Advance Version

COMPLIANCE COMMITTEE

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Report of the technical review of the sixth national communication of Austria

Note by the secretariat

The report of the technical review of the national communication of Austria was published on 29 August 2014. For purposes of rule 10, paragraph 2, of the rules of procedure of the Compliance Committee (annex to decision 4/CMP.2, as amended by decisions 4/CMP.4 and 8/CMP.9), the report is considered received by the secretariat on the same date. This report, FCCC/IDR.6/AUT, contained in the annex to this note, is being forwarded to the Compliance Committee in accordance with section VI, paragraph 3, of the annex to decision 27/CMP.1.

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Report of the technical review of the sixth national communication of Austria

Parties included in Annex I to the Convention are requested, in accordance with decision 9/CP.16, to submit a sixth national communication to the secretariat by 1 January 2014. In accordance with decision 7/CMP.8, Parties included in Annex I to the Convention that are also Parties to the Kyoto Protocol shall include in their sixth national communication supplementary information under Article 7, paragraph 2, of the Kyoto Protocol. In accordance with decision 15/CMP.1, these Parties shall start reporting the information under Article 7, paragraph 1, of the Kyoto Protocol with the inventory submission due under the Convention for the first year of the commitment period. This includes supplementary information on the minimization of adverse impacts in accordance with Article 3, paragraph 14, of the Kyoto Protocol.

This report presents the results of the technical review of the sixth national communication and 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".

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I. Introduction and summary

A. Introduction

1. For Austria, the Convention entered into force on 29 May 1994 and the Kyoto Protocol on 16 February 2005. Under the Convention, Austria made a commitment to contribute to the joint European Union (EU) economy-wide emission reduction target of 20 per cent of greenhouse gas (GHG) emissions by 2020 below the 1990 level. Within the burden-sharing agreement of the EU for meeting commitments under the Kyoto Protocol, Austria committed itself to reducing its GHG emissions by 13 per cent compared with the base year (1990)[1] level during the first commitment period, from 2008 to 2012. For the second commitment period of the Kyoto Protocol, from 2013 to 2020, Austria, as a member State of the EU, committed to a joint EU economy-wide emission reduction target to reduce GHG emissions by 20 per cent compared with the 1990 level.

2. This report covers the in-country technical review of the sixth national communication (NC6) of Austria, coordinated 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" (decision 23/CP.19) and the "Guidelines for review under Article 8 of the Kyoto Protocol" (decision 22/CMP.1).

3. The review took place from 31 March to 5 April 2014 in Vienna, Austria, and was conducted by the following team of nominated experts from the UNFCCC roster of experts: Mr. Matjaž Česen (Slovenia), Mr. Ross Alexander Hunter (United Kingdom of Great Britain and Northern Ireland), Ms. Duduzile Nhlengethwa-Masina (Swaziland) and Ms. Sirinthornthep Towprayoon (Thailand). Mr. Česen and Ms. Towprayoon were the lead reviewers. The review was coordinated by Ms. Inkar Kadyrzhanova (secretariat).

4. During the review, the expert review team (ERT) reviewed each section of the NC6. The ERT also reviewed the supplementary information provided by Austria as a part of the NC6 in accordance with Article 7, paragraph 2, of the Kyoto Protocol. In addition, the ERT reviewed the information on the minimization of adverse impacts in accordance with Article 3, paragraph 14, of the Kyoto Protocol, which was provided by Austria in its 2013 annual submission and previous submissions under Article 7, paragraph 1, of the Kyoto Protocol.

5. In accordance with decisions 23/CP.19 and 22/CMP.1, a draft version of this report was communicated to the Government of Austria, which provided comments that were considered and incorporated, as appropriate, into this final version of the report.

B. Summary

6. The ERT conducted a technical review of the information reported in the NC6 of Austria in accordance with the "Guidelines for the preparation of national communications by Parties included in Annex I to the Convention, Part II: UNFCCC reporting guidelines on national communications" (hereinafter referred to as the UNFCCC reporting guidelines on

[1] "Base year" refers to the base year under the Kyoto Protocol, which is 1990 for all gases. The base year emissions include emissions from sectors/source categories listed in Annex A to the Kyoto Protocol.

NCs). As required by decision 15/CMP.1, supplementary information required under Article 7, paragraph 2, of the Kyoto Protocol[2] is provided in the NC6 (see para. 150 below). The supplementary information on the minimization of adverse impacts referred to in paragraph 4 above is complete and transparent.

7. Austria considered most recommendations provided in the report on the in-depth review of the fifth national communication of Austria.[3] The ERT commended Austria for its improved reporting. During the review, Austria provided further relevant information such as the 2011 annual report of its klima:aktiv policy, the report on GHG projections and the assessment of policies and measures, information on fast-start finance, the chapter on climate change adaptation and climate-related natural hazards from the Organisation for Economic Co-operation and Development (OECD) report on environmental performance in Austria, and the Party's strategy for adaptation to climate change.

1. Completeness and transparency of reporting

8. Gaps and issues related to the reported information identified by the ERT are presented in table 1 below.

2. Timeliness

9. The NC6 was submitted on 10 February 2014, after the deadline of 1 January 2014 mandated by decision 9/CP.16. Austria informed the secretariat about its difficulties with the timeliness of its NC6 on 3 December 2013 in accordance with paragraph 79 of the annex to decision 23/CP.19 and paragraph 139 of the annex to decision 22/CMP.1. The ERT noted with concern the delay in the submission of the NC6.

3. Adherence to the reporting guidelines

10. The information reported by Austria in its NC6 is mostly in adherence with the UNFCCC reporting guidelines on NCs as per decision 4/CP.5 (see table 1).

[2] Decision 15/CMP.1, annex, chapter II.
[3] FCCC/IDR.5/AUT.

Table 1
Assessment of completeness and transparency issues of reported information in the sixth national communication of Austria[a]

Sections of national communication	*Completeness*	*Transparency*	*Reference to paragraphs*	*Supplementary information under the Kyoto Protocol*	*Completeness*	*Transparency*	*Reference to paragraphs*
Executive summary	Complete	Transparent		National systems	Mostly complete	Transparent	25
National circumstances	Complete	Mostly transparent	14	National registries	Mostly complete	Transparent	28
Greenhouse gas inventory	Complete	Transparent		Supplementarity relating to the mechanisms pursuant to Articles 6, 12 and 17	Complete	Transparent	
Policies and measures (PaMs)	Mostly complete	Transparent	40	PaMs in accordance with Article 2	Complete	Mostly transparent	92
Projections and total effect of PaMs	Mostly complete	Mostly transparent	95, 118, 119	Domestic and regional programmes and/or arrangements and procedures	Complete	Transparent	
Vulnerability assessment, climate change impacts and adaptation measures	Complete	Transparent		Information under Article 10	Complete	Transparent	
Financial resources and transfer of technology	Complete	Mostly transparent	125, 127, 132	Financial resources	Complete	Mostly transparent	125
Research and systematic observation	Complete	Mostly transparent		Minimization of adverse impacts in accordance with Article 3, paragraph 14	Complete	Transparent	
Education, training and public awareness	Complete	Transparent					

[a] A list of recommendations pertaining to the completeness and transparency issues identified in this table is included in the Conclusions and recommendations chapter of this report.

II. Technical review of the reported information in the national communication and supplementary information under the Kyoto Protocol

A. Information on greenhouse gas emissions and national circumstances relevant to greenhouse gas emissions and removals, including other elements related to the Kyoto Protocol

1. Information on relevant national circumstances

11. In its NC6, Austria has provided a concise description of the national circumstances and elaborated on the framework legislation and key policy documents on climate change. Further information on the review of the institutional and legislative arrangements for the coordination and implementation of policies and measures (PaMs) is provided in chapter II.B below.

12. Information reported in the NC6 on national circumstances and changes in national circumstances and how these affect emissions and removals over time is complete and mostly transparent. Austria provided a description of its national circumstances, in particular of the government structure, population, geography, climate, economy, as well as of relevant economic sectors such as energy, building stock and urban structure, transport, industry, agriculture, forestry and waste.

13. The ERT recalled a recommendation made in the previous review report in relation to reporting on how changes in national circumstances affect GHG emissions. The ERT noted that Austria added more information on GHG trend analysis and the main drivers behind them in the important buildings sector in the section on building stock and urban structure of the NC6. However, the ERT also noted that the explanation on how national circumstances affect GHG emissions and removals in Austria and on how national circumstances and changes in national circumstances affect GHG emissions and removals over time is not sufficiently transparent in the chapter on the national circumstances in the NC6.

14. During the review, Austria provided more detailed information on the analysis of some main drivers that affected the overall GHG emissions trend over time and in specific sectors and related indicators that define those drivers. This included information on: the growing share of renewable energy in energy supply mix and its impact on total GHG emissions (namely, the relative decoupling of emissions and energy demand); the increase in the volume of road freight transport across Austria and its impact on emissions from transport; and the relationship between climate policies and the number of dwellings and floor space area (an increase in the number of dwellings and average floor space per dwelling contributed to an increase in emissions, but implemented policies outweighed this increase so that emissions from buildings actually decreased over time). The ERT recommends that Austria, in its next national communication (NC), include information provided during the review and information on other relevant factors related to national circumstances that affect GHG emissions and removals and on how national circumstances and changes in national circumstances affect GHG emissions and removals over time.

15. The ERT noted that during the period 1990–2011 Austria's population and gross domestic product (GDP) increased by 9.6 and 55.8 per cent, respectively, while GHG emissions per GDP and GHG emissions per capita decreased by 32.5 and 3.3 per cent, respectively. Total primary energy supply increased by 32.9 per cent during this period and total GHG emissions increased by 6.0 per cent. These findings show that Austria achieved a

relative decoupling of GHG emissions from energy demand, which becomes more visible in the years since 2005. Table 2 illustrates the national circumstances of Austria by providing some indicators relevant to GHG emissions and removals.

16. The ERT noted that a major emission source in Austria is transport. During the review, Austria explained that emissions from transport continue to grow because of the country's unique geographical location at the intersection of transportation corridors connecting Eastern and Western Europe and the increasing long-distance freight traffic between neighbouring countries that crosses Austria. The increase in emissions from this sector is also due to the lower price of fuel in Austria compared with neighbouring countries, and it seems that this price differential will remain, as Austria continues to increase its prices at a slower pace than its neighbours.

Table 2
Indicators relevant to greenhouse gas emissions and removals for Austria

	1990	*2000*	*2005*	*2010*	*2011*	*Change 1990–2011 (%)*	*Change 2010–2011 (%)*
Population (million)	7.68	8.01	8.23	8.39	8.42	9.6	0.4
GDP (2005 USD billion using PPP)	195.31	254.57	276.67	296.27	304.26	55.8	2.7
TPES (Mtoe)	24.84	28.56	33.79	34.23	33.02	32.9	–3.5
GHG emissions without LULUCF (kt CO_2 eq)	78 086.35	80 276.96	92 580.94	84 807.85	82 760.84	6.0	–2.4
GHG emissions with LULUCF (kt CO_2 eq)	68 209.13	65 046.00	84 955.67	80 915.05	78 889.87	15.7	–2.5
GDP per capita (2005 USD thousand using PPP)	25.43	31.78	33.62	35.31	36.14	42.1	2.4
TPES per capita (toe)	3.23	3.57	4.11	4.08	3.92	21.4	–3.9
GHG emissions per capita (t CO_2 eq)	10.18	10.01	11.29	10.13	9.84	–3.3	–2.9
GHG emissions per GDP unit (kg CO2 eq per 2005 USD using PPP)	0.40	0.32	0.34	0.29	0.27	–32.5	–6.9

Sources: (1) GHG emissions data: Austria's 2014 GHG inventory submission; (2) Population, GDP and TPES data: International Energy Agency.

Note: The ratios per capita and per GDP unit are calculated relative to GHG emissions without LULUCF; the ratios are calculated using the exact (not rounded) values and may therefore differ from a ratio calculated with the rounded numbers provided in the table.

Abbreviations: GDP = gross domestic product, GHG = greenhouse gas, LULUCF = land use, land-use change and forestry, PPP = purchasing power parity, TPES = total primary energy supply.

2. Information on the greenhouse gas inventory, emissions and trends

17. Austria has provided a summary of information on GHG emission trends for the period 1990–2011. This information is fully consistent with the 2013 national GHG inventory submission. Summary tables, including trend tables for emissions in carbon dioxide equivalent (CO_2 eq) (given in the common reporting format tables), are provided in an annex to the NC6. During the review, the ERT took note of the draft 2014 annual submission. The relevant information therein is reflected in this report.

18. Total GHG emissions[4] excluding emissions and removals from land use, land-use change and forestry (LULUCF) increased by 6.0 per cent between the base year (1990) and 2011, whereas total GHG emissions including net emissions or removals from LULUCF increased by 15.7 per cent over the same period. During the review, Austria provided preliminary information from its 2014 inventory submission, which included new data on trends for total emissions between 1990 and 2012: total GHG emissions increased by 2.5 and 11.7 per cent with and without LULUCF, respectively.

19. According to the 2014 inventory submission provided during the review, total GHG emissions without LULUCF increased by 18.6 per cent during 1990–2005. However, since 2005, the emission trend has changed and total emissions decreased by 13.5 per cent by 2012. Emissions in 2012 were approximately at the same level as they were in 2000. During the 1990s, the average annual rate of increase in total emissions was 0.3 per cent, while during 2000–2005 it was much higher: 2.9 per cent. Since 2005, emissions have been steadily decreasing, except for a small increase in 2010 due to economic recovery after the global financial crisis in 2009. The average annual rate of decrease in total emissions during 2005–2012 was 2.1 per cent.

