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## **Technical analysis of the third biennial update report of Andorra submitted on 5 September 2019**

### **Summary report by the team of technical experts**

#### *Summary*

According to decision 2/CP.17, paragraph 41(a), Parties not included in Annex I to the Convention, consistently with their capabilities and the level of support provided for reporting, were to submit their first biennial update report by December 2014. Further, paragraph 41(f) of that decision states that Parties not included in Annex I to the Convention shall submit a biennial update report every two years, either as a summary of parts of their national communication in the year in which the national communication is submitted or as a stand-alone update report. As mandated, the least developed country Parties and small island developing States may submit biennial update reports at their discretion. This summary report presents the results of the technical analysis of the third biennial update report of Andorra, conducted by a team of technical experts in accordance with the modalities and procedures contained in the annex to decision 20/CP.19.



## Abbreviations and acronyms

AD	activity data
AFOLU	agriculture, forestry and other land use
AR	Assessment Report of the Intergovernmental Panel on Climate Change
BUR	biennial update report
CGE	Consultative Group of Experts
CH <sub>4</sub>	methane
CO <sub>2</sub>	carbon dioxide
CO <sub>2</sub> eq	carbon dioxide equivalent
EF	emission factor
GEF	Global Environment Facility
GHG	greenhouse gas
HFC	hydrofluorocarbon
ICA	international consultation and analysis
IPCC	Intergovernmental Panel on Climate Change
IPCC good practice guidance	<i>Good Practice Guidance and Uncertainty Management in National Greenhouse Gas Inventories</i>
IPCC good practice guidance for LULUCF	<i>Good Practice Guidance for Land Use, Land-Use Change and Forestry</i>
MRV	measurement, reporting and verification
NA	not applicable
NC	national communication
non-Annex I Party	Party not included in Annex I to the Convention
N <sub>2</sub> O	nitrous oxide
PFC	perfluorocarbon
QA/QC	quality assurance/quality control
Revised 1996 IPCC Guidelines	<i>Revised 1996 IPCC Guidelines for National Greenhouse Gas Inventories</i>
SF <sub>6</sub>	sulfur hexafluoride
TTE	team of technical experts
UNFCCC guidelines for the preparation of NCs from non-Annex I Parties	“Guidelines for the preparation of national communications from Parties not included in Annex I to the Convention”
UNFCCC reporting guidelines on BURs	“UNFCCC biennial update reporting guidelines for Parties not included in Annex I to the Convention”
2006 IPCC Guidelines	<i>2006 IPCC Guidelines for National Greenhouse Gas Inventories</i>

## I. Introduction and process overview

### A. Introduction

1. The process of ICA consists of two steps: a technical analysis of the submitted BUR and a facilitative sharing of views under the Subsidiary Body for Implementation, resulting in a summary report and a record, respectively.
2. According to decision 2/CP.17, paragraph 41(a), non-Annex I Parties, consistently with their capabilities and the level of support provided for reporting, were to submit their first BUR by December 2014. In addition, paragraph 41(f) of that decision states that non-Annex I Parties shall submit a BUR every two years, either as a summary of parts of their NC in the year in which the NC is submitted or as a stand-alone update report. The least developed countries and small island developing States may submit BURs at their discretion.
3. Further, according to paragraph 58(a) of the same decision, the first round of ICA is to commence for non-Annex I Parties within six months of the submission of the Parties' first BUR. The frequency of developing country Parties' participation in subsequent rounds of ICA, depending on their respective capabilities and national circumstances, and the special flexibility for small island developing States and the least developed country Parties, will be determined by the frequency of the submission of BURs.
4. Andorra submitted its second BUR on 2 August 2017, which was analysed by a TTE in the ninth round of technical analysis of BURs from non-Annex I Parties, conducted from 4 to 8 December 2017. After the publication of its summary report, Andorra participated in the sixth workshop for the facilitative sharing of views, convened in Katowice, Poland, on 7 December 2018.
5. This summary report presents the results of the technical analysis of the third BUR of Andorra, undertaken by a TTE in accordance with the provisions on the composition, modalities and procedures of the TTE under ICA contained in the annex to decision 20/CP.19.

### B. Process overview

6. In accordance with the mandate referred to in paragraph 2 above, Andorra submitted its third BUR on 5 September 2019 as a stand-alone update report. The submission was made within two years of the submission of the second BUR.
7. A desk analysis of Andorra's BUR was conducted from 9 to 13 March 2020<sup>1</sup> and was undertaken by the following TTE, drawn from the UNFCCC roster of experts on the basis of the criteria defined in decision 20/CP.19, annex, paragraphs 2–6: Rodrigue Abourou Otego (former member of the CGE from Gabon), Diana Barba (Colombia), Menouer Boughedaoui (former member of the CGE from Algeria), Xiang Gao (China), Patricia Grobбен (former member of the CGE from Belgium), Lawrence Ibhafidon (Nigeria), Medeia Inashvili (Georgia), Gervais Ludovic Itsoua Madzous (member of the CGE from Congo), Sohyang Lee (Republic of Korea), Nicolo Macaluso (Canada) and Pascale Vizey (France). Mr. Gao and Ms. Grobбен were the co-leads. The technical analysis was coordinated by Luca Birigazzi, Hajar Benmazhar and Gopal Joshi (secretariat).
8. During the technical analysis, in addition to the written exchange, through the secretariat, to provide technical clarifications on the information reported in the BUR, the TTE and Andorra engaged in consultation<sup>2</sup> on the identification of capacity-building needs for the preparation of BURs and participation in the ICA process. Following the technical analysis of Andorra's third BUR, the TTE prepared and shared a draft summary report with Andorra on 12 June 2020 for its review and comment. Andorra, in turn, provided its feedback on the draft summary report on 21 September 2020.

<sup>1</sup> Owing to the circumstances related to the coronavirus disease 2019, the technical analysis of the BUR submitted by Andorra had to be conducted remotely.

<sup>2</sup> The consultation was conducted via teleconferencing.

9. The TTE responded to and incorporated Andorra's comments referred to in paragraph 8 above and finalized the summary report in consultation with the Party on 30 November 2020.

## **II. Technical analysis of the biennial update report**

### **A. Scope of the technical analysis**

10. The scope of the technical analysis is outlined in decision 20/CP.19, annex, paragraph 15, according to which the technical analysis aims to, without engaging in a discussion on the appropriateness of the actions, increase the transparency of mitigation actions and their effects and shall entail the following:

(a) The identification of the extent to which the elements of information listed in paragraph 3(a) of the ICA modalities and guidelines (decision 2/CP.17, annex IV) have been included in the BUR of the Party concerned (see chap. II.B below);

(b) A technical analysis of the information reported in the BUR, specified in the UNFCCC reporting guidelines on BURs (decision 2/CP.17, annex III), and any additional technical information provided by the Party concerned (see chap. II.C below);

(c) The identification, in consultation with the Party concerned, of capacity-building needs related to the facilitation of reporting in accordance with the UNFCCC reporting guidelines on BURs and to participation in ICA in accordance with the ICA modalities and guidelines, taking into account Article 4, paragraph 3, of the Convention (see chap. II.D below).

11. The remainder of this chapter presents the results of each of the three parts of the technical analysis of Andorra's BUR outlined in paragraph 10 above.

