



United Nations

FCCC/SBI/ICA/2022/TASR.1/ERI



Framework Convention on  
Climate Change

Distr.: General  
27 April 2023

English only

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## **Technical analysis of the first biennial update report of Eritrea submitted on 30 December 2021**

### **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. 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 first biennial update report of Eritrea, 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

2006 IPCC Guidelines	<i>2006 IPCC Guidelines for National Greenhouse Gas Inventories</i>
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	carbon monoxide
CO <sub>2</sub>	carbon dioxide
CO <sub>2</sub> eq	carbon dioxide equivalent
EF	emission factor
ETF	enhanced transparency framework under the Paris Agreement
GEF	Global Environment Facility
GHG	greenhouse gas
GWP	global warming potential
HFC	hydrofluorocarbon
HWP	harvested wood products
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>
IPPU	industrial processes and product use
LULUCF	land use, land-use change and forestry
MRV	measurement, reporting and verification
N <sub>2</sub> O	nitrous oxide
NA	not applicable
NC	national communication
NDC	nationally determined contribution
NE	not estimated
NMVOC	non-methane volatile organic compound
NO	not occurring
non-Annex I Party	Party not included in Annex I to the Convention
NO <sub>x</sub>	nitrogen oxides
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
SO <sub>2</sub>	sulfur dioxide
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”

## **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. The least developed countries and small island developing States may submit 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. This summary report presents the results of the technical analysis of the first BUR of Eritrea, 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**

5. In accordance with the mandate referred to in paragraph 2 above, Eritrea submitted its first BUR on 30 December 2021 as a stand-alone update report.
6. In its BUR, the Party clarified that, as a least developed country Party, it submitted its first BUR at its discretion.
7. The technical analysis of Eritrea's BUR was conducted from 29 August to 2 September 2022 in Libreville, 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: Rehab Ahmed Hassan (former member of the CGE from the Sudan), Juliana Bempah (Ghana), Ménouër Boughedaoui (former member of the CGE from Algeria), Akram Hamza (Tunisia), Gervais Ludovic Itsoua Madzous (member of the CGE from the Congo), Mwangi James Kinyanjui (Kenya), Traute Koether (Austria), Rocio Lichte (former member of the CGE from Germany), Giorgi Machavariani (Georgia), Philippe Missi Missi (Cameroon), Sandra Boitumelo Motshwanedi (former member of the CGE from South Africa), Sekai Ngarize (Zimbabwe) and Alexander Valencia (Colombia). Rocio Lichte and Sekai Ngarize were the co-leads. The technical analysis was coordinated by Pedro Torres and Gopal Joshi (secretariat).
8. During the technical analysis, in addition to the written exchange, in the virtual team room, to provide technical clarifications on the information reported in the BUR, the TTE and Eritrea engaged in consultation<sup>1</sup> on the identification of capacity-building needs for the preparation of BURs and participation in the ICA process. Following the technical analysis of Eritrea's first BUR, the TTE prepared and shared a draft summary report with Eritrea on 19 December 2022 for its review and comment. Eritrea, in turn, provided its feedback on the draft summary report on 12 April 2023.
9. The TTE finalized the summary report in consultation with the Party on 13 April 2023.

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<sup>1</sup> The consultation was conducted via videoconferencing.

## **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 Eritrea'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 the tables included in annex I.

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

14. The technical analysis referred to in paragraph 10(b) above aims to increase the transparency of information reported by the Parties on 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.

15. 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.

16. 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**

17. 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 NC, 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.

18. Eritrea reported in its first BUR information on its national circumstances, including a description of national and regional development priorities, objectives and circumstances, including features of geography, climate and economy that might affect the Party's ability to deal with mitigating and adapting to climate change, as well as information regarding national circumstances and constraints on the specific needs and concerns arising from the adverse effects of climate change and/or the impact of the implementation of response measures, as referred to in Article 4, paragraph 8, and, as appropriate, Article 4, paragraphs 9–10, of the Convention.

19. In addition, Eritrea provided a summary of relevant information regarding its national circumstances in tabular and graphical format.

20. Eritrea transparently reported in its first BUR information 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 Ministry of Land, Water and Environment, in collaboration with the relevant ministries, oversees the implementation of national climate change policies, strategies, programmes and projects. Within the ministry, the Department of Environment is responsible for coordinating and implementing climate change activities, including the preparation of NCs and BURs. It coordinates four thematic groups (energy, AFOLU, IPPU and waste) in compiling the required information and data from the relevant stakeholders. It is also responsible for undertaking capacity-building and stakeholder engagement activities related to preparing NCs and BURs.

21. Eritrea reported in its first BUR information on its planned domestic MRV arrangements. The description covers key aspects of the institutional arrangements, including the roles and responsibilities of key agencies and stakeholders with respect to the domestic MRV arrangements. The MRV arrangements are designed at the national level and cover four main areas: coordinating and submitting NCs and BURs; compiling the GHG inventory; analysing and tracking impacts of mitigation actions; and tracking support received. The National Steering Committee on Climate Change will be responsible for verifying and approving NCs and BURs, whereas the Ministry of Land, Water and Environment will continue to facilitate the implementation of climate change activities and ensure coordination and communication among the ministries. The MRV system will build on the existing systems, processes and infrastructure, rendering it cost-effective.