20. Over the reporting period, emissions trends were driven by economic growth (42.1 per cent increase in GDP per capita during 1990–2011) and population growth (9.6 per cent increase over the same period). The growth in emissions was to a large extent offset by the increasing share of renewable energy sources in energy supply mix, and energy savings gained through energy efficiency improvements. Apart from this, emissions were driven by the growing demand for freight transportation, and growing fuel export in the vehicle tank ('fuel tourism'). Passenger vehicles also contributed to emission increases but to a much smaller degree. The decrease in emissions since 2005, apart from the effects of the global financial crisis, can mainly be attributed to the reduction in energy demand for space heating by private households (due to improvements in energy efficiency), and increased use of biomass, and energy use in industry.

21. Carbon dioxide (CO_2) was the gas with the greatest share of total GHG emissions in 2012, at 84.6 per cent. In 2012, CO_2 emissions were 9.2 per cent higher than in 1990. The trend for CO_2 emissions is similar to the overall trend for total GHG emissions, and the same is true for the drivers behind the trend. Methane (CH_4) and nitrous oxide (N_2O) had similar shares of total GHG emissions in 2012, with 6.6 per cent for CH_4 and 6.5 per cent for N_2O. While CH_4 emissions steadily decreased over the entire period 1990–2012 because of policies implemented in the waste and agriculture sectors, N_2O emissions fluctuated in the 1990s, stabilized in 2000 at the same level as they were in 1990, and after 2000 they decreased. In 2012, CH_4 and N_2O emissions were 36.3 and 15.8 per cent lower than in 1990, respectively.

22. Fluorinated gases (F-gases) made up 2.3 per cent of total GHG emissions in 2012. Over the entire period 1990–2012, F-gases increased slowly and by 2012, emissions were 16.9 per cent higher than in 1990. A closer examination of the data reveals large changes in the shares of emissions from hydrofluorocarbons (HFCs), perfluorocarbons (PFCs) and sulphur hexafluoride (SF_6) in overall F-gas emissions. The shares of SF_6 and PFCs declined while the share of HFCs increased over the reporting period. In 2012, the share of HFCs in F-gases was 79.6 per cent, while SF_6 contributed 18.1 per cent and PFCs 2.3 per cent. The overall increase in HFC emissions was due to the use of HFCs as substitutes for ozone depleting substances. An analysis of the drivers of GHG emissions trends in each sector is

[4] In this report, the term "total GHG emissions" refers to the aggregated national GHG emissions expressed in terms of CO_2 eq excluding land use, land-use change and forestry (LULUCF), unless otherwise specified.

provided in chapter II.B below. Table 3 provides an overview of GHG emissions by sector from the base year (1990) to 2012.

23. During the review, Austria provided additional information, elaborating on the split of total GHG emissions between emissions from sources covered by the European Union Emissions Trading System (EU ETS) and emissions from sources not covered by the EU ETS (non-ETS). In 2012, emissions from sectors covered by the EU ETS represented 37.8 per cent of the total GHG emissions (30,239.36 kt CO_2 eq), while emissions from the non-ETS sectors represented 62.2 per cent (49,820.00 kt CO2 eq). The EU ETS covers heavy energy-using installations in power generation and manufacturing industries, while non-ETS sectors cover sectors such as transport (with the exception of aviation and international maritime shipping), buildings, agriculture and waste. In Austria, transport was by far the largest non-ETS sector, with a 42.6 per cent share of non-ETS emissions in 2012. The ERT took note of this information.

Table 3
Greenhouse gas emissions by sector in Austria, 1990–2012

	GHG emissions (kt CO_2 eq)				*Change (%)*		*Share[a] by sector (%)*	
Sector	*1990*	*2000*	*2010*	*2012*	*1990–2012*	*2011–2012*	*1990*	*2012*
1. Energy	55 425.27	59 343.60	64 405.46	59 691.53	7.7	–3.7	71.0	74.6
A1. Energy industries	13 842.81	12 276.26	14 075.45	12 446.90	–10.1	–10.1	17.7	15.5
A2. Manufacturing industries and construction	12 773.64	14 032.97	15 942.32	15 580.60	22.0	–0.9	16.4	19.5
A3. Transport	14 029.13	18 965.49	22 438.55	21 635.83	54.2	–0.5	18.0	27.0
A4.–A5. Other	14 443.06	13 643.11	11 473.39	9 546.86	–33.9	–6.6	18.5	11.9
B. Fugitive emissions	336.63	425.78	475.74	481.35	43.0	2.6	0.4	0.6
2. Industrial processes	10 005.29	10 037.96	10 780.73	10 877.24	8.7	–2.2	12.8	13.6
3. Solvent and other product use	511.80	425.12	327.12	334.56	–34.6	4.6	0.7	0.4
4. Agriculture	8 556.71	7 912.11	7 468.13	7 499.03	–12.4	–1.0	11.0	9.4
5. LULUCF	–9 877.23	–15 230.97	–3 892.80	–3 838.52	–61.1	–0.8	–	–
6. Waste	3 587.28	2 558.17	1 826.42	1 657.00	–53.8	–4.6	4.6	2.1
7. Other	NA	NA	NA	NA	–	–	–	–
GHG total with LULUCF	**68 209.13**	**65 046.00**	**80 915.05**	**76 220.84**	**11.7**	**–3.4**	**NA**	**NA**
GHG total without LULUCF	**78 086.35**	**80 276.96**	**84 807.85**	**80 059.36**	**2.5**	**–3.3**	**100.0**	**100.0**

Sources: GHG emissions data: Austria's 2014 GHG inventory submission.

Note: The changes in emissions and the share by sector are calculated using the exact (not rounded) values and may therefore differ from values calculated with the rounded numbers provided in the table.

Abbreviations: GHG = greenhouse gas, LULUCF = land use, land-use change and forestry, NA = not applicable.

[a] The shares of sectors are calculated relative to GHG emissions without LULUCF; for the LULUCF sector, the negative values indicate the share of GHG emissions that was offset by GHG removals through LULUCF.

3. National system

24. Austria provided in its NC6 a description of how its national system is performing the general and specific functions defined in the guidelines for national systems under

Article 5, paragraph 1, of the Kyoto Protocol (decision 19/CMP.1). The description includes most of the elements mandated by decision 15/CMP.1. The NC6 also contains a reference to the description of a national system provided in the report mandated by decision 13/CMP.1, submitted in 2006[5] and to the national inventory report (NIR) of the 2013 annual submission. The ERT took note of the review of the changes to the national system as reflected in the report of the individual review of GHG inventory of Austria submitted in 2013. No changes have been made to Austria's national system since the NIR of the 2013 annual submission.

25. The ERT noted that the NC6 does not include all elements of information on national systems required by the UNFCCC reporting guidelines on NCs; namely, a description of the process for the recalculation of previously submitted inventory data and a description of the procedures for the official consideration and approval of the inventory. This information is included in the NIR of the 2013 annual submission, but it is not referenced in the NC6. The ERT recommends that Austria include this information in its next NC to improve the transparency of its reporting.

26. During the review, Austria provided additional information on the national system, elaborating on institutional and legislative arrangements and administrative procedures for GHG inventory planning, preparation and management. Austria provided information on its procedures for quality assurance and quality control of the GHG inventory and procedures for the continuous improvement process through the quality management system of the GHG inventory. The ERT noted this information on Austria's focus on quality in the preparation of its GHG inventory.

4. National registry

27. In its NC6, Austria has provided information on the national registry in accordance with the annex to decision 13/CMP.1 and the annex to decision 5/CMP.1. The ERT took note of the review of the changes to the national registry as reflected in the report of the individual review of the GHG inventory of Austria submitted in 2013.

28. In its NC6, Austria provided a reference to chapter 13 of the NIR of its 2013 annual submission, which describes the changes in its national registry. The ERT noted that Austria did not include the name and contact information of the registry administrator as required in accordance with decision 15/CMP.1. The ERT recommends that Austria report the required information in its next NC to improve the transparency of its reporting.

29. Austria described the changes, specifically those related to centralization of the EU ETS operations into a single EU registry operated by the European Commission and called the Consolidated System of European Union registries (CSEUR). These changes were made according to the EU directive on the centralization of the EU ETS operations into a single EU registry (directive 2009/29/EC) with a view to increasing the efficiency of EU member States by operating the Kyoto Protocol registries in a consolidated manner through the CSEUR, which was developed together with the new EU registry.

30. During the review, Austria informed the ERT that the CSEUR was certified on 1 June 2012 and the Austrian national registry joined the CSEUR on 20 June 2012. The ERT was also informed that relevant transaction and holdings data were migrated to the CSEUR and the connection to the international transaction log (ITL) was re-established without any issues and according to the agreed schedule. The ERT noted that the Austrian

[5] Party's initial report under the Kyoto Protocol. The report to facilitate the calculation of the assigned amount pursuant to Article 3, paragraphs 7 and 8, of the Kyoto Protocol, available at <http://unfccc.int/national_reports/initial_reports_under_the_kyoto_protocol/items/3765.php>.

registry resides on a consolidated information technology platform sharing the same infrastructure and technologies with other registries of the EU member States. The Austrian registry was reconnected to the ITL directly through a distinct and secure communication link through a consolidated communication channel.

5. Domestic and regional programmes and/or legislative arrangements and procedures related to the Kyoto Protocol

31. Austria has reported in its NC6 comprehensive and well-organized information on domestic and regional programmes and legislative arrangements and procedures related to the Kyoto Protocol. More detailed information in presented in chapter II.B.1 of this report.

32. The Federal Ministry of Agriculture, Forestry, Environment and Water Management is the coordinating body for climate change policymaking. The overall responsibility for climate change policymaking is shared between a number of institutions that form a decentralized governance framework at the federal and state (*Länder*) levels within Austria. Additional institutions as well as a further disaggregation of responsibility to the municipal level are involved in the implementation and delivery of climate change PaMs. As an EU member State, Austria is also significantly influenced by the policymaking process and by programmes at the EU level.

33. Implementation of the Kyoto Protocol is underpinned by a number of framework policies and strategies as well as institutional arrangements. To support implementation of a framework that will lead to Austria reaching its Kyoto Protocol target, the Kyoto Forum was established in 1999 at the Federal Ministry of Agriculture, Forestry, Environment and Water Management with representatives from local governments and the central government (see para. 50 below).

34. Austria's climate change strategy, adopted in 2002 and revised in 2007, outlines domestic measures to achieve the Kyoto Protocol target for the first commitment period, including significant extension of the joint implementation (JI)/clean development mechanism (CDM) programme, which is currently worth EUR 611 million (see para. 123 below). Austria's Environmental Support Act provides the legal basis for the JI/CDM programme and domestic environmental support scheme.

35. For the second commitment period of the Kyoto Protocol (2013–2020), as an EU member State Austria is committed to fulfil a joint target of the 28 EU member States and Iceland to reduce GHG emissions by 20 per cent below the 1990 level. Under EU decision 406/2009/EC of the European Parliament and Council, EU member States are obligated to meet this target via the EU 2020 climate and energy package (see para. 51 below).

36. A wide range of information relating to the development, implementation and progress of climate change policy is made publicly available, primarily via the Internet. The websites of the Federal Ministry of Agriculture, Forestry, Environment and Water Management and the Federal Environment Agency provide much of the policy and legislative background for climate change alongside more detailed technical analysis of measures and GHG emissions. Further information on regional climate change policies is made available on the websites of the states of Austria, and large programmes, such as the National Action Programme for Mobility Management (so called klima:aktiv mobil), have their own websites on which they post information. Before being enacted, all legislative instruments are subjected to a formal public consultation exercise and – once finalized – are published on the Internet. Major strategic documents, for example the Austrian Strategy for Adaptation to Climate Change, are also subject to public consultation during development.

37. Austria provided a description of national legislative arrangements and administrative procedures that seek to ensure that the implementation of activities under Article 3, paragraph 3, and elected activities under Article 3, paragraph 4, of the Kyoto

Protocol also contribute to the conservation of biodiversity and the sustainable use of natural resources. Biodiversity is specifically addressed in the Austrian Strategy for Adaptation to Climate Change, Part 1. Finally, the importance of managing Austria's forestry resources in an economically sustainable manner is outlined in the NC6 under the description of the PaMs relating to the maintenance and extension of vital forests. The main focus of these PaMs is to meet specific biodiversity protection objectives.

B. Policies and measures, including those in accordance with Article 2 of the Kyoto Protocol

38. Austria has provided in its NC6 comprehensive and well-organized information on its package of PaMs implemented, adopted and planned in order to fulfil its commitments under the Convention and its Kyoto Protocol.

1. Policies and measures related to implementation of commitments under the Convention

39. In its NC6, Austria reported on its PaMs adopted, implemented and planned in achieving its commitments under the Convention. Austria provided information on PaMs by sector and by gas and a description of the principal PaMs. The NC6 contains a set of PaMs similar to those in the fifth national communication (NC5). The descriptions clearly outline all 23 reported PaMs, including information on the name, objective, gas affected, type of instrument, status of and timeline for implementation, mitigation impact and related policy instruments. The ERT noted that information on each policy or measure is supplemented by information on actions implemented, and past and future financial budgets allocated. Austria reported on its policy context, and national targets and objections set to implement its commitments under the Convention.

40. Austria has provided only limited information on how it believes its PaMs are modifying longer-term trends in anthropogenic GHG emissions and removals in accordance with the objective of the Convention. Due to the restricted number of PaMs for which quantified mitigation effects have been calculated, the NC6 includes only limited information outlining how PaMs are modifying longer-term trends in GHG emissions. The ERT recommends that Austria provide comprehensive information on how it believes its PaMs are modifying its long-term trends of emissions and removals in its next NC.