### **B. Extent of the information reported**

12. The elements of information referred to in paragraph 10(a) above include the national GHG inventory report; information on mitigation actions, including a description of such actions, an analysis of their impacts and the associated methodologies and assumptions, and information on progress in their implementation; information on domestic MRV; and information on support needed and received.

13. According to decision 20/CP.19, annex, paragraph 15(a), in undertaking the technical analysis of the submitted BUR, the TTE is to identify the extent to which the elements of information listed in paragraph 12 above have been included in the BUR of the Party concerned. The TTE considers that the reported information is mostly consistent with the UNFCCC reporting guidelines on BURs. Specific details on the extent of the information reported for each of the required elements are provided in annex I.

14. The TTE noted improvements in the reporting in the Party's third BUR compared with that in its second BUR. Information on the GHG inventory and mitigation actions and their effects reported in the Party's third BUR demonstrates that it has taken into consideration the areas for enhancing transparency noted by the previous TTE in the summary report on the technical analysis of the Party's second BUR.

### **C. Technical analysis of the information reported**

15. The technical analysis referred to in paragraph 10(b) above aims to increase the transparency of mitigation actions and their effects, without engaging in a discussion on the appropriateness of those actions. Accordingly, the focus of the technical analysis was on the transparency of the information reported in the BUR.

16. For information reported on national GHG inventories, the technical analysis also focused on the consistency of the methods used for preparing those inventories with the

appropriate methods developed by the IPCC and referred to in the UNFCCC reporting guidelines on BURs.

17. The results of the technical analysis are presented in the remainder of this chapter.

**1. Information on national circumstances and institutional arrangements relevant to the preparation of national communications on a continuous basis**

18. As per the scope defined in paragraph 2 of the UNFCCC reporting guidelines on BURs, the BUR should provide an update to the information contained in the most recently submitted NCs, including information on national circumstances and institutional arrangements relevant to the preparation of NCs on a continuous basis. In their NCs, non-Annex I Parties report on their national circumstances following the reporting guidance contained in decision 17/CP.8, annex, paragraphs 3–5, and they could report similar information in their BUR, which is an update of their most recently submitted NC.

19. In its third BUR, Andorra provided an update on its national circumstances, including a description of national development priorities, objectives and circumstances, information on features of geography, climate and economy that might affect the Party's ability to deal with mitigating and adapting to climate change as referred to in Article 4, paragraph 8, of the Convention.

20. Andorra transparently reported in its third BUR an update on its existing institutional arrangements relevant to the preparation of its NCs and BURs on a continuous basis. The description covers key aspects of the institutional arrangements, including the legal status and roles and responsibilities of the overall coordinating entity, and the involvement and roles of other institutions and experts. The Energy and Climate Change Agency was created under the Ministry of Environment, Agriculture and Sustainable Development in April 2015. Law 21/2018 of 13 September 2018 on Energy Transition and Climate Change assigns to this agency competence over matters relating to energy (implementation of national policies) and climate change (study of the phenomenon and implementation of mitigation, adaptation and awareness-raising activities). The National Energy and Climate Change Strategy enables the Government to plan, coordinate and streamline actions, measures and projects aimed at achieving the objectives set out in the above-mentioned law. The new institutional structure will facilitate the identification and implementation of actions aimed at fulfilling the objective of Article 2 of the Convention, and, notably, the preparation of NCs and BURs on a continuous basis.

21. It was not clear to the TTE whether all of the national system working groups described in section 1.3 of the BUR are fully operational. During the technical analysis, Andorra clarified that it is currently transitioning from the institutional arrangements described in the first BUR to those established by the 2018 law on energy transition and climate change. Andorra also informed the TTE of its adoption of a new legal framework in February 2020, which establishes the National Commission on Energy and Climate Change and its responsibility for managing the national response to climate change. Under the new legal framework, subcommissions will be established to carry out the functions of the previously established working groups.

22. Andorra included information on provisions for public consultation and stakeholder engagement in the context of institutional arrangements in the BUR. However, it was not clear to the TTE how the preparation of the BUR incorporated public consultation and stakeholder engagement. During the technical analysis, Andorra clarified that, given the small size of the country, no specific participation process for validating reports is in place because the reporting team is in direct contact with the government departments involved in mitigation and adaptation actions. However, Andorra makes all national reports submitted to the secretariat accessible online to the public, and plans to involve non-governmental stakeholders in report preparation through the subcommissions of the National Commission on Energy and Climate Change once these are established.

23. The TTE noted that the transparency of the information reported on institutional arrangements could be enhanced by addressing the areas noted in paragraphs 21–22 above, which could facilitate a better understanding of the information reported on institutional arrangements.

## 2. National greenhouse gas emissions by sources and removals by sinks

24. As indicated in table I.1, Andorra reported information on its GHG inventory in its BUR mostly in accordance with paragraphs 3–10 of the UNFCCC reporting guidelines on BURs and paragraphs 8–24 of the UNFCCC guidelines for the preparation of NCs from non-Annex I Parties, contained in the annex to decision 17/CP.8.

25. Andorra submitted its third BUR in 2019 and the GHG inventory reported is for 1990–2017. The GHG inventory is consistent with the requirements for the reporting time frame and the BUR presents a consistent time series for 1990–2017.

26. GHG emissions and removals for the BUR covering the 1990–2017 inventories were estimated using methodologies from the 2006 IPCC Guidelines as well as the IPCC inventory software. In conjunction with the BUR, Andorra submitted the database generated by the software, which was used to compile the national GHG inventory. The TTE recognizes Andorra's effort to address this area for improvement, as mentioned in the summary report on the technical analysis of its second BUR, and commends the Party for enhancing the transparency of the reporting by providing such detailed information.

27. Information on the tier levels, AD and EFs used was not reported in Andorra's BUR; however, this information is available in the database referred to in paragraph 26 above. The BUR contains only a brief description of the Party's approach to developing the GHG inventory, including a statement that the tier 1 methodology was used. During the technical analysis, Andorra informed the TTE of its plans to adopt by 2020 a new regulation on data compilation for the national GHG inventory, which will help guide actions to improve the data required as inputs. The Party also noted that the 2018 law on energy transition and climate change declares the GHG inventory to be public information and the collection of the data required to compile the inventory as mandatory.

28. Information on the Party's total GHG emissions by gas for 1990–2017 is outlined in table 1 in Gg CO<sub>2</sub> eq. It shows an increase in emissions of 22.4 per cent including land and 26.8 per cent excluding land since 1990.

Table 1

### Greenhouse gas emissions by gas of Andorra for 2017

<i>Gas</i>	<i>GHG emissions (Gg CO<sub>2</sub> eq) including land<sup>a</sup></i>	<i>% change 1990–2017</i>	<i>GHG emissions (Gg CO<sub>2</sub> eq) excluding land<sup>a</sup></i>	<i>% change 1990–2017</i>
CO <sub>2</sub>	355.67	34.4	491.27	24.5
CH <sub>4</sub>	7.91	–16.9	7.91	–16.9
N <sub>2</sub> O	8.63	26.4	8.63	26.4
HFCs	11.07	NA	11.07	NA
PFCs	NA	NA	NA	NA
SF <sub>6</sub>	2.30	NA	2.30	NA
Other	NA	NA	NA	NA
<b>Total</b>	<b>385.58</b>	<b>22.4</b>	<b>521.18</b>	<b>26.8</b>

<sup>a</sup> 2006 IPCC Guidelines AFOLU category 3.B (land).