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

22. As indicated in table I.1, Eritrea 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.

23. Eritrea submitted its first BUR in 2021 and the GHG inventory reported is for 2000–2018. The GHG inventory is consistent with the requirements for the reporting time frame.

24. GHG emissions and removals for the BUR covering the 2000–2018 inventories were estimated using tier 1 methodology from the 2006 IPCC Guidelines and default EFs for all categories. The TTE commends Eritrea for using the 2006 IPCC Guidelines for reporting emissions and removals in its first BUR.

25. Information on EFs used and their sources was clearly reported in the BUR, as well as the sources of AD, including emission trends, uncertainty and key category analysis.

26. However, the actual AD were not reported in Eritrea's BUR and the reason for this was not clear to the TTE. During the technical analysis, the Party clarified that the AD used

for the GHG inventory are national data and that it opted for including a general description of AD rather than reporting raw data.

27. Information on the Party's total GHG emissions by gas for 2000–2018 is outlined in table 1 in Gg CO<sub>2</sub> eq. It shows an increase in emissions of 22.1 per cent including land and HWP since 2000 (3,286.76 Gg CO<sub>2</sub> eq) and 19.9 per cent excluding land and HWP since 2000 (3,517.74 Gg CO<sub>2</sub> eq).

Table 1

**Greenhouse gas emissions by gas of Eritrea for 2018**

<i>Gas</i>	<i>GHG emissions (Gg CO<sub>2</sub> eq) including land and HWP<sup>a</sup></i>	<i>% change 2000–2018</i>	<i>GHG emissions (Gg CO<sub>2</sub> eq) excluding land and HWP<sup>a</sup></i>	<i>% change 2000–2018</i>
CO <sub>2</sub>	603.89	50.5	808.91	28.0
CH <sub>4</sub>	3 241.31	17.5	3 241.31	17.5
N <sub>2</sub> O	147.00	16.4	147.00	16.4
HFCs	21.24	21 240.0	21.24	21 240.0
PFCs	NO	NA	NO	NA
SF <sub>6</sub>	NO	NA	NO	NA
Other	NO	NA	NO	NA
<b>Total</b>	<b>4 013.44</b>	<b>22.1</b>	<b>4 218.46</b>	<b>19.9</b>

<sup>a</sup> 2006 IPCC Guidelines AFOLU category 3.B (land) and, if reported, 3.D (HWP (3.D.1) and other emissions (3.D.2)).

28. Information on NO<sub>x</sub>, CO, NMVOC and SO<sub>2</sub> emissions was not reported in Eritrea's BUR and the reason for this was not clear to the TTE. During the technical analysis, the Party clarified that the IPCC inventory software does not allow the estimation of these emissions.

29. Eritrea applied notation keys in tables where numerical data were not provided. The use of notation keys was in some cases not consistent with the UNFCCC guidelines for the preparation of NCs from non-Annex I Parties. The TTE noted that in BUR table 3.9, "NA" was reported instead of "NO" for some categories where the activity is not occurring, including CO<sub>2</sub> transport and storage (1.C), chemical industry (2.B), metal industry (2.C), electronics industry (2.E) and rice cultivation (3.C.7). Further, emissions from non-CO<sub>2</sub> gases such as NO<sub>x</sub>, CO, NMVOC and SO<sub>2</sub> were reported as "NO" for the energy and IPPU sectors where emissions were not estimated, rather than "NE". The TTE also noted in the same table that a zero was reported for category 3.B.6 instead of a notation key. The TTE further noted that notation keys were not used in the summary and sectoral tables of the BUR and the reason for this was not clear. Notation keys were used only in BUR table 3.9 in relation to the completeness of the inventory for 2018. During the technical analysis, the Party clarified that it considered the reporting of notation keys in BUR table 3.9 to be sufficient.

30. Eritrea 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.

31. The TTE noted that Eritrea did not follow the format prescribed by 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. In particular, information on CO<sub>2</sub> and non-CO<sub>2</sub> emissions and removals for annual carbon stock changes for different carbon pools was not reported. During the technical analysis, the Party clarified that it lacks the data and technical capacity for reporting in accordance with those tables.

32. The shares of emissions that different sectors contributed to the Party's total GHG emissions excluding land and HWP (category 3.B and, if reported, 3.D), as calculated by the TTE using information from the BUR, in 2018 are reflected in table 2.

Table 2  
Shares of greenhouse gas emissions by sector of Eritrea for 2018

<i>Sector</i>	<i>GHG emissions (Gg CO<sub>2</sub> eq)</i>	<i>% share<sup>a</sup></i>	<i>% change 2000–2018</i>
Energy	783.43	18.6	3.4
IPPU	211.80	5.0	1 053.0
AFOLU	2 985.14	75.6	18.9
Livestock (category 3.A)	3 190.16	75.6	16.4
Land (category 3.B)	–205.02	NA	–11.2
Aggregate sources and non-CO <sub>2</sub> emissions sources on land (category 3.C)	NE	NA	NA
HWP and other emissions (category 3.D)	NE	NA	NA
Waste	33.07	0.8	4 910.6

<sup>a</sup> Share of total without 2006 IPCC Guidelines AFOLU category 3.B (land) and, if reported, 3.D (HWP (3.D.1) and other emissions (3.D.2)).