41. Information on expected mitigation impacts is reported for many PaMs but not for all PaMs in the NC6 (see para. 47 below). The ERT reiterates the encouragement from the previous review report that Austria quantify as many of the currently not estimated PaMs as possible in its next NC. While the mitigation potential of some PaMs is reported, because this information is lacking for other PaMs it is not clear which PaMs are most significant or whether those included provide the most substantial contribution to emission reductions. It is therefore not possible to identify priority PaMs with the most significant impact on GHG emissions and removals. Ideally the reported information should outline the total impact of the measures in each sector, taking into account potential overlaps, and thus illustrate the GHG emission reductions expected for each sector for the reported PaMs. The ERT encourages Austria to report such information in its next NC.

42. The ERT noted that disaggregation of cross-cutting PaMs is not provided; for example, for some of the PaMs reported in section 4.3.1 of the NC6. However, mitigation impact is reported for those PaMs. To enhance the completeness and transparency of reporting, the ERT encourages Austria to include information on mitigation impact of identified cross-cutting measures, as relevant, in its next NC.

43. During the review, further descriptive information on PaMs was provided to the ERT, for example on the Renovation Cheque programme and progress in its implementation. In addition, Austria provided to the ERT the document *GHG Projections and Assessment of Policies and Measures in Austria* (reporting under EU decision 280/2004/EC, 15 March 2013), which includes information relating to implemented, adopted and planned PaMs; analytical data, including a description of methodologies used to quantify the effects of individual PaMs; and a significant number of additional PaMs as compared with the NC6. While it is likely that many of these PaMs are those that are incorporated in the NC6 and reported as disaggregated PaMs, such additional information provides more transparent and comprehensive information on implemented, adopted and planned PaMs in Austria. The ERT encourages Austria to include such relevant information in its next NC.

44. The ERT noted that a detailed description of PaMs that were maintained over time was provided in the previous NCs, while the NC6 provided only introductory text and updated information on those PaMs, as relevant. The only exception was in the waste sector where actions described in the previous NCs are described merely as "other programmes". The ERT encourages Austria to reference more systematically the PaMs that have been maintained over time in its next NC.

45. In terms of the cost–benefit analysis of PaMs, the ERT noted information reported on financial costs associated with the implementation of some PaMs, particularly those that require public funding from federal, regional or municipal governments; for example, where there is associated inward investment for Austria or the creation of green jobs. Non-greenhouse gas benefits are also highlighted for some PaMs. During the review, Austria indicated that a requirement for compiling individual impact assessments for new legislative proposals of the Federal Government was initiated in Austria at the end of 2013 and that impact assessments for EU-level policies are already complete. The ERT encourages Austria to provide information on the impact assessment of PaMs, describing costs and benefits for individual PaMs, in its next NC.

46. The ERT noted that a description of the way in which progress in the implementation of PaMs is monitored over time is provided in the NC6, but that information on institutional arrangements for the monitoring of PaMs is not included. The NC6 highlights the fact that highly fragmented responsibilities for climate change mitigation among national, regional and municipal governance levels present difficulties in providing a coherent mechanism for monitoring and evaluating the effects of policies. However, the ERT also noted that comprehensive monitoring and evaluation processes are in place for certain PaMs (such as for the National Action Programme for Mobility Management and for measures in buildings implemented by the states). The ERT further noted information in the previous review report that the Climate Change Act would include requirements for states to coherently report on PaMs using a common format, which would enable a better understanding of their effects and monitoring at the national level. Despite the Climate Change Act now being in place, no update has been provided on this issue in the NC6. Further information provided during the review indicated that the Climate Change Act does not contain a legal obligation for an overall monitoring and evaluation system for all PaMs. Nevertheless, the states and Ministry of Agriculture, Forestry, Environment and Water Management cooperate in monitoring the implementation of the latest programme of PaMs, agreed in June 2013. However, this does not cover all PaMs that are in place. The ERT encourages Austria to continue developing its process for the monitoring and evaluation of PaMs, both for individual PaMs and as an overall system, and to provide an update on its progress in its next NC.

47. Some information is reported in section 4.3 of the NC6 on interactions between policies implemented across sectors and between PaMs within individual sectors, and their

impact on the overall effect of PaMs. However, no further information on this or on the quantification of such interactions is reported. The effect of policy interactions on quantified GHG emissions reductions for PaMs is therefore unknown and is likely to reduce overall effects due to issues such as overlap in activities. Similarly, the effect of efficiency improvements by certain PaMs have not been separated, which could mean the effect of PaMs is likely to be overestimated for some PaMs. The ERT encourages Austria to describe, analyse and, where possible, quantify the effects of interactions between PaMs and provide an explanation of how PaMs complement each other to enhance mitigation impacts in its next NC.

2. Policy framework and cross-sectoral measures

48. The climate change policy framework for Austria is underpinned by PaMs developed and implemented at three distinct levels of governance: federal, state (nine states) and municipal. A significant proportion of the PaMs is deferred to the state level. Table 4 provides a summary of the reported information on the PaMs of Austria.

49. Articles 10–15 of the Constitution Act prescribe the legislative and executive powers for each of these governance levels. The climate change strategy is the defining document shaping Austria's climate policy. Most of the states also have regional climate change programmes. During the review, Austria provided a 'mapped' overview of these governance arrangements to the ERT. The ERT encourages Austria to include this information in its next NC.

50. In order to support coordination of climate change policy, various committees have been in place for some time. Upon adoption of the Climate Change Act in 2011, the National Climate Change Committee and the National Climate Change Council were established. These two bodies have taken over the functions of the previous Inter-ministerial Committee to Coordinate Measures to Protect the Global Climate and the Kyoto Forum for progressing action on climate change in Austria. The ERT noted this as a key development in administrative arrangements since the previous NC. The social partnership is also incorporated into the policy and legislative process in Austria. Trade unions, chambers of commerce, labour organisations, farmers' entities and non-governmental organizations are involved at many stages of these processes, and they are represented via members of the Committee and the Council.

51. The EU 2020 climate and energy package was adopted to ensure attainment of the EU target to reduce GHG emissions across member States by 20 per cent by 2020 below the 1990 baseline. For the period 2013–2020, this package established the scope and approach to the EU ETS and individual GHG emission reduction targets for the non-ETS sectors, which were disaggregated for each member State via the EU effort-sharing decision (ESD) (see para. 54 below).

52. The most important cross-cutting policy or measure in terms of coverage of total GHGs is the EU ETS, which has been implemented since 2005. Approximately 220 installations under the EU ETS accounted for 37.8 per cent of Austria's GHG emissions in 2012. For the period 2013–2020, an EU-wide cap is in place reducing emissions by 21 per cent by 2020 compared with 2005, including by 1.74 per cent annually over the period. The number of 'free' allocations granted to installations in Austria will fall from 22.75 million allowances in 2013 to 18.46 million allowances in 2020. However, there remains a large excess of allowances on the market, because the economic crisis reduced emissions from EU ETS installations well below their allocated amounts between 2008 and 2012. This means that continuous emissions reductions up to 2020 cannot be guaranteed.

53. The EU ETS is one of the key PaMs that is not quantified in the NC6. However, during the review, Austria informed the ERT that an estimation of GHG emission reductions for the EU ETS in 2015 and every five years thereafter until 2030 has been compiled and was submitted to the EU in March 2013 in the report *GHG Projections and Assessment of Policies and Measures in Austria*.

54. Austria has a legally binding target for the non-ETS sectors by 2020, as has each EU member State. For Austria the target is to reduce emissions in the non-ETS sectors by 16 per cent by 2020 below the 2005 level. This target is incorporated into Austria's Climate Change Act along with six sectoral targets and their annual emission reductions towards the final realisation of the overall target by 2020. During the review, Austria provided to the ERT further information regarding the scope of the sectoral targets and an overview of the annual targets. The Climate Change Act and the corresponding package of measures outline actions to be implemented in 2013 and 2014. Discussions are currently under way to implement a similar package for implementation in 2015.

55. Austria has put in place the Energy Strategy (adopted in 2009), the National Renewable Energy Action Plan (adopted in 2010) and the National Energy Efficiency Action Plan (adopted in 2014). These documents outline the action Austria will take to meet its legally binding commitments under the EU 2020 climate and energy package of increasing the share of renewables in the energy supply to 34 per cent by 2020.

56. Austria reported on the financial instruments put in place for implementing actions across sectors aimed at reducing GHG emissions and increasing energy efficiency and use of renewable energy sources. The domestic environmental support scheme provides economic incentives for projects that implement measures to enhance or address climate change, energy efficiency and environmental protection. It is one of the pillars of the Environmental Support Act. During 2008–2012, 12,000 projects were supported, with estimated emission reductions of 1,900 kt CO_2 eq. The ERT noted the detailed analysis and monitoring arrangements in place for this scheme. The Austrian Climate and Energy Fund provided financial support for 57,000 climate mitigation projects during 2007–2012. The ERT noted the success of this fund in terms of incentivizing inward investment in Austria and the wide-ranging reach of projects to many sectors and communities.

Table 4
Summary of information on policies and measures reported by Austria

Sectors affected	*List of key policies and measures*	*Estimate of mitigation impact (kt CO_2 eq)*
Policy framework and cross-sectoral measures	Climate Change Act, climate and energy strategies (federal and state)	NA
	Environmental Support Act	
	Domestic environmental support scheme	400 (2010) 300 (2015) 250 (2020)
	Austrian Climate and Energy Fund	NE
	European Union Emissions Trading System	NE
	Joint implementation/clean development mechanism programme	14 000 (2010) NE (2015, 2020)
Energy		
Renewable energy	Green Electricity Act	NE (2010) 400 (2015, 2020)
Energy efficiency, including residential and commercial	Domestic and federal environmental support schemes, National Plan on Building Standards,	500 (2010) 1 000 (2015)

Sectors affected	*List of key policies and measures*	*Estimate of mitigation impact (kt CO_2 eq)*
buildings sectors	Renovation Cheque programme	1 200 (2020)
Transport	Fuel consumption-based tax for new cars	NE (2010, 2015) 100 (2020)
	European Union biofuels directive (2003/30/EC)	1 700 (2010) NE (2015) 2 100 (2020)
	National Action Programme for Mobility Management (klima:aktiv mobil)	250 (2010) 500 (2015) NE (2020)
	Electric mobility	NE (2010, 2015) 400 (2020)
Industrial sectors	Domestic environmental support scheme	NE
	European Union fluorinated gas regulations	NE
Agriculture	European Union Common Agricultural Policy, Austrian Programme of Environmentally Sound Farming	NE
	Agricultural raw materials for biofuels, European Union biofuel and renewable energy targets	NA
Forestry	Maintenance and extension of forests	1 300 (2010) NE (2015, 2020)
Waste management	Ban on deposition of untreated biodegradable waste and capture of methane emissions from existing landfill sites	NE
	Remediation of historic landfill sites	NE

Abbreviations: NA = not applicable, NE = not estimated.

3. Policies and measures in the energy sector

57. Between 1990 and 2012, GHG emissions from the energy sector increased by 7.7 per cent (4,266.26 kt CO_2 eq). Within the energy sector, emissions from energy industries decreased by 10.1 per cent (1,395.91 kt CO_2 eq), while those from manufacturing industries and construction increased significantly, by 22.0 per cent (2,806.96 kt CO_2 eq). But the most substantial increase within the energy sector, 54.2 per cent (7,606.70 kt CO_2 eq), was in the transport sector.

58. In the energy supply mix, conflicting drivers are responsible for what equates to effectively the same level of emissions in 2000 and 2012 from the energy sector. A general increase in electricity demand coupled with increases in the share of thermal power plants and demand for district heating were countered by greater energy efficiency in electricity generation, increased electricity imports and an increased share of biomass used for electricity generation.

59. The increase in emissions from manufacturing industries was largely owing to a 73 per cent increase in steel production during 1990–2012, which was offset by a significant reduction in carbon intensity in this sector. During 1990–2012, there was a notable shift from the use of coal (30 per cent reduction) towards the use of natural gas (46 per cent increase) in industry and the overall reduction of fossil fuel use (17 per cent

reduction). The substantial increase in emissions from transport resulted from both an increase in the export of fuel in the vehicle tanks, particularly for freight transport, and an increase in transport demand (see para. 71 below).

60. A reduction in GHG emissions was observed in other sectors, including residential and commercial, primarily due to improvements in energy efficiency alongside increased use of biomass and reduced carbon intensity of fossil fuels. However, these reductions were attenuated by an increase in the number and size of dwellings, which lead to the increase in heating and cooling areas over the period.

61. A number of cross-cutting PaMs have significant influence on the energy sector, such as the EU ETS, the domestic environmental support scheme and the Austrian Climate and Energy Fund. Installations covered by the EU ETS were responsible for more than 85 per cent of emissions in the energy supply sector between 2008 and 2012.

62. ***Energy supply***. The primary energy supply in Austria comprises 26 per cent energy from renewable energy sources (8.6 per cent from hydropower and 17.5 per cent from biomass), 10 per cent from coal, 36 per cent from oil and 23 per cent from natural gas. Total energy imports were stable at about two thirds of the total energy supply during the 1990s. Since 2000 there has been a shift from the use of coal towards natural gas. Gross energy consumption per capita has increased over time and was 164 GJ per capita in 2011. Electricity consumption increased by 45 per cent between 1990 and 2011. However, 66.6 per cent of electricity generation was from renewables in 2011 (62.9 per cent of this being hydropower) with only 28.7 per cent from fossil fuels.

63. PaMs in energy supply include projects implemented through the cross-cutting policies, such as the domestic environmental support scheme and the Austrian Climate and Energy Fund, which are partially aimed at increasing the use of renewable energy sources.

64. ***Renewable energy sources***. The Green Electricity Act is a feed-in tariff scheme that encourages the use of renewable energy. The Act implements the EU renewable energy directive (2001/77/EC) and its amendment (2009/28/EC). It came into force in July 2012 and sets targets for additional electricity production from renewables by 2020. It is expected that this scheme will lead to attainment of the target of a 17–18 per cent share of renewables supported by the Act in final electricity consumption by 2020 (dependent on final electricity consumption at this time).

