



United Nations

FCCC/SBI/ICA/2023/TASR.1/SOM



Framework Convention on  
Climate Change

Distr.: General  
25 March 2024

English only

---

## **Technical analysis of the first biennial update report of Somalia submitted on 3 April 2023**

### **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 Somalia, 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  | 2006 IPCC Guidelines for National Greenhouse Gas Inventories   |
| AD  | activity data  |
| AFOLU   | agriculture, forestry and other land use   |
| AR  | Assessment Report of the Intergovernmental Panel on Climate Change   |
| BUR   | biennial update report   |
| 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  |
| GHG   | greenhouse gas   |
| GWP   | global warming potential   |
| 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>   |
| IPPU  | industrial processes and product use   |
| LDC   | least developed country  |
| LULUCF  | land use, land-use change and forestry   |
| MoECC   | Ministry of Environment and Climate Change of Somalia  |
| 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  |
| NMVOG   | non-methane volatile organic compound  |
| 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  | Revised 1996 IPCC Guidelines for National Greenhouse Gas Inventories   |
| 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”                |

## **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 LDCs 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 LDC 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 Somalia, 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, Somalia submitted its first BUR on 3 April 2023 as a stand-alone update report.
6. The technical analysis of Somalia's BUR was conducted from 2 to 6 October 2023 in Bonn 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: Ijaz Ahmad (Pakistan), Javier Bolufé Torres (Cuba), Ruleta Camacho Thomas (former member of the Consultative Group of Experts from Antigua and Barbuda), Akram Hamza (Tunisia), Atsuko Hayashi (Japan), Traute Koether (Austria), Kakhberi Mdivani (Georgia), Dingane Sithole (Zimbabwe), Koen E.L. Smekens (Belgium) and Christopher Roland Thorpe (Luxembourg). Traute Koether and Dingane Sithole were the co-leads. The technical analysis was coordinated by Marion Vieweg-Mersmann and Jeeyoon Jung (secretariat).
7. 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 Somalia 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 Somalia's first BUR, the TTE prepared and shared a draft summary report with Somalia on 12 December 2023 for its review and comment. Somalia, in turn, provided its feedback on the draft summary report on 11 March 2024.
8. The TTE finalized the summary report in consultation with the Party on 11 March 2024.

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

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

9. 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

---

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

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).

10. The remainder of this chapter presents the results of each of the three parts of the technical analysis of Somalia's BUR outlined in paragraph 9 above.

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

11. The elements of information referred to in paragraph 9(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.

12. 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 11 above have been included in the BUR of the Party concerned. The TTE considers that the reported information is partially 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**

13. The technical analysis referred to in paragraph 9(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.

14. 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.

15. 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**

16. 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.

17. Somalia reported in its first BUR information on its national circumstances, including a description of national development priorities, objectives and circumstances, including features of geography, natural resources, climate, demographics, security, governance arrangements and the economy that might affect the Party's ability to deal with mitigating and adapting to climate change. Somalia is located on the eastern coast of the Horn of Africa and has 3,333 km of coastline and covers 637,540 km<sup>2</sup> of land. The Party faces the dual challenge of climate change and security instability. The Party reported that climate change has led to more frequent and prolonged droughts, flooding, insect outbreaks and other natural disasters that endanger both the ecosystem and people's lives. Additionally, the country's security issues have hindered its ability to effectively address climate change. The economy relies heavily on resources such as livestock that are vulnerable to the impacts of climate change, but ongoing conflicts and political instability impede sustainable resource management and climate adaptation efforts. The complex interplay between security concerns and environmental challenges further exacerbates Somalia's vulnerability to the impacts of climate change. The Party reported that emissions are likely to grow significantly as the country strives to achieve its development objectives.

18. In addition, Somalia provided a summary of relevant information regarding its national circumstances in tabular format.

19. Somalia reported in its first BUR that institutional arrangements for the preparation of its BURs on a continuous basis were identified, noting that these arrangements are associated with entities at both the federal and federal member state level. Somalia reported that MoECC is the nationally designated authority responsible for the formulation of national environmental and climate change policies. It coordinates climate change activities and harmonizes the environment and climate change governance plans of Somalia's federal line ministries and federal member states, international partners and other stakeholders. The Party reported that MoECC is also the UNFCCC focal point responsible for coordinating climate change activities at the international level. Somalia reported that MoECC has established two committees, the National Climate Change Committee and the Cross-Sectoral Committee on Climate Change, which advance work on mainstreaming climate-resilient development.

20. Detailed information on the roles and responsibilities and processes for the preparation of NCs and BURs, including the legal status and the roles and responsibilities of the overall coordinating entity, the involvement and roles of other institutions and experts, mechanisms for information and data exchange, QA/QC procedures, and provisions for public consultation and other forms of stakeholder engagement on a continuous basis was not reported and the reason for this was not clear to the TTE. During the technical analysis, the Party clarified that MoECC, specifically the Department of Climate Change, will be responsible for the development of NCs and BURs on a continuous basis.

21. The TTE noted that the transparency of the information reported on institutional arrangements for the preparation of BURs on a continuous basis could be enhanced by addressing the areas noted in paragraph 20 above, which would facilitate a better understanding of the information reported on institutional arrangements.