33. Eritrea reported information on its use of GWP values consistent with those provided by the IPCC in its AR2 based on the effects over a 100-year time-horizon of GHGs.

34. For the energy sector, information was clearly reported on GHG emissions, methodological tier levels, sources of AD, EFs and key categories. Energy industries (1.A.1) and other sectors (1.A.4) accounted for 42.3 and 35.2 per cent of sectoral emissions respectively, followed by transportation (1.A.3) with 20.8 per cent and manufacturing industries and construction with 1.6 per cent in 2018. CO<sub>2</sub> contributed 78.8 per cent of total emissions for the sector, followed by CH<sub>4</sub> (17.4 per cent) and N<sub>2</sub>O (3.8 per cent). CO<sub>2</sub> emissions from liquid fuels in energy industries (1.A.1), road transportation (1.A.3.b) and solid fuels in energy industries (1.A.1) were identified as key categories. As reported by Eritrea, fugitive emissions do not occur in the country.

35. For the IPPU sector, information was clearly reported on GHG emissions, methodological tier levels, sources of AD, EFs and key categories. Cement production (2.A.1) accounted for 97.2 per cent of sectoral emissions, while lime production (2.A.2) accounted for the remaining 2.8 per cent in 2018. CO<sub>2</sub> emissions from cement production was identified as a key category, accounting for 4.2 per cent of national total GHG emissions in 2018. Emissions from cement production have significantly increased since 2010 owing to a new cement plant installed in the country. Emissions from non-energy products from fuels and solvent use (2.D), from some subcategories under product uses as substitutes for ozone depleting substances (2.F) and from other product manufacture and use (2.G) were reported as “NE”.

36. Information on HFC emissions was reported in Eritrea’s BUR. Eritrea also reported that emissions from PFCs and SF<sub>6</sub> do not occur in the country.

37. The TTE noted that HFC emissions were not included in the total and the reason for this was not clear to the TTE. During the technical analysis, the Party stated that HFC emissions were reported separately to avoid double counting with the reporting under the Vienna Convention for the Protection of the Ozone Layer.

38. The AFOLU sector (excluding categories 3.C and 3.D) accounted for 75.6 per cent of total national emissions in 2018. Livestock (3.A) accounted for 93.8 per cent of sectoral emissions, followed by land (3.B) with 6.2 per cent. CH<sub>4</sub> from enteric fermentation (3.A.1), CO<sub>2</sub> from forest land remaining forest land (3.B.1.a) and CH<sub>4</sub> and N<sub>2</sub>O from manure management (3.A.2) were identified as key categories.

39. The TTE noted that actual AD (e.g. the number of livestock, the amount of fertilizer used and the area of forest land) were not provided in the BUR. During the technical analysis, the Party clarified why information on AD was not reported (see para. 26 above).

40. Eritrea classified land into seven land-use categories, comprising grazing land and six land-use categories from the 2006 IPCC Guidelines. Emissions from grassland (3.B.3), including grazing land, were not reported in the BUR, even though grazing land accounts for

56.3 per cent of the total area of the country. During the technical analysis, the Party clarified that EFs for grassland for the type of climate in Eritrea were not available from the default EFs in the IPCC inventory software and that there were some challenges in matching Eritrea's land classification with that used in the IPCC inventory software.

41. Information on emissions from aggregate sources and non-CO<sub>2</sub> emissions sources on land (3.C) were not reported in Eritrea's BUR. During the technical analysis, the Party clarified that non-CO<sub>2</sub> emissions for category 3.C do not occur, except biomass burning (3.C.1), and that it lacks the AD and technical capacity needed for estimating non-CO<sub>2</sub> emissions from biomass burning.

42. For the waste sector, information was clearly reported on GHG emissions, methodological tier levels, sources of AD, EFs and key categories. In 2018, CH<sub>4</sub> emissions from solid waste disposal (4.A) accounted for 96.7 per cent of total emissions from the waste sector, while CO<sub>2</sub>, CH<sub>4</sub> and N<sub>2</sub>O emissions from open burning of waste (4.C.2) accounted for the remaining 3.3 per cent. Solid waste disposal (CH<sub>4</sub>) was identified as a key category in the trend assessment. No key categories from the waste sector were identified in the level assessment. Emissions from biological treatment of solid waste (4.B) and wastewater treatment and discharge (4.D) were reported as "NE".

43. The BUR provides an update to some of the GHG inventories reported in previous NCs. The information reported provides an update of the Party's NC2 and NC3, which addresses anthropogenic emissions and removals for 2000 and 2000–2015 respectively. The update was carried out for 2010–2018 using the methodologies contained in the 2006 IPCC Guidelines, thus generating a consistent 19-year time series. The Party reported that it did not perform a recalculation of previous inventories because its NC3 and first BUR were prepared in almost the same period. The GHG inventories for 2000–2018 reported in the BUR are consistent.

