United Nations FCCC/SBI/ICA/2021/TASR.2/NGA

Framework Convention on Climate Change

Distr.: General
16 February 2023

English only

# Technical analysis of the second biennial update report of Nigeria submitted on 27 September 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. Further, paragraph 41(f) of that decision states that Parties not included in Annex I to the Convention shall submit a biennial update report every two years, either as a summary of parts of their national communication in the year in which the national communication is submitted or as a stand-alone update report. As mandated, the least developed country Parties and small island developing States may submit biennial update reports at their discretion. This summary report presents the results of the technical analysis of the second biennial update report of Nigeria, 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 |
| CDM | clean development mechanism |
| CGE | Consultative Group of Experts |
| $CH_4$ | methane |
| CO | carbon monoxide |
| $CO_2$ | carbon dioxide |
| $CO_2$ eq | carbon dioxide equivalent |
| EF | emission factor |
| ETF | enhanced transparency framework under the Paris Agreement |
| FAOSTAT | statistical database of the Food and Agriculture Organization of the United Nations |
| F-gas | fluorinated gas |
| 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 | *Good Practice Guidance and Uncertainty Management in National Greenhouse Gas Inventories* |
| IPCC good practice guidance for LULUCF | *Good Practice Guidance for Land Use, Land-Use Change and Forestry* |
| IPPU | industrial processes and product use |
| LULUCF | land use, land-use change and forestry |
| MRV | measurement, reporting and verification |
| $N_2O$ | nitrous oxide |
| NA | not applicable |
| NC | national communication |
| NDC | nationally determined contribution |
| NIR | national inventory report |
| NMVOC | non-methane volatile organic compound |
| non-Annex I Party | Party not included in Annex I to the Convention |
| $NO_X$ | nitrogen oxides |
| PFC | perfluorocarbon |
| QA/QC | quality assurance/quality control |
| Revised 1996 IPCC Guidelines | *Revised 1996 IPCC Guidelines for National Greenhouse Gas Inventories* |
| $SF_6$ | 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. In addition, paragraph 41(f) of that decision states that non-Annex I Parties shall submit a BUR every two years, either as a summary of parts of their NC in the year in which the NC is submitted or as a stand-alone update report.

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. Nigeria submitted its first BUR on 17 March 2018, which was analysed by a TTE in the eleventh round of technical analysis of BURs from non-Annex I Parties, conducted from 20 to 24 August 2018. After the publication of its summary report, Nigeria participated in the seventh workshop for the facilitative sharing of views, convened in Bonn on 19 June 2019.

5. This summary report presents the results of the technical analysis of the second BUR of Nigeria, undertaken by a TTE in accordance with the provisions on the composition, modalities and procedures of the TTE under ICA contained in the annex to decision 20/CP.19.

## B. Process overview

6. In accordance with the mandate referred to in paragraph 2 above, Nigeria submitted its second BUR on 27 September 2021 as a stand-alone update report. The submission was made within three years and six months from the submission of the first BUR. During the technical analysis, the Party explained the reasons for submitting the BUR more than two years after the submission of the last BUR. National experts took over the task of preparing the second BUR from international consultants, who held training sessions on the different thematic areas covered under the BUR. In addition, subnational-level information was included in the second BUR, which required additional financial resources to be mobilized.

7. A desk analysis of Nigeria's BUR was conducted remotely from 4 to 8 April 2022 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: Buket Akay (Türkiye), Michinobu Aoyama (member of the CGE from Japan), Fernando Farias (former member of the CGE from Chile), Kokou Jérémie Fontodji (Togo), Yamikani Idriss (Malawi), Lawrence Mashungu (Zimbabwe), Jorge Eduardo Morfín Ríos (Mexico), Dalia Adel Nakhla (Egypt), Lilian Portillo (former member of the CGE from Paraguay), Tigran Sekoyan (Armenia), Dingane Sithole (Zimbabwe) and Ridhima Sud (India). Michinobu Aoyama and Lilian Portillo were the co-leads. The technical analysis was coordinated by Sohel Pasha and Amr Abdel-Aziz (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 Nigeria engaged in consultation[1] on the identification of capacity-building needs for the preparation of BURs and participation in the ICA process. Following the technical analysis of Nigeria's second BUR, the TTE prepared and shared a draft summary report with Nigeria

[1] The consultation was conducted via videoconferencing.

on 16 December 2022 for its review and comment. Nigeria, in turn, provided its feedback on the draft summary report on 30 January 2023.

9. The TTE finalized the summary report in consultation with the Party on 31 January 2023.

# 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 Nigeria'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.

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

15. Regarding the areas for enhancing understanding of the extent of the information reported in the BUR noted by the previous TTE in the summary report on the technical analysis of the Party's previous BUR, Nigeria identified the areas that were not addressed in its current BUR. They include limited data availability for all sectors and slow progress in data collection owing to lack of capacities and understanding of the process among data collectors and providers, which are potential areas for enhancing national capacity.

## C. Technical analysis of the information reported

16. 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.

17. 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.

18. 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

19. 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.

20. In its second BUR, Nigeria provided an update on its national circumstances, including a description of institutional arrangements, national development priorities, environmental and development challenges, objectives and circumstances, including features of geography, demography, climate and economy that might affect the Party's ability to deal with mitigating and adapting to climate change.

21. Nigeria transparently reported in its second BUR an update on its existing institutional arrangements relevant to the preparation of its NCs and BURs on a continuous basis. The description covers key aspects of the institutional arrangements, including the legal status and roles and responsibilities of the overall coordinating entity and the involvement and roles of other institutions and experts. The UNFCCC national focal point and entity responsible for climate change activities in the country is the Department of Climate Change, which is one of the technical departments of the Federal Ministry of Environment. Under the Interministerial Committee on Climate Change, the Department of Climate Change (convenor and Chair of the Committee) and its four technical divisions (Greenhouse Gas Division, Vulnerability and Adaptation Division, Education, Awareness and Outreach Division and Mitigation Division) coordinate and collaborate with other relevant ministries, agencies and stakeholders in order to receive information on GHG emissions and the outcomes of mitigation activities for preparing NCs and BURs. The TTE noted improvements to the information reported in the BUR, including the provision of an organization chart detailing the functions of the Department of Climate Change at the Federal Ministry of Environment.

