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## **Report on the technical expert review of the first biennial transparency report of Uruguay\***

### **Addendum**

#### *Summary*

This addendum to the report on the technical expert review of the first biennial transparency report of Uruguay, 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 1 to 5 December 2025 in Montevideo.

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\* 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>
AD	activity data
BTR	biennial transparency report
CaO	calcium oxide
CBIT	Capacity-building Initiative for Transparency
CH <sub>4</sub>	methane
CO	carbon monoxide
CO <sub>2</sub>	carbon dioxide
CO <sub>2</sub> eq	carbon dioxide equivalent
COD	chemical oxygen demand
CRT	common reporting table
CTF	common tabular format
DOM	dead organic matter
EF	emission factor
ETF	enhanced transparency framework under the Paris Agreement
F-gas	fluorinated gas
FI	input factor
FLU	land-use factor
FMG	management factor
GHG	greenhouse gas
HFC	hydrofluorocarbon
HWP	harvested wood products
IE	included elsewhere
IPCC	Intergovernmental Panel on Climate Change
IPPU	industrial processes and product use
LEAP	Low Emissions Analysis Platform
LULUCF	land use, land-use change and forestry
MCF	methane correction factor
MMS	manure management system(s)
MPGs	modalities, procedures and guidelines for the transparency framework for action and support referred to in Article 13 of the Paris Agreement
N <sub>2</sub> O	nitrous oxide
NA	not applicable
NDC	nationally determined contribution
NE	not estimated
NID	national inventory document
NIR	national inventory report
NMVO	non-methane volatile organic compound
NO	not occurring
NO <sub>x</sub>	nitrogen oxides
PaMs	policies and measures
PFC	perfluorocarbon
QA/QC	quality assurance/quality control
SimSEE	Simulation of Electric Power Systems
SO <sub>2</sub>	sulfur dioxide
SOC	soil organic carbon
SWDS	solid waste disposal site(s)

TERT	technical expert review team
WASP	Wien Automatic System Planning Package
WM	'with measures'

## I. Areas of improvement<sup>1</sup> identified during the technical expert review of the Party's first biennial transparency report

- Tables 1–14 present the results of the review of the consistency with the MPGs<sup>2</sup> of the information submitted by Uruguay 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

<i>ID#</i>	<i>Reporting requirement</i>	<i>Description of area of improvement with recommendation or encouragement</i>
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

<i>ID#</i>	<i>Reporting requirement</i>	<i>Description of area of improvement with recommendation or encouragement</i>
2.G.1	Specified in paragraphs 34–35 of the MPGs QA/QC and verification	<p>The TERT noted several inconsistencies in information reported in the NID, involving all sectors, for example:</p> <p>(a) On page 68, total NMVOC emissions are reported as 24.1 kt for 2022 (which is the same value reported for the energy sector), but on the same page, NMVOC emissions are also reported from the IPPU (21.1 kt) and waste (0.0051 kt) sectors, totalling 45.2 kt NMVOC emissions. This latter value matches the total NMVOC emissions reported in NID table 2.1 (pp.48–49). The TERT noted similar errors in the reporting of emissions of other precursor gases (CO, NO<sub>x</sub> and SO<sub>2</sub>);</p> <p>(b) In NID table 6.11 (p.289), the total area of forest land remaining forest land for 2022 is reported as 1,612,081 ha, but for the same year, 1,671,920 ha is reported in CRTs 4.1 and 4.A. During the review, the Party explained that the differences in the values reported are due to transcription errors when compiling the CRT tables and when using the IPCC software.</p> <p>(c) Sources and totals of indirect emissions for CO (6.79 kt) and NO<sub>x</sub> (0.29 kt) for the LULUCF sector are reported in CRT 6, but according to NID section 5.5.3 (p.251), those CO and NO<sub>x</sub> emissions correspond to emissions from biomass burning under the agriculture sector categories (3.E and 3.F respectively, reported in the corresponding CRTs) and do not relate to the LULUCF sector;</p> <p>(d) On pages 437–440, in the table titled “Table Level 1 – 2022 regarding uncertainties”, the column titled “Year 2022 emissions or removal (kt CO<sub>2</sub> equivalent)” has the same values as the column “ABS Year 2022 emissions or removals (kt CO<sub>2</sub> equivalent)”; however, the reported sum for each column is different: 28.448 and 64.993 kt CO<sub>2</sub> eq respectively.</p> <p>(e) Furthermore, the TERT noted that in NID table 7.45 (p.394) a steep upward trend in CH<sub>4</sub> emissions from industrial wastewater can be seen in 1990–2010, followed by a steep decline in 2010–2022, and large inter-annual variations are evident (e.g. 149 kt CO<sub>2</sub> eq in 2021 and 186 kt CO<sub>2</sub> eq in 2022). In addition, after retrieving data on annual production volumes, the main sectors generating COD in industrial wastewater (meat processing and milk production; see also NID p.409) show significant inter-annual fluctuation in COD generation per unit of industrial output in 2011–2022. This fluctuation, and an indication of whether QC</p>

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

<sup>2</sup> Decision 18/CMA.1, annex.

