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Report on the technical expert review of the first biennial transparency report of Namibia*

Addendum

Summary

This addendum to the report on the technical expert review of the first biennial transparency report of Namibia, conducted by a technical expert review team in accordance with the modalities, procedures and guidelines for the transparency framework for action and support referred to in Article 13 of the Paris Agreement, contains the results of the review of the consistency of the information submitted by the Party with those modalities, procedures and guidelines, and presents capacity-building needs identified by the Party and by the technical expert review team in consultation with the Party during the review. The review took place from 9 to 13 March 2026 in Windhoek.

* In the symbol for this document, 2024 refers to the year in which the biennial transparency report was submitted, not to the year of publication.



Abbreviations and acronyms

2006 IPCC Guidelines	<i>2006 IPCC Guidelines for National Greenhouse Gas Inventories</i>
2019 Refinement to the 2006 IPCC Guidelines	<i>2019 Refinement to the 2006 IPCC Guidelines for National Greenhouse Gas Inventories</i>
AD	activity data
BTR	biennial transparency report
CBIT	Capacity-building Initiative for Transparency
CBIT–GSP	joint programme of the Capacity-building Initiative for Transparency and the Global Support Programme
CH ₄	methane
CO ₂	carbon dioxide
CRT	common reporting table
CSC	carbon stock change
CTF	common tabular format
DOM	dead organic matter
EF	emission factor
ETF	enhanced transparency framework under the Paris Agreement
FAOSTAT	statistical database of the Food and Agriculture Organization of the United Nations
GHG	greenhouse gas
HFC	hydrofluorocarbon
HWP	harvested wood products
IE	included elsewhere
IEF	implied emission factor
IPCC	Intergovernmental Panel on Climate Change
IPPU	industrial processes and product use
LULUCF	land use, land-use change and forestry
MPGs	modalities, procedures and guidelines for the transparency framework for action and support referred to in Article 13 of the Paris Agreement
N	nitrogen
N ₂ O	nitrous oxide
NA	not applicable
NDC	nationally determined contribution
NE	not estimated
Nex	nitrogen excretion
NID	national inventory document
NIR	national inventory report
NO	not occurring
QA/QC	quality assurance/quality control
REDD+	reducing emissions from deforestation; reducing emissions from forest degradation; conservation of forest carbon stocks; sustainable management of forests; and enhancement of forest carbon stocks (decision 1/CP.16, para. 70)
SF ₆	sulfur hexafluoride
SOC	soil organic carbon
TERT	technical expert review team
Wetlands Supplement	<i>2013 Supplement to the 2006 IPCC Guidelines for National Greenhouse Gas Inventories: Wetlands</i>

I. Areas of improvement¹ identified during the technical expert review of the Party's first biennial transparency report

1. Tables 1–14 present the results of the review of the consistency with the MPGs² of the information submitted by Namibia in its BTR1. All recommendations and encouragements contained in the tables are for the next BTR or NIR, unless otherwise specified.

A. General reporting provisions

Table 1

Areas of improvement relating to general reporting provisions

ID#	Reporting requirement	Description of area of improvement with recommendation or encouragement
NA	NA	No areas of improvement identified

B. Greenhouse gas emissions and removals

Table 2

Areas of improvement relating to general findings on greenhouse gas emissions and removals

ID#	Reporting requirement	Description of area of improvement with recommendation or encouragement
2.G.1	Specified in paragraphs 18 and 19(b) of the MPGs Institutional arrangements	The NID (section 1.2) describes the institutional and procedural arrangements for preparing the NIR but does not provide information on the legal framework underpinning it, including any legal instruments defining the roles, responsibilities and mandates necessary for ensuring the continuity and stability of the GHG inventory system. In addition, while multiple data providers are identified, the institutional arrangements for data provision, such as formal agreements or data-sharing protocols, are not described. The TERT notes that such arrangements are important to ensure efficient, consistent and reliable data acquisition and coordination among institutions, and their absence may affect the continuity and quality of data flows. The NID (p.9) also notes the challenges related to the absence of a fully functional national framework for collecting data. Although the GHG Inventory Technical Working Group is referenced in the sectoral chapters of the NID as being responsible for QA/QC, its composition, mandate and formal status are not defined in the description of the Party's institutional and procedural arrangements, thereby potentially affecting coordination, QA and methodological consistency across sectors. During the review, the Party confirmed that no legal arrangements currently exist in relation to preparing the GHG inventory. However, the Party indicated that legal arrangements are being developed under the second phase of Namibia's CBIT project (https://www.thegef.org/projects-operations/projects/11922), including provisions under the National Statistical Act to strengthen data collection. In addition, a measurement, reporting and verification portal is currently under development to systematize data acquisition from data providers, and the roles and mandates of the working groups involved in preparing the GHG inventory will be further clarified in the next submission. The TERT commends the Party for taking steps to strengthen its legal arrangements, define the roles and mandates of working groups involved in preparing the GHG inventory, systematize the data acquisition process and develop formal agreements or data-sharing protocols with data providers, and encourages the Party to implement and maintain these improvements. The TERT recommends that the Party report information on established national inventory arrangements in the NID.

¹ As referred to in paras. 7, 8, 146(d) and 162(d) of the MPGs, contained in the annex to decision 18/CMA.1.

² Decision 18/CMA.1, annex.

<i>ID#</i>	<i>Reporting requirement</i>	<i>Description of area of improvement with recommendation or encouragement</i>
2.G.2	Specified in paragraph 19(c) of the MPGs Archiving	In its NID (pp.4–5), the Party explained that the Namibia Statistics Agency and the Climate Change Unit of the Ministry of Environment, Forestry and Tourism will be responsible for archiving all data, supporting inventory calculations and other information related to compiling the NID. However, the NID does not specify whether some key elements of information are systematically archived, including all information for the reported time series (e.g. disaggregated AD and EFs), documentation related to generating, processing and aggregating data, QA/QC procedures and review results, and information on planned and implemented inventory improvements. During the review, Namibia explained that archiving arrangements will be strengthened under the second phase of the national CBIT project and that the Namibia Statistics Agency will be the primary institution responsible for archiving information. The TERT recommends that the Party report information on the archiving arrangements in the next BTR, including progress under the second phase of the national CBIT project and the roles and responsibilities of the entities involved in archiving. The TERT also recommends that the Party ensure that the archiving system includes all information for the reported time series, including disaggregated EFs and AD, documentation on data-generation and -aggregation processes, QA/QC procedures and review results, and planned inventory improvements, in accordance with paragraph 19(c) of the MPGs.
2.G.3	Specified in paragraph 30 of the MPGs Notation keys	Namibia reported “NE” in the CRTs for all cells where emissions were not estimated, regardless of whether emissions do not occur, are not applicable, are included elsewhere, or were not estimated, instead of using the appropriate notation keys (“NO”, “NA”, “IE” or “NE” respectively) in line with paragraph 31 of the MPGs. Namibia transparently explained in annex VI to the NID that the CRTs for the GHG inventory for 1990–2022 were generated using the UNFCCC ETF reporting tools by importing AD, emission estimates and other relevant information from the IPCC inventory software, which were then used to estimate emissions across all sectors. However, the Party further explained that compliance with the reporting requirements of the MPGs, particularly with respect to the use of notation keys, was affected by frequent updates to the IPCC inventory software since mid-2023. The NID was prepared using version 2.91, downloaded in April 2024, with calculations completed in May 2024; however, this version did not fully support interoperability for generating CRTs across all sectors. During the review, Namibia confirmed that its BTR2 and corresponding CRTs will include the appropriate notation keys. The TERT acknowledges the interoperability limitations between the IPCC inventory software and the ETF GHG inventory reporting tool, which affected the Party’s reporting of notation keys, as well as the transparent explanation provided in the NID, noting that these limitations affected the generation of CRTs for the BTR1. The TERT recommends that the Party ensure the appropriate use of notation keys in the CRTs to enhance transparency and consistency with the reporting requirements of the MPGs.
2.G.4	Specified in paragraphs 35 and 46 of the MPGs QA/QC and verification	Namibia reported in the NID (pp.13–14) that national data undergo QC checks by ministries, agencies and the private sector, with an overall QC check conducted by the Namibia Statistics Agency. In addition, QA procedures were conducted by an independent reviewer. The NID also explains that, to ensure better alignment with the 2006 IPCC Guidelines, the Party developed and reported information on its QA/QC plan in the NID (annex IV, pp.173–184), noting that implementation of the plan is to be coordinated by the Climate Change Unit of the Ministry of Environment, Forestry and Tourism. However, the Party also explained in the NID (p.14) that there were delays in implementing the QA/QC plan owing to capacity challenges during the compilation of the national GHG inventory for the BTR1. During the review, the Party reiterated the challenges encountered in implementing the QA/QC plan and informed the TERT that further improvements are planned for the next inventory cycle, including through actions supported under the second phase of the national CBIT project.

<i>ID#</i>	<i>Reporting requirement</i>	<i>Description of area of improvement with recommendation or encouragement</i>
		The TERT recommends that the Party improve the implementation of the QA/QC system as planned under the second phase of the national CBIT project and report on these improvements and any remaining challenges in the next NID.
2.G.5	Specified in paragraph 52 of the MPGs Other	Namibia did not report indirect N₂O emissions from sources other than those in the agriculture and LULUCF sectors (CTF table 6 does not include any associated data or notation keys). The TERT notes that reporting indirect N₂O emissions as a memo item is not mandatory. During the review, Namibia indicated that, owing to time constraints and a focus on meeting the core reporting requirements of the MPGs, it was not able to estimate these emissions and currently has no plans to report indirect N₂O emissions from sources other than those in the agriculture and LULUCF sectors. The TERT encourages Namibia to report, as a memo item, indirect N₂O emissions from sources other than those in the agriculture and LULUCF sectors.