22. Nigeria reported in its second BUR an update on its proposed domestic MRV arrangements. The description covers key aspects of the institutional arrangements, including the involvement of the different stakeholders and the next steps towards full implementation. The MRV arrangements, built on the existing monitoring and evaluation system, are designed at the national and state level and cover three main areas: tracking of GHG emissions, mitigation activities, and support needed and received. The Department of Climate Change is the entity that coordinates and supervises all climate change activities through its four technical divisions (see para. 21 above). Each of these divisions oversees the development and implementation of the MRV system for the specific thematic area under its control. These divisions created working groups comprising representatives of ministries, departments and agencies, state governments, the private sector, research institutions, universities, non-governmental organizations, civil society organizations and community-based organizations. Nigeria outlined the steps on a proposed pathway to establishing the domestic MRV system,

including establishing institutional arrangements and a legal framework. Nigeria also intends to develop its MRV system to meet the requirements under the ETF and the reporting standards for the biennial transparency report.

23. Nigeria reported in its BUR (section 4) information on its current initiatives for enhancing its institutional arrangements for compliance with requirements under the ETF. The initiatives relate to the development of the MRV system taking into account the reporting requirements for the biennial transparency report. The Party also reported key activities related to operationalization of the MRV system that need to be completed by the end of 2024 to enable the submission of its first biennial transparency report. The TTE commends the Party for the clear and comprehensive reporting on its proactive approach to preparing for ETF implementation.

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

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

25. Nigeria submitted its second BUR in 2021 and the GHG inventory reported is for 2000–2017. The GHG inventory is consistent with the requirements for the reporting time frame.

26. Nigeria submitted an NIR in conjunction with its second BUR. The relevant sections of the NIR were referenced in the BUR and the document was made publicly available on the UNFCCC website.[2]

27. GHG emissions and removals for the BUR covering the 2000–2017 inventories were estimated using tier 1 methodologies from the 2006 IPCC Guidelines and the IPCC good practice guidance (for the energy, IPPU and agriculture sectors).

28. Information on AD and EFs used and their sources was clearly reported in the NIR. IPCC default EFs were applied for estimating emissions. Where emissions were estimated, AD were collected from national sources (Nigerian National Petroleum Corporation, National Bureau of Statistics, Cement Manufacturers' Association of Nigeria and annual statistical bulletins). Where AD were not available from national sources, international data sources such as the International Energy Agency, FAOSTAT and the World Bank were used. Gaps in AD were filled using the splicing techniques recommended in the 2006 IPCC Guidelines.

29. Information on the Party's total GHG emissions by gas for 2000–2017 is outlined in table 1 in Gg $CO_2$ eq. It shows an increase in emissions of 72.4 per cent excluding land and HWP since 2000 (207,742 Gg $CO_2$ eq).

Table 1
**Greenhouse gas emissions by gas of Nigeria for 2017**

| *Gas* | *GHG emissions (Gg $CO_2$ eq) including land and HWP*[a] | *% change 2000–2017* | *GHG emissions (Gg $CO_2$ eq) excluding land and HWP*[Error! Bookmark not defined.] | *% change 2000–2017* |
|---|---|---|---|---|
| $CO_2$ | 458 341 | 57.7 | 142 913 | 258.8 |
| $CH_4$ | 182 686 | 23.4 | 182 686 | 23.4 |
| $N_2O$ | 32 614 | 64.5 | 32 614 | 64.5 |
| HFCs | NA | NA | NA | NA |
| PFCs | NA | NA | NA | NA |
| $SF_6$ | NA | NA | NA | NA |
| Total | 673 641 | 46.0 | 358 213 | 72.4 |

[a] 2006 IPCC Guidelines AFOLU category 3.B (land) and, if reported, 3.D (HWP (3.D.1) and other emissions (3.D.2)).

[2] https://unfccc.int/process-and-meetings/transparency-and-reporting/greenhouse-gas-data/data-sources/greenhouse-gas-inventory-submissions-from-non-annex-i-parties.

30. Information on other emissions was clearly reported, including 495 Gg $NO_X$, 10,959 Gg CO and 2,031 Gg NMVOCs.

31. Information on HFC, PFC and $SF_6$ emissions was not reported in Nigeria's BUR. During the technical analysis, the Party clarified that the planned centralized data-collection framework to support the collection of reliable national AD on F-gases could not be developed and implemented in time for the preparation of the second BUR. Implementation of the data-collection framework is still a priority; however, the Party indicated that additional time is required as resources are limited.

32. Nigeria applied notation keys in tables where numerical data were not provided. The use of notation keys was consistent with the UNFCCC guidelines for the preparation of NCs from non-Annex I Parties. The Party reported information in its BUR on the approach to applying notation keys, which is an improvement since its reporting in the first BUR.

33. Nigeria 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.

34. Information on land-use changes was not included in the information addressing the tables included in annex 3A.2. However, the Party clarified in its BUR that one of the most urgent GHG inventory improvements is to generate land-use change data for all relevant categories.

35. 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 reported by the Party, in 2017 are reflected in table 2.

Table 2
**Shares of greenhouse gas emissions by sector of Nigeria for 2017**

| *Sector* | *GHG emissions (Gg $CO_2$ eq)* | *% share*[a] | *% change 2000–2017* |
|---|---|---|---|
| Energy | 245 918 | 68.7 | 72.4 |
| IPPU | 11 618 | 3.2 | 362.7 |
| AFOLU | 385 248 | NA | NA |
| Livestock (category 3.A) | 38 576 | 10.8 | 52.5 |
| Land (category 3.B) | 319 971 | 89.3 | 24.7 |
| Aggregate sources and non-$CO_2$ emissions sources on land (category 3.C) | 31 244 | 8.7 | 56.2 |
| HWP and other emissions (category 3.D) | –4 543 | NA | NA |
| Waste | 30 857 | 8.6 | 78.8 |

[a] 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)).