22. Somalia reported in its first BUR information on its domestic MRV arrangements. The description covers key aspects of the institutional arrangements, including a description of the proposed institutional arrangements for MRV, for which some national policies and legislation are in place that provide strategic direction and establish institutional arrangements. However, institutional capacity remains inadequate. The MRV arrangements are designed at the federal and federal member state level and cover five main areas: MRV of the national GHG inventory system, mitigation actions and support needed and received; monitoring and evaluating adaptation actions; and tracking progress in relation to the Sustainable Development Goals. The proposed system will be built around existing institutions and will be sensitive to the financial, institutional and technical resource limitations of the Party. In its BUR, Somalia also reported a need for enhanced coordination and improvement of its overall climate change institutional arrangements and governance, including for the MRV system.

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

23. As indicated in table I.1, Somalia reported information on its GHG inventory in its BUR partially 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.

24. Somalia submitted its first BUR in 2023 and the GHG inventory reported is for 2000–2020. The GHG inventory is consistent with the requirements for the reporting time frame.

25. GHG emissions and removals for the BUR covering the 2000–2020 inventories were estimated using tier 1 methodologies from the 2006 IPCC Guidelines for the AFOLU, energy and waste sectors for 2000, 2005, 2010, 2015 and 2020. The Party clarified in the BUR that GHG emissions from IPPU were not estimated since the sector is small and AD could not be obtained. The TTE commends the Party for using the 2006 IPCC Guidelines.

26. Information on the methodologies and tiers used for some AFOLU categories and subcategories was not clearly reported in Somalia's BUR. This applies to, inter alia, the annual amount of nitrogen deposited from the use of synthetic nitrogen fertilizer, N<sub>2</sub>O emissions from organic and grazed soils, the annual change in biomass carbon stocks on land converted to other land-use categories, the annual change in carbon stocks in biomass, the annual increase in biomass carbon stocks due to an increase in biomass, and the average annual increase in biomass. During the technical analysis, Somalia clarified that it faced challenges and constraints in providing information, especially for some categories, and noted that emissions from synthetic fertilizer and the amount of nitrogen deposited from the use of synthetic nitrogen fertilizer were not estimated as there are no data on synthetic fertilizer imports or use in Somalia.

27. Information on the AD and EFs used and their sources was partly reported in the BUR. Somalia reported information on AD and EFs only for solid municipal waste, open burning, wastewater treatment, discharge of waste, and the enteric fermentation and manure management categories in the AFOLU sector.

28. Information was not reported in Somalia's BUR on the AD and EFs for all reported energy categories (i.e. electricity generation (category 1.A.1.a), manufacture of solid fuels – charcoal production (category 1.A.1.c) and road transportation (category 1.A.3.b)); on emissions from combustion activities in the commercial and residential sectors (category 1.A.4); and on the N<sub>2</sub>O direct and indirect emission subcategories and annual average populations for livestock for the AFOLU sector. During the technical analysis, the Party clarified that emissions for the energy sector were estimated through extrapolation and interpolation based on the energy sector subcategory emissions reported in Somalia's NC1 in 2018.

29. Information on emissions of CO<sub>2</sub>, CH<sub>4</sub>, N<sub>2</sub>O, HFCs, PFCs and SF<sub>6</sub> on a gas-by-gas basis was not reported. During the technical analysis, the Party clarified that these emissions could not be modelled in the IPCC software because energy fuel type and time series AD were not available for all categories.

30. Somalia reported that its total GHG emissions for 2020 amounted to 41,131 Gg CO<sub>2</sub> eq with LULUCF and 23,781 Gg CO<sub>2</sub> eq without LULUCF, as summarized in table 1.

Table 1  
**Greenhouse gas emissions by gas of Somalia for 2020**

| <i>Gas</i>       | <i>GHG emissions (Gg CO<sub>2</sub> eq) including LULUCF</i> | <i>GHG emissions (Gg CO<sub>2</sub> eq) excluding LULUCF</i> |
|------------------|--|--|
| CO <sub>2</sub>  | –  | –  |
| CH <sub>4</sub>  | –  | –  |
| N <sub>2</sub> O | –  | –  |
| HFCs             | –  | –  |
| PFCs             | –  | –  |
| SF <sub>6</sub>  | –  | –  |

| <i>Gas</i>   | <i>GHG emissions (Gg CO<sub>2</sub> eq) including LULUCF</i> | <i>GHG emissions (Gg CO<sub>2</sub> eq) excluding LULUCF</i> |
|--------------|--|--|
| Other        | –  | –  |
| <b>Total</b> | <b>41 131</b>  | <b>23 781</b>  |

*Note:* Emissions by gas were not reported, but totals were provided.

31. Information on other emissions, such as NO<sub>x</sub>, CO and NMVOCs, was not reported in Somalia's BUR. During the technical analysis, the Party clarified that emissions of precursor gases were not estimated owing to a lack of EFs, default or otherwise, and limited capacity to apply the relevant methodologies.

32. Notation keys were not used in Somalia's BUR. During the technical analysis, the Party clarified that it did not have the capacity to correctly apply notation keys.

33. Somalia reported partly 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. The Party provided information on land areas (BUR table 16, p.67), the annual total carbon stock growth rate for trees (BUR table 20, p.72), the ratio of below-ground carbon to above-ground carbon and the total carbon stock (BUR table 19).