65. The federal environmental support scheme, implemented under the operational arrangements of the domestic environmental support scheme (although a standalone programme), provides financial support for localized projects that aim to develop renewable energy systems (primarily heating from biomass). Some EUR 78 million of financial support was provided to projects during 2012.

66. ***Energy efficiency***. A range of energy efficiency PaMs are in place. The domestic environmental support scheme provides economic incentives to projects that implement measures to enhance energy efficiency. Some 61,642 projects were provided with financial support during 2008–2012.

67. The EU energy efficiency directive (2012/27/EU) introduced requirements for annual improvements of 1.5 per cent in energy efficiency across EU member States. Additional information provided by Austria during the review indicated that domestic legislation (Energy Efficiency Act), transposing the requirements of this directive, was adopted in July 2014.

68. ***Residential and commercial sectors***. PaMs in residential and commercial buildings are largely focused on improvements in building standards and on support schemes for energy efficiency improvements and increased use of renewable energy (see para. 64 above). The measures are aimed at thermal improvements in building stock, increased

boiler efficiency, increased use of biomass and solar energy, increased use of district heating and consumer awareness.

69. Improvements in building standards have been implemented via the adoption in 2013 of the National Plan on Building Standards, predominantly developed through a bottom-up approach by the states, which are largely responsible for its implementation. The overarching driver for improved building standards is provided by the revised EU energy performance of buildings directive (2010/31/EC) and its requirement to move towards near-zero energy standards for new buildings from 2020.

70. Other measures largely focused on the provision of subsidies for the renovation of existing buildings to improve energy efficiency standards, such as through installing thermal insulation. The housing support schemes of the states and the Renovation Cheque programme administered by the Federal Government provide these subsidies. Austria reported on the coordinated working arrangement that is placed both among different schemes and between the Federal Government and the states. Additional information provided by Austria to the ERT during the review indicated that the cumulative effect of the housing support schemes resulted in GHG emissions reductions of 270 kt CO_2 eq in 2012. It is estimated that improvements in the energy efficiency of existing buildings will deliver GHG emissions reductions of 426 kt CO_2 eq by 2020.

71. ***Transport sector***. Export of fuel in the vehicle tanks, which contributed 27 per cent of road transport emissions in 2011, is a key driving factor of significant growth in overall emissions. The ERT noted that the previous review report outlined that fuel tax increases between 2007 and 2011 are expected to reduce the effect of fuel export in the vehicle tanks. While in the NC6 the impact of 'fuel tourism' is stated, there are no updates on the fuel price situation, PaMs presented for addressing this issue (e.g. increased taxation) or discussion of, for example, what effect any changes in fuel price have had or will have on GHG emissions from road transport.

72. During the review, Austria provided further information, indicating that fuel tax increases in 2007–2011 had negligible effects on GHG emissions from the transport sector. These increases were broadly in line with similar fuel tax increases in neighbouring countries, resulting in the discrepancy in fuel prices between Austria and neighbouring countries being maintained. Further fuel tax increases are planned, with a projected GHG emission reduction effect of 2,100 kt CO_2 eq by 2020, as reported in *GHG Projections and Assessment of Policies and Measures in Austria* provided during the review.

73. The ERT noted that implementing further tax increases, with the aim of closing the fuel price gap between Austria and its neighbouring countries, would be extremely challenging from a political point of view. Nevertheless, such tax increases are planned and during the review, Austria indicated to the ERT that the impacts of this increase were included in the 'with additional measures' scenario reported in the NC6. To increase the completeness and transparency of reporting, the ERT reiterates the encouragement made in the previous review report that Austria provide additional information on fuel prices, including existing and future PaMs associated with increases in fuel taxes.

74. The overall increase in the number of passenger and freight kilometres is also a key factor that has led to the overall increase in emissions. Passenger kilometres have increased from 80 billion in 1990 to 105 billion in 2012 and freight kilometres have increased from 32 to 128 billion over the same period. In freight transport particularly, much of this increase relates to transport into and out of Austria. Going forward it is clear that the impacts of increasing passenger and freight kilometres alongside fuel export in the vehicle tank will continue to significantly impact GHG emissions from transport. While the former is being addressed by a range of PaMs aimed at improving vehicle efficiency, the latter

issue remains an area of uncertainty as fuel export is sensitive to fluctuating price differences.

75. Under the Climate Change Act, a sectoral target for transport has been defined that requires incremental annual reductions of GHG emissions to a final reduction of 20.37 Mt CO_2 eq by 2020. Various PaMs are in place to achieve this target. The fuel consumption-based tax system places a one-off tax of 0–16 per cent of the overall value of new vehicle purchases, depending upon fuel consumption (i.e. the greater the fuel consumption of the vehicle the greater the tax).

76. In addition, under the Climate Change Act, a subsidy is provided for hybrid cars and those emitting less than 120 g CO_2 per km, while an additional tax is applied to those emitting more than 150 g CO_2 per km. Enhanced fuel efficiency of cars in Austria has also been stipulated by the EU regulation requiring manufacturers to meet a fleet average of not more than 130 g CO_2 per km by 2015, falling to 95 g CO_2 per km by 2021. This supply-side measure therefore operates alongside the demand-side measure of the fuel consumption-based tax system.

77. Through the implementation of the EU biofuel directive (2003/30/EC) and using tax concessions, Austria has successfully incentivized the penetration of biofuels in transport. In 2012, 6.8 per cent of fuel used in transport was in the form of biofuel, which resulted in an estimated GHG emission reduction of 1,700 kt CO_2 eq in 2012.

78. Another successful measure has been the implementation of the National Action Programme for Mobility Management within the transport sector. The programme incentivizes and provides technical advice on a range of emission reduction activities and projects, including eco-driving and the use of alternative fuels, vehicles and cycling. Up to 2012, 4,000 projects with an estimated emission saving of 540 kt CO_2 eq per year have been introduced under this programme. The programme has now been extended until at least 2020.

79. The National Mobility Plan for Austria, adopted in 2012, also outlines plans for increasing the penetration of electric cars and other highly fuel- and energy-efficient vehicles. It includes an objective for 250,000 electric vehicles on roads in Austria by 2020. The ERT noted this ambitious plan.

80. ***Industrial sector***. Energy use in industry is predominantly covered by the EU ETS. PaMs relating to energy efficiency are also in place and implemented in this sector (see paras. 53, 58 and 59 above).

4. Policies and measures in other sectors

81. Between 1990 and 2012, GHG emissions from industrial processes (including solvent and other product use), agriculture and waste decreased by 10.1 per cent (2,293.25 kt CO_2 eq).

82. ***Industrial processes***. Between 1990 and 2012, GHG emissions from the industrial processes sector (excluding solvent and other product use) increased by 8.7 per cent (871.95 kt CO_2 eq), with solvent and other product use decreasing by 34.6 per cent (177.24 kt CO_2 eq) over the same period. Emissions in the industrial processes sector were mainly owing to increased industrial output, particularly in the steel sector. Although productivity dropped after 2008 due to the global financial crisis, Austria indicated that production in 2012 was back to the level seen in 2008. The ERT noted the expected increase in SF_6 emissions in future years due to the disposal of soundproof windows. There are no PaMs for solvent and other product use reported in the NC6.

83. The EU ETS constitutes a key measure for this sector, covering the majority of industrial process-related emissions (more than 80 per cent from 2013 onwards). The

domestic environmental support scheme also provides subsidies to enhance overall efficiency improvements for some industrial sites. The two PaMs addressing F-gases reported in the NC6 – the Austrian F-gas ordinance and the enhanced EU legislation on F-gases – complement the existing EU legislation, adopted in 2007, to ban the use of certain substances. Existing Austrian ordinance is estimated to deliver 75 kt CO_2 eq reductions in emissions by 2020. The impact of the enhanced F-gas regulation is not provided in the NC6, although it was noted that the EU has completed an impact assessment for this. The ERT encourages Austria to provide an estimate of the emission reduction potential of this measure in its next NC. Austria will implement more stringent measures for F-gases alongside introducing a quota for HFCs. During the review, Austria indicated that it intends to adopt these PaMs and the quota into domestic legislation during 2015.

84. ***Agriculture***. Between 1990 and 2012, GHG emissions from the agriculture sector decreased by 12.4 per cent (1,057.68 kt CO_2 eq), mainly owing to reductions in animal populations and the reduced use of mineral fertilizers. Overall productivity is, however, expected to remain stable, therefore illustrating an increase in animal product yields and a trend of applying less fertilizer to agricultural land.

85. The key PaMs for agriculture relate to the ongoing implementation of the EU Common Agricultural Policy in Austria. While this overarching programme incorporates a wide range of requirements relating to agricultural practices, a crucial aspect relates to enhancing environmental performance and reducing GHG emissions from agricultural activities. The Austrian Programme for Environmentally Sound Farming covers this objective by including measures such as minimization of the use of mineral fertilizers and coverage of manure storage facilities. The enhanced use of agricultural materials as a renewable energy source, was also included as a PaM for the agriculture sector, although the impacts of this measure are likely to be seen largely in the energy sector. The impacts of the three PaMs for the agriculture sector were not quantified in the NC6.

86. ***LULUCF***. The LULUCF sector was a sink of 3,838.52 kt CO_2 eq in Austria in 2012, and net GHG removals decreased by 61.1 per cent since 1990. The trend is primarily due to the significant increase in the use of biomass as a renewable energy source within Austria. Such use is widely incentivized under various schemes, such as the domestic heating support scheme, the Green Electricity Act, and the Austrian Climate and Energy Fund. During the review, Austria discussed the planned continued increase in the use of biomass (requiring some 24 million m^2 of land allocated for this purpose), and the likely result that the LULUCF sector would become a net source in the near future.

87. The only PaM included for this sector relates to the maintenance and extension of Austria's forested area. Many of the actions outlined in the PaM relates to maintaining biodiversity and ensuring adaptation to unavoidable future climate change, rather than to mitigation. No estimates of impact are provided for 2015 and 2020. However, taking into account the planned increase in the use of forests as a biomass resource and indications provided by Austria during the review, it is not expected that this PaM will reverse the trend for LULUCF becoming a net source in the near future. It is also not clear how the increasing demand for fuelwood will affect the PaM related to maintaining and extending Austria's forest area. There is likely to be an overlap and potential trade-offs between these conflicting areas. The ERT encourages Austria to provide further details on the effect of fuelwood demand on the LULUCF sector, particularly on how this demand will be integrated with existing PaMs in the sector. The Party may also wish to include specific PaMs outlining the approach and quantified impacts on GHG emissions associated with land use for the provision of biomass fuels.

88. ***Waste management***. Between 1990 and 2012, GHG emissions from the waste sector decreased by 53.8 per cent (1,930.28 kt CO_2 eq), mainly owing to significant reductions in the carbon content of waste, with no organic waste being landfilled from 2009 onwards.

During the review, Austria explained that some 38 per cent of waste is incinerated, with almost all of this with energy recovery (and hence represented in the energy sector). Ongoing emissions from landfills relate only to historical landfilling of organic waste. Minor emissions in this sector emanate from wastewater handling, compost production and waste incineration (without energy recovery).

89. PaMs in the waste sector focus on the minimization of current and future waste to landfills (including stringent restrictions on organic content), capturing gas from existing landfills, or remediation of historical landfills through promoting landfill mining or methane oxidation covers. Existing legislative instruments in the form of the Austrian Waste Management Act and the Remediation of Contaminated Sites Act provide the basis for these PaMs. Implementation of waste minimization and management of active landfills are the responsibility of the states, while remediation of closed landfills resides with the Federal Government. None of the PaMs for waste included in the NC6 is quantified.

5. Policies and measures related to implementation of commitments under the Kyoto Protocol

90. Austria reported on its package of PaMs adopted, implemented and elaborated in achieving its commitment under the Kyoto Protocol.

91. The NC6 includes information on how Austria promotes and implements the International Civil Aviation Organization and the International Maritime Organization decisions to limit emissions from aviation and marine bunker fuels. From 2012 onwards, the aviation sector has been incorporated in the EU ETS, an inclusion supported by Austria. The EU ETS limits emissions from aviation by 2020 below the annual average emissions over the period 2004–2006.

92. In the NC6, 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. The NC6 underlines that Austria is minimizing adverse effects by implementing various Kyoto Protocol provisions, such as: not limiting action to single gas or sector; including flexibility measures; promoting sustainable development through, among other activities, the CDM; and specifically providing support for least developing countries. During the review, the ERT learned that consideration of such impacts have been incorporated into the process for undertaking impact assessments of all PaMs developed in Austria from 2013. The ERT recommends that Austria provide further information on how it minimizes adverse effects, including the adverse effects on international trade and social, environmental and economic impacts on other Parties, especially developing country Parties, in this impact assessment process in its next NC.

C. Projections and the total effect of policies and measures, including information on supplementarity relating to the mechanisms pursuant to Articles 6, 12 and 17 of the Kyoto Protocol

93. Projections referenced in this report have been reported by Austria in the NC6 and the first biennial report. No updated projections were available at the time of review.

1. Projections overview, methodology and key assumptions

94. The GHG emission projections provided by Austria in the NC6 include a ‘with measures’ and a ‘with additional measures’ scenario until 2030, presented relative to actual inventory data for 1990, 2000 and 2011. Projections are presented on a sectoral basis, using

the same sectoral categories used in the PaMs section and on a gas-by-gas basis for all the following GHGs: CO_2, CH_4, N_2O, PFCs, HFCs and SF_6 (treating PFCs and HFCs collectively in each case). Projections are also provided in an aggregated format for each sector as well as for a national total, using global warming potential values. Emission projections related to fuel sold to aircraft engaged in international transport were reported separately and not included in the totals. The ERT commends Austria for taking into account recommendations made in the previous review report.