Table 3

Areas of improvement of the reporting on greenhouse gas emissions and removals – energy sector

<i>ID#</i>	<i>Reporting requirement</i>	<i>Description of area of improvement with recommendation or encouragement</i>
3.E.1	Specified in paragraphs 18 and 20 of the MPGs 1. General (energy sector) – CO ₂ , CH ₄ and N ₂ O	To estimate GHG emissions for the energy sector, Namibia collected data including plant-specific data, annual reports, and national import and export data from a number of data providers, including the national power utility (NamPower), Namibian food manufacturing companies, the cement industry and the Namibia Statistics Agency. These data were transparently reported in NID table 1.2 (p.10). However, it is not clear from the information provided in the NID whether Namibia maintains an official energy balance. During the review, Namibia clarified that it does not prepare an official national energy balance. As a result, data for the national GHG inventory are collected directly from multiple institutions and sources in order to estimate emissions under the sectoral and reference approaches. The Party also highlighted the challenges it faced in obtaining energy data from multiple sources, ensuring time-series consistency, avoiding the omission of fuels to ensure that all fuel consumption was reported, and avoiding double counting. The TERT notes that a national energy balance is a key tool for estimating GHG emissions from the energy sector, as highlighted in the 2006 IPCC Guidelines (vol. 2, chap. 2). An energy balance reconciles fuel supply with transformation processes and final consumption. By doing so, it ensures that all fuels consumed within the country are comprehensively and transparently accounted for. The use of a reliable national energy balance therefore supports the quality of the GHG inventory for the energy sector and enables the appropriate application of the 2006 IPCC Guidelines, while also facilitating adherence to the principles of transparency, accuracy, completeness, consistency and comparability outlined in the MPGs. During the review, the Party explained that the Electricity Control Board, in its role as the regulator responsible for electricity generation, transmission, distribution, supply, import and export, is currently responsible for preparing the electricity balance. The Government is in the process of transitioning the Electricity Control Board into the unified Namibia Energy Regulatory Authority, which will be responsible for developing a comprehensive national energy balance. The Party also indicated that resources have been secured under the second phase of the national CBIT project to support the training of Namibian officials in preparing a national energy balance. In addition, Namibia indicated that a governmental decision has been taken to compile a national energy balance by 15 April 2026. However, the Party did not specify which reference year(s) the balance will cover or whether it will be compiled on a regular basis. The TERT recommends that the Party improve the adherence of the inventory for the energy sector to the principles of transparency, accuracy, completeness, consistency and comparability outlined in the MPGs. The TERT further recommends that the Party improve the estimation of emissions by establishing institutional arrangements for compiling a national energy balance on an annual basis. An energy balance should cover all fuels imported, exported, produced and

<i>ID#</i>	<i>Reporting requirement</i>	<i>Description of area of improvement with recommendation or encouragement</i>
		transformed within the country and include appropriate QA/QC procedures to ensure its quality. The TERT notes that the Party could develop this system in cooperation with international or regional energy organizations, such as the International Energy Agency or the African Energy Commission in order to capitalize on existing expertise, methodologies, training opportunities and technical support for developing and maintaining national energy balances.
3.E.2	Specified in paragraphs 21 and 23 of the MPGs 1.A.2 Manufacturing industries and construction – solid fuels – CO ₂	The Party reported in NID table 1.4 (p.13) that CO₂ emissions from solid fuels under category 1.A.2 manufacturing industries and construction were identified as a key category, but emissions for this category are estimated using tier 1 methods and default EFs. According to the 2006 IPCC Guidelines, emissions from key categories should be estimated using higher-tier methodologies, where feasible, to improve the accuracy and reliability of the estimates, rather than using tier 1 methodology as currently applied by the Party. During the review, the Party explained that it had already identified and included this issue in its inventory improvement plan with the aim of using a higher-tier methodology. The Party also indicated that resources have been secured under the second phase of the national CBIT project to support this improvement. The TERT recommends that the Party use a higher-tier methodology (e.g. tier 2 or higher), where feasible, for estimating CO₂ emissions from solid fuels under category 1.A.2. To develop such a methodology, it might be useful if the Party enhances communication and close cooperation with stakeholders, including industrial end users (e.g. cement plants) and solid fuel importers, in order to collect facility-level data and develop plant-specific and/or country-specific EFs.

Table 4

Areas of improvement of the reporting on greenhouse gas emissions and removals – industrial processes and product use sector

<i>ID#</i>	<i>Reporting requirement</i>	<i>Description of area of improvement with recommendation or encouragement</i>
4.I.1	Specified in paragraphs 39–40 of the MPGs 2.A.1 Cement production – CO ₂	The TERT noted significant inter-annual variations in the trend of CO₂ emissions for cement production in 2015–2016 and 2021–2022 reported in NID figure 4.2 (p.71). According to the NID, there are two cement producers in Namibia, and one of the producers started to produce cement in 2018 (as shown in NID table 4.4). The EFs for cement production for 2017–2022 were from the 2006 IPCC Guidelines, as indicated in NID table 4.5, but no information is provided for years before 2017. However, the NID does not provide explanations for the changes observed in 2015–2016 and 2021–2022. During the review, the Party provided additional explanations and data clarifying that default EFs were used for the years prior to 2017. One cement producer has submitted plant-specific data since 2018, and a tier 2 method was therefore applied for that plant, while emissions from the other plant continue to be estimated using the tier 1 method and default EF. The Party further explained that cement production in Namibia started at the end of 2010, with only one production plant progressively replacing imports and responding to market needs, including exports. In 2018, the entry into operation of the second cement producer brought changes to the market, with the second operator using imported clinker until 2021 when its plant became fully operational and it started producing its own clinker. The TERT recommends that the Party enhance the transparency of the information on the AD and EFs used for cement production across the time series by providing additional information in the NID at the most disaggregated level, to the extent possible, for CO₂ emissions from cement production across the time series, including the assumptions, references and sources of information used for the AD and EFs.
4.I.2	Specified in paragraphs 39–40 of the MPGs 2.D.1 Lubricant use – CO ₂	The Party reported in the NID (p.74) that it used a tier 1 method to estimate CO₂ emissions from lubricant use, using AD sourced from the National Statistics Agency, as presented in NID table 4.9. However, the Party did not provide the detailed information or the underlying data used for calculating emissions for this category. During the review, the Party clarified that the net consumption of lubricants was derived from information on lubricants used in two-stroke engines, which are accounted for under the energy sector. National production, import and export data

<i>ID#</i>	<i>Reporting requirement</i>	<i>Description of area of improvement with recommendation or encouragement</i>
		were obtained from the National Statistics Agency. As Namibia does not produce lubricants, production was considered to be zero. The TERT recommends that the Party enhance the transparency of the information on AD in the NID by including the detailed underlying data on imports and exports used for calculating emissions for this category and providing a clear description of the methodology used to split lubricant consumption between the energy and IPPU sectors, in line with the information provided during the review.
4.I.3	Specified in paragraphs 32, 45 and 47 of the MPGs 2.F Product uses as substitutes for ozone-depleting substances – HFCs	In its NID (p.76), the Party mentioned that emissions from foam blowing agents, aerosols, fire protection agents and other applications are included under category 2.F product uses as substitutes for ozone-depleting substances. However, CRT 2(II).B-Hs2 does not contain information on any emission estimates and only “NO” and “NE” are reported. During the review, the Party explained that foam blowing agents are part of the category description, but emissions from foam blowing agents, aerosols and fire protection applications have not yet been estimated owing to the unavailability of AD and a lack of financial support. The TERT recommends that the Party report estimates of emissions for all categories and gases under category 2.F throughout the reported period on a gas-by-gas basis in units of mass at the most disaggregated level, including emissions from foam blowing agents, aerosols, fire suppression and other applications, in accordance with the 2006 IPCC Guidelines, or report those emissions as insignificant. If the emissions are reported as insignificant, the TERT encourages the Party to use approximated AD and IPCC default EFs to derive a likely level of emissions for the respective category. If the emissions remain not estimated, it is recommended that the Party provide a reason for any lack of completeness in relation to reporting HFC emissions from product uses as substitutes for ozone-depleting substances, including information on any methodological or data gaps.
4.I.4	Specified in paragraphs 21 and 23 of the MPGs 2.F.1 Refrigeration and air conditioning – HFCs	Namibia reported in its NID (p.77), that it used a tier 1 method from the 2006 IPCC Guidelines to estimate HFC emissions for category 2.F.1 refrigeration and air conditioning, which is a key category. The TERT did not find any information in the NID explaining why the methodological choice was not in accordance with the decision tree of the 2006 IPCC Guidelines (vol. 3, chap. 7, p.7.47). In addition, the Party did not indicate whether it is planning to move towards using a higher-tier methodology for this emissions source. During the review, the Party clarified that it intends to improve its reporting of HFC emissions from refrigeration and air conditioning by using a tier 2 method for the next submission. However, as this category contributes only 1.3 per cent of total emissions excluding LULUCF and owing to a lack of financial support, this improvement has not yet been prioritized. The TERT encourages the Party to make every effort to use a higher-tier method for estimating HFC emissions from refrigeration and air conditioning, in line with 2006 IPCC Guidelines, and recommends that the Party justify the reasons for using a tier 1 method by explaining any resource limitations in the NID.
4.I.5	Specified in paragraph 39 of the MPGs 2.G.1 Electrical equipment – SF₆	In the NID (p.81), the Party reported that the EF used for estimating SF₆ emissions from electrical equipment is based on European equipment in accordance with the default EFs in the 2006 IPCC Guidelines (vol. 3, chap. 8, table 8.2). However, the Party did not clarify the rationale for selecting this EF, nor did it indicate whether this choice was supported by any technical studies, literature or comparative analysis demonstrating that this EF is representative of the equipment and technical conditions in Namibia and the main importers of SF₆. During the review, the Party clarified that the EF for Europe was used because the equipment in operation in Namibia originates from Europe. The TERT recommends that the Party enhance the transparency of the information reported in the NID on the EF used by including additional details on the descriptions, assumptions, references and sources of information used for the EFs applied for compiling the GHG inventory, in line with the information provided by the Party during the review.