36. Nigeria reported information on its use of 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 the energy sector, information was clearly reported on GHG emissions, methodological tier levels, AD and their sources, EFs, key categories and notation keys used. Fuel combustion activities (category 1.A) and fugitive emissions – oil and natural gas (subcategory 1.B.2) are the two main contributors of emissions in the energy sector. Under category 1.A, energy industries (subcategory 1.A.1) was the highest contributor, accounting for 38.6 per cent of the total emissions in that category, followed by other sectors (subcategory 1.A.4), accounting for 25.7 per cent, transport (subcategory 1.A.3), accounting for 25.6 per cent, and manufacturing industries and construction (subcategory 1.A.2), accounting for 10.1 per cent.

38. For the IPPU sector, information was clearly reported on GHG emissions, methodological tier levels, AD and their sources, EFs, key categories and notation keys used. The source categories reported are cement production (subcategory 2.A.1), ammonia

production (subcategory 2.B.1) and iron and steel production (subcategory 2.C.1), with cement and iron and steel production accounting for the majority of aggregate emissions in the IPPU sector. AD were obtained from the National Bureau of Statistics and the manufacturers of the products.

39. For the AFOLU sector, the Party estimated emissions for all subcategories under livestock (category 3.A); forest land (subcategory 3.B.1) under land (category 3.B); and biomass burning (subcategory 3.C.1); as well as direct and indirect $N_2O$ emissions from managed soils (subcategories 3.C.4 and 3.C.5); indirect $N_2O$ emissions from manure management (subcategory 3.C.6) and rice cultivation (subcategory 3.C.7) under aggregate sources and non-$CO_2$ emissions sources on land (category 3.C); and removals from HWP under other (category 3.D). Emissions from forest land remaining forest land represented 82.1 per cent of the total sectoral emissions in 2017, followed by livestock (9.9 per cent) and aggregate sources and non-$CO_2$ emissions from land (8.0 per cent). For land and HWP (categories 3.B and 3.D.1), Nigeria reported annual GHG emissions and removals for 2000–2017. Overall, the net removals from land and HWP fluctuated between a minimum of 4,277 Gg $CO_2$ eq for 2012 and a maximum of 5,908 Gg $CO_2$ eq for 2000.

40. Information on land subcategories 3.B.2, 3.B.3, 3.B.4, 3.B.5 and 3.B.6 was not reported. During the technical analysis and in its NIR, the Party clarified that only emissions from changes in forest land (subcategory 3.B.1) were estimated and reported owing to the unavailability of land-use change data. According to the Party, this issue is being addressed and activities within and between all land subcategories are expected to be included in the next NIR.

41. For the waste sector, information was clearly reported on GHG emissions, methodological tier levels, AD and their sources, EFs, key categories and notation keys used. Nigeria reported information on unmanaged waste disposal sites (subcategory 4.A.2), open burning of waste (subcategory 4.C.2) and domestic wastewater treatment and discharge (subcategory 4.D.1). In 2017, emissions from wastewater handling represented 69 per cent of total waste sector emissions, followed by solid waste disposal and open burning of waste with shares of 26 and 5 per cent respectively.

42. The BUR provides an update to some of the GHG inventories reported in the Party's previous NCs and BUR. The information reported provides an update of the Party's first BUR and NC3, which address anthropogenic emissions and removals for 2000–2015 and 2000–2016 respectively. The update was carried out for 2000–2017 using the methodologies contained in the 2006 IPCC Guidelines, thus generating a consistent 18-year time series. The Party reported that it recalculated emissions for the waste sector for 2000–2016 owing to changes in methodology and an improvement in the waste composition AD.

43. Information on GHG emissions and removals prior to 2000 was not reported in Nigeria's BUR. However, the Party indicated in its BUR that as part of its planned improvements it will add the missing years 1990–1999 to complete the full time series from 1990 to the latest reported inventory year.

44. Nigeria described in its BUR the institutional framework for the preparation of its 2017 GHG inventory. The Party reported that the Department of Climate Change under the Federal Ministry of 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 and the GEF. The Party identified improvements in its reporting such as the implementation of a GHG inventory management system and the planned development of EFs for the application of a tier 2 methodology, a data archiving system and a QA/QC system.

45. Nigeria clearly reported that a key category analysis was performed for the level of emissions and the trend in emissions. Overall, the Party identified 16 key categories for the level assessment and 12 key categories for the trend assessment. The three most significant key categories for the level assessment of $CO_2$ for 2017 were forest land remaining forest land (subcategory 3.B.1.a), oil (subcategory 1.B.2.a) and energy industries (gaseous fuels) (subcategory 1.A.1), which contributed 46.9, 8.8 and 8.2 per cent of the total emissions respectively. For the trend assessment, forest land remaining forest land, energy industries (gaseous fuels) and oil were also the most important key categories, contributing 26.3, 20.9

and 20.9 per cent of the total emissions respectively. The Party identified areas for improvement for future reporting such as developing country-specific EFs for key categories to enable the application of a tier 2 methodology.

46. The BUR provides information on QA/QC measures applied for all sectors. An independent international consultant who was not involved with the preparation of the inventory conducted QA procedures. QC procedures were conducted by comparing national data sets with those from international databases and by assessing the consistency of the time-series data. Nigeria voluntarily undertook a QA exercise on the inventory compilation process adopted for its NC3. The recommendations from the QA exercise were partially addressed in the preparation of the inventory for the second BUR, but further improvement is needed to comply with the QA/QC measures in the 2006 IPCC Guidelines.

47. Nigeria clearly reported information on $CO_2$ 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 126,454 Gg $CO_2$ and 133,026 Gg $CO_2$ respectively. The difference between the estimates calculated using the two approaches was reported as 5.2 per cent. The Party explained in the BUR that the difference is due to losses of liquid petroleum products in pipeline transport on which information was not available when the fuel combustion emissions were estimated.

48. Information was clearly reported on international aviation and marine bunker fuels. The Party provided a consistent time series in its NIR (table 4.8) with AD for international aviation and marine bunker fuels, which the Party noted as an improvement compared with the reporting in the previous BUR.