44. Eritrea described in its BUR the institutional framework for the preparation of its 2018 GHG inventory. The Party reported that the Ministry of Land, Water and Environment 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 Eritrea in designing its GHG inventory system. The members of the GHG inventory technical working group were drawn from the National Higher Education and Research Institutes and key government ministries, including the Ministry of Energy and Mines, the Ministry of Agriculture, the Forestry and Wildlife Authority, the Ministry of Trade and Industry, the Ministry of Transport and Communications, the Ministry of Marine Resources, the Ministry of Local Government and the Ministry of Health.

45. Eritrea clearly reported that a key category analysis was performed for the level of emissions and the trend in emissions. The Party identified nine key categories with a 95 per cent cumulative contribution threshold, of which CH<sub>4</sub> from enteric fermentation (3.A.1), CO<sub>2</sub> from energy industries (1.A.1) and CO<sub>2</sub> from cement production (2.A.1) are the most important.

46. The BUR provides information on QA/QC measures for all sectors. The validity of the collected data was checked by the project coordinator of the Department of Environment at different stages from data collection to compiling, as well as the methodology used for data analysis and processing. At all stages of inventory development, the consistency of the AD was checked by comparing the total annual consumption figures with the production and import data. In addition, the data used were verified and validated at stakeholder meetings. Whenever there were inconsistencies or possible transcription errors, the responsible institution was questioned, and the problem discussed and solved. The Party reported on improvements in its QA/QC procedures, including training on performing QA/QC in accordance with the 2006 IPCC Guidelines. The TTE commends the Party for its detailed reporting on QA/QC.

47. Eritrea clearly reported information on CO<sub>2</sub> fuel combustion emissions using both the sectoral and the reference approach. The information reported indicates that the combustion emissions estimated under the sectoral and reference approach are 617.24 and 584.00 Gg CO<sub>2</sub> respectively. The difference between the estimates calculated using the two approaches was reported as 5.4 per cent in 2018. Eritrea explained in the BUR that this difference is the



result of missing data in the recording system of AD providers and some illegal imports of liquid fuels, such as gasoline and diesel, from neighbouring countries.

48. Information was clearly reported on international aviation and marine bunker fuels. Emissions from international aviation and marine bunker fuels were reported as memo items.

49. Eritrea reported information on the uncertainty assessment (level and trend) of its national GHG inventory. The uncertainty analysis was based on the tier 1 approach and covers almost all source categories and all direct GHGs. The results obtained, as reported in the BUR, reveal that the level uncertainty for emissions is 10.1 per cent including land and HWP and the trend uncertainty is 9.6 per cent including land and HWP.

50. The TTE noted that the transparency of the information reported on GHG inventories could be enhanced by addressing the areas noted in paragraphs 26, 28, 29, 31, 37, 39 and 40 above, which could facilitate a better understanding of the information reported on GHG inventories.

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

51. As indicated in table I.2, Eritrea 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.

52. The information reported provides a clear and comprehensive overview of the Party's mitigation actions and their effects. In its BUR, Eritrea reported information on its national context and framed its national mitigation planning and actions in the context of its NDC and sectoral policies (such as the national biodiversity strategy action plan, the national adaptation plan of action and the energy development framework and strategy). Eritrea reported that climate change has been mainstreamed into sectoral policies, to the extent possible. During the technical analysis, the Party emphasized that it requires capacity-building to further mainstream climate change mitigation issues into sectoral policies and development plans. Most of the mitigation actions are in the energy sector.

53. The Party reported information on its first NDC, according to which Eritrea is committed to reducing its GHG emissions by 12.0 per cent by 2030 against a 'business as usual' scenario. If additional international support is provided, this can be further reduced by 38.5 per cent by 2030 against a 'business as usual' scenario. The Party is aiming to realize these targets through the following policy instruments and national strategies: promoting energy efficiency measures; switching fuels (from traditional biomass to liquified petroleum gas for cooking, and from kerosene to electricity and solar for lighting); introducing renewable energy sources in the electricity generation mix, including wind and geothermal power; and enhancing forest areas through plantation and natural regeneration. The TTE acknowledged the information, which is presented in this summary report as contextual, without assessing the completeness and transparency of the information in the NDC.

54. The Party reported a summary of its mitigation actions in tabular format in accordance with decision 2/CP.17, annex III, paragraph 11. The reported mitigation actions are in the energy (including transportation) and forestry sectors. Eritrea also provided brief information on its mitigation actions in narrative format.

55. Information on mitigation actions for the agriculture, IPPU and waste sectors was not reported in Eritrea's BUR and the reason for this was not clear to the TTE. During the technical analysis, the Party clarified that the reporting of such information was hampered by a lack of coordinated institutional arrangements, information, data and technical capacity to identify and analyse potential mitigation measures in these sectors and estimate their effects.

56. Consistently with decision 2/CP.17, annex III, paragraph 12(a), Eritrea reported the names of mitigation actions, coverage (sector and gas), information on quantitative goals, progress indicators and a description of the mitigation actions in the BUR (chap. 4).