34. Information comparable to the sectoral reporting tables annexed to the Revised 1996 IPCC Guidelines and on non-CO<sub>2</sub> emissions by land-use category, basic wood density, the carbon fraction of dry matter, wood removal, fuelwood and disturbance data, and the annual change in carbon stocks in mineral soils was not reported in Somalia's BUR and the reason for this was not clear to the TTE.

35. The shares of emissions that different sectors contributed to the Party's total GHG emissions excluding LULUCF, as reported by the Party, in 2020 are reflected in table 2.

Table 2

**Shares of greenhouse gas emissions by sector of Somalia for 2020**

| <i>Sector</i> | <i>GHG emissions (Gg CO<sub>2</sub> eq)</i> | <i>% share<sup>a</sup></i> | <i>% change 2000–2020</i> |
|---------------|---|----------------------------|---------------------------|
| Energy        | 2 103                                       | 8.9                        | 81.4                      |
| IPPU          | NE  | NA                         | NE                        |
| Agriculture   | 20 508                                      | 86.2                       | –3.2                      |
| LULUCF        | 17 350                                      | NA                         | 0                         |
| Waste         | 1 170                                       | 4.9                        | 1.4                       |

*Note:* Although the Party used the 2006 IPCC Guidelines for the preparation of the GHG inventory, the summary information reported in the BUR used the categories from the Revised 1996 IPCC Guidelines.

<sup>a</sup> Share of total emissions without LULUCF.

36. The Party reported emissions in CO<sub>2</sub> eq but did not provide information on the GWP values used. During the technical analysis, the Party clarified that it used GWP values consistent with those provided by the IPCC in its AR5 based on the effects over a 100-year time-horizon of GHGs.

37. For some energy sector categories (i.e. electricity generation (category 1.A.1.a), manufacture of solid fuels – charcoal production (category 1.A.1.c) and road transportation (category 1.A.3.b), and emissions from combustion activities in the commercial and residential sectors (category 1.A.4)), information was clearly reported on GHG emissions, the methodological tier levels used for estimating GHG emissions and the sources of the EFs and AD. Sector emissions increased from 1,159 to 2,103 Gg CO<sub>2</sub> eq between 2000 and 2020 driven mainly by population growth. The largest share of emissions was from the residential sector, which accounted for 43.6 per cent of emissions in 2020.

38. For the IPPU sector, Somalia reported some information in narrative format on the main categories (the cement, lime, soda ash and product uses as substitutes for ozone

depleting substances subcategories) that, according to the 2006 IPCC Guidelines, could be significant.

39. Information on GHG emissions, methodological tier levels, AD and their sources, and EFs was not reported for any categories under the IPPU sector in Somalia's BUR. However, the Party provided relevant clarification in its BUR, reporting that while emissions do occur for some of these categories in Somalia, AD could not be collected and emissions could not be estimated.

40. For the agriculture sector, Somalia estimated 2006 IPCC Guidelines AFOLU categories 3.A and 3.C. Agricultural soils (N<sub>2</sub>O), enteric fermentation (CH<sub>4</sub>) and manure management (CH<sub>4</sub>) were identified as key categories and the most relevant emissions sources in the sector. Livestock numbers were estimated at about 5.2 million cattle, 12 million sheep, 12 million goats and 7.2 million camels, which together represent the most important income source for the predominantly rural population. Emissions from livestock increased from 17,972 Gg CO<sub>2</sub> eq in 1990 to 18,669 Gg CO<sub>2</sub> eq in 2000 and dropped slightly to 17,700 Gg CO<sub>2</sub> eq in 2019, owing to the growing trade in livestock and frequent drought leading to decreasing population of livestock.

41. For the LULUCF sector, Somalia reported average annual emissions for 2000–2020 under category 3.B (land) as 17,350 Gg CO<sub>2</sub> eq for all inventory years. However, the Party also provided estimates for GHG emissions and removals for 2000–2018 as 5-year averages based on global data sets. According to these data, the net emissions from the LULUCF sector fluctuated between –2,605,289 Gg CO<sub>2</sub> eq in 2015–2018 and 388,553 Gg CO<sub>2</sub> eq in 2000–2005. Nevertheless, owing to the high uncertainty level associated with the data sets used, the LULUCF sector is considered an emitter of GHG emissions for Somalia, using the average over the entire period.

42. Information on estimating the annual change in carbon stocks in biomass, estimating the annual increase in biomass carbon stocks due to biomass increases, estimating the average annual increases in biomass and estimating the annual change in biomass carbon stocks on land converted to other land-use categories was not reported in Somalia's BUR. However, the Party provided relevant clarification in its BUR, namely that the data were generated from global data sets for the stratification of the global agroecological zones with default values.

43. For the waste sector, information was clearly reported on the key categories, GHG emissions, EFs and methodological tier levels (a tier 1 methodology was used for all categories). Categories 4.A solid waste disposal (CH<sub>4</sub>) and 4.D domestic wastewater treatment and discharge (CH<sub>4</sub>) were identified as the most relevant emission sources in the sector. Emissions increased by 139.6 per cent between 2000 and 2020 as a result of population growth, urbanization and industrial growth.

44. Information on CH<sub>4</sub> and N<sub>2</sub>O emissions for incineration and open burning of waste (category 4.C) was not reported in Somalia's BUR. During the technical analysis, the Party clarified that it will endeavour to report this information in the future.

