for implementing national measures to mitigate climate change, with legislative arrangements for implementing measures varying across jurisdictions. The legal basis for the implementation of individual instruments varies and includes legislation for public subsidies or taxation, market regulation, and technical regulation of motor vehicles and buildings. Administrative procedures for implementation and monitoring vary by type of measure. Responsibility for the implementation of key policies is shared across the different levels of government – federal, provincial and municipal.

48. Austria has provisions in place to make information on legislative arrangements and administrative procedures related to compliance and enforcement publicly accessible, such as awareness-raising campaigns and other initiatives organized and funded by the federal and provincial governments. These initiatives provide incentives for implementing measures to protect the climate system, including in the areas of energy, transport and agriculture. The Party reported that Climate Alliance Austria, a network of about 1,000 municipalities, 4,000 private companies and 760 educational institutions, organizes educational programmes and awareness-raising events. Austria noted that public awareness of climate change issues in the country is high.

49. Austria has national legislative arrangements and administrative procedures in place that seek to ensure that the implementation of activities under Article 3, paragraph 3, and any elected activities under Article 3, paragraph 4, of the Kyoto Protocol also contributes to the conservation of biodiversity and the sustainable use of natural resources. At the national level, mandatory government-wide impact assessments of proposed federal legislation, which cover its economic, environmental and social consequences, as appropriate, are in place. These assessments target all PaMs, including those to combat climate change, and require information on the federal budget, economic and environmental impacts, and gender equality. The impact assessments are prepared by the administrative units responsible for the legislative proposals and are published on the website of the Austrian Parliament as part of those proposals.

### (b) Assessment of adherence to the reporting guidelines

50. The ERT assessed the information reported in the NC8 of Austria and recognized that the reporting is complete and transparent, and thus adheres to the reporting guidelines for supplementary information. No issues relating to the topics discussed in this chapter of the review report were raised during the review.

## 4. Policies and measures in accordance with Article 2 and minimization of adverse impacts in accordance with Article 3, paragraph 14, of the Kyoto Protocol

### (a) Technical assessment of the reported information

51. In the NC8 Austria reported information on how it strives to implement PaMs under Article 2 of the Kyoto Protocol in such a way as to minimize adverse effects, including the adverse effects of climate change and effects on international trade and social, environmental and economic impacts on other Parties, especially developing country Parties. Austria noted that its contributions to international climate action do not have adverse effects on other countries – on the contrary, the reduction in GHG emissions due to Austria's commitments under the Kyoto Protocol will contribute to averting and minimizing dangerous climate change impacts worldwide. Projects under the Austrian Development Cooperation programme support developing countries in reducing their dependence on fossil carbon and in adapting to the impacts of climate change.

52. The NC8 includes information on how Austria promotes and implements the decisions of ICAO and IMO to limit emissions from aviation and marine bunker fuels. The EU, with the support of Austria, included aviation $CO_2$ emissions in the EU ETS in 2012, limiting them to 95 per cent of the historical level in 2004–2006. The EU ETS includes emissions from flights within the European Economic Area. Since 2017, Iceland, Norway, Switzerland and the United Kingdom of Great Britain and Northern Ireland have signed agreements to link the EU ETS with their respective emissions trading schemes. Austria and other member States of the EU participated in the voluntary pilot phase of the ICAO global market-based measure to limit GHG emissions from international aviation (the Carbon Offsetting and

Reduction Scheme for International Aviation), which has been fully operational since 2021. Austria has also implemented appropriate action for maritime transport (monitoring and reporting on GHG emissions of ships) at the EU level, including a regulation on the use of renewable and low-carbon fuels in maritime transport.

53. Further information on how Austria strives to implement its commitments under Article 3, paragraph 14, of the Kyoto Protocol in such a way as to minimize adverse social, environmental and economic impacts on developing country Parties was reported in the 2022 annual submission. Austria reported that it is striving with other EU member States to implement the features of the Kyoto Protocol designed to minimize adverse effects. The Party reported information on what it prioritized in implementing its commitments under Article 3, paragraph 14, namely, supporting the development, diffusion and transfer of technology relating to renewable energy and energy efficiency in developing countries through implementing substantive projects and programmes.

### (b) Assessment of adherence to the reporting guidelines

54. The ERT assessed the information reported in the NC8 of Austria and recognized that the reporting is complete and transparent, and thus adheres to the reporting guidelines for supplementary information. No issues relating to the topics discussed in this chapter of the review report were raised during the review.

## E. Estimates of emission reductions and removals and the use of units from market-based mechanisms and land use, land-use change and forestry and progress in achieving the quantified economy-wide emission reduction target

### 1. Technical assessment of the reported information

55. Austria reported in its BR5 that it did not use units from market-based mechanisms under the Kyoto Protocol and other market-based mechanisms under the Convention to meet its commitment under the ESD. It reported in CTF tables 4 and 4(b) that it did not use any units from market-based mechanisms in 2019 or 2020. Given that the contribution of LULUCF activities is not included in the joint EU target under the Convention, reporting thereon is not applicable to Austria. Table 6 illustrates Austria's ESD emissions and use of units from market-based mechanisms for achieving its ESD target.

Table 6
**Summary of information on emissions covered by the European Union effort-sharing decision annual emission allocation and use of units from market-based mechanisms by Austria**
(kt $CO_2$ eq)

| *Year* | *ESD emissions* | *AEA* | *Use of units from market-based mechanisms* | *AEAs transferred to (–) or from (+) other Parties* | *Annual AEA surplus/deficit* | *Cumulative AEA surplus/deficit* |
|---|---|---|---|---|---|---|
| 2013 | 50 097.32 | 52 625.04 | 0.00 | 0.00 | 2 527.72 | 2 527.72 |
| 2014 | 48 194.33 | 52 079.04 | 0.00 | 0.00 | 3 884.71 | 6 412.43 |
| 2015 | 49 295.42 | 51 533.04 | 0.00 | 0.00 | 2 237.62 | 8 650.05 |
| 2016 | 50 618.90 | 50 987.04 | 0.00 | 0.00 | 368.14 | 9 018.19 |
| 2017 | 51 651.77 | 49 502.69 | 0.00 | 0.00 | –2 149.08 | 6 869.11 |
| 2018 | 50 336.57 | 48 918.50 | 0.00 | 0.00 | –1 418.07 | 5 451.04 |
| 2019 | 50 218.75 | 48 334.31 | 0.00 | 0.00 | –1 884.45 | 3 566.59 |
| 2020 | 46 543.21 | 47 750.11 | 0.00 | 0.00 | 1 206.90 | 4 773.49 |

*Sources*: Austria's BR5 and BR5 CTF table 4(b) and EU transaction log (AEAs).
*Note*: For a given year, a positive number (surplus) indicates that annual or cumulative ESD emissions were lower than the corresponding AEA or cumulative AEAs, while a negative number (deficit) indicates that annual or cumulative ESD emissions were higher than the corresponding AEA or cumulative AEAs.

### 2. Assessment of adherence to the reporting guidelines

56. The ERT assessed the information reported in the BR5 of Austria and recognized that the reporting is complete and transparent, and thus adheres 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. Assessment of achievement of the quantified economy-wide emission reduction target

57. In assessing the Party's contribution towards achievement of the 2020 joint EU target on the basis of the information reported in its BR5, the ERT noted that, under the EU 2020 climate and energy package, Austria committed to reducing its emissions under the ESD to 16 per cent below the 2005 level by 2020 (see para. 30 above). This target has been translated into binding quantified AEAs for 2013–2020. In 2020 Austria's ESD emissions were 2.5 per cent (1,206.90 kt $CO_2$ eq) below the AEA. Austria has a cumulative surplus of 4,773.49 kt $CO_2$ eq with respect to its AEAs between 2013 and 2020. The ERT noted that the Party did not make use of units from market-based mechanisms in 2020.

58. The ERT noted that the Party reported in its BR5 that the total GHG emissions excluding LULUCF of the EU and including the use of units from market-based mechanisms do not exceed the emission level corresponding to the target in 2020, and thus that the EU has achieved its joint target. Therefore, the ERT concluded that, on the basis of the information reported in the BR5 and provided during the review, Austria has met its 2020 commitment under the Convention through its contribution to achieving the joint EU target (see the review report of the BR5 of the EU for further details). The ERT noted that the Party's ESD emissions in 2020 do not exceed its AEA for 2020.

59. The ERT noted the differences between EU transaction log ESD emission data (for 2013–2016) and data reported by the Party in the BR5 (table 3.2). During the review, Austria acknowledged the error.

## F. Projections

### 1. Projections overview, methodology and results

#### (a) Technical assessment of the reported information

60. Austria reported in its BR5 and NC8 updated projections for 2030–2040 relative to actual inventory data for 2020 under the WEM scenario. The WEM scenario reported by Austria includes PaMs implemented and adopted until 2018.

61. In addition to the WEM scenario, Austria reported the WAM scenario. Austria provided a definition of its scenarios, explaining that its WEM scenario includes policies that were implemented and adopted before January 2018, while its WAM scenario includes the measures in the national energy and climate plan, which was adopted at the end of 2019. The definition indicates that the scenarios were prepared in accordance with the UNFCCC reporting guidelines on BRs. However, the ERT noted that the cut-off date chosen for distinguishing implemented and planned PaMs, although relevant at the time the scenarios were developed, does not reflect the most recent policy developments because most of the planned measures included in the national energy and climate plan can be considered as implemented at the time of preparation of the NC8 and BR5.

62. Austria did not report the WOM scenario, explaining in the NC8 and BR5 that owing to the complexity of its modelling system, developing this scenario would entail considerable additional cost while having little value for policymaking and target-setting.

63. 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 2020–2040. The projections are also provided in an aggregated format for each sector and for a Party total using GWP values from the AR4. Austria reported on factors and activities affecting emissions for each sector.

64. The Party explained in the NC8 and BR5 that although projections are presented relative to 2020, which is the latest inventory year, the reference year for the scenarios is 2019, as they were developed in 2020–2021. Therefore, reported projections for 2020 are calculated and not the actual values of total GHG emissions for 2020. In addition, the Party clarified that the scenarios do not take into account the impacts of the COVID-19 pandemic, leading to higher projected emissions in 2020 than were reported in the GHG inventory.

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

65. The methodology used for the preparation of the projections is different from that used for the preparation of the emission projections for the NC7. Austria provided information on changes since the submission of its NC7 in the assumptions, methodologies, models and approaches used for the projection scenarios. Austria included a reference to its latest GHG emission projection report, which contains supporting information further explaining the methodologies and the changes made since the NC7. The changes in the methodology used for the preparation of the projections include the refinement and renaming of some models.

66. Projections for $CO_2$, $CH_4$, $N_2O$ and F-gas emissions are estimated by Environment Agency Austria with the help of sectoral forecasts of activities made using various models and methods in close collaboration with several institutions. For example, energy sector projections are developed using the national energy balance (provided by Statistics Austria) and an econometric input–output model, the Dynamic New Keynesian Model (developed by the Austrian Institute of Economic Research), and are supported by calculations made using bottom-up models such as TIMES, which is used for public electricity and district heating supply; INVERT/EE-Lab, which is used for heat demand for heating and hot water in the buildings sector; the natural emissions model (NEMO), which is used for road transport; and GEORG, a fleet model which is used for off-road transport.