95. Austria in its NC6 did not include relevant information on the factors and activities for each sector affecting emissions trends in 1990–2020. The ERT recommends that Austria include this information in its next NC. The NC6 does not include information required by the UNFCCC reporting guidelines on NCs on projections of indirect GHGs, including carbon monoxide, nitrogen oxides and non-methane volatile organic compounds, as well as sulphur oxides; a description of strengths and weaknesses of the models or approaches used; and an explanation of how the model or approach used accounts for any overlap or synergies that may exist between PaMs. The ERT encourages Austria to include this information in its next NC.

96. During the review, Austria provided additional information, elaborating on projections by subsector and gas and also for EU ETS and non-ETS sectors. The ERT took note of this information and suggests that Austria include this information in its next NC to improve the transparency of its reporting.

97. As reported in the NC6, the 'with measures' scenario takes into account PaMs implemented or adopted before February 2012, while the 'with additional measures' scenario takes into account planned PaMs with a realistic chance of being adopted and implemented in time to influence the emissions. The PaMs section of the NC6 includes only measures that have been implemented or adopted, so it is unclear from the report which measures have been included in the 'with additional measures' scenario. During the review, Austria provided additional information on the measures included in the 'with additional measures' scenario, which is available in the report *GHG Projections and Assessment of Policies and Measures in Austria*; where a definition of the scenarios is reported transparently. To improve the transparency of reporting, the ERT encourages Austria to report which measures are included in each scenario alongside a comprehensive description and quantification of the impacts of all PaMs in its next NC.

98. Emissions projections for CO_2, CH_4, N_2O and F-gases are generally estimated by the Federal Environment Agency Austria. Underlying sectoral forecasts of activities are based on various models and methods and are carried out in close collaboration with several institutions. Energy projections are based on the macroeconomic model DEIO of the Austrian Institute of Economic Research, supported by calculations using bottom-up models such as: (1) TIMES, used for electricity demand (a bottom-up approach for devices used in households and a top-down approach based on development of energy intensity and gross value added for industry, services and agriculture) and also for electricity and district heating supply (based on the available capacities for all types of power plants in combination with energy prices, subsidies and fees); (2) INVERT/EE-Lab, used for heat demand for heating and hot water in the buildings sector (an optimization model aimed at identifying options for minimization of cost); (3) GLOBEMI, used for road transport (based on detailed data on vehicle stock, the number of passengers per vehicle and tonnes of payload per vehicle) and also used for fuel export effects and the use abroad of fuel sold in Austria; and (4) GEORG, used for off-road transport (a fleet model). Projections for aviation are based on a jet fuel forecast provided by the Austrian Institute of Economic Research.

99. Projections of emissions from industrial processes and solvents and other product use are based on expert judgement, taking into account indicators related to macroeconomic

development, historical emissions and, in some cases, demand for materials. Projections of emissions of F-gases are based on the Austrian GHG inventory and performed with the same level of detail. For most subcategories in this sector, projected emissions are estimated taking into account activity growth rates used in other sectors and by including technological improvements based on the study on the projections of emissions of F-gases in Austria in 2008–2020 performed in 2010.

100. The agriculture sector projection is based on the model called Positive Agricultural Sector Model Austria – PASMA, which maximizes farm welfare and is calibrated on the basis of historical crops, forestry, livestock and farm tourism activities in Austria. Projections are estimated using the methodology used for the inventory preparation.

101. The waste sector projection is based on forecasts of the quantity of waste deposited, wastewater handled and waste incinerated (only waste oil and clinical waste). For the emission projections the same methods are used as for the inventory preparation.

102. Emissions and removals from forest land and remaining forest land are forecast using the model PROGNAUS, a yield and silvicultural science-based model consisting of several sub-models, including a basal area increment model, a height increment model, a tree recruitment model and a model describing tree mortality. Other emissions and removals in the LULUCF sector have been held constant throughout the period using 2010 figures from the 2013 inventory submission.

103. Austria reported on the changes to the methodology compared with the NC5 and provided supporting documentation. A new macroeconomic model was used, as well as new models for electricity demand and supply, and for energy demand by households (see para. 98 above). However, in the NC6 information reported on the effect of the methodology change and the reasoning behind it is not transparent. The ERT encourages Austria to include this information in its next NC.

104. The NC6 reports key assumptions for the years 2015, 2020, 2025 and 2030 covering GDP, population, building stock, heating degree days, exchange rate, international fuel prices and CO_2 certificate prices, as well as historical values for 2010, which are presented for comparison. Reported assumptions take into account recent economic development and seem reasonable. Compared with the NC5, there have been changes in key assumptions, but they are not significant. The ERT noted that the NC6 lacks information on sectoral assumptions that would increase the transparency of the reporting; for instance, passenger and tonne kilometres or driven kilometres per vehicle type for transport, and gross value added in the industrial and the services sector. Given the importance of fuel export for emission trends in Austria, clear reporting of a projected trend for fuel export is essential in understanding projections in transport. This information was provided during the review and is included in the report on *GHG Projections and Assessment of Policies and Measures in Austria*.

105. The NC6 reports analysis of sensitivity with two sensitivity scenarios using different assumptions of economic growth and energy prices based on the ‘with measures’ scenario. The scenario with high economic growth uses 2.5 per cent average yearly GDP growth in the period 2010–2030, while the scenario with lower economic growth uses 0.8 per cent average yearly GDP growth, compared with 1.5 per cent used in the ‘with measures’ scenario. Total emissions for the high economic growth scenario are 6.7 per cent higher than in the ‘with measures’ in 2020, while in the lower growth scenario they are 2.1 per cent lower than in the ‘with measures’ scenario. The ERT commends Austria for taking into account the recommendation made in the previous review report on sensitivity analysis.

2. Results of projections

106. For the first commitment period under the Kyoto Protocol (2008–2012), the EU has committed to reducing GHG emissions on average by 8 per cent below the base year emission level. Within the EU burden-sharing agreement, Austria committed to reducing its emissions by 13 per cent below the base year (1990) level. As discussed during the review, based on the 2014 inventory submission, Austria's total cumulative emissions for the period 2008–2012 amounted to 414,658.05 kt CO_2 eq, while its assigned amount agreed in the initial review report under the Kyoto Protocol is equal to 343,866.01 kt CO_2 eq which is 17.1 per cent below the cumulative total emissions for the same period.

107. Based on information reported in the NC6 and additional information provided to the ERT during the review, to reach the Kyoto Protocol target for the first commitment period, Austria plans to use units from Kyoto Protocol mechanisms in the amount of 69,030.00 kt CO_2 eq and removal units from activities under Article 3, paragraph 3, of the Kyoto Protocol in the amount of 6,790.00 kt CO_2 eq. The difference between Austria's total cumulative emissions for the period 2008–2012 (414,658.05 kt CO_2 eq) and its assigned amount (343,866.01 kt CO_2 eq) is 70,792.04 kt CO_2 eq, which is below a sum of the amounts corresponding to the units from Kyoto Protocol mechanisms and removal units from activities under Article 3, paragraph 3, of the Kyoto Protocol by 5,027.96 kt CO_2 eq. Taking into account this information, the ERT noted that Austria is in a position to meet its target for the first commitment period of the Kyoto Protocol.

108. In assessing Austria's progress in meeting its target for the first commitment period of the Kyoto Protocol, a difference between annual allocations for the EU ETS and reported emissions should be taken into account. For Austria, the target for non-ETS sectors during the period 2008–2012 was 37,900.00 kt CO_2 eq per year, while its average annual emissions from non-ETS sectors during the same period were 53,032.00 kt CO_2 eq per year. So, the difference is 15,132.00 kt CO_2 eq per year, which is slightly below an average amount of the units from the Kyoto Protocol mechanisms and units from LULUCF activities per year (15,164.00 kt CO_2 eq).

109. For the EU, the target for the second commitment period of the Kyoto Protocol is to reduce emissions by 20 per cent by 2020 compared with 1990 level in accordance with decision 1/CMP.8. This target will be fulfilled jointly by the EU and its member States through the implementation of the EU 2020 climate and energy package, which set the ground for emission reduction by 2020 compared with the 2005 level by 21 per cent of emissions from installations covered by the EU ETS and by 10 per cent of emissions in the non-ETS sectors (primarily transport, buildings, some industrial processes, agriculture and waste). Under the ESD, Austria's target is to reduce its non-ETS emissions by 16 per cent by 2020 compared with 2005 level.

110. According to the NC6, the projected emission trends by 2020 are 4.5 per cent above the 1990 level under the 'with measures' scenario and 0.7 per cent below the 1990 level under the 'with additional measures' scenario. According to the additional information provided during the review, Austria's emission reduction target by 2020 for non-ETS sectors is 47,869.00 kt CO_2 eq. The ERT noted that under the 'with measures' scenario in 2020 Austria's emissions from non-ETS sectors are expected to be 51,299.46 kt CO_2 eq, which is 7.2 per cent above the target, while under the 'with additional measures' scenario, its emissions are expected to reach the level of 47,791.48 kt CO_2 eq, which is just below the target (0.2 per cent below).

111. Austria reported that it does not intend to use units from the Kyoto Protocol mechanisms and accounting for LULUCF activities to reach its 2020 target for non-ETS sectors. Based on this information, the ERT noted that for Austria to reach its non-ETS target by 2020, it will be essential to ensure that additional measures reported under the

'with additional measures' scenario are adopted and implemented on time. The ERT also noted that among the additional measures PaMs in energy and transport have the largest effect by 2020 (see table 6 below), a fact which should be brought to the attention of policymakers.

112. Comparing the 2020 and 2030 projections, Austria reported that under the 'with measures' scenario, its total emissions are expected to increase by 2.9 per cent from 81,635.56 kt CO_2 eq in 2020 to 84,034.07 kt CO_2 eq in 2030, while according to the 2014 inventory submission its actual emissions amounted to 80,059.36 kt CO_2 eq in 2012. Under the 'with additional measures' scenario, emissions are projected to slightly decrease to 77,502.14 kt CO_2 eq in 2020 and afterwards slightly increase to 78,063.59 kt CO_2 eq in 2030. Austria explained that the decrease in emissions is driven by the implementation of PaMs, while the increase after 2020 comes from the fact that no new measures are envisaged so far for after 2020. The ERT noted that Austria might consider intensifying its efforts and put in place new measures early enough to offset emission growth after 2020. Austria informed the ERT during the review that its emissions from non-ETS sectors decrease under both scenarios by 2030. The most important among the non-ETS sectors is transport with the share of 45.2 per cent of emissions in the 'with measures' scenario and 42.9 per cent in the 'with additional measures' scenario in 2020.

113. As reported in the NC6, the most dominant gas continues to be CO_2, with its share ranging between 85 and 87 per cent of total emissions under both reported scenarios for 2020 and 2030. Its share increases by no more than 1–2 percentage points by 2020. In contrast, the shares of CH_4 and N_2O slightly decrease by 2020, due to a continuing decrease in CH_4 and N_2O emissions. The share of F-gases stays at a level of 2 per cent of total emissions.

114. Austria reported in the NC6 its projections by sector. Emissions from energy supply are projected to decrease until 2020 in both the 'with measures' and 'with additional measures' scenarios due to a shift in fuel used from oil and coal to gas and renewables. After 2020, increasing demand for electricity is the reason behind an upward trend in emissions. Emissions from industry are projected to increase under both scenarios, mainly owing to an increase in industrial production. Emissions from transport in the 'with measures' scenario increase significantly until 2015 and later stay almost constant, while in the 'with additional measures' scenario emissions decrease until 2020 and stay almost constant thereafter. The reason behind the increase in emissions is further increase in economic and transport activities, while after 2015 the small increase in emissions is due to the increased use of biofuels and higher efficiency standards, including the introduction of new technologies, the mitigation effects of which outweigh the increase in transport activity. In the 'with additional measures' scenario, the decrease in emissions is mainly a consequence of increased fuel tax. The difference in fuel prices between Austria and neighbouring countries is present over the entire projections period and under both scenarios, and the amount of fuel export slowly increases because of increased economic activity. Emissions from buildings and waste continue to decrease, while emissions in agriculture more or less stay at the same level throughout the period. The LULUCF sector changes from a net sink to a net source between 2012 and 2015 due to the increased use of wood biomass.

115. The most important sector continues to be industry (namely, fuel combustion in industry and industrial processes) with an increase of its share of total emissions to 36.2 per cent under the 'with measures' scenario and 37.1 per cent under the 'with additional measures' scenario in 2030. The second most important sector is transport, with a share of 28.5 per cent under the 'with measures' scenarios and 27.2 per cent under the 'with additional measures' scenario in 2030. The energy supply sector follows, with equal shares of around 16 per cent under both scenarios. Buildings and agriculture represent around

9 per cent each; and emissions from waste contribute around 1 per cent to total emissions under both scenarios in 2030.

116. The projected emission levels under different scenarios and information on the Kyoto Protocol targets and the quantified economy-wide emission reduction target are presented in table 5 and the figure below.

Table 5
Summary of greenhouse gas emission projections for Austria

	Greenhouse gas emissions (kt CO_2 eq per year)	*Changes in relation to the base year[a] level (%)*	*Changes in relation to the 1990 level (%)*
Kyoto Protocol base year[b]	79 049.66	NA	1.2
Kyoto Protocol target for the first commitment period (2008–2012)	68 773.20	–13.0	–11.9
Kyoto Protocol target for the second commitment period (2013–2020)[c]	Not available yet		
Quantified economy-wide emission reduction target under the Convention[d]	Not available yet		
Inventory data 1990[e]	78 086.35	–1.2	–
Inventory data 2012[e]	80 059.36	1.3	2.5
Average annual emissions for 2008–2012[e]	82 932.00	4.9	6.2
‘With measures’ projections for 2020[f]	81 635.56	3.3	4.5
‘With additional measures’ projections for 2020[f]	77 502.14	–2.0	–0.7
‘With measures’ projections for 2030[f]	84 034.07	6.3	7.6
‘With additional measures’ projections for 2030[f]	78 063.59	–1.2	0.0

[a] “Base year” in this column refers to the base year used for the target under the Kyoto Protocol, while for the target under the Convention it refers to the base year for that target.