45. The BUR provides an update to some of the GHG inventories reported in the Party's NC1. The information reported provides an update of the Party's NC1, which addresses anthropogenic emissions and removals for all years between 2000 and 2015. The update was carried out for 2000, 2005, 2010, 2015 and 2020, thus generating a five-yearly time series, although data were not provided for each year of the time series, as reported in the Party's NC1.

46. The Party did not report whether recalculations were conducted and did not report information on the recalculation method used for individual years or the resulting changes. The reason for this was not clear to the TTE. During the technical analysis Somalia clarified that the splicing methods used for generating data were not consistently applied and that more capacity is required.

47. Somalia described in its BUR the institutional framework for the preparation of its 2019 GHG inventory. The Party reported that MoECC 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 Somalia in designing its GHG inventory system.



48. A key category analysis was not reported in Somalia's BUR. The Party provided relevant clarification in its BUR, reporting that owing to limited information and a need for increased staff capacity, a key category analysis could not be conducted for the BUR.

49. The BUR provides information on QA/QC measures, including QC activities. The Party stated that it followed the tier 1 QC checklist. General QC procedures were routinely applied to all categories by sector experts responsible for each category and to the inventory report as a whole. Checks were performed on selected sets of data and processes and on a representative sample of data and calculations for each category. QA reviews were conducted by personnel not directly involved in the inventory compilation or development processes. QA of the inventory was carried out by the United Nations Environment Programme and the United Nations Development Programme, which analysed and made comments on the inventory reports. In addition, the Party reported requirements for improving its capacity with regard to the QA/QC measures for all sectors, which include additional human resources to carry out the various tasks and functions related to QA/QC coordination.

50. Somalia reported information on CO<sub>2</sub> fuel combustion emissions using the sectoral approach but no information was reported on the reference approach. However, the Party provided relevant clarification in its BUR, reporting that the reference approach could not be used owing to the limited availability of data on fuel consumption in Somalia.

51. Information on international aviation and marine bunker fuels was not reported in Somalia's BUR. During the technical analysis, the Party clarified that no institution could provide data on international aviation and marine bunker fuels when the BUR was compiled, and that this is an area for capacity-building.

52. Somalia reported information on the uncertainty assessment (level) of its national GHG inventory for some categories. The uncertainty analysis, which was based on the tier 1 approach for the enteric fermentation category and on expert judgment for the general uncertainty assessment, does not cover all source categories, but does cover enteric fermentation and direct GHGs from the waste sector. The results obtained, as reported in the BUR, reveal that the level uncertainty for emissions across assessed sectors is 20–30 per cent.

53. Information on the uncertainty of AD, EFs and GHG emissions estimated by category was not reported in Somalia's BUR. However, the Party provided relevant clarification in its BUR that it did not have the relevant information to conduct this analysis.

54. The TTE noted that the transparency of the information reported on GHG inventories could be enhanced by addressing the areas noted in paragraphs 26, 28–32, 34, 36, 39, 44, 46, 48, 50 and 51 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**

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

56. The information reported provides an overview of the Party's mitigation actions and their effects. In its BUR, Somalia reported information on its national context and framed its national mitigation efforts in the context of its NDC and national planning processes, strategies and actions, such as the Somalia National Development Plan (2020–2040).

57. Somalia reported a national target of achieving an emission reduction of 30 per cent against the 'business as usual' scenario by 2030 in line with its NDC. The Party reported that under the 'business as usual' scenario, its annual emissions are expected to increase from 41.13 to 49.91 Mt CO<sub>2</sub> eq between 2020 and 2030. The current emissions are attributed mainly to the forestry and agriculture sectors, which are responsible for 92 per cent of all emissions; the energy sector, which is responsible for just over 4 per cent of all emissions; the waste sector, which is responsible for 3 per cent of all emissions and the transport sector, which is responsible for under 1 per cent. The projection to 2030 shows annual increasing emissions trends, mainly in the energy and waste sectors; for the energy sector (excluding

transport), the increase is 94 per cent from 2020 to 2030, and for the waste sector the increase is 55 per cent from 2020 to 2030.

58. Somalia reported that limited and inconsistent data owing to the loss of infrastructure during the country's security instability and the resulting inability to undertake surveys to collect data presented challenges for modelling mitigation scenarios. However, in its BUR Somalia reported mitigation scenarios that projected a 8.35 Mt CO<sub>2</sub> eq GHG emission reduction (16.7 per cent) in 2030 compared with 'business as usual' in the same year. The agriculture sector is reported to be the main source of emission reductions (5.8 Mt CO<sub>2</sub> eq), followed by the waste sector (1.6 Mt CO<sub>2</sub> eq) and energy sector (0.9 Mt CO<sub>2</sub> eq).

59. The Party reported information on the actions and policies from its updated NDC and their effects. Somalia also reported information on the cost of its mitigation actions and reported that, owing to its limited fiscal capacity, the successful implementation of its NDC actions would require the provision of adequate and predictable financial resources, the transfer of environmentally sound technologies and capacity-building support. The Party also provided information on the institutional strengthening and capacity-building actions that would be required to enhance its ability to effectively implement the actions outlined in its NDC.

60. The TTE acknowledged the information, which is presented in this summary report as contextual without assessing the completeness and transparency of the information.

61. The Party reported a summary of its planned mitigation actions in tabular format in accordance with decision 2/CP.17, annex III, paragraph 11. The Party also reported information on its mitigation scenarios by sector in narrative format.