67. Projections of emissions for the IPPU sector are based on expert judgment and on projections of gross value added derived from the Dynamic New Keynesian Model. F-gas projections are based on a study (Schwarz et al., 2011), supplemented by assumptions made on the basis of the latest EU legislation. Agriculture sector emission projections are based on the Positive Agricultural Sector Model Austria (PASMA). Waste sector emission projections are based on expert judgment relating to waste amounts and modes of treatment in use. Several models are used for projecting emissions for the LULUCF sector: CLADIS for forest growth, Yasso07 for soil organic carbon, PASMA for grassland and cropland, and FOHOW2 for harvested wood products. Expert judgment is used for projecting emissions from wetlands, settlements and other land.

68. Austria explained during the review that the WEM and WAM scenarios presented in its NC8 and BR5 were prepared in 2020 by updating the scenarios developed in 2019 with revised historical data (e.g. GHG inventory, energy balance, energy prices). New WEM and WAM scenarios, with updated activity data, are being developed and will be published in 2023.

69. To prepare its projections, Austria relied on key underlying assumptions relating to population, number of households, heating degree-days, energy prices and the price of the $CO_2$ certificate under the EU ETS. These assumptions are presented in CTF table 5 together with data on those parameters for 1995, 2000, 2005, 2010 and 2017. The key assumptions relate to GDP growth, the rate of which is assumed to be 1.4 per cent in 2025 and 2030 and 1.6 per cent in 2040. The prices of fossil fuels, namely, oil (USD 15.70, 17.30 and 19.10 per barrel of oil equivalent in 2025, 2030 and 2040 respectively), coal (USD 3.20, 3.80 and 4.20 per barrel of oil equivalent in 2025, 2030 and 2040 respectively) and gas (USD 9.60, 10.50 and 11.60 per barrel of oil equivalent in 2025, 2030 and 2040 respectively) are projected to increase together with the price of the $CO_2$ certificate (USD 23.30, 34.70 and 51.70 in 2025, 2030 and 2040 respectively). In contrast, the number of heating degree-days is projected to decrease (3,171, 3,118 and 3,013 in 2025, 2030 and 2040 respectively). The assumptions were not updated on the basis of the most recent economic developments known at the time of the preparation of the projections, in particular with regard to taking into account the impacts of the COVID-19 pandemic.

70. Sensitivity analyses were conducted for GDP growth, which, in turn, affects energy prices and the $CO_2$ certificate price. Two sensitivity analyses were conducted: one with a higher average GDP growth of 2.5 per cent per year than that used for the WEM scenario, which corresponds to higher prices than those under the WEM scenario (increases of 27 per cent for oil, 13 per cent for coal, 31 per cent for gas and 18 per cent for the $CO_2$ certificate in 2030) and one with a lower GDP growth of 0.8 per cent per year than that used for the WEM scenario, which corresponds to lower prices than those under the WEM scenario (decreases of 8 per cent for oil, 4 per cent for coal, 11 per cent for gas and 23 per cent for the $CO_2$ certificate in 2030). The results of the sensitivity analyses show that 2030 emissions are 7 per cent higher in the scenario with high GDP growth than in the WEM scenario and 8 per cent lower in the scenario with low GDP growth than in the WEM scenario.

### (c) Results of projections

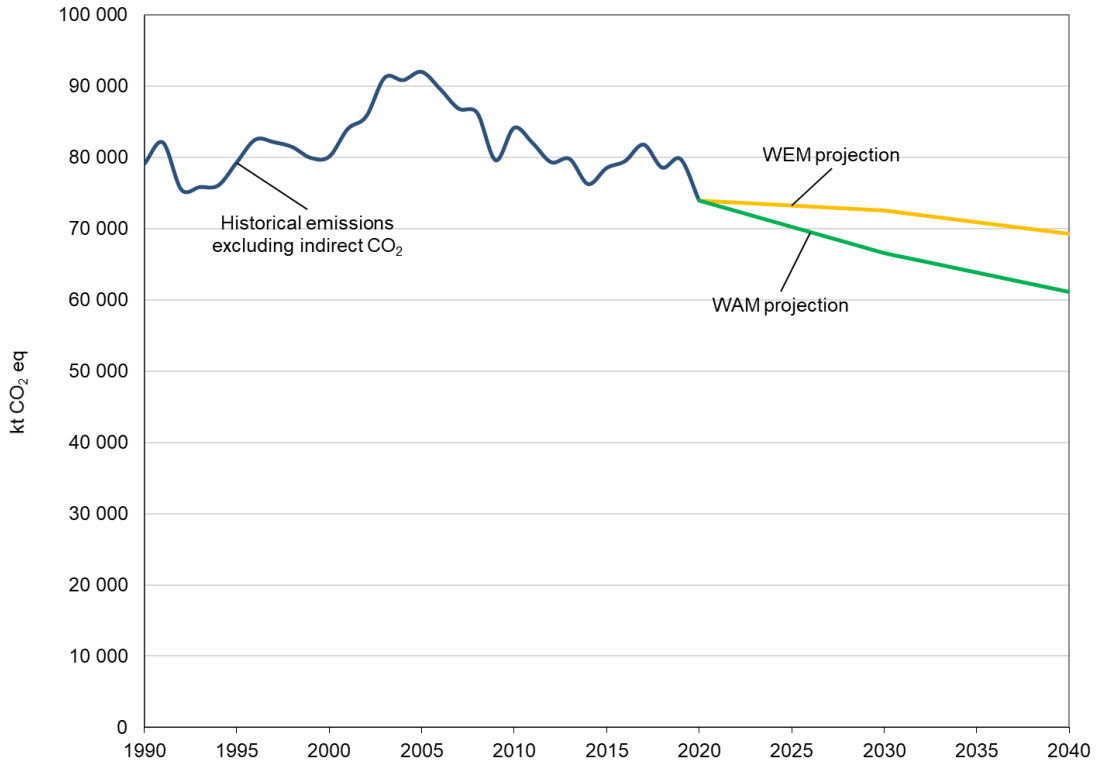
71. The projected emission levels under different scenarios are presented in table 7 and figure 1.

Table 7
**Summary of greenhouse gas emission projections for Austria**

| | *GHG emissions (kt $CO_2$ eq/year)* | *Change in relation to 1990 level (%)* | *Change in relation to 2020 level (%)* |
|---|---|---|---|
| Inventory data 1990 | 78 423.23 | – | NA |
| Inventory data 2020 | 73 592.02 | –6.2 | NA |
| WEM projections for 2030 | 72 539.56 | –7.5 | –1.4 |
| WAM projections for 2030 | 66 536.01 | –15.2 | –9.6 |
| WEM projections for 2040 | 69 329.00 | –11.6 | –5.8 |
| WAM projections for 2040 | 61 078.00 | –22.1 | –17.0 |

*Sources*: Austria's BR5 and BR5 CTF table 6.
*Note*: The projections are of GHG emissions excluding LULUCF and excluding indirect $CO_2$.

Figure 1
**Greenhouse gas emission projections reported by Austria**

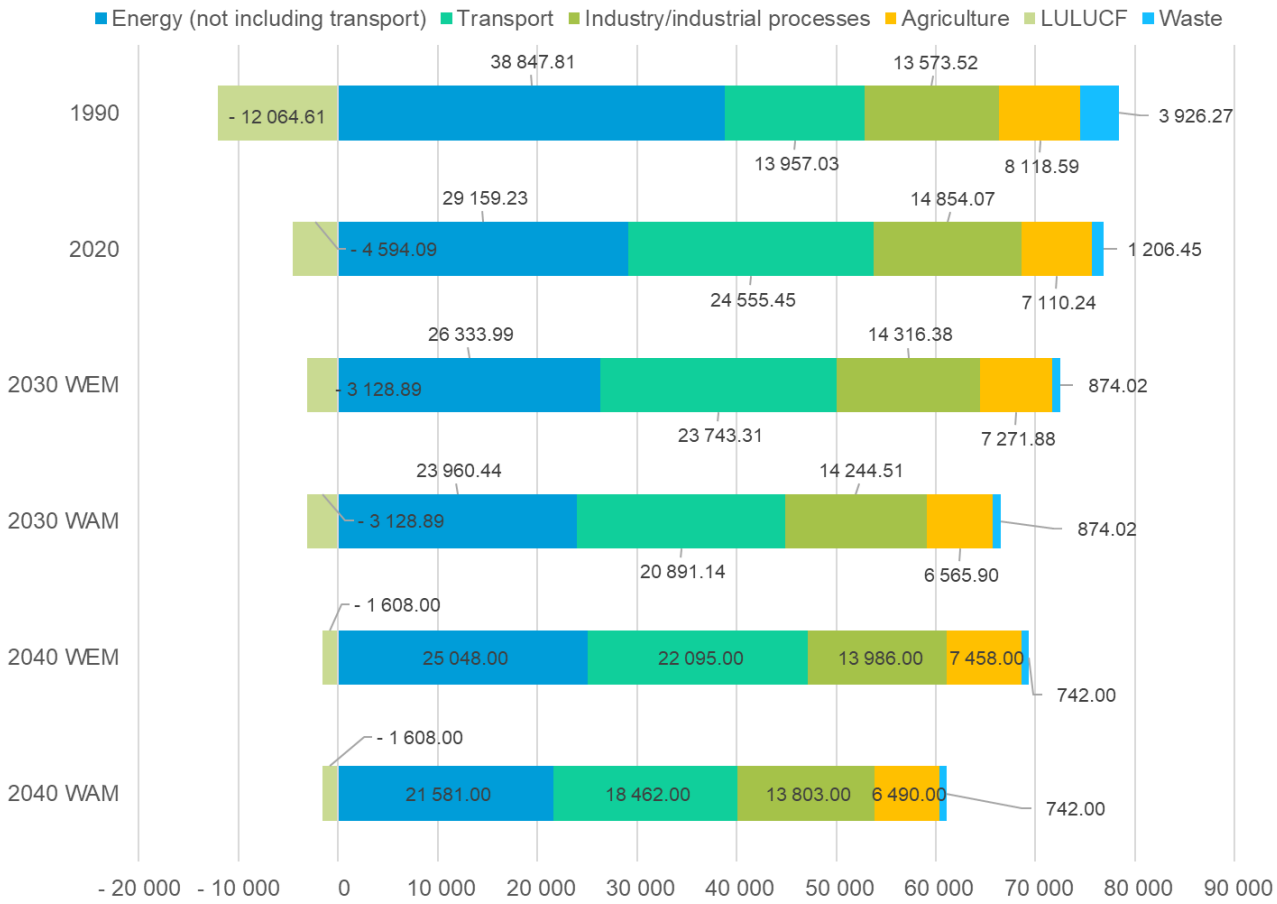



*Sources*: Austria's BR5 and BR5 CTF tables 1 and 6 (total GHG emissions excluding LULUCF) and information provided by the Party during the review.

72. Austria's total GHG emissions excluding LULUCF are projected under the WEM scenario to decrease by 7.5 and 11.6 per cent respectively below the 1990 level in 2030 and 2040. When including LULUCF, total GHG emissions are projected under the WEM scenario to increase by 4.6 and 2.1 per cent respectively above the 1990 level in 2030 and 2040. Under the WAM scenario, emissions in 2030 and 2040 excluding LULUCF are projected to be lower than those in 1990 by 15.2 and 22.1 per cent respectively.

73. Austria presented the WEM and WAM scenarios by sector for 2030 and 2040, as summarized in figure 2 and table 8.

Figure 2
**Greenhouse gas emission projections for Austria presented by sector**
(kt $CO_2$ eq)




*Source*: Austria's BR5 CTF table 6.