Table 5

Areas of improvement of the reporting on greenhouse gas emissions and removals – agriculture sector

<i>ID#</i>	<i>Reporting requirement</i>	<i>Description of area of improvement with recommendation or encouragement</i>
5.A.1	Specified in paragraphs 39–40 of the MPGs 3. General (agriculture) – CO ₂ , CH ₄ and N ₂ O	The Party reported in the NID (p.85) that it used methodologies from the 2006 IPCC Guidelines and the 2019 Refinement to the 2006 IPCC Guidelines for estimating emissions for the agriculture sector. However, the TERT noted that for categories other than CO₂ emissions from urea application, it was not always clear which guidelines were used for estimating the emissions and selecting default EFs. Therefore, the TERT requested clarification for which categories and subcategories Namibia applied the 2006 IPCC Guidelines, the 2019 Refinement to the 2006 IPCC Guidelines or alternative approaches and methodologies. During the review, the Party explained that the estimates for the agriculture sector were compiled using IPCC inventory software version 2.91, which integrates the methodologies and updates from the 2019 Refinement to the 2006 IPCC Guidelines. The Party further clarified that IPCC inventory software version 2.93 was used to estimate all emissions for this submission, as it enables interoperability with the ETF GHG inventory reporting tool. The TERT recommends that the Party enhance transparency by providing in its NID a clear description of the assumptions, references and sources of information used for the EFs applied for compiling the GHG inventory for all categories and subcategories, to the extent possible and as appropriate, clearly indicating where the 2006 IPCC Guidelines, the 2019 Refinement to the 2006 IPCC Guidelines or other methodologies were used.
5.A.2	Specified in paragraph 47 of the MPGs 3. General (agriculture) – CH ₄ and N ₂ O	Namibia submitted a complete time series of CH₄ and N₂O emissions for enteric fermentation, manure management and agricultural soils in the CRTs. However, the TERT identified some outliers in the time series and requested clarification from the Party on the overall trends and inter-annual variations observed in 2020 and 2022 for categories 3.A CH₄ emissions from enteric fermentation and 3.B CH₄ emissions from manure management, as well as clarification on the overall trends and inter-annual variations observed in 2017–2018, 2020–2021 and 2021–2022 for categories 3.B N₂O emissions from manure management and 3.D N₂O emissions from agricultural soils. During the review, the Party indicated that the overall trends for the agriculture sector are explained in NID section 5.1 (p.84). The Party further clarified that the observed trends across the time series are mainly driven by variations in livestock populations and climatic conditions, in particular prolonged droughts followed by recovery periods. The decline in livestock populations observed in 2018–2021 was attributed to an increase in animal mortality and the movement of animals to neighbouring countries in search of better grazing pastures, both related to extended drought events in the country. Livestock numbers recovered thereafter, which explains the observed increase in emissions in 2022. The TERT recommends that the Party enhance transparency by including in its NID a descriptive summary and supporting figures to explain the emission trends and providing justification for any outliers in the NID section on the relevant category.
5.A.3	Specified in paragraphs 30–31 of the MPGs 3. General (agriculture)	Namibia reported emissions for category 3.C rice cultivation category as “NE” in CRT 3.C, while no information on the category was provided in the NID, and NID table 1.5 (p.16) indicates that rice cultivation does not occur in the country. Similarly, in CRT 3, emissions for categories 3.B.2 N₂O emissions from manure management for sheep, 3.D.1.d N₂O emissions from crop residues, 3.D.1.e N₂O emissions from mineralization/immobilization associated with loss/gain of soil organic matter and 3.F CH₄ and N₂O emissions from field burning of agricultural residues were reported as “NE”, with no corresponding explanations provided in the NID. Additionally, emissions for category 3.E prescribed burning of savannahs were reported as “NO”, with no relevant explanation provided in the NID. During the review, the Party confirmed that emissions from rice cultivation and field burning of agricultural residues do not occur in Namibia. The Party also clarified that emissions from crop residues and mineralization/immobilization associated with loss/gain of soil organic matter were not estimated. The Party further explained that emissions from prescribed burning of savannahs do not

ID#	Reporting requirement	Description of area of improvement with recommendation or encouragement
5.A.4	Specified in paragraphs 35 and 39 of the MPGs 3.A Enteric fermentation – CH ₄	occur in Namibia. Nevertheless, the Party reported both CO₂ and non-CO₂ emissions from wildfires in grassland under forest land in the LULUCF sector (CRT 4(IV)). The TERT recommends that the Party use the relevant notation keys where numerical data are not available when completing the CRTs and report them consistently in the NID, clearly indicating the reasons why emissions from specific sources, categories or subcategories were not reported. In the NID (section 5.2.2, p.85), the Party described how AD on animal populations were obtained, including the use of FAOSTAT data and national data sources. The TERT noted that AD on the animal population for enteric fermentation from dairy cattle reported in NID table 5.3 (p.86) show a constant value of 2,000 head in 2017–2022. The NID does not provide clarification on how the FAOSTAT and national data were applied across the time series, nor does it provide a rationale for the constant rounded value reported for the dairy cattle population. During the review, the Party explained that FAOSTAT data were used for all animal categories for 1990–1994, noting that Namibia gained independence in 1990 and that no national data were available for those early years of the time series. From 1995 onward, national data were used for all animal categories, with AD primarily sourced from the Directorate of Veterinary Services of the Ministry of Agriculture, Fisheries, Water and Land Reform. The Party clarified that it is planning to conduct a national agricultural census in 2027, which will provide an updated data set for the agriculture sector. The TERT highlighted that the number of dairy cattle reported in the FAOSTAT database varies between 2017 and 2022. In response, the Party clarified that national data were selected for compiling the inventory and indicated that the number of dairy cattle is likely to be stable as dairy cattle farming occurs in a limited number of farms. The Party also clarified that this number will be verified for the next submission, noting that dairy cattle represent a relatively small proportion of cattle compared with non-dairy cattle in Namibia. The TERT recommends that the Party enhance transparency by providing in its NID the sources of information used for the AD at the most disaggregated level to compile the GHG inventory across the time series, including verification of animal population data, and an explanation of how time-series consistency was ensured for dairy cattle. The TERT also encourages the Party to implement category-specific QC checks, including comparisons with independently compiled data sets, for example using the FAOSTAT “Crops and livestock products” database (https://www.fao.org/faostat/en/#data/QCL) in order to strengthen the robustness of the GHG emission estimates.
5.A.5	Specified in paragraphs 39–40 of the MPGs 3.A.1 Cattle – CH ₄	In the NID (p.85), Namibia reported that it applied a tier 2 approach for dairy and non-dairy cattle and a tier 1 approach for the remaining animal categories to estimate CH₄ emissions from enteric fermentation, using default EFs from the 2006 IPCC Guidelines. However, the TERT noted significant differences between the IEFs reported in CRT 3.A and the IPCC default values from the 2006 IPCC Guidelines (vol. 4, chap. 10, table 10.11), particularly for subcategory 3.A.1.a.i mature dairy cattle, where an EF of 92 kg CH₄/head/year was reported for 2022 compared with the IPCC default value of 46 kg CH₄/head/year and for subcategory 3.A.1.a.ii other mature cattle, where an EF of 52 kg CH₄/head/year was reported compared with the IPCC default value of 31 kg CH₄/head/year. During the review, the Party explained that differences between the IEFs estimated using the tier 2 approach and the IPCC default EFs are mainly related to information on the live weight of animals, as well as differences in farming management systems (communal and commercial). The Party further clarified that efforts are ongoing to improve the collection of data on animal weight for communal farming systems, where data gaps remain, while data on commercial farming systems are already available. It also explained that approximately 60 per cent of cattle are raised in communal farming systems and 40 per cent in commercial systems. In addition, the Party highlighted the support provided through the second phase of the national CBIT project, which will help to further refine the tier 2 emission estimates for cattle, sheep and goats.

ID#	Reporting requirement	Description of area of improvement with recommendation or encouragement
		The TERT recommends that the Party provide in the NID a clear explanation of the parameters and underlying assumptions used for estimating emissions from cattle using the tier 2 approach, as well as relevant justifications based on national circumstances for the discrepancies between the IEFs derived from the tier 2 approach and the corresponding IPCC default values.
5.A.6	Specified in paragraph 35 of the MPGs 3.A Enteric fermentation – CH ₄	In the NID (section 5.2.5, p.89), Namibia described its QA/QC procedures for estimating emissions from enteric fermentation, explaining that QA procedures were conducted by the GHG Inventory Technical Working Group and independent international experts. The TERT requested additional information on the involvement of the independent international experts in this process, including any available documentation or reports supporting the QA activities. During the review, the Party explained that the main QA activities were carried out with support from CBIT–GSP through the engagement of an internal consultant, and that recommendations for improvement were provided as part of this process. The TERT encourages the Party to continue improving its emission estimates, including through the implementation of QA activities, in order to enhance the accuracy of the next NIR.
5.A.7	Specified in paragraph 21 of the MPGs 3.B Manure management – CH ₄ and N ₂ O	In the NID (section 5.3.7, p.93), Namibia described its planned improvements for enhancing the collection of information on manure management systems for different animal species. The TERT requested clarification on whether these efforts will be guided by the 2006 IPCC Guidelines, including international data sources, such as those outlined in the Food and Agriculture Organization of the United Nations World Programme for the Census of Agriculture 2020, including volumes 1 and 2. During the review, the Party explained that it is currently undertaking a study under the second phase of the national CBIT project to collect data on manure management systems for different livestock species. The study applies a nationally representative sampling design, covering all 11 regions of the country, with sampling conducted across constituencies within each region. Data are being collected through structured interviews with farmers, with a particular focus on communal farming systems, where manure is typically managed on rangelands. For commercial farming systems, producer unions are being used as key sources of information to support data collection and validation. Additionally, the Party mentioned that the national 2027 agriculture census questionnaire was shared with the national GHG inventory team, and that the results of the planned survey will complement the census data. The TERT recommends that the Party enhance the accuracy of its reporting by prioritizing significant animal types and ensuring that data collection is carried out in accordance with sound statistical practices. The TERT further recommends that, once new information on manure management systems for communal and commercial farming systems has been collected, the Party recalculate the emission estimates for both CH₄ and N₂O time series, ensuring a consistent annual time series of GHG emission estimates. The TERT also notes the usefulness of the Party using the new <i>World Programme for the Census of Agriculture 2030</i> (https://openknowledge.fao.org/items/2dab2883-d3ba-4391-a207-d80078c65d0c) publication in order to strengthen the robustness of the GHG emission estimates.
5.A.8	Specified in paragraph 21 of the MPGs 3.B Manure management – CH ₄	Namibia reported in the NID (section 5.3.2, p.91) that it used tier 1 methodology from the 2006 IPCC Guidelines to estimate emissions from manure management for all animal groups. The TERT noted, however, that the IEFs reported in CRT 3.B(a) for sheep, goats, camels, horses, mules and asses for 2022 differ from the corresponding default CH₄ EFs provided in the 2006 IPCC Guidelines (vol. 4, chap. 10, table 10.15) for developing countries in a warm climate. During the review, the Party explained that, for the next submission, it will verify the EFs used in the IPCC inventory software and ensure that recalculations are carried out where applicable. The TERT recommends that the Party enhance the accuracy of its reporting by revising the EFs used for the complete inventory time series and by reporting revised estimates, if appropriate, together with explanatory information and justifications for any recalculations.