29. The TTE observed that some emission values reported in the tables of the BUR (e.g. tables 3–5) are different from those reported in the annexes to the BUR. During the technical analysis, Andorra clarified that it experienced challenges in exporting data from the IPCC inventory software and explained that the correct emission values are those contained in the database referred to in paragraph 26 above.

30. Information on other emissions, including nitrogen oxides, carbon monoxide, non-methane volatile organic compounds and sulfur oxides, was not reported. In its BUR, Andorra clarified that it had not reported these emissions owing to a lack of data and capacity. During the technical analysis, the Party informed the TTE that a national study on pollutants in the atmosphere from the residential, tertiary, institutional and transport categories was conducted for 2005. According to this study, the total emissions of other gases for that year was less than 3 t.

31. Information on PFCs was not reported in Andorra's BUR. However, the Party provided relevant clarification in its BUR, noting that a lack of data prevented these emissions from being reported. During the technical analysis, Andorra clarified that it has started monitoring PFCs at the national level and intends to improve the quality of these data in the coming years in order for them to be able to be included in the inventory.

32. Emissions of HFCs are not reported in table 4 of the BUR, which summarizes national GHG emissions by gas, but are reported in the tables in the annexes to the BUR as well as the inventory database submitted with the BUR. During the technical analysis, Andorra clarified that during 2017 it improved its inventory and included, for the first time, estimated HFC emissions from products used as substitutes for ozone-depleting substances. In addition, Andorra noted that it had encountered a problem when transferring data on HFCs from the IPCC inventory software to the tables in the BUR. The Party informed the TTE that the Kigali Amendment to the Montreal Protocol had entered into force in Andorra on 12 April 2019. The adoption of the Amendment will help ensure that emissions of HFCs and PFCs are reported comprehensively in the next GHG inventory.

33. The use of notation keys in tables where numerical data were not provided was at times not consistent with the UNFCCC guidelines for the preparation of NCs from non-Annex I Parties. For example, notation keys were not used in the sectoral tables in annexes I–III; instead, cells were left empty or a value of zero was reported. During the technical analysis, Andorra clarified that it faced technical challenges in applying notation keys in the tables exported from the IPCC inventory software.

34. Andorra reported comparable information addressing the tables included in annex 3A.2 to the IPCC good practice guidance for LULUCF and the sectoral reporting tables annexed to the Revised 1996 IPCC Guidelines. Andorra reported the summary tables and short tables generated by the IPCC inventory software, which contain inventory data for each sector, category and subcategory.

35. The shares of emissions that different sectors contributed to the total GHG emissions excluding land (category 3.B) as calculated by the TTE using information from the BUR in 2017 are reflected in table 2.

Table 2

**Shares of greenhouse gas emissions by sector of Andorra for 2017**

<i>Sector</i>	<i>GHG emissions (Gg CO<sub>2</sub> eq)</i>	<i>% share<sup>a</sup></i>	<i>% change 1990–2017</i>
Energy	494.71	94.2	24.7
Industrial processes and product use	13.43	2.6	12 109.1
AFOLU	–128.40	NA	3.5
Livestock (category 3.A)	5.93	1.1	24.6
Land (category 3.B)	–135.60	NA	4.2
Aggregate sources and non-CO <sub>2</sub> emissions sources on land (category 3.C)	1.27	0.8	5.0
Waste	5.82	1.1	–28.5
Other	4.00	0.8	NA

<sup>a</sup> Share of total without 2006 IPCC Guidelines AFOLU category 3.B (land).

36. Andorra reported information on its use of global warming potential values consistent with those provided by the IPCC in its AR5 based on the effects over a 100-year time-horizon of GHGs.

37. The energy sector is the main source of GHG emissions in Andorra. Transport, commercial and institutional, and residential are the most significant categories, representing approximately 67.5, 14.6 and 13.0 per cent, respectively, of total emissions from the energy sector. Between 1990 and 2017 emissions from the sector increased by 24.7 per cent.

38. For the industrial processes and product use sector, the most important categories are refrigeration and air conditioning and electrical equipment, which represent 82.4 and 17.6 per cent, respectively, of the sector's total emissions.

39. For categories 3.A and 3.C under the AFOLU sector from the 2006 IPCC Guidelines, CH<sub>4</sub> from enteric fermentation and manure management and N<sub>2</sub>O from agricultural soils were identified as key categories and the most relevant emissions sources in the sector. Andorra used EFs from the 2006 IPCC Guidelines.

40. For land (category 3.B), Andorra reported annual GHG emissions and removals for 1990–2017. Overall, the net removals from land (category 3.B) fluctuated between a minimum of 130.01 Gg CO<sub>2</sub> eq in 1990 and a maximum of 139.31 Gg CO<sub>2</sub> eq in 2017.

41. For the waste sector, the most important categories are incineration and open burning of waste, and wastewater treatment and discharge, representing 79.0 and 21.0 per cent, respectively, of the sector's total emissions.

42. The TTE noted that the summary table in annex II to Andorra's BUR, which lists emissions by category for 1990–2017, indicates that wastewater treatment and discharge has been a net sink of GHG emissions since 2000, adsorbing 17.88 Gg CO<sub>2</sub> eq in 2017, but this figure does not appear in any other inventory reporting tables in the BUR or in the database generated by the IPCC inventory software. During the technical analysis, Andorra noted that it had encountered problems when manually transferring information from the inventory software to the tables in the BUR and clarified that the correct information is reported in the short summary tables in annex I to the BUR, which indicate that wastewater treatment and discharge is a GHG source and N<sub>2</sub>O emissions were positive (i.e. 8.63 Gg CO<sub>2</sub> eq in 2017).

43. The BUR provides an update to all GHG inventories reported in NC1 and the first and second BURs. The information reported provides an update of the Party's first and second BURs, which addressed anthropogenic emissions and removals for 1990–2017. The update was carried out for 1990–2017 using the methodologies contained in the 2006 IPCC Guidelines, thus generating a consistent 27-year time series.

44. Andorra described in its BUR the institutional framework for the preparation of its 2017 GHG inventory. The Party reported that the Directorate of Environment under the Ministry of Environment, Agriculture and Sustainable Development is the governmental body responsible for its climate change policy and GHG inventory, which was prepared with the support of the United Nations Development Programme, which assisted Andorra in designing its GHG inventory system.

45. Andorra clearly reported that a key category analysis was performed for the level of emissions in specific years (i.e. 1990, 1995, 2000, 2005, 2010 and 2010–2017) and the trend in emissions (1990–2017). With respect to the level of emissions, the key categories were road transportation, other sectors – liquid fuels, and forest land remaining forest land. With respect to the trend in emissions, the key categories were forest land remaining forest land (CO<sub>2</sub>), road transportation (CO<sub>2</sub>), refrigeration and air conditioning (HFCs and PFCs) and other sectors – liquid fuels (CO<sub>2</sub>).

46. The BUR provides information on QA/QC measures for all sectors. The information reported includes the team in charge of the QA/QC process. The team leader of the national inventory preparation process is also responsible for the QA of the national inventory. This is not in line with the 2006 IPCC Guidelines, which indicate that the QA should be conducted by personnel not directly involved in preparing the inventory. During the technical analysis, Andorra clarified that the expert had a dual role owing to the small number of staff in the team, but that the situation would be addressed by the new National Commission on Energy and Climate Change established by the 2018 law on energy transition and climate change and the new legal framework adopted in February 2020. The Party also noted that a new regulation related to the inventory management system would be adopted pursuant to the above-mentioned law, which made compilation of the GHG inventory mandatory. The Party plans to develop the QA/QC system, for which it requires capacity-building support, particularly for involving Andorra's Department of Statistics, which has an important role to play coordinating other stakeholders in the updated system.