49. Nigeria reported information on the uncertainty assessment (level) of its national GHG inventory. The uncertainty analysis was based on the tier 1 approach and covers all source categories and all direct GHGs. The results obtained, as reported in the BUR, reveal that for 2017 the level uncertainty for emissions is 8.4 per cent including LULUCF and the trend uncertainty is 13.6 per cent including LULUCF.

50. Information on underlying assumptions for the uncertainty assessment was not clearly reported in Nigeria's BUR. During the technical analysis, the Party clarified that its inventory compilation team did not have access to uncertainty information associated with AD. Therefore, a tier 1 approach was applied to the uncertainty analysis, with lower boundaries assigned to nationally derived EFs and AD and higher values allocated to default EFs and AD derived by means of interpolation or another statistical method.

51. The TTE noted that the transparency of the information reported on GHG inventories could be further enhanced by addressing the areas noted in paragraphs 31 and 50 above, which could facilitate a better understanding of the information reported on GHG inventories.

52. In paragraph 44 of the summary report on the technical analysis of Nigeria's first BUR, the previous TTE noted areas where the transparency of the reporting on GHG inventories could be enhanced. The current TTE noted improvements in relation to the provision of information on the NIR, the approach to applying notation keys, and reporting on international aviation and marine bunker fuels and the uncertainty analysis, as referred to in paragraphs 26, 32, 48 and 49 above, and commends the Party for enhancing the transparency of its reporting.

53. Nigeria reported in its BUR (section 2.12) information on its areas for improvement for future BURs and its current initiatives for enhancing its GHG inventory reporting for compliance with requirements under the ETF. The initiatives relate to data collection and archiving, strengthening of the existing institutional framework, implementation of the GHG inventory management system, development of country-specific EFs for key categories, and development and implementation of a QA/QC system, including a QA/QC plan, as well as initiatives relating to improving the completeness of future GHG inventories and developing a land classification system, a new forest inventory and a complete time series since 1990.

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

54. As indicated in table I.2, Nigeria 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.

55. The information reported provides a clear and comprehensive overview of the Party's mitigation actions and their effects. In its BUR, Nigeria reported information on its national context and framed its national mitigation planning and actions in the context of the various sectoral policies and plans developed within the framework of the National Climate Change Policy Response and Strategy, which has been developed to foster low-carbon high economic growth and a climate-resilient society. Other key policies include the National Energy Policy, aimed at developing the nation's energy resources, diversifying energy options and ensuring national energy security and efficient energy delivery with an optimal energy mix; the National Renewable Energy and Energy Efficiency Policy, aimed at strengthening the penetration of renewable energy and improving energy efficiency in the country; and the Renewable Energy Master Plan, aimed at developing a road map for the accelerated development and utilization of renewable energy. Most of the mitigation actions are in the energy sector. Nigeria also reported in its BUR that the cumulative mitigation potential of the measures evaluated in the mitigation assessment for the 2016–2035 time frame, included in its NC3, is estimated to amount to 170,016.51 Gg $CO_2$ eq by 2035, estimated using the Long-range Energy Alternatives Planning system. The highest emission reduction potential was reported for the AFOLU sector, which amounted to 110,014.33 Gg $CO_2$ eq by 2035.

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

57. Consistently with decision 2/CP.17, annex III, paragraph 12(a), Nigeria reported the names and descriptions of mitigation actions or groups of actions, coverage (sector and gases) and progress indicators in its BUR (tables 3.3–3.61). The mitigation actions were divided into five groups: policies, projects under the Short-lived Climate Pollutant Action Plan, mitigation actions implemented using domestic resources, CDM project activities and CDM programmes of activities.

58. Information on quantitative goals was not reported for most of the mitigation actions grouped under policies or implemented using domestic resources. However, the Party provided relevant clarification in its BUR, explaining that this was because of a lack of data necessary for estimating quantitative goals for mitigation actions, as the country does not have a centralized data-collection system. The information reported also indicates that quantitative goals are not or only partially available for most of the sectors (BUR table 5.1) and efforts are ongoing to further increase the data available.

59. Under its mitigation actions grouped under policies, which are predominantly for the energy sector, Nigeria reported 18 mitigation actions, of which 12 are ongoing, 2 are under development and 4 are planned. The Party clearly reported information on the objectives of the actions, steps taken or envisaged to achieve them, progress of implementation and results achieved. The aim of the Renewable Energy Master Plan, for example, is to increase the supply of renewable energy so that it accounts for 36 per cent of the energy mix by 2030, bringing about emission reductions of 11,492 Gg $CO_2$ eq annually from 2030 onward. In addition, six large-scale hydropower plants are expected to yield annual emission reductions of 12,237 Gg $CO_2$ eq once commissioned. Another project is Adopt Clean Cook Stoves, expected to contribute annual emission reductions of 90,054 Gg $CO_2$ eq starting in 2025, when 30 million cookstoves will be distributed. Methodologies from the 2006 IPCC Guidelines were used to estimate emission reductions for these three mitigation actions. The Party reported results achieved as co-benefits, including those in relation to sustainable development, energy security, economic stimulation, employment generation, technology transfer, rural development, environmental protection, female empowerment, deforestation prevention and improvements in air quality, health and livelihood.

60. Information on methodologies, assumptions and estimated emission reductions was reported for 3 of the 18 mitigation actions grouped under policies (see para. 59 above).

However, the Party clarified in its BUR that it lacks AD and sufficient knowledge to construct baselines for quantifying emissions at the facility or plant level. The Party is addressing these barriers to reporting but progress is slow owing to the size of the country, the scope of activities and the lack of resources, including capacity. During the technical analysis, the Party also clarified that at least two workshops were organized to build the capacity of Department of Climate Change staff, relevant stakeholders and state representatives for tracking and reporting mitigation actions, but this proved insufficient to enable complete reporting on mitigation actions. This group of stakeholders is involved in the development of a capacity-building project to better engage and prepare them for the next reporting cycle.