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

| | *GHG emissions and removals (kt $CO_2$ eq)* | | | | | *Change (%)* | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | *2030* | | *2040* | | *1990–2030* | | *1990–2040* | |
| *Sector* | *1990* | *WEM* | *WAM* | *WEM* | *WAM* | *WEM* | *WAM* | *WEM* | *WAM* |
| Energy (not including transport) | 38 847.81 | 26 333.99 | 23 960.44 | 25 048.00 | 21 581.00 | –32.23 | –38.3 | –35.5 | –44.4 |
| Transport | 13 957.03 | 23 743.31 | 20 891.14 | 22 095.00 | 18 462.00 | 70.1 | 49.7 | 58.3 | 32.3 |
| Industry/industrial processes | 13 576.52 | 14 316.38 | 14 244.51 | 13 986.00 | 13 803.00 | 5.5 | 4.9 | 3.0 | 1.7 |
| Agriculture | 8 118.59 | 7 271.88 | 6 565.90 | 7 458.00 | 6 490.00 | –10.4 | –19.1 | –8.1 | –20.1 |
| LULUCF | –12 064.61 | –3 128.89 | –3 128.89 | –1 608.00 | –1 608.00 | –74.1 | –74.1 | –86.7 | –86.7 |
| Waste | 3 926.27 | 874.02 | 874.02 | 742.00 | 742.00 | –77.7 | –77.7 | –81.1 | –81.1 |
| Other | NO | NO | NO | NO | NO | NO | NO | NO | NO |

| | *GHG emissions and removals (kt $CO_2$ eq)* | | | | | *Change (%)* | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | *2030* | | *2040* | | *1990–2030* | | *1990–2040* | |
| *Sector* | *1990* | *WEM* | *WAM* | *WEM* | *WAM* | *WEM* | *WAM* | *WEM* | *WAM* |
| **Total GHG emissions excluding LULUCF and including indirect $CO_2$** | **78 423.23** | **72 539.56** | **66 536.01** | **69 329.00** | **61 078.00** | **–7.5** | **–15.2** | **–11.6** | **–22.1** |

*Source*: Austria's BR5 CTF table 6.

74. According to the projections reported for 2030 under the WEM scenario, the most significant absolute emission reductions are expected to occur in the energy sector (in particular for buildings and energy industries), amounting to projected reductions of 32.2 per cent between 1990 and 2030. The pattern of projected emissions reported for 2040 under the WEM scenario remains the same, with the most significant emission reductions in absolute terms projected for the energy and waste management sectors (35.5 per cent and 81.1 per cent respectively).

75. The pattern of projected emissions reported for 2030 and 2040 under the WAM scenario remains largely the same, with the energy and waste sectors accounting for the most significant projected emission reductions in both years. The projected emission reductions for the energy sector in 2030 and 2040 compared with the 1990 level are 38.3 and 44.4 per cent respectively, while those for the waste sector are 77.7 and 81.1 per cent respectively. Notably, under the WAM scenario, GHG emissions for the transport sector are projected to increase in 2030 by only 49.7 per cent above the 1990 level, compared with a 70.1 per cent increase above the 1990 level under the WEM scenario. This difference is mainly attributable to measures that promote the increase of the share of electric vehicles in road transport. The further decrease in projected emissions for the energy sector under the WAM scenario compared with under the WEM scenario stems from the further shifting from fossil fuels to renewable energy sources for power generation and from further improving energy efficiency in the industry and buildings sectors. In agriculture, additional measures related to optimized feeding and improved nitrogen management lead to lower projected emissions under the WAM scenario than under the WEM scenario.

76. The ERT noted that the WEM and WAM scenarios reported by the Party do not reflect the most recent economic and policy developments taking place in Austria. For example, the scenarios do not take into account the impacts of the COVID-19 pandemic and the more recent global energy crisis. Moreover, the WAM scenario does not take into account the recent policy developments both in Austria (e.g. Renewable Heat Act, $CO_2$ price for sectors not covered by the EU ETS) and in the EU (e.g. Fit for 55 package), which will have considerable impacts on the GHG emissions trajectory of Austria. The ERT noted that Austria is producing a comprehensive update of its WAM and WEM scenarios with updated PaMs, to be finalized in 2023, which should enable it to address these significant changes relevant to GHG projections.

77. Austria presented the WEM and WAM scenarios by gas for 2030 and 2040, as summarized in table 9.

Table 9
**Summary of greenhouse gas emission projections for Austria presented by gas**

| | *GHG emissions and removals (kt $CO_2$ eq)* | | | | | *Change (%)* | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | *2030* | | *2040* | | *1990–2030* | | *1990–2040* | |
| *Gas*[a] | *1990* | *WEM* | *WAM* | *WEM* | *WAM* | *WEM* | *WAM* | *WEM* | *WAM* |
| $CO_2$ | 62 145.25 | 62 483.70 | 57 200.18 | 59 357.00 | 52 076.00 | 0.5 | –8.0 | –4.5 | –16.2 |
| $CH_4$ | 10 110.68 | 5 800.60 | 5 394.48 | 5 748.00 | 5 104.00 | –42.6 | –46.6 | –43.1 | –49.5 |
| $N_2O$ | 4 511.46 | 3 347.16 | 3 033.25 | 3 377.00 | 3 051.00 | –25.8 | –32.8 | –25.1 | –32.4 |
| HFCs | 2.44 | 755.26 | 755.26 | 680.00 | 680.00 | 30 853.3 | 30 853.3 | 27 768.9 | 27 768.9 |
| PFCs | 1 182.79 | 49.05 | 49.05 | 49.00 | 49.00 | –95.9 | -95.9 | –95.9 | –95.9 |

| | *GHG emissions and removals (kt $CO_2$ eq)* | | | | | *Change (%)* | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | *2030* | | *2040* | | *1990–2030* | | *1990–2040* | |
| *Gas*[a] | *1990* | *WEM* | *WAM* | *WEM* | *WAM* | *WEM* | *WAM* | *WEM* | *WAM* |
| $SF_6$ | 470.61 | 93.27 | 93.27 | 107.00 | 107.00 | –80.2 | –80.2 | –77.3 | –77.3 |
| $NF_3$ | 0.00 | 10.52 | 10.52 | 11.00 | 11.00 | – | – | – | – |
| **Total GHG emissions without LULUCF** | **78 423.23** | **72 539.56** | **66 536.01** | **69 329.00** | **61 078.00** | **–7.5** | **–15.2** | **–11.6** | **–22.1** |

*Source*: Austria's BR5 CTF table 6.
[a] Austria did not include indirect $CO_2$ emissions in its projections.

### (d) Assessment of adherence to the reporting guidelines

78. The ERT assessed the information reported in the NC8 and BR5 of Austria and identified issues relating to transparency, and thus adherence to the UNFCCC reporting guidelines on NCs and the UNFCCC reporting guidelines on BRs. The findings are in tables I.2 and II.1.

## 2. Assessment of the total effect of policies and measures

### (a) Technical assessment of the reported information

79. In its NC8 Austria presented the estimated and expected total effect of implemented, adopted and planned PaMs. Information is presented in terms of GHG emissions avoided or sequestered, by gas (on a $CO_2$ eq basis), in 2020, 2025, 2030 and 2035. It also presented relevant information on factors and activities for each sector for 1990–2030.

80. In the absence of a WOM scenario, Austria calculated the impact of PaMs using an indicator-based approach, which involved calculating GHG intensities for a subset of sectors for 1990–1995 and multiplying them by activity data for 2020 and for projected years to obtain 'indicator-based emissions'. The difference between the WEM scenario emissions and the indicator-based emissions constitutes an estimated representation of the impact of implemented and adopted PaMs.

81. Austria reported that the total estimated effect of its implemented and adopted PaMs since 1995 is 37.6 Mt $CO_2$ eq in 2020, 45.2 Mt $CO_2$ eq in 2025, 52.8 Mt $CO_2$ eq in 2030 and 59.6 Mt $CO_2$ eq in 2035. Austria reported that it estimated the total effect of its planned policies by calculating the difference in emissions between its WEM and WAM scenarios. During the review, the Party presented updated figures for planned PaMs, which included a correction for $CH_4$ emissions. Austria estimated that the total effect of its planned PaMs is 3.2 Mt $CO_2$ eq in 2025, 6.0 Mt $CO_2$ eq in 2030 and 7.6 Mt $CO_2$ eq in 2035.

### (b) Assessment of adherence to the reporting guidelines

82. The ERT assessed the information reported in the NC8 of Austria and recognized that the reporting is complete and transparent, and thus adheres to the UNFCCC reporting guidelines on NCs. No issues relating to the topics discussed in this chapter of the review report were raised during the review.

## 3. Supplementarity relating to the mechanisms pursuant to Articles 6, 12 and 17 of the Kyoto Protocol

### (a) Technical assessment of the reported information

83. In the NC8 Austria reported that it did not make use of the mechanisms under the Kyoto Protocol in the second commitment period. Although Austria received some CERs for the second commitment period in association with a contract signed in 2003, these CERs were not used. No new purchase contracts were signed for the second commitment period.

### (b) Assessment of adherence to the reporting guidelines

84. The ERT assessed the information reported in the NC8 of Austria and recognized that the reporting is complete and transparent, and thus adheres to the reporting guidelines for supplementary information. No issues relating to the topics discussed in this chapter of the review report were raised during the review.

## G. 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

85. In its NC8 and BR5 Austria reported information on its provision of financial, technological and capacity-building support to non-Annex I Parties.

86. Austria has provided support that it considers to be "new and additional". Its definition of "new and additional" is – similar to that provided in the NC7 and BR4 – financial support provided to non-Annex I Parties that is gradually being scaled up over time, with new programmes and projects, as well as focus areas, supplementing and extending existing initiatives. The finance provided by Austria to non-Annex I Parties in 2010–2020 shows an increasing trend. However, support provided in 2020 decreased compared with that provided in 2019. In its NC8, Austria explained the decrease as stemming from the impact of the COVID-19 pandemic on the number of new project contracts signed. During the review, the Party indicated that the financial support provided in 2021 is an increase over that provided in 2020. ODA and other official flows represent the largest source of financing.

87. Austria reported on the support that it has provided to non-Annex I Parties, distinguishing between support for mitigation, adaptation and cross-cutting activities and identifying the capacity-building elements of such support. Austria's provision of support to non-Annex I Parties is based on its international climate finance strategy for 2013–2020, which was adopted in 2013 and revised in 2016. Austria noted that it strives to achieve a balance between support for adaptation and mitigation in bilateral cooperation and that projects often address both adaptation and mitigation needs and take into account other priorities of partner countries.

88. Austria's national approach to tracking the provision of support, including information on indicators, delivery mechanisms used and allocation channels tracked, is based on its international climate finance strategy, which has a dedicated chapter on rules and methodologies for tracking and reporting financial support. The aim of these methodologies is to ensure consistency with Austria's ODA reporting as well as comparability with other climate finance providers. Austria tracks finance for adaptation and mitigation using OECD DAC methodologies, including the 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 providers. The methodologies involve identifying climate-relevant projects in a bottom-up manner using the Rio markers for mitigation and adaptation, ensuring no double counting; ascertaining climate-specific contributions to multilateral organizations using the latest DAC data on imputed multilateral shares and official DAC EUR–USD exchange rates for the reporting year; and reporting only committed finance contributions. There have been no changes to Austria's approach for tracking the provision of support since the BR4.

89. Austria's methodology and underlying assumptions used for collecting and reporting information on financial support are described in Austria's international finance strategy. The statistical division of the Austrian Development Agency, which is under the responsibility of the Ministry of European and International Affairs, compiles and archives climate finance information, as well as performing quality control thereon. Implementing agencies report to the Austrian Development Agency on the delivery of objectives of individual projects as per their contracts. The key national actors contributing to climate finance include the Ministry

of Finance, the Development Bank of Austria, the Ministry for Climate Action, Environment, Energy, Mobility, Innovation and Technology and the Austrian Development Agency.