57. Information on other gases (such as CH<sub>4</sub> and N<sub>2</sub>O) covered by the reported mitigation actions was not provided in Eritrea's BUR. During the technical analysis, the Party clarified that the model used to perform mitigation analysis allowed emissions to be reported in CO<sub>2</sub>

eq only. The Party also confirmed that it lacks the technical capacity to report these non-CO<sub>2</sub> gases separately for the reported mitigation actions and needs capacity-building to use other relevant tools to report such gases in future.

58. Eritrea reported information on methodologies and assumptions and the objectives of the actions and steps taken or envisaged to achieve those actions for all mitigation actions in the energy (including transportation) and forestry sectors. The Party also reported information on estimated outcomes or estimated emission reductions for all mitigation actions.

59. The mitigation actions in the energy sector focus mainly on substituting fossil fuels with renewable energy sources (solar, wind and geothermal), promoting energy efficiency measures and incentivizing clean cooking solutions. Of 10 reported mitigation actions, 7 were reported as ongoing with the remaining 3 still at the planning stage. Eritrea reported that, if all activities in the energy sector are sustained, the anticipated minimum annual GHG emission reduction is expected to be 162.70 kt CO<sub>2</sub> eq by 2030. The top three mitigation actions that contribute to significant reduction of GHG emissions in the energy sector include installation of 30 MW of geothermal power plant (delivering 110 GWh of electricity and reducing 70.40 kt CO<sub>2</sub> eq per year by 2030) followed by use of energy-efficient light-emitting diode lamps and electric cookstoves in households (saving 96 GWh of electricity and 33. kt CO<sub>2</sub> eq per year by 2025) and distribution of solar lanterns or individual solar home system for lighting purpose in 400, 000 rural households (reducing 24.4 kt CO<sub>2</sub> eq per year by 2025).

60. With respect to the mitigation actions aimed at disseminating improved biomass cookstoves and solar-powered water pumps, the Party did not clearly report information on the fraction of households relative to the total population that were using old cookstoves, the number of old cookstoves to be replaced by new improved cookstoves and the total number of diesel-powered water pumps currently being used. In the absence of this information, the TTE was unable to understand how the total emission reductions were estimated for these mitigation actions. During the technical analysis, the Party provided additional information that enabled the TTE to better understand the estimated results for these mitigation actions.

61. The mitigation action in the transport sector focuses mainly on promoting an energy-efficient, reliable and sustainable transportation system, improving the road network, promoting the use of public or mass transport, regulating vehicle inspection and controlling the import of fossil fuel powered vehicles. The mitigation action was reported as ongoing. The Party also reported the anticipated results of implementing its mitigation action as annual emission reductions of 2.6 kt CO<sub>2</sub> eq by 2030.

62. The mitigation action in the forestry sector focuses on forest management and silviculture regeneration. The action aims to rehabilitate degraded landscapes through intensive greening (reforestation and afforestation) and control water run-off and soil erosion. It also encourages individual households in communities to plant and own trees, through agroforestry, to produce forage and sustainable perennial crops. The mitigation action was reported as ongoing. Eritrea aims to cover 35,000 ha barren lands with tree seedlings by 2030. The Party also reported the anticipated results of implementing its mitigation action as net emission removals of 117.6 kt CO<sub>2</sub> eq by 2030.

63. With respect to the anticipated results for the mitigation action in the forestry sector, the TTE was unable to determine whether the estimated results were based on carbon stocks of mature trees or growing trees. During the technical analysis, the Party clarified that an area of 35,000 ha barren land will be afforested using tree seedlings and the assumptions used to estimate the value of CO<sub>2</sub> removals. The CO<sub>2</sub> sequestration value was estimated on the basis of the current and future area covered by trees at maturity by 2030.

64. Eritrea did not provide information on its involvement in international market mechanisms. During the technical analysis, the Party clarified that it has not been involved in international market mechanisms.

65. Eritrea reported information on its domestic MRV arrangements in accordance with decision 2/CP.17, annex III, paragraph 13. The information reported indicates that Eritrea is in the process of developing a domestic MRV system for mitigation actions. The Party outlined the proposed institutional arrangements, key agencies and stakeholders engaged in

the domestic MRV system, and their roles and responsibilities for achieving and tracking the goals mentioned in its NDC. During the technical analysis, Eritrea clarified that it needs capacity-building for establishing and operating a domestic MRV system for reporting and measuring the impacts of mitigation actions.

66. The TTE noted that the transparency of the information reported on mitigation actions could be further enhanced by addressing the areas noted in paragraphs 55, 57, 60, 63 and 64 above, which could facilitate a better understanding of the information reported on mitigation actions.

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

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

68. Eritrea reported information on constraints and gaps, and related financial and capacity-building needs in accordance with decision 2/CP.17, annex III, paragraph 14. In its BUR, Eritrea identified an inadequate institutional set-up including limited human resources to effectively design and implement climate change policies and legislative framework as a key constraint. Limited financial resources available to implement mitigation projects is another constraint. At the same time, a low level of knowledge, skills and awareness among stakeholders is posing significant challenges to handling climate change issues, including monitoring and reporting of climate actions and their impacts. The Party also reported that inadequate research capacity for evaluating the suitability and effectiveness of clean energy technologies is also hindering development and transfer of clean energy technologies in the country. Eritrea reported that its financial and capacity-building needs are primarily in the areas of improving national GHG inventories; strengthening institutional arrangements to plan, implement, monitor and report on climate change policies, regulations and actions; identifying technologies and measures for mitigating and adapting to climate change; using appropriate tools and models for mitigation analysis and assessment; and enhancing public awareness of climate change. During the technical analysis, the Party further confirmed that it faced challenges in mobilizing and managing financial resources for climate change activities.