61. Regarding projects under the Short-lived Climate Pollutant Action Plan, Nigeria reported 22 mitigation actions targeting eight different source sectors, including transport, residential, industry, agriculture and waste, all of which are indicated as being under implementation. The Party clearly reported information on the objectives of the actions and steps taken or envisaged to achieve them, progress of implementation and results achieved, such as co-benefits. The potential emission reductions for all groups of actions by 2030 are quantified by the Long-range Energy Alternatives Planning–Integrated Benefits Calculator to be 62 per cent of total national $CH_4$ emissions and 13 per cent of total national $CO_2$ emissions. The outcomes achieved for this group of mitigation actions are inclusion of the action plan in the national budget and secured international funding. The Party reported results achieved as co-benefits, including better air quality, health and livelihood.

62. Regarding mitigation actions implemented using domestic resources, Nigeria reported 13 mitigation actions, of which 6 are ongoing, 4 are planned and 3 are under development. The mitigation actions focus mainly on improving energy efficiency and promoting solar energy. The Party clearly reported information on the objectives of the actions and steps taken or envisaged to achieve them, progress of implementation and results achieved. The planned Solar Mini-grids for Selected Federal Government Buildings project, for example, aims to achieve an annual reduction in emissions of 867.24 Gg $CO_2$ eq once implemented. The Party reported anticipated results as co-benefits, including improved food and energy security, better health and livelihood, increased shelter belts, the creation of microclimates and empowered communities.

63. Information on methodologies and assumptions was not reported for any of the mitigation actions implemented using domestic resources. Information on estimated emission reductions was only reported for the Solar Mini-grids for Selected Federal Government Buildings project. During the technical analysis, the Party explained that this was because of the lack of a systematic archiving system for tracking mitigation actions and recording mitigation outcomes.

64. Regarding mitigation actions grouped under CDM project activities, Nigeria reported 12 stand-alone actions, 5 of which related to the recovery and utilization of gas from oil wells. All mitigation actions in this group were reported as ongoing, except one which was reported as completed. The Party clearly reported information on methodologies and assumptions, the objectives of the actions and steps taken or envisaged to achieve them, progress of implementation and results achieved, such as co-benefits and estimated emission reductions. The highest estimated outcome, of 2,627 Gg $CO_2$ eq per year, was reported for the Pan Ocean Gas Utilization Project, which was successfully implemented in 2010–2013 and directly enabled actual GHG emission reductions of 579 Gg $CO_2$ eq during the same time frame. For 2019, the GHG emission reductions resulting from this group of mitigation actions amounted to 6,967 Gg $CO_2$ eq. The Party reported results achieved as co-benefits, including in relation to better air quality, forest preservation, technology transfer and improved health, environment and livelihood.

65. Regarding mitigation actions grouped under CDM programmes of activities, Nigeria reported seven actions, five of which are related to improving cooking stoves. All mitigation actions in this group were reported as successfully implemented. The Party clearly reported information on methodologies and assumptions, the objectives of the actions and steps taken or envisaged to achieve them, progress of implementation and results achieved, such as co-benefits and estimated emission reductions. The highest estimated outcome, of 51 Gg $CO_2$ eq per year, was reported for an action aimed at reducing emissions from non-renewable fuels from cooking in households, which was successfully implemented in 2014–2020 and directly

enabled actual GHG emission reductions of 242 Gg $CO_2$ eq for the same time frame. For 2019, the GHG emission reductions resulting from this group of mitigation actions amounted to 215 Gg $CO_2$ eq. The Party reported results achieved as co-benefits, including better air quality and health.

66. Nigeria provided information on its involvement in international market mechanisms as a Party to the Kyoto Protocol. Nigeria reported 12 stand-alone CDM project activities and 7 programmes of activities (see paras. 64–65 above). The information reported on the activities includes name, objective, description, status, gases and sectors covered, progress indicators, steps taken or envisaged, methodologies, assumptions, estimated GHG emission reductions per year and co-benefits. The activities are in the energy and waste sectors.

67. Nigeria reported information on its domestic MRV arrangements in accordance with decision 2/CP.17, annex III, paragraph 13. The information reported indicates that Nigeria does not have an operational MRV system for mitigation actions. In the proposed MRV system, the overall responsibility for the domestic MRV of mitigation actions, including nationally appropriate mitigation actions, will remain with the Federal Ministry of Environment through the Mitigation Division of the Department of Climate Change, supported by the Greenhouse Gas Inventory Division. The Mitigation Division will track and follow the different steps of the MRV system, while emission reductions or removals stemming from the mitigation actions will be estimated by the inventory team of the Greenhouse Gas Inventory Division. Further, Nigeria reported consistently with the voluntary general guidelines for domestic MRV of domestically supported nationally appropriate mitigation actions, contained in the annex to decision 21/CP.19.

68. The TTE noted that the transparency of the information reported on mitigation actions could be enhanced by addressing the areas noted in paragraph 63 above, which could facilitate a better understanding of the information reported on mitigation actions.

69. In paragraph 54 of the summary report on the technical analysis of Nigeria's first BUR, the previous TTE noted areas where the transparency of the reporting on mitigation actions could be enhanced. The current TTE noted the improvements in the reporting of information on methodologies, assumptions and quantitative goals referred to in paragraphs 61, 62, 64 and 65 above and commends the Party for enhancing the transparency of its reporting.

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

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

71. Nigeria 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, Nigeria identified existing gaps in information on mitigation actions and their effects as a constraint. It identified in its BUR (table 5.1) gaps relating to key factors such as quantitative goals and progress indicators, methodologies and assumptions, steps taken or envisaged, progress of implementation of mitigation actions and results achieved. Nigeria reported in its BUR (table 5.2) the key gaps in and potential solutions for its MRV arrangements, together with key activities for addressing these gaps. Nigeria also reported in its BUR (table 5.5) that its financial, technical and capacity-building needs are primarily in the areas of improving capabilities for reporting under the Convention, climate-smart agriculture, renewable energy technologies, power generation, diversification of the economy, compiling GHG inventories, reducing deforestation and reducing fossil fuel consumption in road transport. The TTE noted an improvement in the reporting of information on key challenges and related financial, technical and capacity-building needs.