<i>ID#</i>	<i>Reporting requirement</i>	<i>Description of area of improvement with recommendation or encouragement</i>
5.A.9	Specified in paragraph 39 of the MPGs 3.B Manure management – N ₂ O	Namibia reported Nex rates for all animal categories in CRT 3.B(b); however, the NID does not provide references for the values and source of information for this parameter. During the review, the Party explained that default tier 1 values from the IPCC inventory software were used for the Nex rates. The TERT recommends that the Party provide transparent information in the NID on the descriptions, assumptions, references and sources of information used for the Nex rates used to compile the GHG inventory. It also recommends that the Party provide in the NID explicit references to the relevant IPCC guidelines used (e.g. the 2006 IPCC Guidelines, the 2019 Refinement to the 2006 IPCC Guidelines, or subsequent updates, as applicable), instead of the IPCC inventory software.
5.A.10	Specified in paragraphs 31, 45 and 47 of the MPGs 3.D Direct and indirect N ₂ O emissions from agricultural soils – N ₂ O	Namibia reported in the NID (section 5.4.1, p.94) that direct N₂O emissions from agricultural soils include inorganic and organic N fertilizers, urine and dung deposited by grazing animals, and mineralization/immobilization associated with loss/gain of soil organic matter, while other activities were reported as “NO”. The TERT noted that in CRT 3.D for 2022, the following subcategories were reported as “NE”: 3.D.1.b.ii sewage sludge applied to soils, 3.D.1.b.iii other organic fertilizers applied to soils, 3.D.1.d crop residues and 3.D.1.e mineralization/immobilization associated with loss/gain of soil organic matter. During the review, the Party described the issues it encountered in generating the CRTs and indicated that these issues are documented in annex VI to the NID (p.186). The Party further clarified that emissions for subcategory 3.D.1.b.ii do not occur in Namibia, while emissions for subcategories 3.D.1.b.iii, 3.D.1.d and 3.D.1.e were not estimated. The TERT recommends that, to improve completeness, the Party estimate emissions for subcategories 3.D.1.b.iii, 3.D.1.d and 3.D.1.e. The TERT also recommends that the Party use notation keys where numerical data are not available when completing the CRTs and provide a consistent description in the NID of the reasons for not reporting emissions from sources and removals by sinks and associated data for specific sectors, categories, subcategories or gases.
5.A.11	Specified in paragraphs 21, 35 and 39 of the MPGs 3.D Direct and indirect N ₂ O emissions from agricultural soils – N ₂ O	Namibia provided information in the NID (section 5.4.2, p.95) on direct N₂O emissions from managed agricultural soils. The NID does not include information on the fertilizer data used to estimate emissions for subcategories 3.D.1.a inorganic N fertilizers and 3.D.1.b organic N fertilizers. Moreover, no information on the N content of fertilizers was provided in the NID. During the review, the Party explained that statistics on fertilizers are provided by the National Statistics Agency and are derived from trade statistics on imports and exports. It further explained that it has already identified areas for improvement in relation to reporting on this category, particularly with regard to the availability of detailed information on the N content of fertilizer mixtures. In this context, the Ministry of Agriculture, Fisheries, Water and Land Reform is working to strengthen statistics on fertilizers (e.g. production, use, imports and/or exports), including by collaborating with customs authorities to improve the disclosure of information on the N content of imported fertilizers and to enhance consistency between national and international data sources (e.g. FAOSTAT). The TERT recommends that the Party enhance transparency by providing in the next NID clear information on fertilizer data and continuing to assess the N content of fertilizers and, if applicable, recalculating the emission estimates for the relevant subcategories 3.D.1.a inorganic N fertilizers and 3.D.1.b organic N fertilizers, if relevant. The TERT also encourages the Party to implement category-specific QC checks, including comparisons with independently compiled data sets, for example using the FAOSTAT “Fertilizers by product” database (https://www.fao.org/faostat/en/#data/RFB) to strengthen the robustness of the GHG emission estimates.

Table 6

Areas of improvement of the reporting on greenhouse gas emissions and removals – land use, land-use change and forestry sector

<i>ID#</i>	<i>Reporting requirement</i>	<i>Description of area of improvement with recommendation or encouragement</i>
6.L.1	Specified in paragraph 21 of the MPGs Land representation – CO ₂ , CH ₄ and N ₂ O	Namibia reported its land use and land-use change areas in CRT 4.1. The Party also reported in its NID (p.101) that it followed approach 2 from the 2006 IPCC Guidelines for land representation. However, the TERT noted some differences between the final areas reported for a given year and the initial areas reported for the subsequent year in CRT 4.1 for all land-use categories other than wetlands and other land, and for all years of the time series. For example, the final areas reported in the land-use matrix for 2021 were 66,408.03 kha for forest land; 331.61 kha for cropland; 3,592.74 kha for grassland; 40.23 kha for settlements; and 11,463.57 kha for other land. The initial areas reported in the land-use matrix for 2022 were 66,535.89 kha for forest land; 322.41 kha for cropland; 3,473.97 kha for grassland; and 40.34 kha for settlements and 11,463.57 for other land. The TERT noted that, in accordance with the 2006 IPCC Guidelines (vol. 4, chap. 3, p.3.12), the final area for each land-use category reported for a given year must be equal to the initial area reported for the subsequent year. During the review, the Party clarified that land-use matrices were prepared using IPCC inventory software version 2.91 in accordance with approach 2, but the software exported the data to CRT 4.1 in line with approach 1. The TERT noted that it is possible to produce land-use matrices using the IPCC inventory software in accordance with approach 2 and manually insert them in the CRTs; the Party indicated that it will do so for the next NIR. The TERT recommends that the Party provide a consistent land-use matrix in the CRTs, ensuring that the final area per land-use category reported for a given year is equal to the initial area reported for the subsequent year in CRT 4.1.
6.L.2	Specified in paragraphs 21 and 39 of the MPGs Land representation – CO ₂ , CH ₄ and N ₂ O	Namibia reported in the NID (p.101) that it followed approach 2 from the 2006 IPCC Guidelines for land representation. The Party reported areas of land-use changes in CRTs 4.A, 4.C and 4.E. However, these land-use changes do not match those reported in the land-use matrices in CRT 4.1. The TERT noted that while land-use was reported in line with approach 2 in CRTs 4.A, 4.C and 4.E, the land-use matrices in CRT 4.1 were reported in line with approach 1 from the 2006 IPCC Guidelines. During the review, the Party explained that it used IPCC inventory software version 2.91 for producing land-use matrices in accordance with approach 2, but the software exported the data to CRT 4.1 in line with approach 1. The TERT noted that it is possible to produce land-use matrices in accordance with approach 2 and manually insert them in CRT 4.1 (see ID# 6.L.1 above). The TERT recommends that the Party report a consistent land representation approach for the whole inventory in the CRTs by using the IPCC inventory software or correcting the values manually, and clarify the approach used to report the AD in the CRTs.
6.L.3	Specified in paragraphs 31, 39 and 40 of the MPGs LULUCF General – CO ₂ , CH ₄ and N ₂ O	Namibia reported its soil types in the NID (p.105). The Party also reported CSCs in the soil carbon pool for mineral soils for cropland converted to forest land and forest land converted to settlements, while other subcategories were reported as “NE” or “0” in the CRTs. However, the TERT noted that methodologies for estimating CSCs in the soil carbon pool, SOC reference values, SOC values for each land-use category, sources of the values and reasons for reporting “NE” or “0” (e.g. an analysis of the significance of the emissions) were not provided in the NID. During the review, the Party clarified that it estimated CSCs in the soil carbon pool for land-use changes in accordance with equation 2.25 from the 2006 IPCC Guidelines (vol. 4, chap. 2, p.2.30) using the IPCC default values for each land-use category. The Party also explained that it reported “NE” as that is the default notation key in the IPCC inventory software, but it had intended to report “NO” or “NA” instead. The TERT recommends that the Party use the appropriate notation key to report soil carbon pools for all categories and, for each land-use category, provide an