### (b) Financial resources

90. Austria reported in its NC8 and BR5 information on its provision of financial support to non-Annex I Parties as required under the Convention, including on financial support committed and disbursed, allocation channels and annual contributions. Austria's international climate finance strategy elaborates the framework and methodologies for providing long-term climate finance to non-Annex I Parties, encompassing public, private and alternative sources, as well as bilateral and multilateral channels. As per the strategy, eligible recipient countries are identified using the most recent DAC list of countries eligible for ODA.

91. Austria described how it seeks to ensure that the resources it provides to non-Annex I Parties effectively address their adaptation and mitigation needs. The Party explained in its NC8 and BR5 that all bilateral programmes, projects and initiatives are developed in close cooperation with partner countries and are based on jointly developed national or regional strategies. Austria mentioned that it aims for all programmes, projects and initiatives to be compatible with the relevant development strategies of partner countries. 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 2019–2020**
(Millions of United States dollars)

| *Allocation channel of public financial support* | *Disbursement in 2019–2020* |
|---|---|
| ODA | 2 814.86 |
| Climate-specific contributions through multilateral channels, including: | 264.22 |
| Global Environment Facility | 30.57 |
| Least Developed Countries Fund | 0.00 |
| Special Climate Change Fund | 0.00 |
| Adaptation Fund | 0.00 |
| Green Climate Fund | 62.13 |
| Trust Fund for Supplementary Activities | 0.00 |
| Other multinational climate change funds | 0.00 |
| Financial institutions, including regional development banks | 159.68 |
| United Nations bodies | 11.84 |
| Climate-specific contributions through bilateral, regional and other channels | 402.94 |

*Sources*: Austria's BR5 CTF tables and Query Wizard for International Development Statistics, available at http://stats.oecd.org/qwids/.

92. Austria's climate-specific public financial support[8] totalled USD 667.2 million in 2019–2020, representing an increase of 44 per cent since the BR4 (2017–2018).[9] Austria reported that all finance is marked as committed. Austria also reported that it is committed to the goal of developed countries to jointly provide USD 100 billion financial support for climate protection to developing countries by 2020 in the context of significant emission reduction measures, as well as the new collective quantified goal on climate finance to be set by 2025, which will be more than USD 100 billion per year.

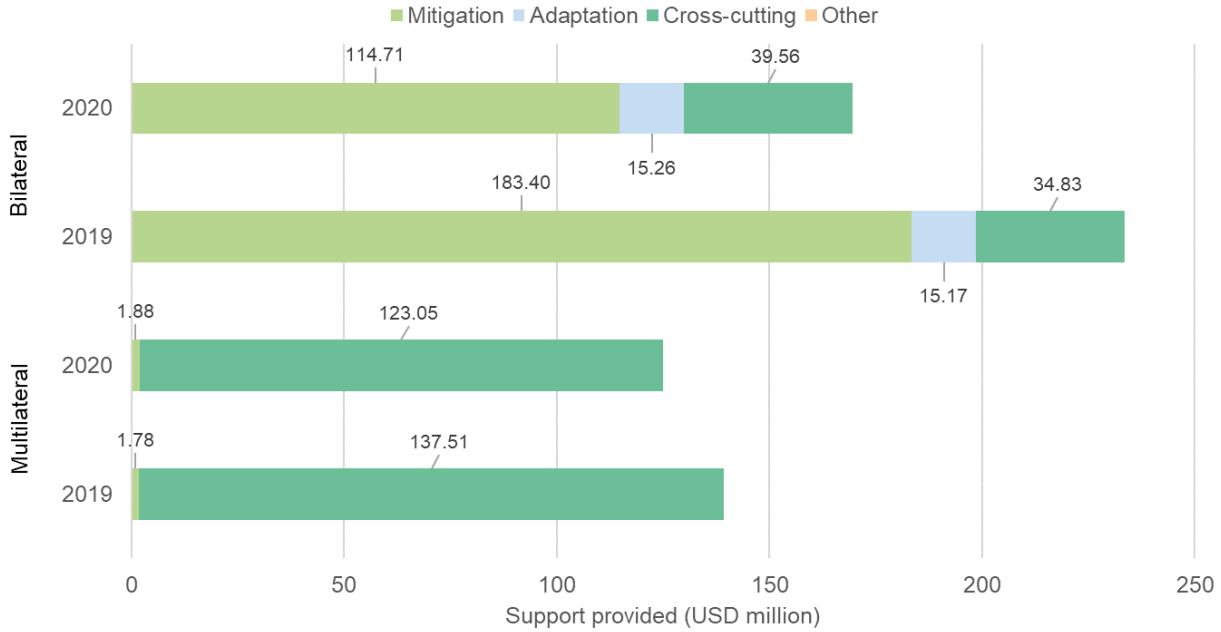
93. Austria contributed through multilateral channels USD 264.2 million in 2019–2020. The contributions were made to specialized multilateral climate change funds, such as the Global Environment Facility and the Green Climate Fund. Contributions were also made to the African Development Bank, the Asian Development Bank, the Inter-American Development Bank and the World Bank, as well as to specialized United Nations agencies.

[8] For the remainder of this chapter, the term "financial support" means climate-specific financial support, unless otherwise noted.

[9] Comparisons with data from previous years have been calculated directly without adjusting for inflation.

The ERT noted that total overall multilateral financial contributions have increased by 108 per cent since the BR4, stemming mainly from an increase in the support channelled through multilateral sources for projects in cross-cutting areas. Information on 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.

Figure 3
**Provision of support by Austria in 2019–2020**




*Sources*: Austria's BR5 CTF tables 7, 7(a) and 7(b).

Table 11
**Summary of information on channels of financial support reported by Austria**
(Millions of United States dollars)

| *Allocation channel of public financial support* | *Amount disbursed in 2019–2020* | *Amount disbursed in 2017–2018* | *Change (%)*[a] | *Share of total (2019–2020) (%)* |
|---|---|---|---|---|
| Detailed information by type of channel | | | | |
| Multilateral channels | | | | |
| Mitigation | 3.67 | 3.16 | 16.0 | 1.4 |
| Adaptation | 0.00 | 0.00 | – | – |
| Cross-cutting | 260.55 | 123.86 | 110.4 | 98.6 |
| Other | 0.00 | 0.00 | – | – |
| **Total multilateral** | **264.22** | **127.02** | **108.0** | **100.0** |
| Bilateral channels | | | | |
| Mitigation | 298.11 | 243.69 | 22.3 | 74.0 |
| Adaptation | 30.44 | 44.34 | –31.4 | 7.6 |
| Cross-cutting | 74.39 | 48.17 | 54.4 | 18.5 |
| Other | 0.00 | 0.00 | – | – |
| **Total bilateral** | **402.94** | **336.20** | **19.9** | **100.0** |
| **Total multilateral and bilateral** | **667.16** | **463.22** | **44.0** | **100.0** |

*Sources*: Austria's BR5 CTF tables 7, 7(a) and 7(b), and the report on the technical review of the BR4 of Austria for 2017–2018 data.

[a] Note that variances in contribution amounts from year to year can occur that are not reflective of trends, owing to factors such as the biennial or triennial contribution cycles of some multilateral funds, the timing of approvals for individual bilateral projects or changes in exchange rates.

94. The Party reported detailed information on the total financial support provided through bilateral and regional channels (USD 402.9 million) in 2019–2020. This amount has

increased by 19.9 per cent compared with the 2017–2018 allocation. The ERT noted that the NC8, the BR5 and CTF table 7(b) do not provide disaggregated information on the financial support provided through bilateral and regional channels. During the reporting period, Austria provided financial support to non-Annex I Parties in East Asia, Eastern Europe, Central and South America, and sub-Saharan Africa in the form of grants, concessional loans, interest subsidies and shares in investment vehicles. It placed a particular focus on Argentina, Bhutan, Burkina Faso, Ecuador, Egypt, Ethiopia, Georgia, Ghana, India, the Lao People's Democratic Republic, Mongolia, Montenegro, Mozambique, Nicaragua, Nigeria, the Republic of Moldova, Serbia and Uganda, to which it allocated USD 205.32 million.

95. The NC8 and the BR5 provide information on the types, sectors and instruments of support provided. The information reported shows that in 2019–2020 the average shares of bilateral and regional financial support allocated to mitigation, adaptation and cross-cutting projects were 74.0, 7.5 and 18.5 per cent respectively. In 2019–2020, the majority of financial contributions through bilateral and regional channels were allocated to the energy (52 per cent), industry (10.9 per cent) and cross-cutting (21.7 per cent) sectors. The ERT noted that loans, grants and other instruments provided in 2019–2020 accounted for 57.3, 25.0 and 17.7 per cent respectively of the bilateral and regional financial support. Austria reported that the focus of support provided through loans is on sustainable energy, in particular renewable energy; energy efficiency; and resource efficiency for sustainable consumption and production.

96. Austria explained that private finance is mainly mobilized for exporting technologies and services in the areas of renewable energy, resource efficiency for sustainable consumption and production, and energy efficiency of buildings. It also reported on how it uses public funds to promote private sector financial support to increase mitigation and adaptation efforts in developing countries through Austrian Development Cooperation. Under its business partnership programme, Austrian Development Cooperation provides up to 50 per cent of the enterprise investment for projects in developing countries if the development objectives of a specific project are in line with the mitigation and adaptation priorities of the country concerned. This business partnership can serve as an incubator for private investments given that private enterprises are required to match the grant funding provided through the business partnership programme by at least the same amount. Austria's investment projects on renewable energy deployment developed in cooperation with private financial partners are in line with the goals of the Paris Agreement. Austria is committed to promoting private climate finance over time in line with the goal of developed countries to jointly mobilize USD 100 billion a year by 2020.

97. Austria explained its approach to reporting on private financial flows leveraged by bilateral climate finance for mitigation and adaptation activities in non-Annex I Parties. Austria reported that until 2016, it tracked private climate finance mobilized through the Austrian Development Cooperation business partnership programme. Since 2017, Austria has been tracking private climate finance mobilized by the Development Bank of Austria as a main actor and implemented through the Austrian Development Cooperation business partnership programme. The Party has an interministerial working group that closely follows international developments in tracking climate finance, for example the OECD Research Collaborative on Tracking Finance for Climate Action, and intends to expand the scope of its reporting on mobilized private climate finance as further guidance thereon becomes available.

98. An example of Austria's support is its contribution to the Energy and Environment Partnership Trust Fund for technology transfer in Southern Africa and East Africa. The initiative, which ensures a gradual expansion in scope and geographical coverage of energy projects in the region, focuses on supporting sustainable and renewable energy in recipient countries while ensuring the profitability of projects and the involvement of local intermediaries. Austria is also involved in a project supporting technology transfer in Central and West African countries, which was started in 2020 with total funding of EUR 16.5 million provided by Austria. This project will support local independent renewable energy producers and mini-grids, including solar energy generation for self-consumption by companies and households, and will have a significant climate change mitigation impact.