62. Consistently with decision 2/CP.17, annex III, paragraph 12(a), Somalia reported the names and descriptions of mitigation actions and their quantitative goals (in terms of potential emission reductions in Mt CO<sub>2</sub> eq) in BUR table 47. The Party also provided a list of mitigation priorities and targets by sector in BUR table 35, including descriptions of measures, their current adoption status and targets for 2030. Of the 14 actions reported, 4 are ongoing and 10 are planned.

63. Information on the gases covered and progress indicators was not reported in Somalia's BUR. Information on the sectors covered was not clearly reported in BUR table 47. During the technical analysis, the Party clarified that there are a few ongoing mitigation projects but information on their progress was not available during the preparation of the BUR.

64. Somalia reported information on methodologies and assumptions used to develop scenarios, noting that the Low Emissions Analysis Platform was used for all sectors, except the IPPU sector, for which the Party reported it was not possible to find adequate data to support emissions modelling.

65. The Party clearly reported on the objectives of the mitigation actions for all mitigation actions in the energy, AFOLU and waste sectors.

66. The mitigation actions for the energy sector focus on improving energy efficiency, promoting renewable energy sources and improving efficiency in the transport sector. The development of the renewable energy sources project is ongoing; the project is aimed at installing an additional 200 MW of solar and wind power in Somaliland and Puntland. Training is ongoing on energy efficiency in power transmission projects; the clean energy and efficient cookstoves project has commenced; and the distributed portable solar lanterns project is ongoing. The quantitative goals of individual measures in 2030 were reported in BUR table 47, amounting to 2.48 Mt CO<sub>2</sub> eq for the energy sector, including transport. Additional benefits include improved energy access and energy security, the promotion of gender equality and energy cost savings. In the transport sector, additional benefits include enhanced air quality, improved health and improved access to markets.

67. The mitigation actions for the AFOLU sector focus on sustainable agriculture and agroforestry. Of the six reported measures, one is ongoing and five are planned. The Party also reported the potential impact of implementing its mitigation actions in the AFOLU sector as an emission reduction of 22.13 Mt CO<sub>2</sub> eq in 2030, including mitigation co-benefits such

as increased food productivity, soil protection, an increase in income and savings, and poverty reduction. The Party reported sustainable agriculture projects focusing on improvements in livestock breeding practices and organic farming: the overall impact of these projects is expected to be a reduction in the growth rate of the area used for agricultural fields from 3 to 1.5 per cent, resulting in an annual emission reduction of 6 Mt CO<sub>2</sub> eq in 2030.

68. The BUR includes one planned mitigation action for the waste sector, which focuses on waste-to-energy generated from landfill gas. The Party reported the expected result of implementing its mitigation action as an emission reduction of 1.60 Mt CO<sub>2</sub> eq in 2030, including mitigation co-benefits such as reducing dumping of waste and minimizing releases of hazardous chemicals.

69. As well as the information on individual mitigation actions, the Party provided information on the targets and current adoption levels of the sector priorities in BUR table 35. For agriculture, six sector priorities and targets were reported. The Party reported that the smart agriculture and intensification of crop production initiative at present has a 3 per cent growth rate for the agricultural field area, compared with the 1.5 per cent target by 2030. No progress updates were provided for the five other sector priorities or targets. For the energy sector, the Party reported on the progress of three of the nine priorities or targets reported. For increased adoption of energy-efficient cooking, the Party reported an adoption level of 14 per cent against a 50 per cent 2030 target; for the clean energy and energy-efficient cookstoves project, the Party reported a 10 per cent adoption rate and a 2030 target of 40 per cent; and for the action on reducing transmission losses, the Party reported transmission losses to be 40 per cent, compared with its 12 per cent 2030 target.

70. For the forestry sector, four sector priorities were identified; for the transport sector four sector priorities were identified; and for the waste sector three priorities were identified; however, no reference levels were provided for these priorities.

71. Information on the steps taken or envisaged to implement the mitigation actions was not provided in the BUR, but the Party clarified in its BUR that it requires financial resources to implement the listed mitigation actions.

72. Information on assumptions used to implement and record progress of mitigation actions was not reported in Somalia's BUR. During the technical analysis, Somalia clarified that estimated emission reductions of mitigation actions were included in the 2021 NDC analysis report. Information on mitigation strategies was reported in BUR table 35 and in narrative format, and actions were reported in BUR table 47; however, the link or relationship between the actions and strategies is not clear. During the technical analysis, the Party clarified that BUR table 35 summarizes the priority mitigation actions highlighted in the NDC, while BUR table 47 provides further details of mitigation priorities.

73. Somalia reported that it is not currently involved in any international market mechanism projects.

74. Somalia reported information on its domestic MRV arrangements in accordance with decision 2/CP.17, annex III, paragraph 13. The information reported indicates that Somalia is in the process of designing and developing a domestic MRV system for mitigation actions.

75. The TTE noted that the transparency of the information reported on mitigation actions could be enhanced by addressing the areas noted in paragraphs 63, 71 and 72 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**

76. As indicated in table I.3, Somalia 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.

77. Somalia clearly 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, Somalia identified its security and economic situation, limited

fiscal capacity and status as an LDC as constraints in effectively addressing climate change. The Party also identified resource-use conflicts, environmental degradation and climate-related disasters, such as floods and droughts, as key challenges to the stability and development of the country.