<i>ID#</i>	<i>Reporting requirement</i>	<i>Description of area of improvement with recommendation or encouragement</i>
		explanation on the methodologies and parameters used, such as SOC reference values and SOC values for estimating CSCs for the soil carbon pool.
6.L.4	Specified in paragraphs 21, 31 and 39 of the MPGs LULUCF General – CO₂, CH₄ and N₂O	Namibia reported CSCs in the DOM carbon pool for cropland converted to forest land, grassland converted to forest land, forest land converted to grassland and forest land converted to settlements as “0”, while other subcategories were reported as “NE” in the CRTs. No information was provided in the NID on the reasons for reporting estimates of CSCs in DOM for the reported land-use categories as “0” or on the reasons for reporting “NE” (e.g. an analysis of the significance of the emissions). During the review, the Party clarified that it estimated CSCs in DOM for land-use changes using equation 2.23 from the 2006 IPCC Guidelines (vol. 4, chap. 2, p.2.28) and the IPCC default values for each category other than deadwood for forest land. The Party also explained that it reported “NE” as that is the default notation key in the IPCC inventory software, but it had intended to report “NO” or “NA” instead. The TERT recommends that the Party provide information on the methodologies used to estimate CSCs in the DOM and litter pools for each land-use category and explain the use of notation keys for any cases where CSCs are not reported using “0” or provide estimates for CSCs for these pools when they are not in accordance with the 2006 IPCC Guidelines.
6.L.5	Specified in paragraph 39 of the MPGs 4.A Forest land – CO₂, CH₄ and N₂O	Namibia reported biomass stocks and deadwood values for forestry and other land uses in NID table 6.9 (p.108), referencing table 6.15 of its third national inventory (p.79), submitted in 2018. The Party also referenced the biomass stocks and deadwood values reported in table 6.15 to its third NIR (pp.77–78). The reported values for woody biomass and deadwood in forest land (22.63 t/ha and 1.48 m³ respectively) were the same in both the NID and the third national inventory. However, woody biomass and deadwood in other wooded land were reported using different values in the NID (12.13 t/ha and 1.48 m³ respectively) and in the third national inventory (3.11 t/ha and 0.31 m³ respectively). The Party did not provide an explanation for the difference between the used and referenced values. During the review, the Party explained that woody biomass and deadwood values for other wooded land reported in NID table 6.9 were derived from the weighted average of the other wooded land and woodland values reported in table 6.15 of its third national inventory, which includes country-specific values by region. The TERT recommends that the Party provide clear references in its NID for the sources of the country-specific values for woody biomass and deadwood in other wooded land and explain how these values were derived.
6.L.6	Specified in paragraphs 20 and 32 of the MPGs 4.D Wetlands – CO₂, CH₄ and N₂O	Namibia reported in the NID (p.5) that it used the Wetlands Supplement for reporting category 4.D wetlands. The Party reported the area of wetlands remaining wetlands in CRT 4.D. However, CSCs for all categories, subcategories and pools under wetlands were reported as “NE”. Therefore, the Party did not appear to have used the Wetlands Supplement or the 2006 IPCC Guidelines for estimating CSCs for wetlands and land conversions from and to wetlands. During the review, the Party explained that the subcategories under wetlands have not yet been estimated using the 2006 IPCC Guidelines or the Wetlands Supplement, but that it is planning to make some improvements in this area. It further explained that, owing to the climatic conditions in Namibia and the lack of large reservoirs, CSCs from these categories are likely to be insignificant. The TERT encourages the Party to use the Wetlands Supplement for estimating CSCs in wetlands and land conversions from and to wetlands by identifying the relevant subcategories and using related tier 1 methods to estimate CSCs as appropriate. If the emissions and removals are deemed insignificant, the TERT encourages the Party to use approximated AD and IPCC default EFs to derive a likely level of emissions for the respective subcategory to demonstrate that the expected emissions are below the significance threshold.
6.L.7	Specified in paragraphs 47 and 56 of the MPGs	Namibia reported in its NID (p.119) that it followed the stock change approach for estimating CSCs for the HWP pool by considering domestic consumption (approach A in CRT 4.Gs1). However, the TERT noted that while the Party used an approach other than the production approach for estimating CSCs for the HWP

<i>ID#</i>	<i>Reporting requirement</i>	<i>Description of area of improvement with recommendation or encouragement</i>
	4.G HWP – CO ₂	pool, it did not report supplementary information on emissions and removals from HWP using the production approach, as required by the MPGs. Emissions and removals from HWP were not included in CRT 4 or in the totals. During the review, the Party explained that it used the same stock change approach for its previous NIR, as Namibia was a consumer of HWP (excluding fuelwood) throughout the time series. The Party further explained that, since 2020, the country has begun to shift to being a producer of HWP and indicated that supplementary information will be included in the next NID. The TERT recommends that the Party provide supplementary information on emissions and removals from HWP estimated using the production approach and report them in CRT 4.
6.L.8	Specified in paragraph 39 of the MPGs 4(IV) Biomass burning – CO ₂ , CH ₄ and N ₂ O	Namibia reported in its NID (p.117) that it used tier 1 methodology for estimating emissions from biomass burning. The Party also reported combustion factors and EFs for each gas for forest land, other wooded land and grassland in NID table 6.20 (p.117). The combustion factor and EFs for CH₄ and N₂O for grassland were consistent with the default values from the 2006 IPCC Guidelines (vol. 4, chap. 2, tables 2.5–2.6). However, the TERT noted that the combustion factors reported in NID table 6.20 for forest land (0.0601) and other wooded land (0.07514) are significantly different from the IPCC default values (0.45 for forest land and between 0.22 and 0.77 for other types of wooded land). The difference between the values of the combustion factors reported by the Party and the IPCC default values was not explained in the NID. During the review, the Party clarified that the combustion factor and EFs for each gas for grassland were from the 2006 IPCC Guidelines (vol. 4, chap. 2, tables 2.5–2.6), but the combustion factors for forest land and other wooded land were country-specific factors derived from measurements taken in the field by the Forest Service that reflect national characteristics such as dry weather conditions and the percentage of broadleaf species that remain alive after biomass burning. The TERT recommends that the Party provide in its NID references for the sources of the country-specific combustion factors and EFs for each gas for forest land, other wooded land and grassland, explain how these were derived and provide the reasons for any differences compared with the IPCC default values.

Table 7

Areas of improvement of the reporting on greenhouse gas emissions and removals – waste sector

<i>ID#</i>	<i>Reporting requirement</i>	<i>Description of area of improvement with recommendation or encouragement</i>
7.W.1	Specified in paragraph 39 of the MPGs 5. General (waste)	In its NID (pp.124 and 126), Namibia referenced previous national inventories submitted under the Convention for several methodologies applied for the waste sector. The TERT requested clarification on whether the Party had encountered challenges owing to lack of resources, resulting in incomplete references to previous national inventories. During the review, Namibia noted that the NID is a scientific report, in which the inclusion of references to previous national publications is a standard feature. Additionally, the Party wished to point out that most of these shortcomings are due to a lack of resources. The TERT recommends that Namibia, at a minimum, follow a systematic referencing style that includes the weblink, chapter, section and page number of the respective reference(s), even if the methodologies have not changed since the previous report.
7.W.2	Specified in paragraph 39 of the MPGs 5. General (waste)	The Party provided information on planned improvements for the waste sector in the NID (pp.129, 133 and 138), which the TERT considered to be very useful. However, additional information should ideally be provided on the status and prioritization of planned improvements, including (1) what will be improved: this information was partially reported in the Party's NID; (2) why it was included as an improvement (data gap/limitation addressed): this was partially included in the NID; (3) how it will be addressed (method, institution or tool): currently missing from the NID; (4) when it will be addressed (timeline or target year): currently

<i>ID#</i>	<i>Reporting requirement</i>	<i>Description of area of improvement with recommendation or encouragement</i>
		missing from the NID; and (5) status of the improvement (planned, ongoing, partially implemented): currently missing from the NID. During the review, Namibia indicated that it ultimately intends to capture this information in future submissions and will work towards this improvement. The TERT encourages Namibia to design a table that includes complete information on the status and prioritization of planned improvements as detailed above to help in tracking and prioritizing improvements.
7.W.3	Specified in paragraph 40 of the MPGs 5.A Solid waste disposal on land – CH₄	The Party did not provide clear information on the criteria for dividing the population in urban areas into subgroups on the basis of population size (urban high, medium and low), which is a basis for estimating waste generation (NID p.124). During the review, Namibia clarified that all urban towns with less than 15,000 people were grouped under the “urban low” category and there are eight “urban low” towns. The TERT recommends that the Party clearly document in the NID the number of people in each population group used to estimate waste generation.
7.W.4	Specified in paragraphs 21 and 39 of the MPGs 5.A Solid waste disposal on land – CH₄	The Party reported that the waste generation rate for the rural population increased by 47.6 per cent, from 0.134 t/person/year in 2011 to 0.183 t/person/year in 2022, while the number of people in the rural population increased by 0.4 per cent during the same period, from 1,209,643 to 1,215,035. During the review, Namibia clarified that the overall population is increasing but the change in the rural population is minimal as a result of internal migration from rural to urban areas, and that the waste generation rate was determined on the basis of the trend reported in previous national inventories and not collected data. The TERT recommends that the Party collect the necessary AD or use relevant (or proxy) methodologies to confirm that the waste generation rate is significantly increasing, and revise the estimates accordingly, or provide justification and documentation for the increase in the waste generation rate and constant rural population over time.
7.W.5	Specified in paragraphs 21 and 23 of the MPGs 5.A Solid waste disposal on land – CH₄	The Party did not provide waste composition data in the NID (p.126), which states that no such data are available, and bulk waste was therefore considered instead. In addition, although category 5.A solid waste disposal on land is a key category based on trend assessment (without LULUCF), the Party used IPCC default parameter values to estimate emissions for this category without clearly documenting why it was not able to use a higher-tier method. During the review, Namibia explained that there is a lack of resources for systematic sampling and data collection in the country, but it is working to strengthen stakeholder engagement to address this situation across the waste sector. The TERT recommends that Namibia document in the NID why the methodological choice for estimating emissions from solid waste disposal on land is not in line with the corresponding decision tree of the 2006 IPCC Guidelines. The TERT encourages Namibia to make every effort to use a recommended method (tier level) for category 5.A solid waste disposal on land, in accordance with the 2006 IPCC Guidelines, by prioritizing the collection of waste composition data to calculate country-specific parameters, such as waste composition data, as a future improvement, given that solid waste disposal on land is a key category.
7.W.6	Specified in paragraphs 31, 32, 45 and 47 of the MPGs 5.B Biological treatment of solid waste – CH₄ and N₂O	In CRT 5, Namibia reported CH₄ and N₂O emissions for categories 5.B.1a composting of municipal solid waste and 5.B.2a anaerobic digestion at biogas facilities of municipal solid waste as “NE”, while the NID (table 1.5) states that emissions were not occurring for category 5.B without providing any reason for not estimating them. During the review, Namibia clarified that the notation key “NE” was added by default by the IPCC inventory software and that it did not amend the notation key for the entire time series owing to time constraints. Furthermore, the Party clarified that emissions for category 5.B should be reported as “NE” instead of “NO” as the Party has not yet started collecting the relevant data.