### (c) Technology development and transfer

99. Austria reported on its measures and activities related to technology transfer, access and deployment benefiting developing countries, including activities undertaken by the public and private sector. The Party underlined that transfer of technology for mitigation and adaptation is a component of many programmes and projects supported by Austria through the provision of climate finance by Austrian Development Cooperation, which has a strong focus on promoting sustainable energy generation in developing countries. While highlighting that it does not have a specific approach to identifying and supporting endogenous technologies and capacities given the lack of a clear definition of support needed for the development and enhancement of endogenous capacities and technologies in non-Annex I Parties, Austria explained that technology transfer projects and activities are developed jointly with partner countries, with the involvement of local consultants and experts. One example of support provided for the deployment and enhancement of the endogenous capacities and technologies of non-Annex I Parties is the business partnership supported by the Austrian Development Agency and implemented by a consortium of Austrian and Turkish partners, which aims to train maintenance personnel in Türkiye in wind power station maintenance and thus contribute to increasing the share of renewable energy sources in Türkiye.

100. Austria focused the provision of its technology transfer support on decentralized renewable energy development and deployment, including solar and wind energy, and, to a lesser extent, on adaptation projects. Regarding recipient countries, the focus of Austria's assistance is on the least developed countries that are facing challenges in switching to non-wood renewable energy generation and achieving energy efficiency. Recipient countries include Albania, Armenia, Bhutan, Burkina Faso, Burundi, Cambodia, Cameroon, Chad, Côte d'Ivoire, Egypt, Georgia, Guatemala, India, Indonesia, the Niger and Thailand. The majority of projects address mitigation and target the energy sector, although agriculture, disaster risk reduction, forestry, and water and sanitation are also targeted.

101. Since its last NC and BR, Austria has implemented a project providing funding, through a facility for energy inclusion, for independent power producers and mini-grids in some of the least developed countries in Africa (see para. 98 above). Austria also described success stories in relation to technology transfer, and in particular measures taken to promote, facilitate and finance the transfer and deployment of climate-friendly technologies in countries with economies in transition and in developing countries. These measures include providing advisory services, particularly regarding renewable energy and energy and resource efficiency. In the area of adaptation, Austrian Development Cooperation supports early warning systems, climate-smart agricultural practices, and measures to prevent landslides and torrents.

### (d) Capacity-building

102. Austria reported on its capacity-building support for mitigation, adaptation and technology that responds to the existing and emerging needs identified by non-Annex I Parties. It described individual measures and activities related to capacity-building support in textual and tabular format. Austria provides support to non-Annex I Parties in their transition to low-emission, climate-resilient development and in implementing their nationally determined contributions. The Party considers capacity-building as an integral component of programmes, projects and initiatives developed with partner countries; in this context, it promotes the systematic assessment of capacity needs and the identification of capacity gaps and their underlying causes in all the programmes, projects and initiatives it supports, which allows it to tailor its support to better address existing and emerging needs and interests of developing countries. Austria highlighted the importance of strengthening scientific and technical capacities in partner developing countries as these capacities are crucial in guiding policymaking and strategic planning by local authorities, preparing students for professional challenges related to climate change, and developing innovative community-based adaptation solutions on the basis of local scientific information.

103. Austria has supported climate-related capacity development activities relating to adaptation, mitigation, and technology development and transfer. Since the BR4, the focus of support has remained the same, with equal importance being given to adaptation and

mitigation capacity-building. Austria's support has responded to the existing and emerging capacity-building needs of non-Annex I Parties by following the principles of national ownership, and its support is country-driven and addresses end-user demand. For example, Austrian Development Cooperation provides capacity-building support to the Pacific Centre for Renewable Energy and Energy Efficiency that is tailored to the gaps identified in the process of assessing the needs relating to regional capacity-building, knowledge management and business development.

### 2. Assessment of adherence to the reporting guidelines

104. The ERT assessed the information reported in the NC8 and BR5 of Austria and identified issues relating to transparency, and thus adherence to the UNFCCC reporting guidelines on NCs and the UNFCCC reporting guidelines on BRs. The findings are described in tables I.3 and II.2.

### 3. Reporting on finance, capacity-building and technology transfer information related to the Kyoto Protocol

#### (a) Technical assessment of the reported information

105. In its NC8 Austria reported its activities, actions and programmes undertaken in fulfilment of its commitments under Article 10 of the Kyoto Protocol. Austria provided information on steps taken to promote, facilitate and finance the transfer of technology to developing countries and to build their capacity in order to facilitate implementation of Article 10 of the Kyoto Protocol. Austria provided information on measures and activities related to technology transfer, access and deployment benefiting developing countries, including information on activities undertaken by the public and private sectors (see paras. 99–101 and 102–103 above).

106. Austria provided information on its implementation of Article 11 of the Kyoto Protocol. Austria has considered the need for adequacy and predictability through the internationally agreed principles of the Busan Partnership for Effective Development Co-operation, including focus on results, transparency and responsibility. The Party described how its contributions are "new and additional" (see para. 86 above).

#### (b) Assessment of adherence to the reporting guidelines

107. The ERT assessed the information reported in the NC8 of Austria and recognized that the reporting is complete and transparent, and thus adheres to the reporting guidelines for supplementary information. No issues relating to the topics discussed in this chapter of the review report were raised during the review.

## H. Vulnerability assessment, climate change impacts and adaptation measures

### 1. Technical assessment of the reported information

108. In its NC8 Austria provided information on the expected impacts of climate change in the country; the adaptation policies covering regional, sectoral and cross-sectoral vulnerabilities and considerations; and an outline of the action taken to implement Article 4, paragraph 1(b) and (e), of the Convention with regard to adaptation. Austria provided a description of climate change vulnerability and impacts on agriculture, forestry, water resources and water management, tourism, energy, construction and housing, human health, ecosystems and biodiversity, industry and trade, and transportation infrastructure and highlighted the adaptation response actions taken and planned at different levels of government.

109. Austria is in the Alpine region and as a result, it is vulnerable to climate change, owing to its elevation, complex topography and sensitivity to minor shifts in the general circulation of the atmosphere. The impacts of climate change on Austria included in the NC8 are based on the first Austrian assessment report on climate change (published in 2014 following the

publication of the AR5). According to the Austrian assessment report, the average annual temperature in Austria has risen to nearly 2 °C above the pre-industrial level and future projections show that climate change will continue to have an impact on hydrology, soil, the living environment, human health and society. During the review, the Party provided information on the special reports it has produced since the 2014 Austrian assessment report, which address the impacts of climate change on human health, demography, tourism, and the infrastructural conditions of large cultural and sporting events. Austria is in the process of producing the second Austrian assessment report on climate change, to be published in 2025.

110. Austria has addressed adaptation matters through the adoption of the comprehensive national strategy for adaptation to climate change (2017), which includes adaptation measures aimed at combating the adverse effects of climate change on vulnerable sectors. The strategy comprises a strategic framework and national action plan, which includes 135 adaptation options for 14 areas of action and a qualitative vulnerability assessment by area of action. During the review, the Party informed the ERT that Austria is in the process of revising the national adaptation strategy and national action plan and intends to finalize them by the end of 2023. Federal provinces have also developed climate change adaptation strategies to address specific climate change impacts.

111. Some of the key adaptation measures are protecting soil fertility and optimizing fertilizer management; reducing crop damage caused by wildlife; implementing wildfire prevention management; improving the management of water consumption; integrating climate change considerations into tourism strategies; optimizing energy network infrastructure and promoting decentralized energy production and feed in; and ensuring preparedness for extreme events (e.g. heatwaves and floods). Table 12 summarizes the information on vulnerability and adaptation to climate change presented in the NC8 of Austria.

Table 12
**Summary of information on vulnerability and adaptation to climate change reported by Austria**

| *Vulnerable area* | *Examples/comments/adaptation measures reported* |
|---|---|
| Agriculture and forestry | Vulnerability: heat stress in crops; reduced water supply due to changing precipitation patterns; arrival of new invasive species and pathogens, affecting crop production, grassland and animal husbandry; and increased incidence of forest fires due to longer periods with reduced precipitation. |
| | Adaptation: protecting soil fertility, structure and stability; promoting water-saving irrigation systems and improving irrigation planning; breeding water-saving, heat-tolerant plants; optimizing fertilizer management; providing farmers with advice on new agricultural diseases and pests; selecting site-adapted crops; promoting animal welfare and animal health under changing climatic conditions; selecting hardy tree species; promoting soil-friendly management practices; reducing crop damage caused by wildlife; implementing prevention measures for forest fires; and developing innovative techniques for wood processing. |
| Biodiversity and natural ecosystems | Vulnerability: changed species composition due to increasing temperatures and changes in precipitation patterns, especially in Alpine regions with a large share of endemic species; spread of alien species; and loss of habitats and species. |
| | Adaptation: improving knowledge through research and extension of monitoring systems; strengthening threatened populations and species and protecting key habitats; and modifying the design of open spaces in residential areas and the type of leisure activities. |
| Tourism | Vulnerability: regional variations in vulnerability, including reduced winter snow cover, resulting in considerable losses to winter tourism; reduced rainfall in summer and extended summers, potentially leading to worsening water quality of warmwater lakes; increased incidence of heatwaves in cities; and reduced diversity of natural scenery due to biodiversity loss and glacier retreat. |
| | Adaptation: integrating climate change into tourism strategies; providing regional data as the basis for decision-making on management of tourism; and strengthening summer tourism in Alpine regions. |
| Energy | Vulnerability: space heating (low vulnerability) due to the decreasing energy demand of buildings and the decreasing number of heating degree-days; cooling of buildings (high vulnerability) due to the increasing number of cooling degree-days, leading to periods of high electricity demand for cooling coinciding with unfavourable conditions for electricity production; electricity production by thermal power plants due to increasing temperatures of ambient air and cooling water; seasonal |

| *Vulnerable area* | *Examples/comments/adaptation measures reported* |
|---|---|
| | changes in run-off, affecting run-of-river power plants; supply of renewable energy sources due to climatic conditions; production of forest biomass in some regions (high vulnerability). |
| | Adaptation: optimizing network infrastructure and promoting decentralized energy production and feed in; increasing research on potential methods of energy storage; optimizing the interaction between generation and consumption; increasing the security of supply through more diversified energy sources; reducing internal heat loads in buildings in summer by reducing power consumption; and increasing final energy efficiency. |
| Transportation and infrastructure | Vulnerability: transportation infrastructure (high vulnerability for some regions) due to increasing amount of snow accompanied by a higher risk of avalanches and to thawing of permafrost, resulting in rockfalls and landslides; heavy local precipitation, resulting in drainage system overloads and the flooding of underpasses as well as in the increased risk of landslides and mud flows; erosion and washout threatening the stability of railway embankments and roadbeds; and increased heat stress, leading to damage to materials and structures and the deformation of pavements and rail infrastructure. |
| | Adaptation: expanding early warning systems; safeguarding a functional transportation system under changed climatic conditions and during extreme events; installing appropriate air conditioning in public transport in order to reduce heat stress; reviewing legal standards for the construction and operation of transport infrastructure; reducing sealed surfaces for transport infrastructure; and improving public information systems. |
| Human health | Vulnerability: heat stress (high vulnerability for children, elderly people and people with heart diseases, low vulnerability for the rest of the population); increased level of ground-level ozone and increased ultraviolet radiation (high vulnerability for sensitive individuals, moderate vulnerability for the general population); and spread of pathogens, vector-borne diseases and allergenic plants. |
| | Adaptation: ensuring preparedness for extreme events (e.g. heatwaves and floods) and for the arrival of new infectious diseases and the spread of allergenic or toxic species; and incorporating climate-relevant topics in the training and further education of medical professionals. |
| Construction and housing | Vulnerability: increased frequency of heatwaves, heavy rain, heavy snow loads and local floods, avalanches and landslides (high vulnerability for existing buildings in urban areas). |
| | Adaptation: implementing structural measures to ensure thermal comfort in buildings and to protect them from extreme weather events, including further developing building standards; using passive and active cooling derived from sustainable technologies; improving microclimatic conditions in urban spaces; and supporting relevant research, awareness-raising and training. |
| Water resources and water management | Vulnerability: shipping, quality of water bodies and aquatic biocenoses due to changing precipitation, temperature and run-off (increasing in winter and decreasing in summer); decreased groundwater recharge, especially in southern and eastern Austria; reduced water supply in areas with unfavourable water resources; and shifts in the risk of flooding to spring and winter in northern Austria due to seasonal changes in precipitation patterns and earlier melting of snow. |
| | Adaptation: extending data collection and use; improving coordination of water consumption for various uses; increasing consideration of low water levels in the management of water resources; and implementing adaptive flood risk management with robust measures. |

### 2. Assessment of adherence to the reporting guidelines

112. The ERT assessed the information reported in the NC8 of Austria and recognized that the reporting is complete and transparent, and thus adheres to the UNFCCC reporting guidelines on NCs. No issues relating to the topics discussed in this chapter of the review report were raised during the review.