78. Somalia reported in its BUR (chaps. 4–5) that its financial, technical and capacity-building needs are in the areas of tracking the progress of the implementation of its mitigation actions, institutional strengthening, enhancing legislative frameworks, mobilizing resources, training MoECC staff, enhancing monitoring and reporting, and addressing barriers to technology access and uptake. Somalia also reported that the estimated cost of implementing its planned mitigation and adaptation actions is USD 55.5 billion from 2021 to 2030, of which mitigation requires USD 7 billion and adaptation requires USD 48.5 billion.

79. Somalia reported information on financial resources received in accordance with decision 2/CP.17, annex III, paragraph 15, in tabular format. In its BUR, Somalia reported that it received USD 385,000 from the Global Environment Facility for the preparation of its first BUR and USD 500,000 for the preparation of its NC1, and USD 21,820,000 for its technology needs assessment, cross-cutting capacity development and its projects for climate resilience in agricultural pastoral communities and climate change adaptation for rural livelihoods. The information reported indicates that Somalia also received financial support from Germany, Sweden, Italy, the European Union, the African Development Bank, the United Nations Development Programme, the Global Environment Facility, the United States Agency for International Development, the Food and Agriculture Organization of the United Nations and the World Bank totalling USD 179,765,339 for a number of climate change projects related to adaptation and humanitarian issues, including on agriculture, land management, sustainable livelihoods, food security, water resource management, resilience and disaster risk management.

80. Information on technology transfer, capacity-building and technical support received was not clearly reported in Somalia's BUR. During the technical analysis, the Party clarified that no technology transfer, capacity-building or technical support was received.

81. 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 was not reported in Somalia's BUR. However, the Party provided relevant clarification in its BUR, in which it reported that a technology needs assessment project is ongoing.

82. The TTE noted that the transparency of the information reported on needs and support received could be enhanced by addressing the areas noted in paragraph 80 above, which could facilitate a better understanding of the information reported on needs and support received.

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

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

(a) Capacity-building needs related to reporting information on national circumstances and institutional arrangements relevant to the preparation of NCs on a continuous basis:

(i) Capacity-building to enhance the Party's understanding and interpretation of the guidelines related to UNFCCC reporting, and capacity-building on general QA/QC of the overall report;

(ii) Enhancing capacity to develop arrangements specific to the preparation of NCs and BURs/biennial transparency reports on a continuous basis, including by specifying the tasks and responsibilities of the institutions responsible for or involved in the preparation of reports; identifying and reporting the differences and linkages between institutional arrangements for GHG inventory preparation and general institutional arrangements for reporting under the Convention and on the development of the MRV system;

(b) Capacity-building needs related to reporting on national GHG emissions by sources and removals by sinks:

(i) Enhancing capacity to prepare an energy balance, including estimating and reporting separately emissions from international aviation and marine bunker fuels;

(ii) Enhancing capacity to provide information on the splicing methods applied and underlying parameters at the category level for the agriculture and LULUCF sectors;

(iii) Enhancing capacity to improve data collection and analysis in order to:

a. Identify categories and subcategories where emissions may occur;

b. Enable the development of country-specific EFs and the use of higher-tier methods;

c. Apply the reference approach in the energy sector;

d. Transparently and accurately estimate GHG emissions/removals from rice cultivation, biomass burning in forest lands and carbon stocks;

(iv) Enhancing capacity to provide country-specific EFs in order to estimate N<sub>2</sub>O emissions from nitrogen inputs to flooded rice fields from drained/managed organic soils;

(v) Enhancing capacity to improve the level of information provided by using the reporting tables specified in the related reporting guidelines (e.g. table 1 of decision 2/CP.17, annex III, the sectoral report tables annexed to the Revised 1996 IPCC Guidelines, including the information for the energy and waste sectors, and tables included in annex 3A.2 to the IPCC good practice guidance for LULUCF), including:

a. Building capacity to estimate the annual change in carbon stocks, non-CO<sub>2</sub> emissions for land-use categories, basic wood density, the carbon fraction of dry matter, wood removal, fuelwood and disturbance data, or the annual change in carbon stocks in mineral soils;

b. Enhancing capacity to provide information on the GWP values applied for estimating non-CO<sub>2</sub> emissions in CO<sub>2</sub> eq;

(vi) Enhancing capacity to report information on emissions of N<sub>2</sub>O and CH<sub>4</sub> for category 4.C.2 (open burning of waste) and CO, NO<sub>x</sub>, NMVOCs and other gases not controlled by the Montreal Protocol, such as sulfur oxides, using IPCC methodologies for GHG inventory preparation;

(vii) Enhancing capacity to report information on the methodologies used for estimating CH<sub>4</sub> emissions from AFOLU sources, the annual amount of nitrogen deposited by the use of synthetic nitrogen fertilizer, N<sub>2</sub>O emissions from organic and grazed soils, the annual change in biomass carbon stocks on land converted to other land-use categories, the annual change in carbon stocks in biomass, the annual increase in biomass carbon stocks due to biomass increases and the average annual increase in biomass;

(c) In relation to reporting on mitigation actions and their effects, enhancing capacity to track the status of implementation of mitigation strategies and actions and the contribution of mitigation actions to achieving the targets set out in mitigation strategies, and to estimate outcomes of mitigation actions and the emission reductions associated with them;

(d) In relation to reporting on constraints and gaps, and related technology, financial, technical and capacity-building needs, including on support needed and received, enhancing capacity to track support received and to report on technology transfer, technology, technical and capacity-building support received.