72. Nigeria reported information on financial resources, technology transfer, capacity-building and technical support received in accordance with decision 2/CP.17, annex III, paragraph 15. In its BUR, Nigeria reported that, since 2012, it has leveraged nearly USD 3 billion of multilateral funds for climate change projects. BUR table 5.3 outlines support received from bilateral and multilateral agencies, including the GEF, for projects for various sectors and thematic areas, which are ongoing or have been implemented since 2015. BUR

table 5.4 provides examples of private sector funding in Nigeria. In its BUR, Nigeria reported that it received USD 352,000 from the GEF and USD 50,000 as an in-kind contribution from the Federal Government of Nigeria for the preparation of its second BUR. The information reported indicates that Nigeria received capacity-building and technical support from the United Nations Development Programme to facilitate its use of the 2006 IPCC Guidelines for preparing its GHG inventory. Nigeria also benefited from the support provided by the secretariat through an international consultant to improve the existing GHG inventory management system in order to render it fully operational and sustainable.

73. Nigeria reported 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. In its BUR (section 5.2.4, p.91), Nigeria reported that it did not conduct an in-depth technology needs assessment to address climate change; however, it identified some features relating to technology transfer. Nigeria acknowledged the importance of technology transfer in its efforts to mitigate and adapt to climate change. During the technical analysis, Nigeria clarified that the preliminary information contained in the updated NDC will serve as input to the technology needs assessment process and that it expects the assessment to be conducted within the framework of the preparation of its NC4.

74. In paragraph 58 of the summary report on the technical analysis of Nigeria's first BUR, the previous TTE noted areas where the transparency of the reporting on constraints, gaps, needs and support needed and received could be enhanced. The current TTE noted the improvement referred to in paragraph 71 above and commends the Party for enhancing the transparency of its reporting.

75. Nigeria reported in its BUR information on its areas for improvement for future BURs and its current initiatives for enhancing its existing MRV system for compliance with requirements under the ETF. The initiatives relate to the National GHG Inventory Improvement Plan and the domestic MRV system, which are included in the framework of the GEF Capacity-building Initiative for Transparency project, in addition to the UNFCCC project providing support for the development and operationalization of the GHG inventory management system.

### 5. Any other information

76. Nigeria reported some information on its national climate change strategies and plans and on climate change adaptation. The information reported by the Party indicates that its sustainable development is guided by its Vision 2020 strategy adopted in 2010 and its Economic Sustainability Plan approved in 2020. Nigeria developed the National Adaptation Plan Framework in 2020 to facilitate the management of the country's medium- and long-term adaptation needs in a coherent and coordinated manner.

## D. Identification of capacity-building needs

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

(a) Related to GHG inventories:

(i) Enhance national capacity to collect data on land-use change for all relevant categories and for the complete time series to enable the Party to report GHG emissions and removals for all relevant land-use categories;

(ii) Enhance the capacity of the Department of Climate Change to collect AD for 1990–1999 using appropriate methods and existing data sets;

(iii) Enhance national capacity to estimate and report uncertainties associated with AD and EFs more robustly, including documenting underlying assumptions;

(iv) Develop national capacity to collect reliable national AD on F-gases and to estimate emissions of F-gases;

(v) Enhance national capacity to report information on procedures and arrangements undertaken to collect and archive data for all categories reported in the GHG inventory;

(b) Related to mitigation actions and their effects:

(i) Enhance national capacity to report on quantitative goals and progress indicators for mitigation actions;

(ii) Develop national capacity to establish a systematic archiving system to track mitigation actions and record the outcomes, particularly quantitative estimation of emissions avoided;

(iii) Enhance the capacity of Department of Climate Change staff and relevant stakeholders to use appropriate methodologies in the absence of field-level AD for quantifying emissions and to construct baselines for quantifying emissions at the facility or plant level;

(iv) Enhance national capacity to report on assumptions related to the assessment of mitigation actions to facilitate a better understanding of GHG emission reductions for the ongoing and planned mitigation actions;

(c) Related to needs and support:

(i) Develop national institutional and human capacity to track technology support received;

(ii) Strengthen and build the capacity of national institutions to identify and keep track of needs and support;

(iii) Strengthen and build the capacity of national institutions to conduct technology needs assessments;

(d) Related to cross-cutting issues:

(i) Develop national capacity to institutionalize the MRV system and build the capacity of the human resources team for optimal utilization of existing resources in lieu of accessing additional ones;

(ii) Strengthen and enhance the capacity of national officials to coordinate and collaborate with other relevant institutions for the success of the proposed MRV system.

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

(a) Reporting under the Convention, including GHG inventory preparation;

(b) Diversifying the economy;

(c) Energy;

(d) Agriculture and forestry;

(e) Transport.

79. In paragraph 60 of the summary report on the technical analysis of Nigeria's first BUR, the previous TTE, in consultation with Nigeria, identified capacity-building needs. In its second BUR, Nigeria reflected that some of those capacity-building needs have been addressed:

(a) Staff in the Greenhouse Gas Inventory Division, who lacked the appropriate capacity to independently compile inventories, received training on various aspects of GHG inventory preparation, including on the 2006 IPCC Guidelines and the IPCC inventory software;

(b) Capacity-building of national experts, including those at the state level, on the data-collection process for mitigation actions that are implemented by a wide range of stakeholders has started, but progress has been slow owing to insufficient resources. The programme was further constrained by the coronavirus disease 2019 pandemic, which led to

the closure of borders and cancellation of flights, preventing the international consultant from holding further training sessions. Virtual sessions were avoided owing to unreliable Internet connectivity for participants. Nigeria expects the situation to improve and, with improved availability of resources (e.g. through the GEF Capacity-building Initiative for Transparency project), it will continue to enhance the capacity of the national experts.

# III. Conclusions

80. The TTE conducted a technical analysis of the information reported in the second BUR of Nigeria 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, including an NIR; 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 the proposed domestic MRV. During the technical analysis, additional information was provided by Nigeria on GHG inventory preparation, mitigation actions and their effects, needs and support received, and cross-cutting issues. The TTE concluded that the information analysed is mostly transparent.