47. Andorra reported information on CO<sub>2</sub> fuel combustion using only the sectoral approach. The information reported indicates that the combustion emissions estimated under the sectoral approach are 494.71 Gg CO<sub>2</sub> eq for 2017.



48. While information on the reference approach and a comparison of estimates using the sectoral and reference approach were not reported in the BUR, these were included in the inventory database that was submitted with the BUR. During the technical analysis, Andorra reported that for 2017 the difference between the estimates using the two approaches was 1.8 per cent, which it considered to be a small difference. The Party also noted that estimates using the reference approach would be reported in the text of the BUR in future.

49. Information on international aviation and marine bunker fuels was reported in the summary tables in annexes I and II to the BUR. The information reported indicates that the combustion consumption for the civil aviation sector is 6,160 TJ for 2017 and that no international marine bunkering occurs in the country as Andorra does not have access to a coast or navigable rivers.

50. Andorra reported information on the uncertainty assessment (level) of its national GHG inventory. The uncertainty analysis was based on the tier 1 approach and covers all source categories and all direct GHGs. Andorra noted that the uncertainty analysis was performed using the IPCC inventory software and the default IPCC uncertainty values. The results obtained, as reported in the BUR, reveal that the level uncertainty for emissions is 6.72 per cent and the trend uncertainty is 8.52 per cent. During the technical analysis, Andorra informed the TTE that the 2018 law on energy transition and climate change assigns to the Department of Statistics responsibility for compiling the data used for the GHG inventory, including information on uncertainty levels associated with these data, while the responsibility for providing the data is conferred on each relevant public, partly State-owned or private national entity.

51. The TTE noted that the transparency of the information reported on GHG inventories could be further enhanced by addressing the areas noted in paragraphs 29–33, 42 and 46 above, which could facilitate a better understanding of the information reported on GHG inventories.

52. In paragraphs 27–29, 31, 33 and 40 of the summary report on the technical analysis of the second BUR, the previous TTE noted areas where the transparency of the reporting could be further enhanced regarding a number of issues, including the methodologies applied or the data used to compile the GHG inventory, emissions of HFCs or PFCs and the information on fuel combustion using only the sectoral approach. The current TTE noted the improvements referred to in paragraphs 26, 32 and 48 above and commends the Party for enhancing the transparency of its reporting.

### **3. Mitigation actions and their effects, including associated methodologies and assumptions**

53. As indicated in table I.2, Andorra reported in its BUR, mostly in accordance with paragraphs 11–13 of the UNFCCC reporting guidelines on BURs, information on mitigation actions and their effects, to the extent possible.

54. The information reported provides a comprehensive overview of the Party's mitigation actions and their effects. Andorra reported that climate change has been integrated into its development plans, including mitigation. The BUR describes ongoing and planned programmes of GHG mitigation activities in the energy, agriculture, transport, solid waste and wastewater sectors, as well as related laws.

55. Andorra presented three emissions scenarios for 2011–2050: 'business as usual' (i.e. without any mitigation measures), 'with existing measures' and 'with additional measures' (which includes the planned mitigation actions). The 'with additional measures' scenario has two transport sub-scenarios, which differ in terms of the extent to which the promotion of electric vehicles will impact the share of fossil fuels sold in the country. The main drivers of the GHG emission projections are population (the number of both residents and visitors) and gross domestic product. The projected total national GHG emissions under the 'business as usual' scenario are estimated to be 643.47 Gg CO<sub>2</sub> eq in 2050. The implementation of mitigation actions ('with existing measures') is estimated to result in emission reductions totalling 67.37 Gg CO<sub>2</sub> eq in 2050 (10.5 per cent of total emissions) compared with the 'business as usual' scenario. Implementing the scenario 'with additional measures' is projected to result in an additional emission reduction of 206.17 Gg CO<sub>2</sub> eq (68 per cent

lower than the ‘business as usual’ scenario) or 386.52 Gg CO<sub>2</sub> eq (39.9 per cent lower than the ‘business as usual’ scenario) in 2050, depending on which of the two sub-scenarios is implemented. The TTE noted that Andorra’s reporting on the methodologies used to develop the scenarios has improved compared with that in the second BUR.

56. Andorra reported information on existing and planned mitigation actions in narrative format for all sectors. Its planned mitigation actions were also reported in tabular format (tables 6.1–6.3 of the BUR), in accordance with decision 2/CP.17, annex III, paragraph 11. The planned mitigation actions include three actions in the energy sector and one action in the waste sector. These two sectors represent 97.7 and 1.2 per cent of total GHG emissions for 2017, respectively. Existing mitigation actions are in the energy, agriculture and waste sectors.

57. It was unclear to the TTE whether all the planned actions reported in BUR tables 6.1–6.3 were considered in the ‘with additional measures’ scenario. During the technical analysis, the Party clarified that all actions included in those tables are considered ‘additional measures’ and that they comprise both planned actions and actions that have begun and are ongoing.

58. Consistently with decision 2/CP.17, annex III, paragraph 12(a), Andorra clearly reported a description and the names, coverage, quantitative goals, nature of the actions and progress indicators of its planned mitigation actions in tables 6.1–6.3 of the BUR.

59. Information on coverage, quantitative goals and progress indicators of the existing mitigation actions was not reported. During the technical analysis, Andorra clarified that it lacks the capacity to report on existing mitigation actions in accordance with decision 2/CP.17. Moreover, the Party informed the TTE that the ongoing process of digitization of the public administration (including digitization of the information on national production and consumption of energy) would make it possible to access more accurate data and generate monitoring indicators from 2020 onward.

60. Andorra clearly reported information on methodologies and assumptions, and the objectives of the planned actions and steps taken or envisaged to achieve those actions. While the Party clearly reported on some of the estimated outcomes of each planned mitigation action (such as number of electric vehicles or photovoltaic installations purchased), information on the estimated emission reductions of each action was not provided. During the technical analysis, Andorra clarified that it is currently working on improving the estimation of the results achieved from the mitigation actions related to improving energy efficiency in buildings. The Party also indicated that a national study to estimate the emission reductions of each mitigation action was launched in 2017 but its results have not yet been included in the emissions scenarios.

61. The planned mitigation actions in the energy sector are derived from a white paper on energy, developed and adopted by the Government, which aims to define the national energy policy for 2030–2050. Andorra’s planned actions in the energy sector relate to three main areas: increasing national energy production, thereby changing the energy mix in favour of low-carbon and renewable energy sources; improving energy efficiency in buildings; and promoting the use of electric cars in the country. Andorra reported that the planned actions in the energy sector could result in an aggregated emission reduction of between 57.67 and 33.48 per cent in 2050 compared with a ‘business as usual’ scenario, depending on which of the two energy sub-scenarios is implemented (see para. 55 above).

62. Planned mitigation actions in the waste sector are based on the objectives set out in the 2012–2016 national waste scheme. These actions relate to reducing the incineration of waste by promoting the reduction, reuse, recycling and recovery of waste. The additional measures in the waste sector could result in an additional emission reduction of 0.55 Gg CO<sub>2</sub> eq (5.5 per cent) compared with the ‘with existing measures’ scenario in 2050.