<i>ID#</i>	<i>Reporting requirement</i>	<i>Description of area of improvement with recommendation or encouragement</i>
		The TERT recommends that Namibia clearly indicate the reasons why emissions from biological treatment of solid waste were not reported, in accordance with paragraph 45 of the MPGs. The TERT also recommends that the Party estimate and report emissions from biological treatment of solid waste, composting and/or anaerobic digestion at biogas facilities, if they occur. If emissions for this category are deemed insignificant, the TERT encourages the Party to use approximated AD and IPCC default EFs to derive a likely level of emissions for the respective category to demonstrate that the expected emissions are below the significance threshold.
7.W.7	Specified in paragraphs 26, 27, 47 and 57 of the MPGs 5.C.1 Waste incineration – CO ₂ , CH ₄ and N ₂ O	The Party did not estimate emissions from clinical waste incineration (NID table 7.11, p.130) owing to a lack of data for 1990–2016; however, data were reported for 2017–2022. During the review, Namibia confirmed that it did not use any gap-filling techniques or proxy methods to estimate emissions for this category. The TERT recommends that Namibia report a consistent time series for this category. The TERT also encourages Namibia to use proxy data and appropriate gap-filling techniques to quantify emissions from clinical waste incineration in order to ensure a consistent time series in accordance with paragraph 27 of the MPGs.
7.W.8	Specified in paragraphs 45 and 47 of the MPGs 5.D Wastewater treatment and discharge – N ₂ O	The Party reported in the NID (p.126) that sludge from Walvis Bay and Swakopmund is not sent to landfill sites and is used instead as organic amendment in soils for landscaping in municipal areas and was therefore not included in the estimates of wastewater treatment and discharge. However, in CRT 5.D sludge removed is reported as “NE”. The TERT asked whether emissions from sludge used for landscaping were estimated and reported under the appropriate subcategory in accordance with the 2006 IPCC Guidelines (vol. 5, chap. 6), which clearly states that emissions from any waste-derived products utilized for another process should be reported under the process where the emissions occur. The TERT notes that, in accordance with footnote 2 to CRT 4.D, sludge removal reported in the wastewater inventory should be consistent with the estimates for sludge applied to agricultural soils, sludge incinerated and sludge deposited at solid waste disposal sites. During the review, Namibia confirmed that the information on sludge removed was used to amend the time series for the waste sector only and that estimates of N₂O emissions from use of sludge from municipal lands were not calculated or reported elsewhere (e.g. CRT 3.D for the agriculture sector, also reported as “NE”). The TERT recommends that Namibia provide a reason in the NID for any lack of completeness under category 5.D or estimate N₂O emissions from sludge spread on municipal lands under the process where the emissions occur.
7.W.9	Specified in paragraphs 21, 27 and 57 of the MPGs 5.D.2 Industrial wastewater – CH ₄ and N ₂ O	Namibia used the same AD for industrial wastewater treatment and discharge (14,786 t) for 2017–2022 (NID table 7.25, p.136), explaining that no data could be sourced for sheep handled at abattoirs for the inventory up until 2022. The Party did not provide further justification for using the same AD for 2017–2022. During the review, Namibia clarified that the information provided by MeatCo on meat handled at its abattoirs has been decreasing in accuracy, and the amount of meat processed in its abattoirs has decreased since the establishment of a new private entity for meat handling. The Party explained that it has yet to engage the new entity in relation to AD collection. It also clarified that there is very little published information on other activities generating wastewater, such as fish processing. It further indicated the need to improve stakeholder engagement in order to obtain the necessary information. The TERT recommends that Namibia collect actual data to develop a complete and accurate AD time series for the total organic product for wastewater. If this is not possible owing to a lack of AD, the TERT encourages the Party to use surrogate data, extrapolation, interpolation and other methods consistent with the splicing techniques provided in the 2006 IPCC Guidelines to estimate the emissions or provide appropriate justification for using the same AD across the time series.

C. Information necessary to track progress in implementing and achieving the nationally determined contribution under Article 4 of the Paris Agreement

Table 8

Areas of improvement of the reporting on national circumstances and institutional arrangements

ID#	Reporting requirement	Description of area of improvement with recommendation or encouragement
8.1	Reporting requirement specified in paragraphs 60 and 63 of the MPGs	Namibia did not report in its BTR1 information on how its national circumstances affect GHG emissions and removals over time. During the review, Namibia explained that this information is included in different sections of the NID, but not in the BTR1. The TERT recommends that the Party include in the BTR clear information outlining how its national circumstances affect GHG emissions and removals over time.

Table 9

Areas of improvement of the description of the nationally determined contribution under Article 4 of the Paris Agreement, including updates

ID#	Reporting requirement	Description of area of improvement with recommendation or encouragement
NA	NA	No areas of improvement identified

Table 10

Areas of improvement of the reporting of the information necessary to track progress in implementing and achieving the nationally determined contribution under Article 4 of the Paris Agreement

ID#	Reporting requirement	Description of area of improvement with recommendation or encouragement
10.1	Specified in paragraph 65 of the MPGs	The TERT considered that Namibia did not provide clear information on the indicators selected to track progress in implementing and achieving its NDC under Article 4 of the Paris Agreement. In BTR1 section 3.5.1 and CTF table 1, Namibia stated that it selected total GHG emissions and removals as the key indicator for tracking progress in implementing and achieving its NDC. However, in BTR1 section 3.7.1, the Party appears to list the following two indicators for tracking progress towards its NDC: (1) total GHG emissions and removals, consistent with the coverage of its NDC; and (2) the contribution of the LULUCF sector, as applicable. Furthermore, BTR1 section 3.8.9 identifies several other performance indicators that enable Namibia to quantify progress effectively, identify areas requiring additional focus and refine its strategies to achieve its NDC targets. During the review, Namibia confirmed that total GHG emissions and removals is the key or primary indicator used to track progress towards its NDC and explained that it selected other performance indicators to track the progress of actions, policies and measures and their impact on the implementation and achievement of its NDC. The TERT recommends that the Party provide clear information in the BTR on the indicator selected to track progress in implementing and achieving its NDC under Article 4 of the Paris Agreement.
10.2	Specified in paragraphs 67 and 77(a)(i) of the MPGs	Namibia did not provide clear information in its BTR1 on all selected indicators for tracking progress towards its NDC. Specifically, the Party provided information on the reference level, implementation period, target level and target year for two of the selected indicators (BTR1 p.28), namely (1) total GHG emissions and removals; and (2) the contribution of the LULUCF sector. However, Namibia did not provide the necessary information specified in paragraph 67 of the MPGs for the other indicators that it could have selected to track progress in implementing its NDC under Article 4 of the Paris Agreement (see also ID# 10.1 above). During the review, Namibia explained that its understanding was that the information specified in paragraph 67 of the MPGs is only required for the main or key indicator and not for all selected indicators. The TERT recommends that, if the additional indicators selected by the Party are also used to track progress towards its NDC, the Party provide information on the reference point(s), level(s), baseline(s), base year(s) or starting point(s) for all

ID#	Reporting requirement	Description of area of improvement with recommendation or encouragement
10.3	Specified in paragraphs 68 and 77(a)(iii) of the MPGs	indicators selected and used for tracking progress. Otherwise, the TERT recommends that the Party provide clear information in the BTR on which indicators are used for tracking progress in implementing and achieving its NDC (see also ID# 10.1 above). Namibia did not provide the most recent information for some selected indicators for each reporting year during the implementation period of its NDC under Article 4 of the Paris Agreement. Specifically, the Party only provided the most recent information for the key indicator total GHG emissions and removals. In addition, CTF table 4 of the structured summary was not reported by the Party. Namibia reported in the BTR1 that the most recent value for this indicator is –104,206 Mt CO₂ eq for 2016. However, the TERT noted that the value of total GHG emissions and removals reported in CRT 10 for 2022 is –96,342.26 Mt CO₂ eq, not –104,206 Mt CO₂ eq. BTR table 3-11 gives a value of –98,939 kt CO₂ eq for 2022. During the review, Namibia explained that it is currently unable to provide the most recent information for the other selected indicators (see also ID#s 10.1 and 10.2 above). Furthermore, the Party explained that although 2016 was specified as part of the most recent information for total GHG emissions and removals, this was a typographical error that should have read 2022. The TERT recommends that the Party provide the most recent information for each selected indicator identified pursuant to paragraph 65 of the MPGs (see also ID#s 10.1 and 10.2 above) for each reporting year during the implementation period of its NDC under Article 4 of the Paris Agreement, ensuring consistency with the values reported in the NIR.
10.4	Specified in paragraph 69 of the MPGs	Namibia did not compare the most recent information for each selected indicator with the information provided pursuant to paragraph 67 of the MPGs to track progress in implementing its NDC under Article 4 of the Paris Agreement. Specifically, Namibia only compared the most recent information for one selected indicator, namely total GHG emissions and removals, but not for the other indicators. In addition, CTF table 4 was not reported by the Party and the values reported in accordance with paragraph 68 of the MPGs were inaccurate (see ID# 10.3 above). During the review, Namibia explained that the most recent information is not available for all other selected indicators. The TERT recommends that the Party provide information on the comparison of the most recent information for each selected indicator with the information provided pursuant to paragraph 67 of the MPGs to track progress in implementing its NDC under Article 4 of the Paris Agreement.
10.5	Specified in paragraphs 73, 74(c) and 76(a) of the MPGs	Namibia did not provide a description in its BTR of the definitions needed to understand its NDC and the underlying methodology and/or accounting approach for each selected indicator and how they are related to its NDC. Specifically, the Party provided only a description of the methodology and accounting approach for the indicator total GHG emissions and removals, but not for the other indicators. During the review, Namibia explained that its understanding was that this information is only required for the key or main indicator selected, and not for all other selected indicators. The TERT recommends that, if the additional indicators selected by the Party are also used to track progress towards its NDC, the Party provide a definition of each indicator and a description of the methodology and/or accounting approach, as applicable, for all indicators selected, as well as information on how they are related to its NDC under Article 4 of the Paris Agreement.