81. Nigeria reported an update on the institutional arrangements relevant to the preparation of its BURs. The UNFCCC national focal point and entity responsible for climate change activities in the country is the Department of Climate Change, which is one of the technical departments of the Federal Ministry of Environment. Under the Interministerial Committee on Climate Change, the Department of Climate Change and its four technical divisions (Greenhouse Gas Division, Vulnerability and Adaptation Division, Education, Awareness and Outreach Division and Mitigation Division) coordinate and collaborate with other relevant ministries, agencies and stakeholders in the preparation of NCs and BURs. In addition to the operations carried out by these divisions, the Department of Climate Change is the Convener and Chair of the Interministerial Committee on Climate Change. The Party has taken significant steps to establish institutional arrangements that enable sustainable preparation of its BURs, such as making organizational improvements and establishing knowledge-sharing procedures to facilitate sectoral information transfer.

82. In its second BUR, submitted in 2021, Nigeria reported information on its national GHG inventory for 2000–2017. This included GHG emissions and removals of $CO_2$, $CH_4$ and $N_2O$ for all relevant sources and sinks as well as the precursor gases. The inventory was developed on the basis of the 2006 IPCC Guidelines and the IPCC good practice guidance and default EF values from the 2006 IPCC Guidelines were applied for individual source categories. The total GHG emissions for 2017 were reported as 358,213 Gg $CO_2$ eq excluding land and HWP and 673,641 Gg $CO_2$ eq including land and HWP. Sixteen key categories and three main gases were identified, with forest land remaining forest land (subcategory 3.B.1.a) being the main key category and $CO_2$ being the main gas identified. Emission estimates of F-gases and removal from other land uses, besides forest land remaining forest land, were not provided owing to difficulties in obtaining the necessary data, as clarified by the Party in the BUR.

83. Nigeria reported information on mitigation actions and their effects in tabular format, including its national context, and framed its national mitigation planning and actions in the context of its national strategy, which was adopted in 2012 to foster economic growth and build a climate-resilient society. Nigeria reported planned and ongoing mitigation actions in five groups for the energy, IPPU, AFOLU and waste sectors. Nigeria reported the co-benefits of its mitigation actions, including sustainable development, improved standard of living, improved health, job creation, technology transfer, and food and energy supply security. Nigeria reported that, if the mitigation actions reported in its BUR are implemented over the 2016–2035 time frame, the cumulative GHG emission reductions achieved will be 170,016.51 Gg $CO_2$ eq by 2035. The highest emission reduction potential was reported for the AFOLU sector, which amounted to 110,014.33 Gg $CO_2$ eq by 2035. The Party also

reported information on its involvement in international market mechanisms and on MRV arrangements. Estimates of emission reductions and information on methodologies and assumptions were not clearly reported owing to the lack of a systematic archiving system in the country to track mitigation actions and record the outcomes, including a quantitative estimation of emissions avoided. Further, Nigeria lacks AD and sufficient knowledge to construct baselines for quantifying emissions at the facility or plant level.

84. Nigeria reported information on key constraints, gaps and related needs. The Party identified constraints and gaps in reporting information on mitigation actions and in implementing a domestic MRV system. It also identified needs in the areas of improving capabilities for reporting under the Convention, including GHG inventories, energy, climate-smart agriculture and reducing deforestation. Information was reported on the technical, technology transfer and capacity-building support received, including a list of support received from bilateral and multilateral agencies, such as the GEF, for projects on various sectors and thematic areas, which are ongoing or have been implemented since 2015. The Party also reported that it received financial support of approximately USD 352,000 from the GEF and USD 50,000 as an in-kind contribution from the Federal Government of Nigeria for preparing its second BUR. Information on technology needs and technology support received was also reported in the BUR.

85. The current TTE noted improvements in the reporting in the Party's second BUR compared with that in its previous BUR. The information reported demonstrates that the Party has taken into consideration the areas for enhancing the transparency of the information reported noted by the TTE in the summary report on the technical analysis of the first BUR. However, improvements are ongoing, and the Party has taken note of outstanding areas for future improvements.

86. The TTE, in consultation with Nigeria, identified the 14 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. Nigeria prioritized the capacity-building needs referred to in paragraph 77 above.

# Annex I

## Extent of the information reported by Nigeria in its second biennial update report

Table I.1
**Identification of the extent to which the elements of information on greenhouse gases are included in the second biennial update report of Nigeria**

| *Decision* | *Provision of the reporting guidelines* | *Assessment of whether the information was reported* | *Comments on the extent of the information provided* |
|---|---|---|---|
| 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 | Nigeria submitted its second BUR in September 2021; the GHG inventories reported are for 2000–2017. |
| Decision 2/CP.17, annex III, paragraph 4 | Non-Annex I Parties should use the methodologies established in the latest UNFCCC guidelines for the preparation of NCs from non-Annex I Parties approved by the Conference of the Parties or those determined by any future decision of the Conference of the Parties on this matter. | Yes | Nigeria used the 2006 IPCC Guidelines and the IPCC good practice guidance. |
| Decision 2/CP.17, annex III, paragraph 5 | The updates of the section on national inventories of anthropogenic emissions by sources and removals by sinks of all GHGs not controlled by the Montreal Protocol should contain updated data on activity levels based on the best information available using the Revised 1996 IPCC Guidelines, the IPCC good practice guidance and the IPCC good practice guidance for LULUCF; any change to the EF may be made in the subsequent full NC. | Yes | |
| Decision 2/CP.17, annex III, paragraph 6 | Non-Annex I Parties are encouraged to include, as appropriate and to the extent that capacities permit, in the inventory section of the BUR: | | |
| | (a) The tables included in annex 3A.2 to the IPCC good practice guidance for LULUCF; | Yes | |
| | (b) The sectoral report tables annexed to the Revised 1996 IPCC Guidelines. | Yes | Comparable information was reported. |
| Decision 2/CP.17, annex III, paragraph 7 | Each non-Annex I Party is encouraged to provide a consistent time series back to the years reported in its previous NCs. | Partly | The time series reported in the BUR does not include 1994–1999, which was covered 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 not reported for 1994. |
| | The inventory section of the BUR should consist of an NIR as a summary or as an update of the information contained in decision 17/CP.8, | Yes | |