## I. Research and systematic observation

### 1. Technical assessment of the reported information

113. In its NC8 Austria provided information on its general policy and funding relating to research and systematic observation and both domestic and international activities, including contributions to the World Climate Programme, the International Geosphere–Biosphere Programme, the Global Climate Observing System and the IPCC. Austria also provided information on the identification of opportunities for and barriers to free and open

international exchange of data and information and on action taken to overcome such barriers. Austria reported that barriers arise when the results of research and observation are not published or are not published in their entirety and from the costs involved in accessing research journals. To address these challenges, the Austrian Science Fund signed the Berlin Declaration on Open Access to Knowledge in the Sciences and Humanities in 2003 and has since pursued a strategy of promoting open access to scientific data. Further, Austria supports Open Science Policy Austria in response to the Recommendation on Open Science of the United Nations Educational, Scientific and Cultural Organization.

114. Austria has implemented international and domestic policies and programmes on climate change research, systematic observation and climate modelling that aim to advance capabilities to predict and observe the physical, chemical, biological and human components of the Earth's system over space and time. Examples of initiatives include the Earth Systems Science research programme, which aims to conduct research on the Earth as a system; StartClim, which supports research on climate change impacts and adaptation options; ProVision, which was established to foster interdisciplinary research on climate change impacts; and the Austrian Climate Research Programme, which funds basic climate system research as well as policy-oriented projects. Austria has also developed research and innovation strategies for specific sectors and topics, including the Research, Technology and Innovation Strategy 2030, the Bioeconomy Strategy, the Circular Economy Strategy, the Research and Innovation Mobility Strategy and the Austrian Space Strategy 2030+. Austria has also undertaken various research studies in areas such as the climate process and climate system; modelling and prediction, including global circulation models; climate change impacts; socioeconomic factors, including analysis of climate change impacts and response options; and mitigation and adaptation technologies.

115. Austria reported on its areas of competence and the legal basis supporting climate research in the country, which includes the funding of basic infrastructure of universities and other research institutions by the federal Government and legal instruments (e.g. Research and Technology Funding Act, Research Organisation Act and Universities Act). In 2021, Austria provided total research funding of EUR 12.95 billion, which increased from 2.91 per cent of GDP in 2012 to 3.21 per cent in 2021.

116. In terms of activities related to systematic observation, Austria reported on national plans, programmes and support for ground- and space-based climate observing systems, including satellite and non-satellite climate observation. Austria also reported on challenges related to the maintenance of a consistent and comprehensive observation system. These challenges include the limited applicability of general model-based findings on climate change in Austria owing to the lack of density in its network of stations. The Austrian Government established the Austrian Global Climate Observing System Coordination Unit, which is stationed at the Central Institute for Meteorology and Geodynamics, to provide national meteorological and geophysical services.

117. The NC8 reflects actions taken to support capacity-building and the establishment and maintenance of observation systems and related data and monitoring systems in developing countries. Austria provided some examples of how it supports developing countries in establishing observation and monitoring systems. Austria and the World Meteorological Organization, the United Nations Development Programme and the United Nations Environment Programme jointly established the Systematic Observations Financing Facility in an effort to close the gap in the Global Basic Observing Network. Austria plans to sign a memorandum of understanding with the hydrometeorological service of Kazakhstan to assist the country with its scientific and observational infrastructure. Austria also supports Serbia in its development of a transparency framework for measuring, reporting and verifying GHG emissions.

### 2. Assessment of adherence to the reporting guidelines

118. The ERT assessed the information reported in the NC8 of Austria and recognized that the reporting is complete and transparent, and thus adheres to the UNFCCC reporting guidelines on NCs. No issues relating to the topics discussed in this chapter of the review report were raised during the review.

## J. Education, training and public awareness

### 1. Technical assessment of the reported information

119. In its NC8 Austria provided information on its actions relating to education, training and public awareness at the domestic and international level, although it focused on domestic initiatives. The Party provided information on the general policy on education, training and public awareness; primary, secondary and higher education; public information campaigns; training programmes; education materials; resource or information centres; the involvement of the public and non-governmental organizations; and its participation in international activities. The National Strategy for Sustainable Development includes education among its objectives. The aim of the Austrian Strategy for Education for Sustainable Development, adopted in 2008, is to promote awareness of sustainability among teachers and students. The topic of education for sustainable development will gain more importance in 2023–2024 following the convening of the 9th cycle of the EU Youth Dialogue, 2022–2023, and its Austrian counterpart, which resulted in Youth Goals (Goal 10 is "Sustainable Green Europe").

120. Austria reported several networks and other initiatives promoted by institutions in the country to enhance sustainable education and topics related to climate change, including the Environmental Education Forum, which organizes programmes and provides small grants for school projects related to sustainable development; the Network for Schools and Environment (ÖKOLOG), which comprises more than 550 schools and 13 university colleges; Climate Alliance Austria, which has more than 750 schools and kindergartens participating in Education for Sustainable Development, a national university course aimed at promoting the environment and sustainable development in teacher education; and a university-level training institute for education professionals in agricultural and ecological affairs, which supports the development and dissemination of appropriate methods and practices for teaching, training and creating awareness in ecological matters.

121. In the NC8 Austria also reported various training activities targeting farmers, students and municipal officials, among others, related to promoting sustainable mobility and land-use planning, soil protection, climate change adaptation, organic farming, energy efficiency, renewable energy sources and climate protection. Austria also promotes the Klimaaktiv initiative, the aim of which is to reduce energy consumption and promote the use of carbon-neutral energy sources by companies, communities and individual end users.

122. Austria uses various formats and channels to share information that raises public awareness of climate change, including print (brochures, magazines), advertisements in the media (newspapers, television), websites and newsletters. Initiatives such as Klimaaktiv play an important role in disseminating climate-related information. Austria also has the Energy Globe Awards (organized by the Energy Globe Foundation), an annual international competition for projects on climate change. Civil society in Austria is also actively engaged in public awareness campaigns. For instance, Climate Alliance Austria, a network with a membership of 2,000 municipalities from more than 25 European countries, works with Indigenous Peoples living in rainforests to raise issues relating to climate change.

### 2. Assessment of adherence to the reporting guidelines

123. The ERT assessed the information reported in the NC8 of Austria and identified an issue relating to completeness, and thus adherence to the UNFCCC reporting guidelines on NCs. The finding is described in table I.4.

# III. Conclusions and recommendations

124. The ERT conducted a technical review of the information reported in the NC8 of Austria in accordance with the UNFCCC reporting guidelines on NCs. The ERT concluded that the reported information mostly adheres to the UNFCCC reporting guidelines on NCs and that the NC8 provides an overview of the national climate policy of Austria.

125. The information provided in the NC8 includes all elements of the supplementary information under Article 7, paragraph 2, of the Kyoto Protocol. Austria reported on the national system, the national registry, supplementarity relating to the mechanisms pursuant to Articles 6, 12 and 17 of the Kyoto Protocol, PaMs in accordance with Article 2 of the Kyoto Protocol, domestic and regional programmes and/or legislative arrangements and enforcement and administrative procedures, information under Article 10 of the Kyoto Protocol, and financial resources provided to developing country Parties. Supplementary information under Article 7, paragraph 1, of the Kyoto Protocol on the minimization of adverse impacts in accordance with Article 3, paragraph 14, of the Kyoto Protocol was provided by Austria in its 2022 annual submission.

126. The ERT conducted a technical review of the information reported in the BR5 and BR5 CTF tables of Austria in accordance with the UNFCCC reporting guidelines on BRs. The ERT concluded that the reported information mostly adheres to the UNFCCC reporting guidelines on BRs and that the BR5 and its CTF tables provide 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.

127. In its NC8 Austria reported on its key national circumstances related to GHG emissions and removals, including legislation, population trends, geography and land use, climate and climate change, economic developments, energy, transport, the buildings sector, industry, trade, the services sector, agriculture, forestry, waste and wastewater. During 1996–2020, Austria's GDP per capita increased by 85 per cent, while GHG emissions per GDP unit and GHG emissions per capita decreased by 37.3 and 11.0 per cent respectively, showing a clear decoupling of GHG emissions from GDP and energy consumption. The main drivers of emissions are Austria's continued dependence on the fossil fuels in energy supply and the large and increasing transport sector share, in particular road transportation, in the final energy consumption.

128. Austria's total GHG emissions in 2021 excluding LULUCF were estimated to be 1.9 per cent below its 1990 level. Emissions peaked in 2005, decreased in 2006–2014 and remained nearly constant until 2019. Austria's GHG emissions (excluding LULUCF) decreased sharply in 2020 owing to the impacts of the COVID-19 pandemic and increased sharply by 4.9 per cent in 2020–2021 mostly owing to economic recovery from the pandemic. The changes in total emissions were driven mainly by factors such as increased demand for inland transport, which resulted in an increase in road transport emissions. This growth in emissions was offset to some extent by decreases in waste sector emissions, stemming from a reduction in organic waste deposited in landfills, agriculture sector emissions, stemming from the adoption of more sustainable farming practices, and energy sector emissions, stemming from the use of gas instead of solid and liquid fuels and energy efficiency gains.

129. As reported in the BR5, under the Convention Austria committed to contributing to the achievement of the joint EU quantified economy-wide 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 GWP values from the AR4. Emissions and removals from the LULUCF sector are not included. Under the ESD Austria has a target of reducing its emissions by 16 per cent below the 2005 level by 2020.

130. The EU has a joint 2030 emission reduction target of at least 55 per cent below the 1990 level. This will be primarily implemented through the EU ETS and ESR, which have targets to reduce emissions by 2030 by 62 and 40 per cent respectively compared with the 2005 level. Under the ESR, Austria has a national target of reducing emissions from covered sectors to 48 per cent below the 2005 level by 2030.

131. The ERT noted that the total GHG emissions of the EU excluding LULUCF do not exceed the emission level corresponding to the target in 2020, and thus that the EU has achieved its joint target. The ERT therefore concluded that Austria has met its 2020 commitment under the Convention through its contribution to achieving the joint target of the EU. See the report on the review of the BR5 of the EU for further details. The ERT noted

that the Party met its 2020 ESD target because its ESD emissions in 2020 do not exceed its AEA for 2020 and it has a cumulative surplus of AEAs of 4.77 Mt $CO_2$ eq for 2013–2020.

132. The GHG emission projections provided by Austria in its NC8 and BR5 correspond to the WEM and WAM scenarios. Under the WEM scenario, emissions excluding LULUCF in 2030 are projected to be 7.5 per cent below the 1990 level and 1.4 per cent below the 2020 level. Under the WAM scenario, emissions excluding LULUCF in 2030 are projected to be 15.2 per cent below the 1990 level and 9.6 per cent below the 2020 level.