63. Andorra reported that existing measures in the energy sector are based on the 2006 National Energy Strategy and on the outcomes of the 2010 national consultation on energy and the future, both of which contributed to the development and adoption of the white paper on energy (see para. 61 above), and are aimed at reducing the country’s dependence on external energy sources, especially liquid hydrocarbons.

64. Existing mitigation actions in the waste sector relate to waste management and wastewater treatment and discharge. The actions comprise implementation of the measures set out in the 1996 sanitation scheme, which regulates the treatment and release of wastewater, and the waste separation procedures outlined in the national waste schemes for 2001–2006 and 2007–2011. The Party expects to achieve GHG emission reductions of 57.7 per cent as a result of the existing measures for wastewater treatment and 39.4 per cent as a result of the national waste management schemes by 2050 compared with the corresponding emissions from these subsectors under the ‘business as usual’ scenario. The existing measures in the waste sector are estimated to result in an aggregate emission reduction of 8 Gg CO<sub>2</sub> eq by 2050 compared with the ‘business as usual’ scenario.

65. Andorra did not report mitigation actions in the AFOLU and industrial processes and product use sectors. In its BUR, the Party clarified that, according to its projections, emissions from these sectors are expected to remain constant until 2050. In addition, the Party noted that a lack of information on industrial processes and product use made it extremely challenging for it to assess the impact of internal or external measures, such as those derived from European Union directives or regulations, on that sector.

66. Andorra is not a Party to the Kyoto Protocol. The Party did not provide information on its involvement in international market mechanisms. During the technical analysis, Andorra clarified that it does not participate in international market mechanisms, and referred the TTE to the 2018 law on energy transition and climate change, which regulates, inter alia, the domestic national voluntary market for compensating GHG emissions.

67. Andorra reported information on its domestic MRV arrangements partially in accordance with decision 2/CP.17, annex III, paragraph 13. The BUR indicates that Andorra is in the process of transforming its institutional arrangements, including by establishing a commission to oversee the response to climate change subcommissions (see para. 21 above). However, explicit information about domestic MRV arrangements to monitor mitigation actions in the country was not provided. During the technical analysis, the Party clarified that, as its institutional arrangements are being transformed, a domestic MRV system has not yet been established.

68. The TTE noted that the transparency of the information reported on mitigation actions could be enhanced by addressing the areas noted in paragraphs 57, 59–60 and 66–67 above, which could facilitate a better understanding of the information reported on mitigation actions.

69. In paragraphs 49, 51, 53, 55 and 57 of the summary report on the technical analysis of Andorra’s second BUR, the previous TTE noted areas where the transparency of the reporting could be enhanced regarding a number of issues, including the estimated emission reductions of the individual mitigation actions, and the reporting of the results achieved from the mitigation actions in the industry sector. The current TTE noted the improvements referred to in paragraph 55 above and commends the Party for enhancing the transparency of its reporting.

#### **4. Constraints and gaps, and related technology, financial, technical and capacity-building needs, including a description of support needed and received**

70. As indicated in table I.3, Andorra reported in its BUR, partially in accordance with paragraphs 14–16 of the UNFCCC reporting guidelines on BURs, information on finance, technology and capacity-building needs and support received.

71. Andorra reported information on constraints and gaps, and related financial, technical and capacity-building needs in accordance with decision 2/CP.17, annex III, paragraph 14. In its BUR Andorra identified a lack of financial and technical support and its small size as constraints.

72. Information on financial, technical and capacity-building needs was not clearly reported in Andorra’s BUR. The capacity-building needs were not reported in detail and related financial estimates were not provided. Technical needs were reported and partially estimated, but the need for financial support was not reported in the BUR. During the technical analysis, the Party clarified that government officials and national experts lack the capacity to assess, identify and report on financial, technical and capacity-building needs.

The Party also provided the TTE with an additional detailed list of capacity-building needs, mainly related to MRV and QA/QC system development (see chap. II.D below).

73. Andorra reported information on financial resources, technology transfer and technical support received in accordance with decision 2/CP.17, annex III, paragraph 15. In its BUR Andorra reported that it did not receive any financial support to prepare its three BURs and NC1 as enabling activities or any other financial resources. It was unclear to the TTE whether Andorra had applied to the GEF for financial support for enabling activities since 2014. During the technical analysis, Andorra indicated that in 2014, it prepared, with the support of an expert from the United Nations Environment Programme, a proposal requesting USD 932,000 from the GEF to support the preparation of its NC1 and first BUR. Andorra clarified that it had not received any feedback from the GEF.

74. The information reported indicates that Andorra did not receive any financial support to build national capacity for activities relating to climate change, including for the preparation of the current BUR. However, information on capacity-building support received was not reported in the BUR. During the technical analysis, Andorra provided documentation on capacity-building, including information on the support received from the secretariat to train national experts on inventories, MRV and the technology needs assessment.

75. Andorra did not report information on nationally determined technology needs with regard to the development and transfer of technology in accordance with decision 2/CP.17, annex III, paragraph 16. Andorra did not conduct a technology needs assessment. During the technical analysis, Andorra clarified that government officials and national experts lacked the capacity to conduct a technology needs assessment and the Party identified adapting technology to mountain conditions as an important constraint. However, Andorra also noted that it plans to conduct a technology needs assessment and that the assessment would be reported in its next submission. During the review of the draft report, Andorra indicated that it is currently elaborating the new National Energy and Climate Change Strategy, which will include the development of updated sectoral strategies, and that a technology needs assessment will be conducted within this framework.

76. The TTE noted that the transparency of the information reported on needs and support received could be further enhanced by addressing the areas noted in paragraphs 72–75 above, which could facilitate a better understanding of the information reported on needs and support received.

## **D. Identification of capacity-building needs**

77. In consultation with Andorra, the TTE identified the following needs for capacity-building that could facilitate the preparation of subsequent BURs and participation in ICA:

- (a) For GHG inventory preparation, build or enhance the national capacity to:
  - (i) Identify and use surrogate data (e.g. for drivers) to fill data gaps in order to estimate and report on fluorinated gases through participation in UNFCCC training courses;
  - (ii) Assess uncertainty associated with GHG emissions and removals, AD, EFs and other parameters;
  - (iii) Apply remote-sensing techniques for land identification and classification of land uses;
  - (iv) Apply IPCC methodologies to estimate CO<sub>2</sub> emissions using the reference approach and explain the differences between the reference and sectoral approach;
  - (v) Estimate and report indirect GHG emissions;
  - (vi) Export GHG emission estimates and time-series data from the IPCC inventory software;
- (b) For mitigation actions and their effects, enhance the national capacity to:
  - (i) Assess and report mitigation actions and their effects;

- (ii) Calculate emission reductions resulting from mitigation actions;
- (c) For cross-cutting issues, enhance the national capacity to:
  - (i) Develop and implement an MRV system, with a focus on assessing the advantages and disadvantages of various possible alternative systems;
  - (ii) Conduct a technology needs assessment;
  - (iii) Develop a QA/QC plan and implement it;
  - (iv) Draft and submit financial requests, including to the GEF, and develop and implement procedures to request funding for enabling activities;
  - (v) Promote public consultation and the involvement of civil society in the consultation process.