69. Information on technical needs to address identified constraints and gaps was not clearly reported in Eritrea's BUR. During the technical analysis, the Party clarified that it faced challenges in reporting information on technical needs owing to lack of human resources.

70. Eritrea reported information on financial resources, technology transfer and capacity-building support received in accordance with decision 2/CP.17, annex III, paragraph 15. In its BUR, Eritrea reported that it received USD 261.44 million from multilateral and bilateral funding sources to implement climate change mitigation and adaptation programmes and projects. The Party reported that it received USD 852,000 from the GEF to prepare both its NC3 and its first BUR. Eritrea received technology transfer support to establish a weather information and forecast station and a wind energy project. The information reported indicates that Eritrea received capacity-building support from various agencies and Parties to facilitate its use of the 2006 IPCC Guidelines for preparing its GHG inventory and to strengthen its institutional arrangements and national capacity for preparing national climate-related reports (such as the national inventory report, BUR and NCs), analysing and tracking impacts of mitigation actions and setting up an efficient and effective national MRV system.

71. Information on technical support received for climate change activities, including for the preparation of the first BUR, was not clearly reported in Eritrea's BUR. During the technical analysis, Eritrea clarified that it received technical support from the United Nations Environment Programme and the Global Support Programme for Preparation of National Communications and Biennial Update Reports by non-Annex I Parties in using various manuals, toolkits, guidelines and templates relevant to its BUR preparation. These entities also provided technical support to review and validate the BUR.

72. Eritrea reported information on technology needs with regard to the development and transfer of technology in accordance with decision 2/CP.17, annex III, paragraph 16. In its BUR, Eritrea presented a list of technology transfer needs to develop EFs for the energy sector, establish sectoral and national databases and information systems and strengthen the research capacity on renewable energy and adaptation measures.

73. However, information on whether the technology needs reported in the BUR were determined following a nationally determined process was not clearly reported in Eritrea's BUR. During the technical analysis, the Party clarified that it did not conduct a technology needs assessment to identify its technology needs owing to limited national capacity. The reported technology needs were the outcomes of the Capacity-building Initiative for Transparency project funded by the GEF.

74. 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 69, 71 and 73 above, which could facilitate a better understanding of the information reported on needs and support received.

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

75. In consultation with Eritrea, the TTE identified the following needs for capacity-building that could facilitate the preparation of subsequent BURs and participation in ICA, and transitioning to ETF implementation:

- (a) Enhancing capacity to develop and apply tier 2 or tier 3 methodologies for key categories;
- (b) Building capacity for reporting information on the following indirect GHGs: CO, NO<sub>x</sub>, NMVOCs and sulfur oxides;
- (c) Building capacity for reporting updated data on activity levels used in the preparation of the national GHG inventory;
- (d) Building capacity for estimating and reporting CH<sub>4</sub> and N<sub>2</sub>O emissions from biomass burning;
- (e) Training national experts to align the national land-use classification in accordance with the six land-use categories included in the 2006 IPCC Guidelines;
- (f) Enhancing the technical capacities needed for data management and archiving;
- (g) Building capacity, through training, to enhance mainstreaming of climate-specific mitigation actions into national development priorities and planning;
- (h) Establishing a domestic MRV system for reporting and measuring impacts of mitigation actions and training national experts to develop the technical capacity to register, track and share information on the progress of mitigation actions for all sectors;
- (i) Enhancing technical capacity, through training, on the use of mitigation analysis tools and models for reporting relevant information on mitigation actions for the AFOLU, IPPU and waste sectors;
- (j) Enhancing technical capacity, through training, for assessing and quantifying the impacts of mitigations actions (such as establishing baselines, formulating and using methods and assumptions, identifying mitigation options, estimating emission reductions) for all sectors;
- (k) Enhancing national capacity for reporting information on technical needs and support received;
- (l) Enhancing national capacity to identify technology transfer needs following a nationally determined process and reporting information on technology transfer support received;
- (m) Enhancing national capacity for reporting information on financial support received for climate change activities, including BUR preparation;

(n) Enhancing national capacity for mobilizing and managing financial resources for climate change activities;

(o) Enhancing national capacity to prepare for and implement the requirements of the ETF.

76. The TTE noted that, in addition to those identified during the technical analysis, Eritrea reported several capacity-building needs in its BUR covering the following areas:

(a) Improving national GHG inventories;

(b) Training on performing QA/QC, uncertainty analysis and key category analysis in accordance with the 2006 IPCC Guidelines;

(c) Strengthening institutional and human capacity to fulfil obligations under the Convention;

(d) Enhancing national capacity to establish a systematic and continuous approach to raise public awareness of climate change;

(e) Enhancing research capacity to identify clean energy technologies.