| *Decision* | *Provision of the reporting guidelines* | *Assessment of whether the information was reported* | *Comments on the extent of the information provided* |
|---|---|---|---|
| Decision 2/CP.17, annex III, paragraph 9 | 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); | Yes | Comparable information was reported in BUR table 2.19. |
| | (b) Table 2 (National greenhouse gas inventory of anthropogenic emissions of HFCs, PFCs and $SF_6$). | Yes | Comparable information was reported in BUR table 2.19. |
| Decision 2/CP.17, annex III, paragraph 10 | Additional or supporting information, including sector-specific information, may be supplied in a technical annex. | Yes | The Party submitted an NIR as an annex to its BUR. |
| 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 was reported on 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. |
| 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) $CO_2$; | Yes | |
| | (b) $CH_4$; | Yes | |
| | (c) $N_2O$. | Yes | |
| Decision 17/CP.8, annex, paragraph 15 | Non-Annex I Parties are encouraged, as appropriate, to provide information on anthropogenic emissions by sources of: | | |
| | (a) HFCs; | No | |
| | (b) PFCs; | No | |
| | (c) $SF_6$. | 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; | Yes | |
| | (b) $NO_X$; | Yes | |
| | (c) NMVOCs. | Yes | |
| 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. | Yes | The Party reported on other gases, such as sulfur oxides. |

| *Decision* | *Provision of the reporting guidelines* | *Assessment of whether the information was reported* | *Comments on the extent of the information provided* |
|---|---|---|---|
| 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 $CO_2$ fuel combustion emissions using both the sectoral and the reference approach and to explain any large differences between the two approaches. | Yes | The information was reported for both the sectoral and the reference approach and the differences were explained. |
| 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 $CO_2$ 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 used the GWP provided in the AR5. |
| Decision 17/CP.8, annex, paragraph 21 | Non-Annex I Parties are encouraged to provide information on methodologies used in the estimation of anthropogenic emissions by sources and removals by sinks of GHGs not controlled by the Montreal Protocol, including a brief explanation of the sources of EFs and AD. If non-Annex I Parties estimate anthropogenic emissions and removals from country-specific sources and/or sinks that are not part of the Revised 1996 IPCC Guidelines, they should explicitly describe the source and/or sink categories, methodologies, EFs and AD used in their estimation of emissions, as appropriate. Parties are encouraged to identify areas where data may be further improved in future communications through capacity-building: | | |
| | (a) Information on methodologies used in the estimation of anthropogenic emissions by sources and removals by sinks of GHGs not controlled by the Montreal Protocol; | Yes | Nigeria used the 2006 IPCC Guidelines. |
| | (b) Explanation of the sources of EFs; | Yes | |
| | (c) Explanation of the sources of AD; | Yes | |
| | (d) If non-Annex I Parties estimate anthropogenic emissions and removals from country-specific sources and/or sinks that are not part of the Revised 1996 IPCC Guidelines, they should explicitly describe: | NA | Nigeria used the 2006 IPCC Guidelines. Tier 1 methodology was used for all sectors. |
| | (i) Source and/or sink categories; | | |
| | (ii) Methodologies; | | |
| | (iii) EFs; | | |
| | (iv) AD; | | |
| | (e) Parties are encouraged to identify areas where data may be further improved in future communications through capacity-building. | Yes | |

| *Decision* | *Provision of the reporting guidelines* | *Assessment of whether the information was reported* | *Comments on the extent of the information provided* |
|---|---|---|---|
| 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. | Yes | Notation keys were 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: | | |
| | (a) Level of uncertainty associated with inventory data; | Yes | |
| | (b) Underlying assumptions; | No | |
| | (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 second biennial update report of Nigeria**

| *Decision* | *Provision of the reporting guidelines* | *Assessment of whether the information was reported* | *Comments on the extent of the information provided* |
|---|---|---|---|
| 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 quantitative goals was not reported for most of the mitigation actions grouped under policies and implemented using domestic resources. |
| | (b) Information on: | | |
| | (i) Methodologies; | Partly | Information on methodologies was not reported for most of the mitigation actions grouped |

| *Decision* | *Provision of the reporting guidelines* | *Assessment of whether the information was reported* | *Comments on the extent of the information provided* |
|---|---|---|---|
| | | | under policies and implemented using domestic resources. |
| | (ii) Assumptions; | Partly | Information on assumptions was not reported for most of the mitigation actions grouped under policies and implemented using domestic resources. |
| | (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; | Partly | Estimated emission reductions were not reported for most of the mitigation actions grouped under policies and implemented using domestic resources. |
| | (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 second biennial update report of Nigeria**

| *Decision* | *Provision of the reporting requirements* | *Assessment of whether the information was reported* | *Comments on the extent of the information provided* |
|---|---|---|---|
| Decision 2/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. | Yes | Information on financial, technical and capacity-building needs was reported. |
| Decision 2/CP.17, annex III, paragraph 15 | Non-Annex I Parties should provide: | | |
| | (a) Information on financial resources received, technology transfer and capacity-building received; | Yes | |
| | (b) Information on technical support received from the GEF, Parties included in Annex II to the Convention and other developed country Parties, the Green Climate Fund and multilateral institutions for activities relating to climate change, including for the preparation of the current BUR. | Yes | |

| *Decision* | *Provision of the reporting requirements* | *Assessment of whether the information was reported* | *Comments on the extent of the information provided* |
|---|---|---|---|
| Decision 2/CP.17, annex III, paragraph 16 | With regard to the development and transfer of technology, non-Annex I Parties should provide information on: | | |
| | (a) Nationally determined technology needs; | Yes | |
| | (b) Technology support received. | Yes | |

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

# Annex II

## Reference documents

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

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

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

IPCC. 2003. *Good Practice Guidance for Land Use, Land-Use Change and Forestry*. J Penman, M Gytarsky, T Hiraishi, et al. (eds.). Hayama, Japan: Institute for Global Environmental Strategies. Available at http://www.ipcc-nggip.iges.or.jp/public/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 and second BURs of Nigeria. Available at https://unfccc.int/BURs.

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

Summary report on the technical analysis of the first BURs of Nigeria, contained in document FCCC/SBI/ICA/2018/TASR.1/NGA. Available at https://unfccc.int/ICA-reports.