78. The TTE noted that, in addition to those identified during the technical analysis, Andorra reported the following capacity-building needs in its BUR:

- (a) Strengthening the national capacity to prepare the GHG inventory and the inventory report for the purpose of the BUR;
- (b) Strengthening institutional and human capacities for the fulfilment of obligations under the Convention.

79. In paragraph 68 of the summary report on the technical analysis of Andorra's second BUR, the previous TTE, in consultation with Andorra, identified capacity-building needs. In its third BUR, Andorra reflected that some of those capacity-building needs have been addressed.

### III. Conclusions

80. The TTE conducted a technical analysis of the information reported in the third BUR of Andorra in accordance with the UNFCCC reporting guidelines on BURs and concludes that the information reported is mostly consistent. It provides an overview of national circumstances and institutional arrangements relevant to the preparation of NCs on a continuous basis; the national inventory of anthropogenic emissions by sources and removal by sinks of all GHGs not controlled by the Montreal Protocol, including a national inventory report; mitigation actions and their effects, including associated methodologies and assumptions; constraints and gaps and related financial, technical and capacity-building needs, including a description of support needed and received; and the level of support received to enable the preparation and submission of BURs. During the technical analysis, additional information was provided by Andorra on the GHG inventory, mitigation actions and their effects, and capacity-building needs and support received. The TTE concluded that the information analysed is mostly transparent.

81. Andorra reported an update on the institutional arrangements relevant to the preparation of its BURs. It has taken significant steps to enhance the institutional arrangements in place following the adoption in 2018 of the law on energy transition and climate change, which established a commission responsible for climate change matters. The founding text of the commission, adopted in February 2020, covers the composition and responsibilities of all the subcommissions that will facilitate the sustainable preparation of BURs.

82. In its third BUR, submitted in 2019, Andorra reported information on its national GHG inventory for 1990–2017. This included GHG emissions and removals of CO<sub>2</sub>, CH<sub>4</sub>, N<sub>2</sub>O, HFCs and SF<sub>6</sub> for all relevant sources and sinks as well as the precursor gases. The inventory was developed on the basis of the 2006 IPCC Guidelines using the IPCC inventory software. EF values from the 2006 IPCC Guidelines were applied for individual categories.

83. The total GHG emissions for 1990–2017 were reported as 420.32 CO<sub>2</sub> Gg eq in 1990, increasing to 521.18 Gg CO<sub>2</sub> eq in 2017 (without land), and 290.31 Gg CO<sub>2</sub> eq in 1990, increasing to 385.58 Gg CO<sub>2</sub> eq in 2017 (including land). Nine key categories and main gases were identified. The key categories identified include forest land remaining forest land, road

transportation, refrigeration and air conditioning, and other sectors – liquid fuels, while the main gases identified were CO<sub>2</sub>, CH<sub>4</sub>, HFCs and SF<sub>6</sub>. Estimates of PFCs were not provided owing to difficulties in obtaining the necessary data, as clarified by the Party during the technical analysis and in the BUR.

84. Andorra reported information on mitigation actions and their effects in both tabular (for planned or additional mitigation actions) and narrative format (for all mitigation actions), including emission reduction targets and the baseline and mitigation scenarios for 2050. Andorra reported actions that are planned, ongoing and completed in the waste, energy and transport sectors. The mitigation actions focus on increasing the energy efficiency of heating in buildings, switching fuel use from imported fossil fuels to domestic low-carbon sources and renewable energy sources, introducing electric cars and improving waste management, including incineration and wastewater treatment. The Party reported the progress of implementation of its mitigation actions and the results achieved, including the aggregated emission reductions achieved and estimated outcomes by 2050. The implementation of existing measures is estimated to result in emission reductions totalling 67.37 Gg CO<sub>2</sub> eq in 2050 compared with the ‘business as usual’ scenario.

85. The waste sector is the main source of such estimated emission reductions (57.7 per cent of the total reductions come from wastewater treatment measures and 39.4 per cent from solid waste management measures). Andorra reported that if the additional mitigation actions reported in its BUR are implemented, the cumulative GHG emission reductions achieved will be 206.17 or 386.52 Gg CO<sub>2</sub> eq by 2050, depending on the extent to which the promotion of electric vehicles impacts the share of hydrocarbons sold in the country.

86. During the technical analysis Andorra clarified that it does not participate in international market mechanisms and that, as its institutional arrangements are being transformed, the domestic MRV system is currently transitioning to that established by the 2018 law on energy transition and climate change. Estimates of emission reductions of the individual actions were not provided owing to difficulties in calculating emission reductions, as clarified by the Party during the technical analysis.

87. Andorra reported information on key constraints, gaps and related needs, including in the areas of obtaining capacity-building for developing its MRV system, conducting a technology needs assessment and requesting financial support. Information was not reported on the capacity-building support received, including on training received from the secretariat, but it was clarified during the technical analysis. The Party also reported that it had not received any financial support from the GEF although it submitted a request in 2014 for funds to prepare its NCs and BURs. The Party did not report on technology needs owing to a lack of national capacity to conduct the technology needs assessment. However, the Party clarified during the technical analysis that it plans to conduct a technology needs assessment while updating the sectoral strategies under the new National Energy and Climate Change Strategy and will report it in its next submission.

88. The TTE, in consultation with Andorra, identified the 13 capacity-building needs listed in chapter II.D above that aim to facilitate reporting in accordance with the UNFCCC reporting guidelines on BURs and participation in ICA in accordance with the ICA modalities and guidelines, taking into account Article 4, paragraph 3, of the Convention. Andorra identified the following as priority capacity-building needs:

- (a) Apply remote-sensing techniques for land identification and classification of land uses;
- (b) Export GHG emission estimates and time-series data from the IPCC inventory software;
- (c) Assess and report mitigation actions and their effects;
- (d) Calculate emission reductions resulting from mitigation actions;
- (e) Develop and implement an MRV system, with a focus on assessing the advantages and disadvantages of various possible alternative systems;
- (f) Draft and submit financial requests, including to the GEF, and develop and implement procedures to request funding for enabling activities.

## Annex I

## Extent of the information reported by Andorra in its third biennial update report

Table I.1

### Identification of the extent to which the elements of information on greenhouse gases are included in the third biennial update report of Andorra