[b] The Kyoto Protocol base year level of emissions is provided in the initial review report contained in document FCCC/IRR/2007/AUT.

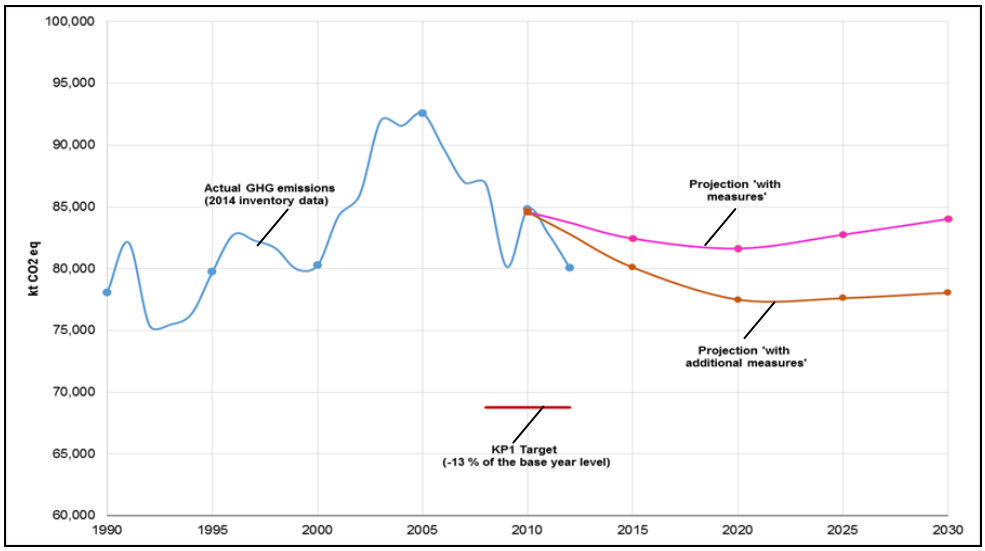
[c] The Kyoto Protocol target for the second commitment period (2013–2020) is a joint target for the European Union and its 28 member States and Iceland. The target is to reduce emissions by 20 per cent by 2020 compared with the base year (1990) level. The target for sectors not covered by the European Union Emissions Trading System is 16 per cent for Austria under the European Union effort-sharing decision.

[d] The quantified economy-wide emission reduction target under the Convention is a joint target for the European Union and its 28 member States and Iceland. The target is to reduce emissions by 20 per cent by 2020 compared with the base year (1990) level.

[e] Austria’s 2014 greenhouse gas inventory submission; the emissions are without land use, land-use change and forestry.

[f] Austria’s sixth national communication.

Greenhouse gas emission projections



Sources: (1) Data for the years 1990–2012: Austria's 2014 greenhouse gas inventory submission; the emissions are without land use, land-use change and forestry; (2) Data for the years 2011–2030: Austria's sixth national communication and/or first biennial report; the emissions are without land use, land-use change and forestry.

Note: The target for the second commitment period of the Kyoto Protocol is based on preliminary estimates of the base year emissions for the first commitment period of the Kyoto Protocol and quantified emission limitation or reduction objective included in annex I to decision 1/CMP.8. The initial assigned amount for the second commitment period will be established after the initial review for the second commitment period of the Kyoto Protocol.

Abbreviations: GHG = greenhouse gas, KP1 = first commitment period of the Kyoto Protocol.

3. Total effect of policies and measures

117. In the NC6, Austria presents the estimated and expected total effect of implemented and adopted PaMs, in accordance with the 'with measures' scenario, using an indicator-based approach. Information is presented in terms of GHG emissions avoided or sequestered, by gas (on a CO_2 eq basis), in 2010, 2015, 2020, 2025 and 2030. Austria also reported the total effect of planned PaMs by calculating the difference between the 'with measures' and 'with additional measures' scenarios, and presented it in terms of GHG emissions avoided or sequestered, by gas (on a CO_2 eq basis), in 2015, 2020, 2025 and 2030. During the review, Austria provided information on the total effect of implemented and adopted PaMs in 2000 and 2005.

118. The reported total effect of implemented and adopted PaMs does not include the effects of PaMs in agriculture. The ERT recommends that Austria in its next NC include this information to improve the transparency of its reporting.

119. The 'without measures' scenario was developed using an indicator approach, which may result in an overestimation of the total effect of PaMs because the approach also includes the effect of autonomous improvement, so it can be understood as an upper limit of the effect of PaMs. The ERT reiterates the recommendation made in the previous review report that Austria improve the accuracy and transparency of its reporting on the total effect of implemented and adopted PaMs in its next NC, either through the preparation of a 'without measures' scenario with underlying key assumptions that are consistent with those of the 'with measures' scenario, or through an aggregation of the effects of each significant PaM.

120. Austria reported that the total effect of adopted and implemented PaMs since 1995 is 29,500 kt CO_2 eq in 2010, 48,100 kt CO_2 eq in 2020 and 62,400 kt CO_2 eq in 2030. The aggregate effect of the planned PaMs is estimated as 4,133 kt CO_2 eq in 2020 and 5,970 kt CO_2 eq in 2030. According to the NC6, additional PaMs implemented in the transport sector will deliver the largest emission reductions, followed by the effect of additional PaMs implemented in industry and energy supply. The most effective PaMs and drivers behind GHG emission reductions are described in chapter II.B above. Table 6 provides an overview of the total effect of PaMs as reported by Austria.

Table 6
Projected effects of planned, implemented and adopted policies and measures in 2020 and 2030

Sector	*Effect of implemented and adopted measures (kt CO_2 eq)*	*Relative value (% of 1990 emissions)*	*Effect of planned measures (kt CO_2 eq)*	*Relative value (% of 1990 emissions)*	*Effect of implemented and adopted measures (kt CO_2 eq)*	*Relative value (% of 1990 emissions)*	*Effect of planned measures (kt CO_2 eq)*	*Relative value (% of 1990 emissions)*
	2020				*2030*			
Energy (without transport)	NA	–	990	2.4	NA	–	2 724	6.6
Transport	NA	–	2 689	19.2	NA	–	2 718	19.4
Industrial processes	NA	–	183	1.7	NA	–	271	2.6
Agriculture	NA	–	271	3.2	NA	–	257	3.0
Land-use change and forestry	NA	–	0	0.0	NA	–	0	0.0
Waste management	NA	–	0	0.0	NA	–	0	0.0
Total	**48 100**	**61.6**	**4 133**	**5.3**	**62 400**	**79.9**	**5 970**	**7.6**

Source: Austria's sixth national communication.

Note: The total effect of implemented and adopted policies and measures is defined as the difference between the indicator-based 'without measures' and 'with measures' scenarios; the total effect of planned policies and measures is defined as the difference between the 'with measures' and 'with additional measures' scenarios.

Abbreviation: NA = not available.

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

121. Austria in its NC6 provided information on how its use of the mechanisms under Articles 6, 12 and 17 of the Kyoto Protocol is supplemental to domestic action. In the first commitment period of the Kyoto Protocol, Austria will use units from the Kyoto Protocol mechanisms in addition to domestic measures to reach its target, while at the time of reporting, there were no plans to use units from the Kyoto Protocol mechanisms in the second commitment period.

122. Austria explained during the review that in defining supplementarity it took into account that the main focus of its climate policy was on domestic measures. However, at the time of elaborating on the plans for the first commitment period, Austria did not expect the economic developments to take place that had a significant impact on emission trends and delayed the mitigation effect of PaMs. The focus on domestic measures becomes obvious as the total effect of implemented and adopted PaMs (29,500 kt CO_2 eq) exceeds the average amount of the units from the Kyoto Protocol mechanisms per year (about 14,200 kt CO_2 eq) that are planned to be used for meeting the target for the first commitment period of the Kyoto Protocol.

123. Austria's JI/CDM programme was launched in 2003. The total budget of the programme amounts to EUR 611 million, and a limit for purchased units from the Kyoto Protocol mechanisms is set to 80 million tonnes CO_2 eq in total for the first commitment period. During the review, the ERT was informed that by the end of 2013, the purchased units from the Kyoto Protocol mechanisms amounted to 71.1 million tonnes of emission reductions, which exceeds the planned used of the units from the Kyoto Protocol mechanisms and is sufficient for Austria to reach the Kyoto Protocol target for the first commitment period (see para. 107 above). The total number of projects under the programme is 74, with CDM projects constituting the largest share, 65 per cent, while JI projects represent 19 per cent. Green investment schemes, CDM facilities and the World Bank Community Development Carbon Fund make up the remainder of the projects. The projects are distributed worldwide, in 29 countries, with the greatest share in China and Estonia.

D. Provision of financial resources and technology transfer to developing country Parties, including information under Articles 10 and 11 of the Kyoto Protocol

1. Financial resources, including "new and additional" resources and resources under Article 11 of the Kyoto Protocol

124. In its NC6, Austria provided details on measures taken to give effect to its commitments under Article 4, paragraphs 3, 4 and 5, of the Convention as required by the UNFCCC reporting guidelines on NCs and under Article 11 of the Kyoto Protocol, as required by the "Guidelines for the preparation of information required under Article 7 of the Kyoto Protocol". In this regard, Austria reported that it considers as "new and additional" all climate change financial resources that underpin a gradual and substantial scaling up of climate finance over the years since the Convention and its Kyoto Protocol entered into force.

125. The NC6 provides information on financial contributions to the Global Environment Facility (GEF), which was made in 2010 for the fifth replenishment. During the review, Austria clarified that it reported its commitments, wherein a total of EUR 42.6 million was committed to the fifth replenishment of the GEF and is currently still being disbursed. Austria further explained during the review that the reported EUR 14 million was the portion of the GEF contribution it considered "new and additional", hence included in information on fast-start finance. The ERT could not, however, ascertain what criterion Austria used to come to this consideration. The ERT recommends that Austria improve the transparency of its reporting by clearly explaining what financial resources are reported as "new and additional" and associated criteria used to report such resources. In so doing, the ERT recommends that Austria use table 3 of the UNFCCC reporting guidelines on NCs to report the total contribution to the GEF and explain "new and additional" in this regard, including how it was determined as such, in its next NC.

126. The NC6 indicates that Austria made no contributions to specialized bodies of the United Nations, with the exception of the UNFCCC Supplementary Fund and the Intergovernmental Panel on Climate Change (IPCC) in 2009 and 2012, wherein the total contribution was USD 0.12 million each year.

127. In the NC6, Austria reports that it has exceeded its fast-start finance pledge of EUR 120 million (for the period 2010–2012). However, information reported in the NC6 was not sufficient to verify this. Additional information provided during the review indicates that the financial support committed in 2010, 2011 and 2012 was EUR 40.5 million, EUR 34.22 million and EUR 45.74 million, respectively. This makes a total of

EUR 120.46 million, which indeed exceeds the pledge. The ERT commends Austria in this regard.

128. Austria has reported on the assistance it has provided to developing country Parties that are particularly vulnerable to the adverse effects of climate change to help them to meet the costs of adaptation to those adverse effects. In this regard the ERT noted the increasing proportion of funds allocated for adaptation, which is commended.

129. Also Austria has provided information on its financial contribution to the Adaptation Fund, established in accordance with decision 10/CP.7. It provided 244 thousands of certified emission reduction units to the Fund over the period 2009–2012. With regard to the most recent financial contributions (made during 2010–2012) to enhance the implementation of the Convention by developing countries, Austria's contribution, which is in the form of official development assistance (ODA) grants, amounts to USD 221.18 million (4.6 per cent of total ODA). Table 7 summarizes information on financial resources and technology transfer.

Table 7
Summary of information on financial resources and technology transfer for 2009-2012
(Millions of United States dollars)

	Years of disbursement			
Allocation channel of public financial support	*2009*	*2010*	*2011*	*2012*
Official development assistance	1 217.29	1 304.09	1 226.50	1 088.71
Contributions through multilateral channels, including regional banks	12.78	35.09	21.26	14.64
Contribution to the Global Environment Facility	–	56.42	–	–
Contributions through bilateral and regional channels	18.36	3.93	25.50	32.96
Contributions through United Nations bodies	0.12	–	–	0.12
Fast-start finance	–	53.64	47.58	58.79

Sources: (1) Official development assistance figures from the Query wizard for international development statistics of the Organisation of Economic Co-operation and Development. Available at: <http://stats.oecd.org/qwids>; (2) Contributions to the Global Environment Facility, GEF/A.4/7, "Summary of negotiations: Fifth replenishment of the GEF Trust Fund" (Attachment 1). Available at <https://www.thegef.org/gef/sites/thegef.org/files/documents/GEF-A.4-7%20Summary%20of%20Negotiations%20of%20the%20Fifth%20Replenishment%20of%20the%20GEF_0.pdf>; (3) Annex 2: Fast Start Climate Finance Monitoring table. Austria. Figures for 2012 reported in euro. Available at <http://ec.europa.eu/europeaid/what/development-policies/financing_for_development/documents/accountability-report-2013/2013_annex_3_fsf_monitoring_at_en.pdf>; (4) All other figures, Austria's sixth national communication.

2. Technology transfer, including information under Article 10 of the Kyoto Protocol

130. Austria has provided in its NC6 information on activities related to the transfer of technology and notable activities by the public and private sectors. A detailed review of reported information is provided in chapter II.D.3 of the report of the technical review of the first biennial report.