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

(a) Enhancing capacity of various institutions and strengthening policy and legislative frameworks to support Somalia's efforts to enhance its adaptive capacities with regard to climate change;

(b) Enhancing capacity to access multilateral and bilateral climate finance sources by addressing barriers to and enhancing private sector investments in climate finance, and establishing effective institutional mechanisms to enhance the mobilization and effective use of climate finance;

(c) Support for establishing a national MRV system and strengthening its institutional set-up with adequate infrastructure and human resources for tracking climate actions:

(i) Building capacity to make human resources improvements, including with regard to overall planning, coordination, management and technical oversight; conducting research; data collection and management; emission calculations; and QA/QC coordination;

(ii) Institutional capacity-building to improve the processes and coordination of the agencies involved;

(iii) Building technical capacity to identify and use appropriate methodologies to obtain accurate data and on use of platforms for data collection and management;

(d) Immediate training for Somalia's GHG team, both theoretical and practical, on data collection and use of sector-specific data-collection templates; the use of the IPCC 2006 inventory software for all sectors and a geographic information system in the LULUCF sector; key category analyses; trend assessments; QC; uncertainty assessments; completeness assessments; and report writing.

### III. Conclusions

85. The TTE conducted a technical analysis of the information reported in the first BUR of Somalia in accordance with the UNFCCC reporting guidelines on BURs and concludes that the information reported is partially 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, including a national inventory report; mitigation actions and their effects; 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 Somalia on institutional arrangements relevant to the preparation of NCs on a continuous basis, the national inventory, mitigation actions and their effects, constraints and gaps, and related financial, technical and capacity-building needs. The TTE concluded that the information analysed is mostly transparent.

86. Somalia reported that institutional arrangements for the preparation of its BUR on a continuous basis were identified, noting that they are associated with entities at both the federal and federal member state level with MoECC, specifically the Department of Climate Change, as the responsible agency.

87. In its first BUR, submitted in 2023, Somalia reported information on its national GHG inventory for 2000–2020. This included total GHG emissions and removals in Gg CO<sub>2</sub> eq for most of the relevant sources and sinks. The inventory was developed on the basis of the 2006 IPCC Guidelines. The total GHG emissions for 2020 were reported as 23,781 Gg CO<sub>2</sub> eq (excluding LULUCF) and 41,131 Gg CO<sub>2</sub> eq (including LULUCF). GHG emissions were mainly from the agriculture (mainly livestock) and LULUCF sectors. Information on methodologies, AD, EFs and emissions by gas was partly reported in the BUR. Somalia did not report information related to precursor gases for any sectors. Information on emissions from the IPPU sector and estimates of fluorinated gases were not provided owing to difficulties in obtaining the necessary data, as clarified by the Party in the BUR.

88. Somalia reported information on mitigation actions and their effects in both tabular and narrative format, including its commitment to pursuing a low-emission sustainable development pathway, as reflected in its NDC, and reported an emission reduction target of 30 per cent against the ‘business as usual’ scenario by 2030 and reported the baseline and mitigation scenarios for 2020–2030, framing its national mitigation priorities, targets and actions in the context of its national planning processes and its NDC, which was updated in 2021. Somalia reported 14 actions, of which 4 are ongoing actions and 10 are planned actions, in the energy (including transport), AFOLU and waste sectors. The mitigation actions focus on improving efficiency in the agriculture sector, land and ecosystem restoration, energy efficiency, renewable energy and reducing transmission losses, efficiency improvements in transport, and sustainable waste management. Somalia reported that the co-benefits of its planned and ongoing mitigation priorities include fostering sustainable economic development, restoring ecosystems, reducing disaster risks and improving living conditions. The Party also reported that it is not currently participating in international market mechanisms and that MRV arrangements are currently at the proposal stage. Information on the sectors and gases covered, progress indicators, methodologies, assumptions and estimated emission reductions achieved was not provided.

89. Somalia reported information on key constraints, gaps and related needs, including in relation to institutional strengthening and enhancing human resources and technical capacity in areas such as accessing financial resources, climate change mitigation opportunities, monitoring and reporting, data collection, and analysis and development of sustainable financing mechanisms. Somalia also reported that it requires some USD 55.5 billion of climate finance from 2021 to 2030 to implement its NDC priorities. The Party also reported that it received approximately USD 385,000 of financial support from the Global Environment Facility for preparing its BUR and USD 202,085,399 for climate change and humanitarian-related projects from a range of donors. Information on technology needs was not reported; however, the Party reported in the BUR that its technology needs assessment is currently under way. Information on capacity-building, technology transfer and technical support received was not reported in the BUR, and during the technical analysis Somalia clarified that it has not received such support.

90. The TTE, in consultation with Somalia, identified the 11 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. Somalia prioritized all the capacity-building needs.