<i>Decision</i>	<i>Provision of the reporting guidelines</i>	<i>Yes/partly/no/NA</i>	<i>Comments on the extent of the information provided</i>
Decision 2/CP.17, paragraph 41(g)	The first BUR shall cover, at a minimum, the inventory for the calendar year no more than four years prior to the date of the submission, or more recent years if information is available, and subsequent BURs shall cover a calendar year that does not precede the submission date by more than four years.	Yes	Andorra submitted its third BUR in September 2019; the GHG inventories reported are for 1990–2017.
Decision 2/CP.17, annex III, paragraph 4	Non-Annex I Parties should use the methodologies established in the latest UNFCCC guidelines for the preparation of NCs from non-Annex I Parties approved by the Conference of the Parties or those determined by any future decision of the Conference of the Parties on this matter.	Yes	Andorra used the 2006 IPCC Guidelines.
Decision 2/CP.17, annex III, paragraph 5	The updates of the section on national inventories of anthropogenic emissions by sources and removals by sinks of all GHGs not controlled by the Montreal Protocol should contain updated data on activity levels based on the best information available using the Revised 1996 IPCC Guidelines, the IPCC good practice guidance and the IPCC good practice guidance for LULUCF; any change to the EF may be made in the subsequent full NC.	Yes	
Decision 2/CP.17, annex III, paragraph 6	Non-Annex I Parties are encouraged to include, as appropriate and to the extent that capacities permit, in the inventory section of the BUR:		
	(a) The tables included in annex 3A.2 to the IPCC good practice guidance for LULUCF;	Yes	Comparable information was reported in the summary tables and short tables generated by the IPCC inventory software that contain inventory data for each sector, category and subcategory.
	(b) The sectoral report tables annexed to the Revised 1996 IPCC Guidelines.	Yes	Comparable information was reported.
Decision 2/CP.17, annex III, paragraph 7	Each non-Annex I Party is encouraged to provide a consistent time series back to the years reported in its previous NCs.	Yes	
Decision 2/CP.17, annex III, paragraph 8	Non-Annex I Parties that have previously reported on their national GHG inventories contained in their NCs are encouraged to submit summary information tables of inventories for previous submission years (e.g. for 1994 and 2000).	Yes	
	The inventory section of the BUR should consist of a national inventory report as a summary or as an update of the information contained in decision	Yes	

<i>Decision</i>	<i>Provision of the reporting guidelines</i>	<i>Yes/partly/no/NA</i>	<i>Comments on the extent of the information provided</i>
Decision 2/CP.17, annex III, paragraph 9	17/CP.8, annex, chapter III (National greenhouse gas inventories), including: (a) Table 1 (National greenhouse gas inventory of anthropogenic emissions by sources and removals by sinks of all greenhouse gases not controlled by the Montreal Protocol and greenhouse gas precursors); (b) Table 2 (National greenhouse gas inventory of anthropogenic emissions of HFCs, PFCs and SF <sub>6</sub> ).	Yes Yes	
Decision 2/CP.17, annex III, paragraph 10	Additional or supporting information, including sector-specific information, may be supplied in a technical annex.	Yes	In conjunction with the BUR, Andorra submitted the database generated by the IPCC inventory software that was used to compile the national GHG inventory.
Decision 17/CP.8, annex, paragraph 12	Non-Annex I Parties are also encouraged, to the extent possible, to undertake any key source analysis as indicated in the IPCC good practice guidance to assist in developing inventories that better reflect their national circumstances.	Yes	
Decision 17/CP.8, annex, paragraph 13	Non-Annex I Parties are encouraged to describe procedures and arrangements undertaken to collect and archive data for the preparation of national GHG inventories, as well as efforts to make this a continuous process, including information on the role of the institutions involved.	Yes	
Decision 17/CP.8, annex, paragraph 14	Each non-Annex I Party shall, as appropriate and to the extent possible, provide in its national inventory, on a gas-by-gas basis and in units of mass, estimates of anthropogenic emissions of: (a) CO <sub>2</sub> ; (b) CH <sub>4</sub> ; (c) N <sub>2</sub> O.	Yes Yes Yes	
Decision 17/CP.8, annex, paragraph 15	Non-Annex I Parties are encouraged, as appropriate, to provide information on anthropogenic emissions by sources of: (a) HFCs; (b) PFCs; (c) SF <sub>6</sub> .	Yes No Yes	Information on HFC emissions was included in the annexes to the BUR and in the inventory database that was submitted with the BUR.
Decision 17/CP.8, annex, paragraph 16	Non-Annex I Parties are encouraged, as appropriate, to report on anthropogenic emissions by sources of other GHGs, such as: (a) Carbon monoxide; (b) Nitrogen oxides; (c) Non-methane volatile organic compounds.	No No No	



<i>Decision</i>	<i>Provision of the reporting guidelines</i>	<i>Yes/partly/no/NA</i>	<i>Comments on the extent of the information provided</i>
Decision 17/CP.8, annex, paragraph 17	Other gases not controlled by the Montreal Protocol, such as sulfur oxides, and included in the Revised 1996 IPCC Guidelines may be included at the discretion of Parties.	No	
Decision 17/CP.8, annex, paragraph 18	Non-Annex I Parties are encouraged, to the extent possible, and if disaggregated data are available, to estimate and report CO <sub>2</sub> fuel combustion emissions using both the sectoral and the reference approach and to explain any large differences between the two approaches.	Yes	Information on the reference approach and a comparison of the sectoral and reference approach were not included in the BUR but were provided in the inventory database that was submitted with the BUR.
Decision 17/CP.8, annex, paragraph 19	Non-Annex I Parties should, to the extent possible, and if disaggregated data are available, report emissions from international aviation and marine bunker fuels separately in their inventories:		
	(a) International aviation;	Yes	Information on international aviation fuels was reported in the annexes to the BUR.
	(b) Marine bunker fuels.	Yes	Information on marine bunker fuels was reported in the annexes to the BUR.
Decision 17/CP.8, annex, paragraph 20	Non-Annex I Parties wishing to report on aggregated GHG emissions and removals expressed in CO <sub>2</sub> eq should use the global warming potential provided by the IPCC in its AR2 based on the effects of GHGs over a 100-year time-horizon.	NA	The Party used the global warming potential values provided in the AR5.
Decision 17/CP.8, annex, paragraph 21	Non-Annex I Parties are encouraged to provide information on methodologies used in the estimation of anthropogenic emissions by sources and removals by sinks of GHGs not controlled by the Montreal Protocol, including a brief explanation of the sources of EFs and AD. If non-Annex I Parties estimate anthropogenic emissions and removals from country-specific sources and/or sinks that are not part of the Revised 1996 IPCC Guidelines, they should explicitly describe the source and/or sink categories, methodologies, EFs and AD used in their estimation of emissions, as appropriate. Parties are encouraged to identify areas where data may be further improved in future communications through capacity-building:		
	(a) Information on methodologies used in the estimation of anthropogenic emissions by sources and removals by sinks of GHGs not controlled by the Montreal Protocol;	Yes	
	(b) Explanation of the sources of EFs;	Yes	
	(c) Explanation of the sources of AD;	Yes	
	(d) If non-Annex I Parties estimate anthropogenic emissions and removals from country-specific sources and/or sinks that are not part of the Revised 1996 IPCC Guidelines, they should explicitly describe:	NA	
	(i) Source and/or sink categories;		
	(ii) Methodologies;		

<i>Decision</i>	<i>Provision of the reporting guidelines</i>	<i>Yes/partly/no/NA</i>	<i>Comments on the extent of the information provided</i>
	(iii) EFs;		
	(iv) AD;		
	(e) Parties are encouraged to identify areas where data may be further improved in future communications through capacity-building.	Yes	The Party identified areas where national data are currently not available and could be further improved.
Decision 17/CP.8, annex, paragraph 22	Each non-Annex I Party is encouraged to use tables 1 and 2 of the guidelines annexed to decision 17/CP.8 in reporting its national GHG inventory, taking into account the provisions established in paragraphs 14–17. In preparing those tables, Parties should strive to present information that is as complete as possible. Where numerical data are not provided, Parties should use the notation keys as indicated.	Partly	Notation keys were not used in the summary tables in annexes I–III; instead, in some cases, the cells were left blank or a value of zero was reported.
Decision 17/CP.8, annex, paragraph 24	Non-Annex I Parties are encouraged to provide information on the level of uncertainty associated with inventory data and their underlying assumptions, and to describe the methodologies used, if any, for estimating these uncertainties:		
	(a) Level of uncertainty associated with inventory data;	Yes	
	(b) Underlying assumptions;	Yes	
	(c) Methodologies used, if any, for estimating these uncertainties.	Yes	

*Note:* The parts of the UNFCCC reporting guidelines on BURs on reporting information on GHG emissions by sources and removals by sinks in BURs are contained in decision 2/CP.17, paras. 3–10 and 41(g). Further, as per para. 3 of those guidelines, non-Annex I Parties are to submit updates of their national GHG inventories in accordance with paras. 8–24 of the UNFCCC guidelines for the preparation of NCs from non-Annex I Parties, contained in the annex to decision 17/CP.8. The scope of such updates should be consistent with the non-Annex I Party’s capacity and time constraints and the availability of its data, as well as the level of support provided by developed country Parties for biennial update reporting.