133. Austria's main policy framework relating to energy and climate change is its national energy and climate plan. The Party described the mitigation actions that it has implemented to help it achieve its 2020 and longer-term targets, which include increasing the share of renewable energy in energy supply and district heating, increasing the share of clean energy sources in road transport, increasing fuel efficiency in road transport, and further enhancing energy efficiency in energy and manufacturing industries. These PaMs are focused on the energy and transport sectors, both of which account for a significant proportion of Austria's GHG emissions.

134. Austria continued to provide climate financing to developing countries in line with its international climate finance strategy. Financial contributions are provided by a number of ministries and an interministerial working group regularly takes stock of developments related to climate finance, including the tracking of support. Austria has increased its contributions by 44 per cent since the BR4; its public financial support in 2019–2020 totalled USD 667.2 million. For those years, Austria provided more support for mitigation and cross-cutting projects. The biggest share of support went to projects and programmes in the energy, industry, water and agriculture sectors, such as the Energy and Environment Partnership Trust Fund for technology transfer in Southern Africa and East Africa, which ensures a gradual expansion in scope and geographical coverage of energy projects in the region.

135. Austria continued to provide support for technology development and transfer and capacity-building. Priority for technological support was given to mitigation projects targeting the energy sector (e.g. decentralized renewable energy development and deployment, including solar and wind energy) and adaptation projects targeting agriculture, disaster risk reduction, forestry, and water and sanitation in the least developed countries. Over time, the focus has remained the same. Priority for capacity-building support was given to projects and programmes in adaptation, mitigation, and technology development and transfer, with a focus on supporting partner developing countries in Asia and Africa in transitioning to low-emission, climate-resilient development, implementing their nationally determined contributions, and strengthening the scientific and technical capacities of policymakers for strategic planning.

136. In its NC8 Austria provided information on the expected impacts of climate change in the country; the adaptation policies covering regional, sectoral and cross-sectoral vulnerabilities and considerations; and an outline of the action taken to implement Article 4, paragraph 1(b) and (e), of the Convention with regard to adaptation. Austria is vulnerable to climate change impacts because of its location in the Alpine region. Austria's 2017 national strategy for adaptation to climate change includes a national action plan containing 135 adaptation measures focusing on 14 areas of action. A revised strategy is planned to be finalized by the end of 2023. Federal provinces have also developed climate change adaptation strategies to address specific climate change impacts.

137. In its NC8 Austria provided information on its activities relating to research and systematic observation. Austria is engaged in promoting research and systematic observation through initiatives such as the Earth System Sciences research programme, which aims to undertake research on the Earth as a system, StartClim, which supports research on climate change impacts and adaptation options, ProVision, which was established to foster interdisciplinary research on climate change impacts and the Austrian Climate Research Programme, which funds basic climate system research as well as policy-oriented projects. To enhance research and systematic observation, Austria has also developed a number of research and innovation strategies for specific sectors and topics.

138. In its NC8 Austria provided information on its actions relating to education, training and public awareness. Austria is implementing a number of initiatives, including the Network

for Schools and Environment, Klimaaktiv and Climate Alliance Austria. The objective of Klimaaktiv, which targets companies, communities and individuals, is to reduce energy consumption, promote carbon-neutral sources and reduce GHG emissions in transport and mobility. Climate Alliance Austria is a network with a membership of 2,000 municipalities from more than 25 European countries that works with Indigenous Peoples living in rainforests to raise issues relating to climate change.

139. In the course of the review, the ERT formulated the following recommendations for Austria to improve its adherence to the UNFCCC reporting guidelines on NCs in its next NC: improve the transparency of its reporting by:

(a) Providing updated information on the methodologies used for tracking financial support provided to non-Annex I Parties (see issue 1 in table I.3);

(b) Providing information specifically addressing the assistance it provides for the purpose of assisting developing country Parties that are particularly vulnerable to the adverse effects of climate change (see issue 2 in table I.3);

140. In the course of the review of Austria's BR5, the ERT noted the following recommendation relating to adherence to the UNFCCC reporting guidelines on BRs: provide the most recent available information on the methodologies used for tracking financial support provided to non-Annex I Parties (see issue 1 in table II.2).

# Annex I

## Assessment of adherence to the reporting guidelines for the eighth national communication of Austria

Tables I.1–I.4 summarize the ERT assessment of adherence to the UNFCCC reporting guidelines on NCs for Austria's NC8.

Table I.1
**Findings on policies and measures from the review of the eighth national communication of Austria**

| *No.* | *Reporting requirement, issue type and assessment* | *Description of the finding with recommendation or encouragement* |
|---|---|---|
| 1 | Reporting requirement specified in paragraph 10<br>Issue type: transparency<br>Assessment: encouragement | In its NC8, Austria did not identify the PaMs that it has prioritized on the basis of most significant impact on GHG emissions and removals. The Party indicated that all the PaMs reported are expected to modify the long-term trend in emissions and explained that mitigation impacts cannot be estimated for some PaMs owing to a lack of regulations for estimating, monitoring and reporting the effects of PaMs.<br>During the review, the Party clarified which PaMs are priority PaMs by identifying key instruments under the thematic groups of PaMs reported. For example, the Renewable Deployment Act is a key instrument for the thematic measure "Increasing share of renewable energy in energy supply and district heating".<br>The ERT encourages Austria to clarify the PaMs, or groups of PaMs, that it has prioritized on the basis of most significant impact on GHG emissions and removals, for example by reporting the key instruments under its thematic grouping of PaMs. |
| 2 | Reporting requirement specified in paragraph 10<br>Issue type: completeness<br>Assessment: encouragement | In its NC8, Austria did not indicate the PaMs that are innovative and/or effectively replicable by other Parties.<br>During the review, the Party provided information on innovative PaMs; these include the Renewable Heat Act, which focuses on the phase-out of oil space heating by 2035, and the KlimaTicket Ö system, which provides commuters with access to all public transport with one annual ticket.<br>The ERT encourages Austria to indicate in its next submission the PaMs that are innovative and/or effectively replicable by other Parties. |
| 3 | Reporting requirement specified in paragraph 17<br>Issue type: transparency<br>Assessment: encouragement | In its NC8, Austria reported information on its overall mitigation policy context, including national targets for GHG mitigation, renewable energy and energy efficiency. However, it was not clear if and how Austria's long-term strategy target of climate neutrality in 2050 and the target for climate neutrality by 2040 are related.<br>During the review, the Party clarified that the target of climate neutrality in 2050 is part of the long-term strategy and corresponds to the climate-neutrality target of the EU. But the Austrian Government has also declared its intention to reach climate neutrality by 2040 and is actively modelling achievement of this target.<br>The ERT encourages Austria to clearly explain if and how the national targets for GHG mitigation are related. |
| 4 | Reporting requirement specified in paragraph 19<br>Issue type: transparency<br>Assessment: encouragement | In its NC8, Austria reported information on PaMs in textual and tabular format. However, the Party did not describe the objectives of the PaMs in quantitative terms and for adopted and implemented measures did not include information on funds already provided, future budget allocated and time frame for implementation.<br>During the review, the Party provided information on time frames, objectives, funding and estimated mitigation effects of key instruments under its thematic groups of PaMs.<br>The ERT encourages Austria, to the extent possible, to describe the objectives of PaMs in quantitative terms and by providing, for adopted and implemented measures, information on funds already provided, future budget allocated and time frame for implementation. |

*Note*: Paragraph number listed under reporting requirement refers to the relevant paragraph of the UNFCCC reporting guidelines on NCs. The reporting on the requirements not included in this table is considered to be complete and transparent, and thus adheres to the UNFCCC reporting guidelines on NCs.

Table I.2
**Findings on projections including aggregate effects of policies and measures reported in the eighth national communication of Austria**

| *No.* | *Reporting requirement, issue type and assessment* | *Description of the finding with recommendation or encouragement* |
|---|---|---|
| 1 | Reporting requirement specified in paragraph 32<br>Issue type: completeness<br>Assessment: encouragement | In its NC8, Austria did not report projections of indirect emissions of carbon monoxide, nitrogen oxides, non-methane volatile organic compounds or sulfur oxides.<br>During the review, the Party explained that it did not report indirect GHG emissions because it focuses on the mandatory requirements of the UNFCCC reporting guidelines on NCs. The Party also explained that although Austria does not project emissions of carbon monoxide, projections of nitrogen oxides, sulfur dioxide and non-methane volatile organic compounds have been calculated in accordance with the United Nations Economic Commission of Europe Convention on Long-range Transboundary Air Pollution guidelines and can be found in the report *Austria's National Air Emission Projections 2021 for 2020, 2025 and 2030* (available at https://www.umweltbundesamt.at/fileadmin/site/publikationen/rep0769.pdf).<br>The ERT reiterates the encouragement from the previous review report for Austria to report projections for indirect GHGs in its next submission. |
| 2 | Reporting requirement specified in paragraph 40<br>Issue type: transparency<br>Assessment: encouragement | In its NC8, Austria reported limited information on models and/or approaches used for calculating projections, including a list of models used together with a short description of them. The NC8 includes a reference to Austria's latest GHG emission projection report, which provides further information on the models used, emission factors and underlying parameters. However, the information provided in the NC8 does not include for each model its type and characteristics, the original purpose for which it was designed, and how it accounts for any overlap or synergies that may exist among PaMs.<br>During the review, the Party provided detailed information on each model used, including name, type, scope, main inputs and outputs, and linkages with other models. The Party explained that accounting for overlaps or synergies among PaMs is usually part of its modelling efforts and is achieved by analysing the interactions of PaMs, including feedback loops and effects of PaMs on one another. The accounting requires a careful analysis of specific policy instruments and the context in which they are implemented. As such, Austria tries to engage as many stakeholders as possible from different fields and sectors in the policy development process to ensure that all perspectives and potential impacts are considered.<br>The ERT encourages Austria to provide, for each model or approach used, information on its type and characteristics, the original purpose for which it was designed, and how it accounts for any overlap or synergies that may exist among PaMs. |

*Note*: Paragraph number listed under reporting requirement refers to the relevant paragraph of the UNFCCC reporting guidelines on NCs. The reporting on the requirements not included in this table is considered to be complete and transparent, and thus adheres to the UNFCCC reporting guidelines on NCs.

Table I.3
**Findings on financial, technological and capacity-building support from the review of the eighth national communication of Austria**

| *No.* | *Reporting requirement, issue type and assessment* | *Description of the finding with recommendation or encouragement* |
|---|---|---|
| 1 | Reporting requirement specified in paragraph 50<br>Issue type: transparency<br>Assessment: recommendation | In its NC8, Austria reported the methodology used for tracking support provided to non-Annex I Parties, which is part of its international climate finance strategy. However, the methodology has been improved since the NC7 (as explained by the Party during the review), but the Party did not provide details on the improved methodology in the NC8.<br>During the review, the Party provided details on the improvements made in how the financial support provided by different ministries, agencies and private sector entities is tracked for reporting purposes. The improvements include additional quality control checks conducted by the Austrian Development Agency to ensure the reliability of the data reported. |

| *No.* | *Reporting requirement, issue type and assessment* | *Description of the finding with recommendation or encouragement* |
|---|---|---|
| | | The ERT recommends that Austria provide in its next submission the most recent available information on the methodologies used for tracking financial support provided to non-Annex I Parties. |
| 2 | Reporting requirement specified in paragraph 54<br>Issue type: transparency<br>Assessment: recommendation | In its NC8, Austria did not provide information specifically addressing the assistance it provided for the purpose of assisting developing country Parties that are particularly vulnerable to the adverse effects of climate change in meeting the costs of adaptation to those adverse effects, in textual format and with reference to table 6 of the UNFCCC reporting guidelines for NCs. Austria reported only that support provided to non-Annex I Parties includes that provided to countries that are particularly vulnerable to the adverse effects of climate change.<br>During the review, the Party explained that estimating the costs of adaptation at the national and local level is challenging owing to the lack of a standard agreed methodology for quantifying the costs and impacts of adaptation and as such, Austria focuses on identifying the priorities of partner countries through dialogue, which includes a discussion on needs relating to adaptation.<br>The ERT recommends that Austria provide information specifically addressing the assistance it provides for the purpose of assisting developing country Parties that are particularly vulnerable to the adverse effects of climate change. |

*Note*: Paragraph number listed under reporting requirement refers to the relevant paragraph of the UNFCCC reporting guidelines on NCs. The reporting on the requirements not included in this table is considered to be complete and transparent, and thus adheres to the UNFCCC reporting guidelines on NCs.