Table 11

Areas of improvement of the reporting on mitigation policies and measures, actions and plans, including those with mitigation co-benefits resulting from adaptation actions and economic diversification plans, related to implementing and achieving the nationally determined contribution under Article 4 of the Paris Agreement

<i>ID#</i>	<i>Reporting requirement</i>	<i>Description of area of improvement with recommendation or encouragement</i>
11.1	Specified in paragraphs 80 and 84 of the MPGs	Namibia's BTR1 (section 3.8) contains information on actions, policies and measures that support the implementation and achievement of its NDC; however, CTF table 5 contains information on a smaller number of actions, policies and measures than those reported in the BTR1. In addition, paragraph 80 of the MPGs requires information on actions, policies and measures including mitigation co-benefits to be reported in both narrative and tabular format. During the review, Namibia acknowledged that the information on actions, policies and measures was provided in tabular format only and indicated that it would provide this information in narrative format in the next BTR. The TERT recommends that the Party provide information on actions, policies and measures also in narrative format.
11.2	Specified in paragraphs 80 and 82 of the MPGs	Namibia did not report information in CTF table 5 on all its actions, policies and measures. It reported information only on 5 of the 38 actions, policies and measures listed in BTR1 table 3-7. The BTR contains no information clarifying the selection of the five actions, policies and measures in the CTF table. During the review, Namibia acknowledged that information was reported only on 5 of the 38 actions, policies and measures listed in BTR1 table 3-7. Namibia explained that it did so owing to the limited availability of quantitative data and the ongoing development of monitoring and reporting systems for certain indicators and policies, and informed the TERT that it will provide the necessary information in the next BTR. The TERT recommends that the Party, to the extent possible, report consistent information on all actions, policies and measures listed in the BTR and in CTF table 5, and explain the criteria for not listing all actions, policies and measures in CTF 5.
11.3	Specified in paragraph 83(c) of the MPGs	Namibia did not report information in its BTR1 on how its mitigation actions interact with each other, as appropriate. During the review, Namibia acknowledged that information on how its mitigation actions interact with each other was not reported in the BTR1 and informed the TERT that it will provide this information in the next BTR. The TERT encourages Namibia to provide in the BTR information on how its mitigation actions interact with each other or explain why this information was not provided.
11.4	Specified in paragraph 85 of the MPGs	Namibia did not report in CTF table 5 information on achieved GHG emission reductions for its actions, policies and measures, but only for expected reductions without specifying the time frame (e.g. by 2030). The TERT noted that additional information on the impact of the actions, policies and measures (though not specifying if expected or achieved) is provided in BTR1 table 3-7, including the mitigation impact of many of the Party's actions, policies and measures on GHG emissions. However, for many actions, policies and measures reported in table 3-7, the mitigation impact is reported as "NA" or "TBD" (to be determined). During the review, Namibia explained that some actions, policies and measures are, by nature, difficult to track in terms of their achieved mitigation impact. The Party also explained that, for the actions, policies and measures whose mitigation impact was reported as "TBD", it lacked the capacity to track and report their respective mitigation impact and it might consider using the flexibility provisions. The TERT recommends that the Party, to the extent possible, provide complete information on GHG emission reductions expected and achieved for its actions, policies and measures in tabular format. If the Party deems that it is not possible to report this information consistently with paragraph 85 of the MPGs and decides to apply the flexibility provisions in the light of its capacities, the TERT recommends that the Party clarify it in the BTR.

<i>ID#</i>	<i>Reporting requirement</i>	<i>Description of area of improvement with recommendation or encouragement</i>
11.5	Specified in paragraph 86 of the MPGs	Namibia did not describe in its BTR1 the methodologies and assumptions used to estimate the GHG emission reductions or removals due to each action, policy and measure reported in CTF 5 or table 3-7 in the BTR. During the review, Namibia acknowledged that the methodologies and assumptions used to estimate the GHG emission reductions or removals due to each action, policy and measure were not described in the BTR1. Namibia also mentioned that it will provide this information in the next BTR. The TERT recommends that the Party, to the extent possible, describe in the BTR the methodologies and assumptions used to estimate the GHG emission reductions or removals due to each action, policy and measure. In line with paragraph 86 of the MPGs, the TERT notes that this information may be presented in an annex to the BTR.

Table 12

Areas of improvement of the summary of greenhouse gas emissions and removals

<i>ID#</i>	<i>Reporting requirement</i>	<i>Description of area of improvement with recommendation or encouragement</i>
12.1	Specified in paragraph 91 of the MPGs	The summary of GHG emissions and removals reported by the Party in BTR1 table 3-9 (pp.62–64) does not correspond to the values reported in the CRTs for 1990, 2000, 2010 and 2022 or to the values reported in CTF table 6. In addition, the values reported in CTF table 6 do not match those reported in CRT 10. The TERT further noted that CTF table 6 does not cover the entire time series or the most recent years, focusing only on 1990, 2000, 2010 and 2022. The TERT also noted that the notation key “NA”, or the terms “negligible” or “net sink” were applied for some years in BTR1 table 3-9, even though quantitative information is available in the CRTs. During the review, Namibia acknowledged the discrepancies in the reported values and indicated that it will ensure consistency between the values reported for the summary of GHG emissions and removals in the BTR and the values reported in the NID and CTF table 6. The TERT recommends that the Party provide the summary of GHG emissions and removals for the most recent years of the time series in accordance with the most recent NIR, ensuring consistency between the values reported in the BTR, CTF table 6 and the NIR.

Table 13

Areas of improvement of the projections of greenhouse gas emissions and removals

<i>ID#</i>	<i>Reporting requirement</i>	<i>Description of area of improvement with recommendation or encouragement</i>
13.1	Specified in paragraph 95 of the MPGs	The starting year for Namibia’s projections is 2022, but the value reported in the BTR1 as emissions for this year (p.67) is –104.206 Mt CO₂ eq, which does not correspond to the value reported in CRT 10 for 2022 (–94,342.26 Mt CO₂ eq). In addition, the projections extend only to 2035 and not to at least 15 years beyond the next year ending in zero or five (2040). During the review, Namibia acknowledged that the projections for the most recent inventory year (2022) were not available when calculating the projections. The Party also informed the TERT that it needs additional capacity to develop more accurate and updated timely projections, and it might use the flexibility provisions. The TERT recommends that the Party develop and report the projections beginning from the most recent inventory year in accordance with the Party’s NIR and extending at least 15 years beyond the next year ending in zero or five, or clarify that it is applying the relevant flexibility provisions in the light of its capacities.
13.2	Specified in paragraph 96(a) of the MPGs	Namibia did not provide information in the BTR1 on the models and/or approaches used and key underlying assumptions and parameters used for the projections (e.g. gross domestic product growth rate/level, population growth rate/level). There is no information (in tabular format) on underlying assumptions and parameters used for projections. During the review, Namibia explained that it has limited capacity to compile and report information on the methodologies used for the projections, and that

<i>ID#</i>	<i>Reporting requirement</i>	<i>Description of area of improvement with recommendation or encouragement</i>
		information on the models and/or approaches used and key underlying assumptions and parameters used for the projections will be included in its BTR2. The TERT encourages the Party to provide information on the models and/or approaches used and key underlying assumptions and parameters used for the projections, including clear information on any changes made between the BTR1 and BTR2.
13.3	Specified in paragraph 96(d) of the MPGs	Namibia reported information on a sensitivity analysis for the projections in the BTR1 (p.66). However, the Party did not provide the results of this analysis or a brief explanation of the methodologies and parameters used for the sensitivity analysis. During the review, Namibia explained that it has limited capacity to undertake and report a sensitivity analysis. The TERT encourages the Party to provide the results of any sensitivity analysis performed, including a brief explanation of the methodologies and parameters used for the sensitivity analysis.
13.4	Specified in paragraph 97 of the MPGs	Namibia did not report projections of key indicators to determine progress towards its NDC under Article 4 of the Paris Agreement (see table 10 above). During the review, Namibia explained that it has limited capacity to develop projections of key indicators in order to determine progress towards its NDC under Article 4 of the Paris Agreement. The TERT recommends that the Party provide projections of key indicators (e.g. total net GHG emissions and removals) to determine progress towards its NDC under Article 4 of the Paris Agreement.
13.5	Specified in paragraph 98 of the MPGs	Namibia did not report projections on a sectoral basis and by gas using a common metric consistent with that used in its NIR. No information on projections was reported in the CTF tables, and table 3-12 in the BTR provides only information by sector (transport not distinguished) for 2025–2035 without distinguishing the projection scenarios. During the review, Namibia acknowledged this reporting gap and explained that it will provide the required information in its BTR2. The TERT recommends that the Party provide information on projections on a sectoral basis and by gas using a common metric consistent with that used in its NIR.
13.6	Specified in paragraph 100 of the MPGs	Namibia did not report projections with and without LULUCF except in table 3-12, which provides total net emissions but without specifying which scenario is being considered. During the review, Namibia explained that there is a capacity gap in relation to reporting projections and indicated that it will provide the required information in its BTR2. The TERT recommends that the Party clearly report projections with and without LULUCF.
13.7	Specified in paragraph 101 of the MPGs	Namibia did not report complete and transparent information on projections in tabular format. There is some information on projections in the BTR1 (table 3-12), but it is not clear to which scenario this table refers. Other information on projections is only available in graphical format or reported across several tables in the BTR1. The CTF tables do not contain information on projections. During the review, Namibia acknowledged that the relevant CTF tables were not submitted and explained that they will be provided for the next submission. The TERT recommends that Namibia provide clear and complete information on projections in tabular format in the BTR and CTF tables.

Table 14

Areas of improvement of other information relevant to tracking progress in implementing and achieving the nationally determined contribution under Article 4 of the Paris Agreement

<i>ID#</i>	<i>Reporting requirement</i>	<i>Description of area of improvement with recommendation or encouragement</i>
14.1	NA	No areas of improvement identified

II. Capacity-building needs³ identified by the Party and by the technical expert review team in consultation with the Party during the technical expert review of its first biennial transparency report

2. Table 15 presents capacity-building needs identified by the Party and by the TERT in consultation with the Party during the technical expert review of its BTR1.