### III. Conclusions

77. The TTE conducted a technical analysis of the information reported in the first BUR of Eritrea 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 removals by sinks of all GHGs not controlled by the Montreal Protocol; 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; the level of support received to enable the preparation and submission of BURs; and domestic MRV. The TTE concluded that the information analysed is mostly transparent.

78. Eritrea reported information on the institutional arrangements relevant to the preparation of its BURs. The Department of Environment under the Ministry of Land, Water and Environment coordinates four sectoral thematic groups to prepare the BUR. Eritrea is establishing domestic MRV arrangements to compile data and information on the GHG inventory, the impacts of mitigation actions and support received in a systematic and efficient manner, which will enable the sustainable preparation of its NCs and BURs.

79. In its first BUR, submitted in 2021, Eritrea reported information on its national GHG inventory for 2000–2018. This included GHG emissions and removals of CO<sub>2</sub>, CH<sub>4</sub> and N<sub>2</sub>O for all relevant sources and sinks as well as HFCs. The inventory was developed on the basis of the 2006 IPCC Guidelines, using tier 1 methodology. Default EF values from the 2006 IPCC Guidelines were applied for individual key categories. The total GHG emissions for 2018 were reported as 4,218.46 Gg CO<sub>2</sub> eq (excluding land and HWP) and 4,013.44 Gg CO<sub>2</sub> eq (including land and HWP). Nine key categories and three main gases were identified using the level assessment, of which CH<sub>4</sub> from enteric fermentation (3.A.1) and CO<sub>2</sub> from liquid fuels in energy industries (1.A.1) are the most important categories. Estimates of aggregate sources and non-CO<sub>2</sub> emissions sources on land were not reported owing to a lack of technical capacity and limited availability of AD. Emissions and removals from grassland were not reported owing to difficulties in using the IPCC inventory software.

80. Eritrea reported information on mitigation actions and their effects in both tabular and brief narrative format and framed its national mitigation planning and actions in the context of its NDC and other sectoral policies. Eritrea reported ongoing and planned actions in the energy (including transportation) and forestry sectors. The mitigation actions focus on reducing emissions by using renewable energy sources, promoting energy efficiency measures, improving the transportation system and increasing CO<sub>2</sub> removals by managing forests and promoting afforestation and reforestation activities. The Party reported the

progress of implementation of its mitigation actions and the results achieved, including emission reductions. The highest estimated outcome was reported for the energy sector of 162.70 kt CO<sub>2</sub> removals by 2030. The Party reported the co-benefits of its mitigation actions, including fuel cost savings and improvements in health outcomes. The Party also reported information on planned MRV arrangements. Information on mitigation actions for the agriculture, IPPU and waste sectors and non-CO<sub>2</sub> gases covered by reported mitigation actions in the energy and forestry sectors was not reported owing to difficulties in obtaining the necessary data and limited technical capacity, as clarified by the Party during the technical analysis.

81. Eritrea reported information on key constraints, gaps and related needs, including in the areas of national GHG inventories; institutional arrangements relevant to climate change policies, regulations and actions; technologies and measures for mitigation and adaptation to climate change; appropriate tools and models for mitigation analysis and assessment; and public awareness of climate change. Information was reported on the financial and capacity-building support received to implement climate change mitigation and adaptation projects, use the 2006 IPCC Guidelines for the compilation of the GHG inventory and strengthen institutional arrangements for the MRV system. The Party also reported that it received financial support of USD 852,000 from the GEF for preparing its NC3 and first BUR. The Party further reported information on the technology transfer support received for establishing a weather information and forecast station and a wind energy project. Information on technical needs and support received and a nationally determined process to identify technology needs was not reported owing to limited national capacity, as clarified by the Party during the technical analysis.

82. The TTE, in consultation with Eritrea, identified the 15 capacity-building needs listed in chapter II.D above and needs for capacity-building 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. The Party, in consultation with the TTE, also identified one need for capacity-building to facilitate transition to the ETF listed in paragraph 75(o) above. Eritrea prioritized the capacity-building needs referred to in paragraph 75(a–c), (e–j) and (o) above.

## Annex I

### Extent of the information reported by Eritrea in its first biennial update report

Table I.1

**Identification of the extent to which the elements of information on greenhouse gases are included in the first biennial update report of Eritrea**

<i>Decision</i>	<i>Provision of the reporting guidelines</i>	<i>Assessment of whether the information was reported</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	Eritrea submitted its first BUR in December 2021; the GHG inventory reported is for 2000–2018.
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	Eritrea 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.	No	Information on the sources of the AD was reported; however, the actual AD were not reported.
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;	Partly	Comparable information was reported in BUR table 3.3 but not for the annual change in carbon stocks in different pools.
	(b) The sectoral report tables annexed to the Revised 1996 IPCC Guidelines.	Partly	Comparable information was reported in BUR table 3.3. However, information on category 3.C was not 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.	Partly	The GHG inventory for 1994 was not reported, although it was included in the NC1.
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).	Partly	This information was reported only for 2000, 2006, 2010, 2015 and 2018. The GHG inventory for 1994 was not reported.