131. Austria also reported activities related to technology transfer, particularly on steps taken by governments to promote, facilitate and finance the transfer of technology. The Government of Austria is collaborating with the private sector through the Federal Economic Chamber on an environmental technologies export initiative and also participates in various international networks and forums, such as the Climate Technology Initiative.

During the review, however, the ERT learned that Austria does not yet have a national designated entity for the Technology Mechanism.

132. The ERT noted that since the NC5 there has been no significant improvement in the reporting of success and failure stories. The ERT recommends that Austria improve reporting in this regard. In so doing, Austria may include a textual description of success and failure stories, making reference to the relevant project activities. Care should be taken to report failure stories in a constructive manner and, where applicable, to describe how challenges were overcome.

133. In its NC6, Austria has provided information on the fulfilment of its commitments under Article 10 of the Kyoto Protocol. In particular, Austria reported on capacity-building activities, focusing on the forestry sector. Furthermore, Austria reported on research projects with the focus on support to developing countries (in appendix C, table C.2 of the NC6); some of the research activities seek to support the development and enhancement of endogenous capacities and technologies of developing countries. The ERT took note of this information and suggests that Austria make reference to this appendix in its next NC.

E. Vulnerability assessment, climate change impacts and adaptation measures

134. In its NC6, Austria has provided the required information on the expected impacts of climate change in the country and on studies conducted to evaluate the status of adaptation measures, and has elaborated on the process of the implementation of the Austrian Strategy for Adaptation to Climate Change that was approved by the Austrian Council of Ministers on 23 October 2012. The recommendations for action addressing various sectors are included in the Strategy for Adaptation and referenced in the NC6.

135. The ERT noted limited information on the expected impacts of climate change reported in the NC6 compared with the NC5 and encourages Austria to elaborate in more detail on the impact of climate change on ecological systems. During the review, the ERT was informed by Austria that it will finalize the Austria Assessment Report, prepared by the Austrian Panel on Climate Change, by June 2014. This report, an independent assessment prepared by Austrian researchers that undergoes scientific review, covers three aspects of climate change: the physical science basis, consequences for society and nature, and mitigation and adaptation. The ERT notes that this report will include information on the expected impacts of climate change and other relevant issues related to vulnerability and adaptation, and encourages Austria to include this information in its next NC.

136. The ERT noted that Austria considers itself a country vulnerable to climate change due to the sensitivity of its mountain ecosystems. Table 8 summarizes the information on vulnerability and adaptation to climate change presented in the NC6.

Table 8
Summary of information on vulnerability and adaptation to climate change

Vulnerable area	*Examples/comments/adaptation measures reported*
Water resources and water management	*Vulnerability*: highly vulnerable due to shifts in precipitation, glacier melt and permafrost thawing. Water scarcity is exacerbated by decreasing groundwater and surface water supply, which poses risks for energy supply from large hydropower energy sources and may impact the energy mix of Austria in the future *Adaptation*: major activities are research, data collection, management of water supply and demand, improved water resources and flood management, rational use of water resources and industrial water management

Vulnerable area	*Examples/comments/adaptation measures reported*
Agriculture and forestry	*Vulnerability*: highly vulnerable due to pest diseases, weeds and extreme events as well as heat stress and reduction of water supply resulting from shift in precipitation, which poses risks for yield loss and land-use changes as well as risks for tree growth and changes in the life cycle of trees *Adaptation*: major activities cover soil protection and fertilizer management, improvements in irrigation plans, use of plant protection products, breeding of adaptive plants as well as preventative work
Tourism	*Vulnerability*: vulnerability varies from high to low depending on area. Shorter winters and less snow impact tourist numbers and pose risks related to short-term economic activities Adaptation: major activities cover mainstreaming of climate change in tourism strategies and the development of adaptation measures, including improving data support for decision-making
Energy	*Vulnerability*: vulnerability varies from high to low depending on certain issues. Low vulnerability of energy demand in housing due to a decrease of heating degree days. In contrast, an increase of cooling degree days leads to high vulnerability of heat demand for the cooling of buildings. Risk to energy generation is linked to increasing energy demand due to high temperatures and reduction of energy production from hydropower. *Adaptation*: major activities cover optimizing distribution network infrastructure, climate adapted system planning for transport systems, including effects of climate change on energy sector decision-making and research activities, reducing demand, and developing energy supply strategies
Human health	*Vulnerability*: vulnerability varies from low to high depending on area, age and living circumstances and is linked to heat stress, disease, ultraviolet irritation, and extreme events that affect population health and lead to migration *Adaptation*: major activities cover general public relations and preparedness for extreme events such as heatwaves, droughts, flood mudslides and landslides as well as outbreak of infectious diseases
Transportation infrastructure	*Vulnerability*: highly vulnerable in some regions due to amounts of snow, avalanches and permafrost thawing, rock falls and landslides. The impacts pose risks for road transportation and construction. *Adaptation*: major activities cover information and early warning systems, safeguarding of transportation systems and thermal comfort, reduction of heat stress, review of legal standards based on climate change, and research and training opportunities in the area of transportation infrastructure in the context of climate change
Industry and trade	*Vulnerability*: moderately vulnerable but may have an indirect impact on other sectors such as energy supply and water consumption. Climate impacts pose risks related to production losses and factory shutdowns, including an industrial profile shift in the long term *Adaptation*: major activities cover increasing resilience of products, protecting supply and energy security, and developing climate-friendly goods taking into account climate adaptation requirements

137. Unlike in the NC5, Austria described in the NC6 expected impacts of climate change based on recent research. The Party reported on: the temperature increase by 2 C since the middle of the nineteenth century in the larger Alpine area and a slower increase during the twentieth century; the increase in sunshine duration by 20 per cent; the precipitation trend, increasing by 10–15 per cent; and the increase in extreme events, particularly heat waves. The ERT noted that Austria could report in its next NC other relevant expected impacts based on vulnerability assessment based on the forth coming assessment report.

138. During the review, the ERT was informed about the progress in the implementation of the Austrian Strategy for Adaptation to Climate Change. The ERT noted that Austria could reference or include relevant information from this document in its next NC. The ERT noted that Austria does not prioritize vulnerable areas based on short-term impacts on the economy. Austria may wish to establish priority in vulnerability areas for planning of short-term and long-term adaptation strategies in order to prevent and avoid impacts on vulnerable economic sectors. The main sectors considered to be vulnerable are water resources and water management, agriculture, forestry, tourism, energy, human health, transportation infrastructure, and industry and trade.

139. During the review, Austria informed the ERT of the preparation of the National Action Plan, as the second part of the strategy. The ERT noted the plan for implementation, which is disaggregated by sector and by state, where most of actions are to take place in 2014 and 2015. To improve the transparency of reporting, the ERT encourages Austria to make a tabular synthesis of major activities as reflected in the strategy and include this information in its next NC. Austria may wish to assess the progress of the actions implemented and report on this in its next NC to improve the quality of reporting.

F. Research and systematic observation

140. Austria has provided detailed information on its actions relating to research and systematic observation and addressed both domestic and international activities, including the World Climate Programme, the Global Climate Observing System (GCOS), the IPCC, the World Glacier Monitoring Service, the International Geosphere–Biosphere Programme, the Global Observation Research Initiative in Alpine Environments, and European research projects on climate modelling. Furthermore, in accordance with the UNFCCC reporting guidelines on NCs, Austria has provided a summary of information on GCOS activities. Information reported in the NC6 on research and systematic observation is complete and transparent.

141. Austria has a strong infrastructure in place for research both in terms of institutional arrangements and law. The Climate Change Centre Austria was established in 2011 to facilitate, promote and support climate research in Austria. The ERT noted that there are several acts supporting climate research in Austria, including the Research and Technology Funding Act, the Research Organization Act and the Universities Act. The ERT also notes that research expenditure related to climate change has continuously increased to 2.8 per cent of GDP in 2012.

142. During the review, the ERT was informed of the initiative of the Austrian Panel on Climate Change supported by the Austrian Climate and Energy Fund in 2011. The major area of Austria's research is the Alpine region, including neighbouring countries, particularly aspects of the hydrological cycle and their interaction with the biosphere in Alpine ecosystems. The NC6 has provided detailed information on ongoing research activities and climate research programmes, including Start Climate and Austrian Climate Research programme.

143. Austria reported on its long-standing experience in climate observations supported by a dense network of observing stations monitoring meteorological and hydrographical parameters. Over time, Austria has collected a homogeneous data series based on instrumental measurements of the greater Alpine region with more than 1,000 stations measuring temperature and precipitation as well as other parameters relating to glacier monitoring. Some of these stations exchange data at the international level. During the review, Austria informed the ERT of the research observation results and the GCOS in particular, including the results of its studies on atmosphere and biosphere. To improve the

quality of its reporting, Austria may wish to summarize the outcomes of the research in its next NC.

144. The ERT noted that Austrian researchers actively participate in research networks, particularly on modelling and global circulation models, and in relevant European research projects funded by the European Commission.

145. The NC6 describes activities related to research support to developing countries through the Commission for Development Research, which has its own criteria for selection of partners. The support for research studies of the partner countries in sub-Saharan Africa, Central and South America and Asia is provided in the context of the United Nations Millennium Development Goals, however this support is limited to those countries only. The ERT recommends that Austria undertake systematic effort to provide capacity-building support to other developing countries and include more detailed information on its action taken to provide such support its next NC.

G. Education, training and public awareness

146. In the NC6, Austria has provided information on its actions relating to education, training and public awareness at both the domestic (federal and state) and international level.

147. The NC6 provides updated information on the implementation of a wide variety of initiatives by federal and state governments. The ERT took note of the education development programme called OKOLOG, which is implemented and supported at the state level. The ERT noted Austria's intention to enhance the network of participating schools across the country.

148. The ERT commends Austria on its initiative for active climate protection (klima:aktiv), started in 2004 as part of the Austrian climate protection strategy, whose effective implementation and various activities have led to substantial impacts on market uptake and behavioural changes in relation to energy efficiency, mobility and the use of renewable energy by Austrian society. As a Climate Alliance member, Austria reported on its active role in implementation of domestic and international activities. The ERT took note of the national activities of the Climate Alliance in Austria at different levels, including cities, states, the private sector and educational institutes as well as the linkages with the international level.

149. The ERT appreciates the media materials, information platforms and climate awareness culture produced and promoted by the Austrian Climate Alliance. Austria may wish to report on its successful training and public awareness-raising in its next NC in order to communicate this information to other countries.

III. Summary of reviewed supplementary information under the Kyoto Protocol

A. Overview of supplementary information under Article 7, paragraph 2, of the Kyoto Protocol

150. Supplementary information provided by Austria under Article 7, paragraph 2, of the Kyoto Protocol in its NC6 is mostly complete and mostly transparent. The supplementary information is located in different sections of the NC6. Table 9 provides an overview of supplementary information under Article 7, paragraph 2, of the Kyoto Protocol as well as references to the NC6 chapters in which this information is provided.

Table 9
Overview of supplementary information under Article 7, paragraph 2, of the Kyoto Protocol

Supplementary information	*Reference to the sixth national communication*
National registry	Section 3.4
National system	Section 3.3
Supplementarity relating to the mechanisms pursuant to Articles 6, 12 and 17	Section 5.3
Policies and measures in accordance with Article 2	Sections 4.3 and 4.4
Domestic and regional programmes and/or legislative arrangements and enforcement and administrative procedures	Section 4.2
Information under Article 10	Sections 3.3, 4.2, 6.3, 7.4, 8 and 9
Financial resources	Sections 7.1–7.3

B. Minimization of adverse impacts in accordance with Article 3, paragraph 14, of the Kyoto Protocol

151. Austria reported the information requested in section H, "Minimization of adverse impacts in accordance with Article 3, paragraph 14", of the annex to decision 15/CMP.1 as a part of its 2013 annual submission. The information in NIR 2013 is in line with the supplementary information required under Article 7, paragraph 1, of the Kyoto Protocol (decision 15/CMP.1). During the review, Austria provided the ERT with the additional information on how it strives to implement its commitments under Article 3, paragraph 1, of the Kyoto Protocol in such a way as to minimize adverse social, environmental and economic impacts on developing country Parties, particularly those identified in Article 4, paragraphs 8 and 9, of the Convention. The ERT considers the reported information to be complete and transparent. The ERT noted that Austria could continue exploring and reporting on the adverse impacts of the response measures.

152. The ERT took note that as an EU member State, Austria implements PaMs as determined by common EU legislation that is subject to impact assessments, which include trade relations with non-EU and other countries, World Trade Organization obligations and assessment of impacts on developing countries. The ERT noted additional information provided in the NC6 on how Austria seeks to ensure that response measures designed and implemented at the national level are as targeted and effective as possible. This is achieved through compulsory, government-wide impact assessments concerning environmental, economic and social consequences of PaMs. In addition, there are legally-binding standards for Austrian JI/CDM projects, which take into account social and environmental impact criteria. The ERT encourages Austria to report more information on how it assists developing Parties, in particular those that are highly dependent on the export of fossil fuels in diversifying their economies and conducting relevant research.

IV. Conclusions and recommendations

153. The ERT conducted a technical review of the information reported in the NC6 of Austria according to the UNFCCC reporting guidelines on NCs. The ERT concludes that the NC6 provides a good overview of the national climate policy of Austria. The information provided in the NC6 includes all elements of the supplementary information

under Article 7 of the Kyoto Protocol. During the review, Austria provided additional information such as the 2011 annual report of its klima:aktiv policy, the 2013 report on GHG projections and the assessment of policies and measures, information on fast-start finance, the chapter on climate change adaptation and climate-related natural hazards from the OECD report on environmental performance in Austria, and the Party's strategy for adaptation to climate change.