Table 15

Capacity-building needs identified in consultation with the Party

<i>ID#</i>	<i>Reporting requirement</i>	<i>Area in which capacity-building is needed</i>
General reporting		
1_CBN.1	Specified in paragraphs 4–6 of the MPGs	Understanding the Party's capacities in order to decide when to apply the flexibility provisions of the MPGs. While flexibility is available to developing countries that need it in the light of their capacities, Namibia did not report that it used these provisions. However, during the review, it became evident that the Party could have benefited from using flexibility provisions in relation to some reporting obligations under the MPGs, owing to lack of capacity. The Party acknowledged that it might use these flexibility provisions in the future (high priority)
1_CBN.2	NA	Strengthening technical and institutional capacity to develop and operationalize REDD+ elements, including the national REDD+ strategy, forest reference emission level/forest reference level, safeguard information system and national forest monitoring system, to enable transparent estimation, monitoring and reporting of forest-related emissions and removals and the preparation of the REDD+ technical annex in conjunction with the preparation of the BTR
NIR – general		
NA	NA	No capacity-building needs identified
NIR – energy		
3.E_CBN.1	Specified in paragraph 20 of the MPGs	Developing and institutionalizing the preparation of a national energy balance to support the estimation of GHG emissions for the energy sector. This includes technical training on methodologies for compiling the energy balance, developing institutional arrangements for systematic data collection from relevant data providers (e.g. energy producers, industrial facilities and statistical agencies) and establishing QA/QC procedures (high priority)
3.E_CBN.2 ^b	Specified in paragraphs 21 and 23 of the MPGs	Strengthening technical and institutional capacity to implement higher-tier methodologies (e.g. tier 2 or higher) for estimating CO ₂ emissions from solid fuels for category 1.A.2 manufacturing industries and construction. This includes developing country-specific and/or plant-specific EFs, improving systems for collecting facility-level AD, and enhancing engagement with stakeholders such as industrial facilities (e.g. cement plants) and solid fuel importers (high priority)
3.E_CBN.3 ^b	Specified in paragraph 20 of the MPGs	Strengthening technical and institutional capacity to establish a consistent and reliable AD collection system for domestic aviation emissions. This includes developing procedures for systematically collecting AD (e.g. number of landings and take-offs), improving coordination and data-sharing with stakeholders such as aviation authorities and airport operators, and providing training on data-collection tools, data management and QC procedures to ensure accurate and complete reporting over time

³ As referred to in paras. 7, 8 and 162(d) of the MPGs.

<i>ID#</i>	<i>Reporting requirement</i>	<i>Area in which capacity-building is needed</i>
3.E_CBN.4 ^b	Specified in paragraph 21 and 23 of the MPGs	Strengthening technical capacity to collect, manage and analyse detailed road transport AD to support the application of a tier 2 or tier 3 methodology. This includes conducting regular surveys, improving the accuracy of data on vehicle kilometres travelled, fuel consumption by vehicle class and fleet composition, as well as enhancing data validation and QC procedures, including the use of fuel sales data from service stations
3.E_CBN.5 ^b	Specified in paragraph 21, and 23 of the MPGs	Strengthening technical and institutional capacity to improve data collection and reporting on domestic navigation emissions. This includes identifying relevant stakeholders, enhancing engagement with stakeholders involved in domestic navigation activities and conducting training on data-collection tools and QC procedures
3.E_CBN.6 ^b	Specified in paragraph 47 of the MPGs	Strengthening technical and institutional capacity to improve the completeness and accuracy of emission estimates for the commercial/institutional and agriculture/forestry/fishing subcategories. This includes identifying relevant operators, establishing systems to collect AD on fuel consumption and providing training to stakeholders on the use of data-collection and reporting tools, as well as QC procedures (high priority)
NIR – IPPU		
4.I_CBN.1	Specified in paragraphs 21 and 23 of the MPGs	Strengthening technical and institutional capacity to establish a consistent and reliable data-collection system for HFC emissions from product uses as substitutes for ozone-depleting substances, SF ₆ emissions from electrical equipment and N ₂ O emissions from other product uses. This includes developing procedures for systematically collecting AD (e.g. on consumption of foam blowing agents, aerosols and fire protection agents, SF ₆ emissions from equipment installed by private electricity producers for their own use or independent electric energy producers, and use of N ₂ O for medical applications), improving coordination and data-sharing with stakeholders such as national statistics agencies, customs authorities, industry associations and individual manufacturers, and providing training on data-collection tools, data management and QC procedures to ensure accurate and complete reporting over time (high priority)
4.I_CBN.2	Specified in paragraphs 21 and 23 of the MPGs	Strengthening technical and institutional capacity to implement higher-tier methodologies for estimating HFC emissions from refrigeration and air conditioning. This includes developing country-specific or plant-specific EFs and improving systems for collecting AD (high priority)
NIR – agriculture		
5.A_CBN.1	Specified in paragraphs 39–40 of the MPGs	Strengthening capacity for collecting and analysing data on synthetic fertilizer use to support the estimation of GHG emissions (high priority)
5.A_CBN.2	Specified in paragraph 47 of the MPGs	Strengthening capacity to calculate GHG emission and removal estimates for soil-related sources and develop country-specific SOC values (high priority)
5.A_CBN.3	Specified in paragraphs 21 and 23 of the MPGs	Enhancing research capacity to estimate CH ₄ emissions from enteric fermentation and develop country-specific EFs
NIR – LULUCF		
6.L_CBN.1	Specified in paragraphs 21 and 26 of the MPGs	Enhancing capacity to prepare a land-use matrix to be used in the IPCC inventory software that is consistent with the land representation approach adopted by the Party. This includes consulting the guidance on using the IPCC inventory software (available at https://www.ipcc-nggip.iges.or.jp/software/files/Land_Representation_Guide_ver.1.2.pdf) (high priority)

<i>ID#</i>	<i>Reporting requirement</i>	<i>Area in which capacity-building is needed</i>
6.L_CBN.2	Specified in paragraph 20 of the MPGs	Conducting trainings on how to use the Wetlands Supplement for estimating CSCs for category 4.D wetlands and land conversions from and to wetlands
6.L_CBN.3 ^b	Specified in paragraphs 21 and 26 of the MPGs	Updating and ensuring the consistency of data on land use and land-use changes for the whole time series where data gaps occur (high priority)
6.L_CBN.4 ^b	Specified in paragraphs 39–40 of the MPGs	Strengthening capacity to calculate GHG emission and removal estimates for soil-related sources and collecting data on country-specific SOC values for each land-use category in the LULUCF sector, in conjunction with the similar activity for the agriculture sector (see ID# 5.A_CBN.2 above) (high priority)
NIR – waste		
7.W_CBN.1	Specified in paragraphs 23, 24, 31, 33 and 47 of the MPGs	Strengthening AD collection systems and applying relevant waste sector methodologies across the waste sector; strengthening data collection on sludge and waste generation, composition and incineration across the time series, where possible; and prioritizing data collection for category 5.B biological treatment of solid waste, as this category is currently reported as “NE” and the non-availability of AD is the Party’s primary reason for not reporting in accordance with the MPGs. Namibia currently estimates emissions from solid waste disposal on land, which is a key category (without LULUCF), using a tier 1 first-order decay model. Collecting appropriate waste composition data will enable Namibia to progress to using a higher-tier methodology. The actions above will also improve the Party’s institutional arrangements and data collection and coordination for the waste sector, for which Namibia currently has limited data availability owing to weak coordination between the Ministry of Environment, Forestry and Tourism, municipalities, landfill operators, utilities and private waste companies, and fragmented data flows. Developing and implementing the necessary legal or institutional mandates for regular data provision will ensure sustained reporting in accordance with the MPGs and ensure that appropriate data-sharing agreements are in place (high priority)
7.W_CBN.2	Specified in paragraphs 39–40 of the MPGs	Improving the transparency of and documentation provided in the NID. This includes providing general training on transparency for the compilers of the inventory for the waste sector, including in relation to missing documentation on assumptions and default parameters used; lack of explanation when deviating from IPCC decision trees; and missing or unclear literature references, especially for recycling rates, waste treatment pathways and industrial wastewater trends
7.W_CBN.3	Specified in paragraphs 22 and 34–36 of the MPGs	Enhancing QA/QC and inventory management systems for the waste sector. There is a need to strengthen the QA/QC workflow for the waste sector as several errors were identified that could easily be fixed by implementing appropriate QA/QC procedures (high priority)
7.W_CBN.5	Specified in paragraphs 26–28 and 43 of the MPGs	Improving the use of gap-filling techniques, including developing capacity on how to use proxy data or gap-filling techniques to ensure time-series consistency and completeness. This includes interpolation, extrapolation and splicing of time-series data; avoiding repeated use of identical AD across multiple years; and justifying proxy data choices in line with IPCC guidance
Information necessary to track progress in implementing and achieving the NDC under Article 4 of the Paris Agreement		
8_CBN.1	Specified in paragraph 60 of the MPGs	Identifying the linkages between the country’s circumstances and national GHG emissions and removals and systematically assessing how national circumstances affect the country’s GHG emissions and removals and mitigation actions over time

<i>ID#</i>	<i>Reporting requirement</i>	<i>Area in which capacity-building is needed</i>
10_CBN.1	Specified in paragraphs 68–70 of the MPGs	Strengthening institutional arrangements and technical capacity to track all indicators identified for tracking progress towards and achievement of the country's NDC, including the performance indicators for tracking the progress of actions, policies and measures (high priority)
11_CBN.1	Specified in paragraph 85 ^{a, b} of the MPGs	Developing technical and institutional capacity to enhance the use of methodologies and assumptions to estimate GHG emission reductions or removals (mitigation impact) for each action, policy and measure (high priority)
11_CBN.2	Specified in paragraph 90 of the MPGs	Developing institutional arrangements and technical capacity to use methodologies for assessing the economic and social impacts of response measures
13_CBN.1 ^b	Specified in paragraphs 95 ^b –96 of the MPGs	Strengthening institutional arrangements and technical capacity for developing and reporting projections for all relevant years, including the approaches, methodologies, parameters and assumptions, and sensitivity analysis, and monitoring key indicators to determine progress towards its NDC (high priority)

^a Capacity-building need identified by the TERT in consultation with the Party relating to the flexibilities applied by it as per the MPGs.

^b Capacity-building need identified by the Party in its BTR1.

Annex

Documents and information used during the review

A. Reference documents

BTR1 of Namibia. Available at <https://unfccc.int/first-biennial-transparency-reports>.

BTR1 CTF tables of Namibia. Available at <https://unfccc.int/first-biennial-transparency-reports>.

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Fifth NIR of Namibia. Available at <https://unfccc.int/sites/default/files/resource/Namibia%20NIR5%20Part%201-Final%20.pdf> and <https://unfccc.int/sites/default/files/resource/Namibia%20NIR5%20Part%202-Final.pdf>.

B. Additional information provided by the Party

Responses to questions during the review were received from Reagan Chunga (Ministry of Environment, Forestry and Tourism), including additional material.