Table I.4
**Findings on education, training and public awareness from the review of the eighth national communication of Austria**

| *No.* | *Reporting requirement, issue type and assessment* | *Description of the finding with recommendation or encouragement* |
|---|---|---|
| 1 | Reporting requirement specified in paragraph 69<br>Issue type: completeness<br>Assessment: encouragement | In its NC8, Austria did not provide information on monitoring, review and evaluation of the implementation of Article 6 of the Convention.<br>During the review, the Party explained that it did not report this information because it does not relate to a mandatory provision in the UNFCCC reporting guidelines on NCs and the Party prioritizes mandatory requirements owing to resource constraints.<br>The ERT encourages Austria to report information on monitoring, review and evaluation of the implementation of Article 6 of the Convention. |

*Note*: Paragraph number listed under reporting requirement refers to the relevant paragraph of the UNFCCC reporting guidelines on NCs. The reporting on the requirements not included in this table is considered to be complete and transparent, and thus adheres to the UNFCCC reporting guidelines on NCs.

# Annex II

## Assessment of adherence to the reporting guidelines for the fifth biennial report of Austria

The BR5 of Austria is the final BR under the measurement, reporting and verification system established under the Convention.[1] Nevertheless, ERTs continue to provide recommendations and encouragements to the Parties on completeness, transparency and adherence to the UNFCCC reporting guidelines on BRs. Parties may find these recommendations and encouragements relevant, as appropriate, when preparing their initial biennial transparency report under the enhanced transparency framework of the Paris Agreement. Tables II.1–II.2 summarize the ERT assessment of adherence to the UNFCCC reporting guidelines on BRs for Austria's BR5.

Table II.1
**Findings on projections reported in the fifth biennial report of Austria**

| *No.* | *Reporting requirement and issue type* | *Description of the finding with recommendation or encouragement* |
|---|---|---|
| 1 | Reporting requirement[a] specified in paragraph 32<br>Issue type: completeness<br>Assessment: encouragement | In its NC8/BR5, Austria did not report projections of indirect emissions of carbon monoxide, nitrogen oxides, non-methane volatile organic compounds or sulfur oxides.<br>During the review, the Party explained that it did not report indirect GHG emissions because it focuses on the mandatory requirements of the UNFCCC reporting guidelines on NCs. The Party also explained that although Austria does not project emissions of carbon monoxide, projections of nitrogen oxides, sulfur dioxide and non-methane volatile organic compounds have been calculated in accordance with the United Nations Economic Commission of Europe Convention on Long-range Transboundary Air Pollution guidelines and can be found in the report *Austria's National Air Emission Projections 2021 for 2020, 2025 and 2030* (available at https://www.umweltbundesamt.at/fileadmin/site/publikationen/rep0769.pdf).<br>The ERT reiterates the encouragement from the previous review report for Austria to report projections for indirect GHGs in its next submission. |
| 2 | Reporting requirement[a] specified in paragraph 40<br>Issue type: transparency<br>Assessment: encouragement | In its NC8/BR5, Austria reported limited information on models and/or approaches used for calculating projections, including only a list of models used together with a short description of them. The NC8 includes a reference to Austria's latest GHG emission projection report, which provides further information on the models used, emission factors and underlying parameters. However, the information provided in the NC8 does not include for each model its type and characteristics, the original purpose for which it was designed, and how it accounts for any overlap or synergies that may exist among PaMs.<br>During the review, the Party provided detailed information on each model used, including name, type, scope, main inputs and outputs, and linkages with other models. The Party explained that accounting for overlaps or synergies among PaMs is usually part of its modelling efforts and is achieved by analysing the interactions of PaMs, including feedback loops and effects of PaMs on one another. The accounting requires a careful analysis of specific policy instruments and the context in which they are implemented. As such, Austria tries to engage as many stakeholders as possible from different fields and sectors in the policy development process to ensure that all perspectives and potential impacts are considered. |

[1] The COP, by decision 1/CP.24, decided that the final biennial reports shall be those submitted to the secretariat no later than 31 December 2022 and reaffirmed that, for Parties to the Paris Agreement, following the submission of the final biennial report, the modalities, procedures and guidelines contained in the annex to decision 18/CMA.1 will supersede the measurement, reporting and verification system established under decision 1/CP.16, paras. 40–47 and 60–64, and decision 2/CP.17, paras. 12–62.

| No. | Reporting requirement and issue type | Description of the finding with recommendation or encouragement |
|---|---|---|
| | | The ERT encourages Austria to provide, for each model or approach used, information on its type and characteristics, the original purpose for which it was designed, and how it accounts for any overlap or synergies that may exist among PaMs. |

*Note*: The reporting on the requirements not included in this table is considered to be complete and transparent, and thus adheres to the UNFCCC reporting guidelines on NCs and on BRs.

[a] Item listed under reporting requirement refers to the relevant paragraph of the UNFCCC reporting guidelines on NCs, as per para. 11 of the UNFCCC reporting guidelines on BRs.

Table II.2

**Findings on provision of financial, technological and capacity-building support to developing country Parties from the review of the fifth biennial report of Austria**

| No. | Reporting requirement and issue type | Description of the finding with recommendation or encouragement |
|---|---|---|
| 1 | Reporting requirement specified in paragraph 15<br>Issue type: transparency<br>Assessment: recommendation | In its NC8/BR5, Austria reported the methodology used for tracking support provided to non-Annex I Parties, which is part of its international climate finance strategy. However, the methodology has been improved since the NC7 (as explained by the Party during the review), but the Party did not provide details on the improved methodology in the NC8.<br>During the review, the Party provided details on the improvements made in how the financial support provided by different ministries, agencies and private sector entities is tracked for reporting purposes. The improvements include additional quality control checks conducted by the Austrian Development Agency to ensure the reliability of the data reported.<br>The ERT reiterates the recommendation that Austria provide in its next submission the most recent available information on the methodologies used for tracking financial support provided to non-Annex I Parties. |

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

# Annex III

## Documents and information used during the review

### A. Reference documents


2022 GHG inventory submission of Austria. Available at https://unfccc.int/ghg-inventories-annex-i-parties/2022.

2023 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-2023.

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

BR5 CTF tables of Austria. Available at https://unfccc.int/BR5.

BR5 of Austria. Available at https://unfccc.int/BR5.

BR5 of the EU. Available at https://unfccc.int/BR5.

"Common tabular format for 'UNFCCC biennial reporting guidelines for developed country Parties'". Annex to decision 19/CP.18. Available at https://unfccc.int/resource/docs/2012/cop18/eng/08a03.pdf.

"Compilation of economy-wide emission reduction targets to be implemented by Parties included in Annex I to the Convention". FCCC/SBSTA/2014/INF.6. Available at http://unfccc.int/resource/docs/2014/sbsta/eng/inf06.pdf.

European Green Deal. European Commission document COM(2019) 640 final. Available at https://ec.europa.eu/info/files/communication-european-green-deal_en.

"Guidelines for the preparation of national communications by Parties included in Annex I to the Convention, Part II: UNFCCC reporting guidelines on national communications". FCCC/CP/2019/13/Add.1. Available at https://unfccc.int/documents/210471.

"Guidelines for the preparation of the information required under Article 7 of the Kyoto Protocol". Annex to 15/CMP.1. Available at https://unfccc.int/documents/4253.

"Guidelines for the preparation of the information required under Article 7 of the Kyoto Protocol". Annex III to decision 3/CMP.11. Available at https://unfccc.int/documents/9101.

"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". Annex to decision 13/CP.20. Available at http://unfccc.int/resource/docs/2014/cop20/eng/10a03.pdf.

NC8 of Austria. Available at https://unfccc.int/NC8.

NC8 of the EU. Available at https://unfccc.int/NC8.

Report on the individual review of the annual submission of Austria submitted in 2018. FCCC/ARR/2018/AUT. Available at https://unfccc.int/documents/192421.

Report on the technical review of the BR4 of Austria. FCCC/TRR.4/AUT. Available at https://unfccc.int/documents/230802.

Report on the technical review of the NC8 and the technical review of the BR5 of the EU. FCCC/IDR.8/EU–FCCC/TRR.5/EU. Available at https://unfccc.int/documents/630393.

"UNFCCC biennial reporting guidelines for developed country Parties". 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 (Ministry for Climate Action, Environment, Energy, Mobility, Innovation and Technology), including additional material. The following references were provided by Austria and may not conform to UNFCCC editorial style as some have been reproduced as received:

Austrian Panel on Climate Change. 2014. *Österreichischer Sachstandsbericht Klimawandel 2014 (AAR14)*. Vienna. Verlag der Österreichischen Akademie der Wissenschaften. Available at https://ccca.ac.at/wissenstransfer/apcc/apcc-aar14/downloads.

Federal Environment Agency. 2021. *Austria's National Air Emission Projections 2021 for 2020, 2025 and 2030*. available at https://www.umweltbundesamt.at/fileadmin/site/publikationen/rep0769.pdf).

Federal Ministry for Education, Arts and Culture, the Federal Ministry of Agriculture, Forestry, Environment and Water Management and the Federal Ministry of Science and Research. 2008. *Austrian Strategy for Education for Sustainable Development.* Austrian Federal Ministry of Agriculture, Forestry, Environment and Water Management. Vienna.

Federal Ministry for Sustainability and Tourism. 2017. *Austrian Strategy for Adaptation to Climate Change.* Federal Ministry for Sustainability and Tourism. Vienna. Available at https://www.bmk.gv.at/en/topics/climate-environment/climate-protection/austrian-strategy-adaptaion.html.

Federal Ministry of Climate Action, Environment, Energy, Mobility, Innovation and Technology. 2021. *GHG projections and assessment of policies and measures in Austria.* Vienna. Umweltbundesamt GmbH. Available at *https://www.umweltbundesamt.at/fileadmin/site/publikationen/rep0766.pdf*.

National energy and climate plan of Austria. Available at https://energy.ec.europa.eu/system/files/2020-03/at_final_necp_main_en_0.pdf.

Schwarz, W.; Gschrey, B.; Leisewitz, A.; Herold, A.; Gores, S.; Papst, I.; Usinger, J.; Oppelt, D.; Croiset, I.; Pedersen, P. H.; Colbourne,,D.; Kauffeld, M.; Kaar, K.; & Lindborg, A. 2011. *Preparatory study for a review of Regulation (EC) No 842/2006 on certain fluorinated greenhouse gases*, Final Report, Prepared for the European Commission in the context of Service Contract No 070307/2009/548866/SER/C4.