## Annex I

## Extent of the information reported by Somalia 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 Somalia**

| <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   | Somalia submitted its first BUR in April 2023; the GHG inventory reported is for 2000–2020.  |
| 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   | Somalia 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. | Partly  | Somalia used the 2006 IPCC Guidelines but did not report information on the AD used to estimate emissions for categories in the energy and AFOLU sectors.  |
| 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 about the annual change in carbon stocks, non-CO <sub>2</sub> emissions from land-use categories, basic wood density, the carbon fraction of dry matter, wood removal, fuelwood and disturbance data, and the annual change in carbon stocks in mineral soils was not reported. |
|  | (b) The sectoral report tables annexed to the Revised 1996 IPCC Guidelines.   | Partly  | The Party provided some information in tabular format, but the information does not provide the level of detail requested in the sectoral tables.  |
| 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   |  |



| <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 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   | This information was reported for 2000.   |
| 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:   |   |   |
|   | (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);   | Partly  | The Party provided some information, but the information does not provide the level of detail requested in table 1.         |
|   | (b) Table 2 (National greenhouse gas inventory of anthropogenic emissions of HFCs, PFCs and SF <sub>6</sub> ).   | No  |   |
| 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.  | No  |   |
| 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> ;  | No  |   |
|   | (b) CH <sub>4</sub> ;  | Partly  | CH <sub>4</sub> emissions for incineration and open burning of waste and changes in forest and grassland were not reported. |
|   | (c) N <sub>2</sub> O.  | Partly  | N <sub>2</sub> O emissions were not reported for incineration and open burning of waste.                                    |
| Decision 17/CP.8, annex, paragraph 15     | Non-Annex I Parties are encouraged, as appropriate, to provide information on anthropogenic emissions by sources of:   | No  |   |
|   | (a) HFCs;  | No  |   |
|   | (b) PFCs;  | No  |   |
|   | (c) SF <sub>6</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>  |
|---------------------------------------|---|---|--|
| 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  |  |
|                                       | (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  |  |
| 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.   | No  |  |
| 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;   | No  |  |
|                                       | (b) Marine bunker fuels.  | No  |  |
| 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.  | NA  | The Party reported emissions and removals in CO <sub>2</sub> eq but did not provide information on its use of the GWP values.  |
| 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;  | Partly  | The methodology used to estimate on-site CO <sub>2</sub> emissions from peatland was not reported.   |
|                                       | (b) Explanation of the sources of EFs;  | Partly  | Information on the source of the EFs for N <sub>2</sub> O emissions from nitrogen inputs to flooded rice fields from drained/managed organic soils was not reported. |
|                                       | (c) Explanation of the sources of AD;   | Partly  | AD sources for animal waste were not provided.   |

| <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>  |
|---------------------------------------|---|---|--|
|                                       | (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: <ul style="list-style-type: none"> <li>(i) Source and/or sink categories;</li> <li>(ii) Methodologies;</li> <li>(iii) EFs;</li> <li>(iv) AD;</li> </ul>   | NA  |  |
|                                       | (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.  | No  | Notation keys were not used.   |
| 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: <ul style="list-style-type: none"> <li>(a) Level of uncertainty associated with inventory data;</li> <li>(b) Underlying assumptions;</li> <li>(c) Methodologies used, if any, for estimating these uncertainties.</li> </ul> | Partly  | Information on the uncertainty level for AD, EFs and GHG emission estimations for the energy sector and some categories for the waste and AFOLU sectors was not reported.    |
|                                       |   | Partly  | Information on the underlying assumptions used to estimate the uncertainty level for the energy sector and some categories for the waste and AFOLU sectors was not reported. |
|                                       |   | No  |  |

*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 Somalia**

| <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. | Yes   |  |
| 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;   | Partly  | Information on the sectors and gases covered and progress indicators was not provided.   |
|   | (b) Information on:  |   |  |
|   | (i) Methodologies;   | Partly  | No information was provided on the methodologies used to track the impacts of the mitigation actions.  |
|   | (ii) Assumptions;  | Partly  | The Party did not report on the assumptions used to implement and record the progress of the mitigation actions, but provided information on the assumptions used to develop scenarios.                    |
|   | (c) Information on:  |   |  |
|   | (i) Objectives of the action;  | Yes   |  |
|   | (ii) Steps taken or envisaged to achieve that action;  | No  |  |
|   | (d) Information on:  |   |  |
|   | (i) Progress of implementation of the mitigation actions;  | Partly  | The Party provided information on the progress of implementation of the mitigation actions in BUR table 47; however, the status of project 8, "Range land restorations and rehabilitation", was not clear. |
|   | (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;  | No  |  |
|   | (e) Information on international market mechanisms.  | Yes   |  |

|   |  |     |
|---|--|-----|
| 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 Somalia**

| <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 2/CP.17, annex III, paragraph 14 | Non-Annex I Parties should provide updated information on:<br>(a) Constraints and gaps;<br>(b) Related financial, technical and capacity-building needs.   | Yes<br>Yes  |   |
| Decision 2/CP.17, annex III, paragraph 15 | Non-Annex I Parties should provide:<br>(a) Information on financial resources, technology transfer and capacity-building received from the Global Environment Facility, 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;<br>(b) Information on technical support received from the Global Environment Facility, 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. | Partly<br>No  | No technology transfer or capacity-building support was specifically mentioned. |
| 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:<br>(a) Nationally determined technology needs;<br>(b) Technology support received.   | No<br>No  |   |

*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/gpglulucf/gpglulucf.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 BUR of Somalia. Available at <https://unfccc.int/BURs>.

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

---