154. Austria's emissions for 2012 were estimated to be 2.5 per cent above its 1990 level excluding LULUCF and 11.7 per cent above including LULUCF. Its emissions reached maximum levels in 2005 and since then, they have declined. Emissions trends were driven by economic growth (42.1 per cent increase in GDP per capita during 1990–2011) and population growth (9.6 per cent increase during the same period). The growth in emissions was to a large extent offset by the increasing share of renewable energy sources in energy mix, and energy savings gained through energy efficiency improvements.

155. In the NC6, Austria presents GHG projections for the period from 2010 to 2030. Two scenarios are included: 'with measures' and 'with additional measures'. The projected level of GHG emissions excluding LULUCF by 2020 is 4.5 per cent above 1990 under the 'with measures' scenario, and 0.7 per cent below 1990 under the 'with additional measures' scenario.

156. For the first commitment period of the Kyoto Protocol (2008–2012), within the EU burden-sharing agreement, Austria committed to reducing its emissions by 13 per cent below the base year (1990). Based on the 2014 inventory submission, Austria's total cumulative emissions for the period 2008–2012 amounted to 414,658.05 kt CO_2 eq, while its assigned amount agreed in the initial review report under the Kyoto Protocol is equal to 343,866.01 kt CO_2 eq which is 17.1 per cent below the cumulative total emissions for the same period.

157. During the first commitment period, Austria plans to use units from Kyoto Protocol mechanisms in the amount of 69,030.00 kt CO_2 eq and removal units from activities under Article 3, paragraph 3, of the Kyoto Protocol in the amount of 6,790.00 kt CO_2 eq. The difference between Austria's total cumulative emissions for the period 2008–2012 (414,658.05 kt CO_2 eq) and its assigned amount (343,866.01 kt CO_2 eq) is 70,792.04 kt CO_2 eq, which is below a sum of the amounts corresponding to the units from Kyoto Protocol mechanisms and removal units from activities under Article 3, paragraph 3, of the Kyoto Protocol by 5,027.96 kt CO_2 eq. Taking into account this additional information, the ERT noted that Austria is in a position to meet its Kyoto Protocol target for the first commitment period.

158. The NC6 contains information on how its use of the mechanisms under Articles 6, 12 and 17 of the Kyoto Protocol is supplemental to domestic action. In the first commitment period of the Kyoto Protocol, Austria will use units from the Kyoto Protocol mechanisms in addition to domestic measures to meet its target, while at the time of reporting, there were no plans to use units from the Kyoto Protocol mechanisms in the second commitment period. The focus on domestic measures becomes obvious as the total effect of implemented and adopted PaMs (29,500 kt CO_2 eq) exceeds the amount of the average units from the Kyoto Protocol mechanisms per year (14,200 kt CO_2 eq) that are planned to be used for meeting the target for the first commitment period of the Kyoto Protocol.

159. Under the EU effort-sharing decision, Austria's emission reduction target by 2020 in sectors not covered by the EU ETS is a 16 per cent reduction below the 2005 level, which is equal to 47,869.00 kt CO_2 eq in 2020. Under the 'with measures' scenario in 2020 Austria's emissions are expected to be 51,299.46 kt CO_2 eq, which is 7.2 per cent above the target, while under the 'with additional measures' scenario, its emissions are expected to

reach the level of 47,791.48 kt CO_2 eq, which is just below the target (0.2 per cent below). Austria reported that it does not intend to use units from the Kyoto Protocol mechanisms to reach its 2020 target for non-ETS sectors. The ERT noted that Austria should intensify its efforts and ensure that additional measures reported under the 'with additional measures' scenario are adopted and implemented on time to allow Austria reach its non-ETS target by 2020.

160. The climate change policy framework for Austria is underpinned by PaMs developed and implemented at three distinct levels of governance: federal, state and municipal. Upon adoption of the Climate Change Act in 2011, Austria established the National Climate Change Committee and the National Climate Change Council to support coordination of climate change policy. Austria has put in place the Energy Strategy (adopted in 2009), the National Renewable Energy Action Plan (adopted in 2010) and the National Energy Efficiency Action Plan (adopted in 2014). These documents outline the action Austria will take to meet its legally binding commitments under the EU 2020 climate and energy package of increasing the share of renewables in the energy supply to 34 per cent by 2020.

161. The most important cross-cutting policy in terms of coverage of total GHGs is the EU ETS, which has been implemented in Austria since 2005 covering approximately 220 installations that accounted for 37.8 per cent of Austria's GHG emissions in 2012. The other significant PaMs are the domestic environmental support scheme (economic incentives for climate change, energy efficiency and environmental protection projects), the Renovation Cheque programme (federal subsidies for thermal renovation of buildings), the financial support scheme for construction and renovation (state subsidies for thermal renovation, energy efficient construction and use of renewable energy sources in the housing sector) and obligatory shared for biofuel use in the transport sector.

162. In its NC6, Austria provided information on provision of support required under the Convention and its Kyoto Protocol. In this regard Austria reported that it considers as "new and additional" all climate change financial resources that underpin a gradual and substantial scaling up of climate finance over the years since the Convention and its Kyoto Protocol entered into force. Austria reported that it exceeded its fast-start finance pledge of EUR 120 million for 2010–2012.

163. Austria is a vulnerable country due to its mountainous location, with two thirds of its area in the Alps. The key vulnerable sectors are water resources and water management, agriculture, forestry, tourism and energy. Austria has put in place the Strategy for Adaptation to Climate Change and the National Adaptation Plan, which is being implemented at the state level. Austria plans by June 2014 to finalize the Austria Assessment Report that will cover three aspects of climate change: the empirical science basis, the consequences for society and nature, and mitigation and adaptation activities.

164. The NC6 provides information on education programmes and federal programmes and public awareness campaigns. Austria has several initiatives and activities related to climate awareness at the domestic and international levels. Most remarkable, the initiative for active climate protection (klima:aktiv), started in 2004 as part of the Austrian climate protection strategy, whose effective implementation and various activities have led to substantial impacts on market uptake and behavioural changes in relation to energy efficiency, mobility and the use of renewable energy by Austrian society.

165. The NC6 provides information on Austria's actions related to research and systematic observation, and addresses both domestic and international activities, including information on GCOS activities. Austria has a good infrastructure for research and its researchers actively participate in research networks.

166. 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 is provided by Austria in its 2013 annual submission.

167. In the course of the review, the ERT formulated several recommendations relating to the completeness and transparency of Austria's reporting under the Convention and its Kyoto Protocol. The key recommendations[6] are that Austria:

(a) Improve completeness of reporting by including in the next NC the following information:

(i) A complete description of the national system;

(ii) A complete description of the national registry;

(iii) How it believes PaMs are modifying long-term trends of emissions and removals in Austria;

(iv) Factors and activities for each sector affecting emissions trends in 1990–2020;

(b) Improve the transparency of reporting by including in the next NC the following information:

(i) How national circumstances are relevant to factors affecting GHG emissions and removals, including disaggregated indicators, to explain the relationship between national circumstances and emissions or removals;

(ii) How Austria further strives to implement PaMs under Article 2 of the Kyoto Protocol in such a way as to minimizes adverse effects, including the adverse effects on international trade and the social, environmental and economic impacts on other Parties, especially developing country Parties;

(iii) An evaluation of the total effect of implemented and adopted PaMs, if possible, through the preparation of a 'without measures' scenario with underlying key assumptions that are consistent with those of the 'with measures' scenario, or through an aggregation of the effects of each significant PaM;

(iv) An indication of which financial resources provided to developing country Parties are "new and additional" and clarification of associated criteria used to report such resources;

(v) Improved reporting of success and failure stories of technology transfer initiatives.

V. Questions of implementation

168. During the review, the ERT assessed the NC6, including supplementary information provided under Article 7, paragraph 2, of the Kyoto Protocol and reviewed information on the minimization of adverse impacts in accordance with Article 3, paragraph 14, of the Kyoto Protocol, with regard to timeliness, completeness, transparency and adherence to the reporting guidelines on NCs. No question of implementation was raised by the ERT during the review.

[6] The recommendations are given in full in the relevant sections of this report.

Annex

Documents and information used during the review

A. Reference documents

"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/1999/7. Available at <http://unfccc.int/resource/docs/cop5/07.pdf>.

"Guidelines for the preparation of national communications by Parties included in Annex I to the Convention, Part I: UNFCCC reporting guidelines on annual inventories". FCCC/CP/1999/7. Available at <http://unfccc.int/resource/docs/cop5/07.pdf>.

"Guidelines for the preparation of the information required under Article 7 of the Kyoto Protocol". Decision 15/CMP.1. Available at <http://unfccc.int/resource/docs/2005/cmp1/eng/08a02.pdf#page=54>.

"Guidelines for review under Article 8 of the Kyoto Protocol". Decision 22/CMP.1. Available at <http://unfccc.int/resource/docs/2005/cmp1/eng/08a03.pdf#page=51>.

"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 23/CP.19. Available at <http://unfccc.int/resource/docs/2013/cop19/eng/10a02.pdf#page=20>.

FCCC/SBI/2011/INF.1. Compilation and synthesis of fifth national communications. Executive summary. Note by the secretariat. Available at <http://unfccc.int/resource/docs/2011/sbi/eng/inf01.pdf>.

FCCC/SBI/2011/INF.1/Add.1. Compilation and synthesis of fifth national communications. Note by the secretariat. Addendum. Policies, measures, and past and projected future greenhouse gas emission trends of Parties included in Annex I to the Convention. Available at <http://unfccc.int/resource/docs/2011/sbi/eng/inf01a01.pdf>.

FCCC/SBI/2011/INF.1/Add.2. Compilation and synthesis of fifth national communications. Note by the secretariat. Addendum. Financial resources, technology transfer, vulnerability, adaptation and other issues relating to the implementation of the Convention by Parties included in Annex I to the Convention. Available at <http://unfccc.int/resource/docs/2011/sbi/eng/inf01a02.pdf>.

FCCC/SBI/2011/INF.2. Compilation and synthesis of supplementary information incorporated in fifth national communications submitted in accordance with Article 7, paragraph 2, of the Kyoto Protocol. Note by the secretariat. Available at <http://unfccc.int/resource/docs/2011/sbi/eng/inf02.pdf>.

FCCC/ARR/2013/AUT. Report of the individual review of the annual submission of Austria submitted in 2013. Available at <http://unfccc.int/resource/docs/2014/arr/aut.pdf>.

FCCC/IRR/2007/AUT. Report of the review of the initial report of Austria. Available at <http://unfccc.int/resource/docs/2007/irr/aut.pdf>.

FCCC/IDR.5/AUT. Report of the in-depth review of the fifth national communication of Austria. Available at <http://unfccc.int/resource/docs/2011/idr/aut05.pdf>.

Sixth national communication of Austria. Available at <http://unfccc.int/files/national_reports/annex_i_natcom/submitted_natcom/application/pdf/aut_nc6.pdf>.

2013 GHG inventory submission of Austria. Available at <http://unfccc.int/national_reports/annex_i_ghg_inventories/national_inventories_submissions/items/7383.php>.

2014 GHG inventory submission of Austria. Available at <http://unfccc.int/national_reports/annex_i_ghg_inventories/national_inventories_submissions/items/8108.php>.

B. Additional information provided by the Party

Responses to questions during the review were received from Mr. Martin Kriech (Federal Ministry of Agriculture, Forestry, Environment and Water Management of Austria), including additional material on updated policies and measures, greenhouse gas projections, the national registry and recent climate policy developments in Austria. The following documents[1] were also provided by Austria:

Network for Change. Klima:aktiv. 2011. *Annual Report 2011*. Vienna: Federal Ministry of Agriculture, Forestry, Environment and Water Management, Division of Environmental Economics and Energy Policy. Available at <http://www.klimaaktiv.at/dms/klimaaktiv/publikationen/klimaaktiv/annualreport2011/Annual-Report-2011/Annual%20Report%202011.pdf?1=1>.

Environment Agency Austria. 2013. *GHG Projections and Assessment of Policies and Measures in Austria*. Reporting under Decision 280/2004/EC, 15 March 2013. Report REP-0412. Vienna: Environment Agency Austria. Available at <http://www.umweltbundesamt.at/fileadmin/site/publikationen/REP0412.pdf>.

Organisation for Economic Co-operation and Development (OECD). 2013. *Environmental Performance Reviews: Austria*. *2013*. Chapter 5 on Climate Change Adaptation and Climate-Related Natural Hazards. Paris: OECD. Available at <http://www.oecd-ilibrary.org/environment/oecd-environmental-performance-reviews-austria-2013_9789264202924-en>.

Division of Air Pollution Control and Climate Protection. 2012. *The Austrian Strategy for Adaptation to Climate Change. Part 1*. Context. May 2012. Vienna: Federal Ministry of Agriculture, Forestry, Environment and Water Management. Available at <http://www.bmlfuw.gv.at/dms/lmat/umwelt/klimaschutz/klimapolitik_national/anpassungsstrategie/strategie-kontext/AustrianAdaptationStrategy_Context_FINAL_25092013_v02_online.pdf>.

Annex 2: Fast Start Climate Finance Monitoring table. Austria. Figures for 2012. Available at <http://ec.europa.eu/europeaid/what/development-policies/financing_for_development/documents/accountability-report-2013/2013_annex_3_fsf_monitoring_at_en.pdf>.

Contributions to the Global Environment Facility, GEF/A.4/7, "Summary of negotiations: Fifth replenishment of the GEF Trust Fund" (Attachment 1), available at <https://www.thegef.org/gef/sites/thegef.org/files/documents/GEF-A.4-7%20Summary%20of%20Negotiations%20of%20the%20Fifth%20Replenishment%20of%20the%20GEF_0.pdf>.

[1] Reproduced as received from the Party.