<i>Decision</i>	<i>Provision of the reporting guidelines</i>	<i>Assessment of whether the information was reported</i>	<i>Comments on the extent of the information provided</i>
Decision 2/CP.17, annex III, paragraph 9	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 17/CP.8, annex, chapter III (National greenhouse gas inventories), including:	Yes	
	(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);	Yes	Comparable information was reported in BUR table 3.3.
	(b) Table 2 (National greenhouse gas inventory of anthropogenic emissions of HFCs, PFCs and SF <sub>6</sub> ).	Partly	Only emissions of HFCs were reported in BUR table 3.3, in CO <sub>2</sub> eq.
Decision 2/CP.17, annex III, paragraph 10	Additional or supporting information, including sector-specific information, may be supplied in a technical annex.	NA	
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	Information on procedures and arrangements for data collection and archiving, including the roles of the institutions involved, was reported.
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> ;	Partly	Some categories in the IPPU, AFOLU and waste sectors were reported as "NE".
	(b) CH <sub>4</sub> ;	Partly	Some categories in the IPPU, AFOLU and waste sectors were reported as "NE".
	(c) N <sub>2</sub> O.	Partly	Some categories in the IPPU, AFOLU and waste sectors were reported as "NE".
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;	Yes	
	(b) PFCs;	No	
	(c) SF <sub>6</sub> .	No	
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) CO;	No	
	(b) NO <sub>x</sub> ;	No	



<i>Decision</i>	<i>Provision of the reporting guidelines</i>	<i>Assessment of whether the information was reported</i>	<i>Comments on the extent of the information provided</i>
	(c) NMVOCs.	No	
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	The Party did not report on other gases, such as sulfur oxides.
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	
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	
	(b) Marine bunker fuels.	Yes	
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 GWP provided by the IPCC in its AR2 based on the effects of GHGs over a 100-year time-horizon.	Yes	The Party used the GWP provided in the AR2.
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	Eritrea used the 2006 IPCC Guidelines. Tier 1 methodology was used for all sectors.
	(b) Explanation of the sources of EFs;	Yes	
	(c) Explanation of the sources of AD;	Yes	Eritrea used default AD from the 2006 IPCC Guidelines as well as national AD.
	(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;		
	(iii) EFs;		

<i>Decision</i>	<i>Provision of the reporting guidelines</i>	<i>Assessment of whether the information was reported</i>	<i>Comments on the extent of the information provided</i>
	(iv) AD;		
	(e) Parties are encouraged to identify areas where data may be further improved in future communications through capacity-building.	Yes	
Decision 17/CP.8, annex, paragraph 22	Each non-Annex I Party is encouraged to use tables 1–2 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	In the BUR notation keys were not consistently applied in the summary tables.
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 first biennial update report of Eritrea**

<i>Decision</i>	<i>Provision of the reporting guidelines</i>	<i>Assessment of whether the information was reported</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	Eritrea reported information in tabular format on planned and ongoing conditional mitigation actions for the energy, transport and forestry sectors. However, no information was reported for the agriculture, IPPU and waste sectors.
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	Partly	Information on the gases covered was provided only for CO <sub>2</sub> ; information on other gases (such as CH <sub>4</sub> and N <sub>2</sub> O) was not reported.

<i>Decision</i>	<i>Provision of the reporting guidelines</i>	<i>Assessment of whether the information was reported</i>	<i>Comments on the extent of the information provided</i>
	gases), quantitative goals and progress indicators;		
	(b) Information on:		
	(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.	Yes	

*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 first biennial update report of Eritrea**

<i>Decision</i>	<i>Provision of the reporting requirements</i>	<i>Assessment of whether the information was reported</i>	<i>Comments on the extent of the information provided</i>
Decision /CP.17, annex III, paragraph 14	Non-Annex I Parties should provide updated information on:		
	(a) Constraints and gaps;	Yes	
	(b) Related financial, technical and capacity-building needs.	Partly	Eritrea provided information on support needed, including technology transfer, capacity-building and financial needs to address identified constraints and gaps; however, information on technical needs was not reported.
Decision /CP.17, annex III, paragraph 15	Non-Annex I Parties should provide:		
	(a) Information on financial resources received, technology transfer and capacity-building received;	Yes	
	(b) Information on technical support received from the GEF, Parties included in Annex II to the Convention and other	Partly	Eritrea did not provide information on technical support received for climate

<i>Decision</i>	<i>Provision of the reporting requirements</i>	<i>Assessment of whether the information was reported</i>	<i>Comments on the extent of the information provided</i>
	developed country Parties, the Green Climate Fund and multilateral institutions for activities relating to climate change, including for the preparation of the current BUR.		change activities, including for the preparation of its first BUR.
Decision /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;	Partly	Eritrea reported information on needs for development and transfer of technology; however, the Party did not report whether these technology development and transfer needs were identified following a nationally determined process.
	(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>.

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#### B. UNFCCC documents

First BUR of Eritrea. Available at <https://unfccc.int/BURs>.

NC1, NC2 and NC3 of Eritrea. Available at <https://unfccc.int/non-annex-I-NCs>.