Table I.2

**Identification of the extent to which the elements of information on mitigation actions are included in the third biennial update report of Andorra**

<i>Decision</i>	<i>Provision of the reporting guidelines</i>	<i>Yes/partly/no</i>	<i>Comments on the extent of the information provided</i>
Decision 2/CP.17, annex III, paragraph 11	Non-Annex I Parties should provide information, in tabular format, on actions to mitigate climate change by addressing anthropogenic emissions by sources and removals by sinks of all GHGs not controlled by the Montreal Protocol.	Partly	Andorra reported in tabular format its planned mitigation actions only.
Decision 2/CP.17, annex III, paragraph 12	For each mitigation action or group of mitigation actions, including, as appropriate, those listed in document FCCC/AWGLCA/2011/INF.1, developing country Parties shall provide the following information, to the extent possible:		
	(a) Name and description of the mitigation action, including information on the nature of the action, coverage (i.e. sectors and gases), quantitative goals and progress indicators;	Yes	
	(b) Information on:		

<i>Decision</i>	<i>Provision of the reporting guidelines</i>	<i>Yes/partly/no</i>	<i>Comments on the extent of the information provided</i>
	(i) Methodologies;	Yes	
	(ii) Assumptions;	Yes	
	(c) Information on:		
	(i) Objectives of the action;	Yes	
	(ii) Steps taken or envisaged to achieve that action;	Yes	
	(d) Information on:		
	(i) Progress of implementation of the mitigation actions;	Yes	
	(ii) Progress of implementation of the underlying steps taken or envisaged;	Yes	
	(iii) Results achieved, such as estimated outcomes (metrics depending on type of action) and estimated emission reductions, to the extent possible;	Yes	
	(e) Information on international market mechanisms.	No	
Decision 2/CP.17, annex III, paragraph 13	Parties should provide information on domestic MRV arrangements.	Partly	Andorra provided information on its institutional arrangements with respect to climate change in the country (BUR, chap. 1.3). However, explicit information about domestic MRV arrangements to monitor mitigation actions in the country was not provided.

*Note:* The parts of the UNFCCC reporting guidelines on BURs on the reporting of information on mitigation actions in BURs are contained in decision 2/CP.17, annex III, paras. 11–13.

Table I.3

**Identification of the extent to which the elements of information on finance, technology and capacity-building needs and support received are included in the third biennial update report of Andorra**

<i>Decision</i>	<i>Provision of the reporting requirements</i>	<i>Yes/partly/no</i>	<i>Comments on the extent of the information provided</i>
Decision 2/CP.17, annex III, paragraph 14	Non-Annex I Parties should provide updated information on:		
	(a) Constraints and gaps;	Partly	Constraints and gaps were reported but were not specific enough to enable the identification of needs.
	(b) Related financial, technical and capacity-building needs.	Partly	Information on financial needs was not reported.
Decision 2/CP.17, annex III, paragraph 15	Non-Annex I Parties should provide:		
	(a) Information on financial resources received, technology transfer and capacity-building received;	Partly	Andorra did not report on all capacity-building support received.
	(b) Information on technical support received from the GEF, Parties included in Annex II to the Convention and other developed country Parties, the Green Climate Fund and multilateral institutions for activities relating to climate change, including for the preparation of the current BUR.	Yes	Andorra has not received any support, despite a request to the GEF for financial support to prepare the BUR it submitted in 2014.

<i>Decision</i>	<i>Provision of the reporting requirements</i>	<i>Yes/partly/no</i>	<i>Comments on the extent of the information provided</i>
Decision 2/CP.17, annex III, paragraph 16	With regard to the development and transfer of technology, non-Annex I Parties should provide information on:		
	(a) Nationally determined technology needs;	No	
	(b) Technology support received.	Yes	

*Note:* The parts of the UNFCCC reporting guidelines on BURs on the reporting of information on finance, technology and capacity-building needs and support received in BURs are contained in decision 2/CP.17, annex III, paras. 14–16.

## Annex II

### Reference documents

#### A. Reports of the Intergovernmental Panel on Climate Change

IPCC. 1997. *Revised 1996 IPCC Guidelines for National Greenhouse Gas Inventories*. JL Houghton, LG Meira Filho, B Lim, et al. (eds.). Paris: IPCC/Organisation for Economic Co-operation and Development/International Energy Agency. Available at <https://www.ipcc-nggip.iges.or.jp/public/gl/invs1.html>.

IPCC. 2000. *Good Practice Guidance and Uncertainty Management in National Greenhouse Gas Inventories*. J Penman, D Kruger, I Galbally, et al. (eds.). Hayama, Japan: IPCC/Organisation for Economic Co-operation and Development/International Energy Agency/Institute for Global Environmental Strategies. Available at <http://www.ipcc-nggip.iges.or.jp/public/gp/english>.

IPCC. 2003. *Good Practice Guidance for Land Use, Land-Use Change and Forestry*. J Penman, M Gytarsky, T Hiraishi, et al. (eds.). Hayama, Japan: Institute for Global Environmental Strategies. Available at <http://www.ipcc-nggip.iges.or.jp/public/gp/lulucf/gp/lulucf.html>.

IPCC. 2006. *2006 IPCC Guidelines for National Greenhouse Gas Inventories*. S Eggleston, L Buendia, K Miwa, et al. (eds.). Hayama, Japan: Institute for Global Environmental Strategies. Available at <http://www.ipcc-nggip.iges.or.jp/public/2006gl>.

#### B. UNFCCC documents

First and second BURs of Andorra. Available at <https://unfccc.int/BURs>.

NC1 of Andorra. Available at <https://unfccc.int/non-annex-I-NCs>.

Summary report on the technical analysis of the first and second BUR of Andorra. Available at <https://unfccc.int/ICA-reports>.

#### C. Information provided by the Party

The following documents<sup>1</sup> were provided by the Party in response to requests for technical clarification during the technical analysis:

Capacity Building Progress OECC.

Endorsement letter of Andorra to GEF secretariat of the funding request of BUR1 & NC1.

Extract from the legal text adopted by Andorra in February 2020 related to the composition and missions of the energy transition and climate change commission members.

Loi 21/2018, du 13 septembre, relative à la promotion de la transition énergétique et du changement climatique (Litecc), Govern d'Andorra, Oficina de l'Energia i Canvi Climàtic.

Table of capacity-building support received and needs by Andorra.

Text of the law on energy transition and climate change commission adopted by Andorra.

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<sup>1</sup> Reproduced as received from the Party.