<i>ID#</i>	<i>Reporting requirement</i>	<i>Description of area of improvement with recommendation or encouragement</i>
		<p>procedures are applied when such fluctuation is observed, is not explained in the NID.</p> <p>The TERT also noted the challenges expressed by Uruguay in using the ETF reporting tools for filling the CRTs, including interoperability issues with the IPCC inventory software.</p> <p>During the review, Uruguay acknowledged the discrepancies in information and noted that transcription and typographical errors had occurred, explaining that it faced some issues with implementing QA/QC procedures due to time constraints experienced in preparing and submitting the BTR1 on time. With regard to the above-mentioned examples, the Party clarified that:</p> <p>(a) The correct values for NMVOC, CO, NO<sub>x</sub> and SO<sub>2</sub> emissions for 2022 are those reported in NID table 2.1;</p> <p>(b) The correct value for total area of forest land remaining forest land in 2022 is 1,671,923 ha, as reported in NID table 6.10;</p> <p>(c) The correct value for the sum for both columns in the table is 28.448 kt CO<sub>2</sub> eq.</p> <p>Furthermore, the Party explained that it has internal QA/QC protocols in place and external reviews that take place on an annual basis to verify the consistency of the data reported. When inconsistencies or errors are detected, consultations and verifications are carried out with the data providers.</p> <p>Regarding CH<sub>4</sub> emissions from industrial wastewater, the inter-annual variation observed is attributed to changes in effluent treatment systems and fluctuations in the activity level of the industries involved.</p> <p>Finally, the Party explained that while it made onerous efforts to use the ETF reporting tools and IPCC inventory software, which placed an undue burden on the Party, reporting issues arose as a result of their use.</p> <p>The TERT recommends that Uruguay implement robust, comprehensive general and sector-level QC procedures for its NID before submission, in accordance with its QA/QC plan and the 2006 IPCC Guidelines, and explain any QA procedures or category-specific QC procedures already in place such as conducting a basic expert peer review of its NID.</p>

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 paragraph 40 of the MPGs 1. General (energy sector) – all fuels – all gases	<p>In annex 5 to the NID (p.515), the Party provided a link to information on the national energy balance, including AD at the most disaggregated level. However, the TERT found that the link does not work and the information thus could not be accessed.</p> <p>During the review, the Party provided the link to the national energy balance (<a href="https://www.gub.uy/miem/ben">https://www.gub.uy/miem/ben</a>).</p> <p>The TERT recommends that Uruguay ensure that the NID contains either AD reported at the most disaggregated level, to the extent possible, or an active link to the national energy balance, where such information can be found.</p>
3.E.2	Specified in paragraph 51 of the MPGs 1. General (energy sector) – all fuels – precursor gases	<p>The Party reported emissions of precursors (NO<sub>x</sub>, CO, NMVOCs) and SO<sub>2</sub> in CRTs 1, 2(I), 3, 4, 5, Summary 1 and Summary 2 and in NID tables 2.1, 3.3, 3.9, 4.1, 4.4, 5.1, 5.6, 6.2, 6.6, 7.1 and 7.1.4, as well as in NID section 2.2.2.5 (pp.65–68). Nevertheless, the TERT did not find in the NID the AD and EFs used to estimate those emissions.</p> <p>During the review, the Party clarified that the AD and EFs used in calculating precursor emission estimates can be found at <a href="https://www.gub.uy/ministerio-ambiente/datos-y-estadisticas/datos/ingei-1990-2022-informacion-complementaria">https://www.gub.uy/ministerio-ambiente/datos-y-estadisticas/datos/ingei-1990-2022-informacion-complementaria</a>, by sector, and informed the TERT that it will include a methodological section on precursors in the next NID.</p> <p>The TERT encourages Uruguay to provide information on AD and EFs used to estimate emissions of precursors (NO<sub>x</sub>, CO, NMVOCs) and SO<sub>2</sub>.</p>

<i>ID#</i>	<i>Reporting requirement</i>	<i>Description of area of improvement with recommendation or encouragement</i>
3.E.3	Specified in paragraphs 21 and 23 of the MPGs  1.A.3.b Road transportation – gasoline – CO <sub>2</sub>	<p>The Party reported that category 1.A.3.b road transportation – liquid fuels – CO<sub>2</sub> is a key category (annex 5 to the NIR, p.437). According to the Party, 56 per cent of emissions for this category correspond to diesel oil and the other 44 per cent to gasoline (NID p.110). The Party reported that it plans to apply a tier 2 method for estimating CO<sub>2</sub> emissions from road transportation and that, while it has begun developing a country-specific EF for diesel oil, it does not have the equipment to do so for gasoline (NID p.112). The Party also indicated in BTR table 5.7 (annex 5) that determining the carbon content of diesel oil consumed in Uruguay is a capacity-building need.</p> <p>During the review, the Party confirmed the information reported and stated that developing a country-specific gasoline EF constitutes a capacity-building need, because it does not have the appropriate equipment or the resources for this task.</p> <p>The TERT encourages Uruguay to make every effort to use a higher-tier method for estimating emissions for category 1.A.3.b, a key category, in line with IPCC good practices, and to report information on how it is addressing or intends to address the determination of country-specific EFs for diesel oil and gasoline.</p>

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 paragraph 46 of the MPGs  2. General (IPPU)	<p>The Party reported in NID section 4.12 details on the sector-specific QA/QC procedures in place for the IPPU sector. However, it was not clear to the TERT whether those procedures relate only to the internal QA/QC procedures for GHG inventory compilation or also to checking data obtained from external sources (e.g. company data for cement and steel production, and data from the National Directorate of Climate Change for F-gas consumption).</p> <p>During the review, the Party clarified that the reported sector-specific QA/QC comprises procedures that are part of the broader QA/QC framework for GHG inventory compilation. It also clarified that data from external sources are, when possible, compared with information from other sources (academic studies, national statistics), that their consistency is evaluated against the historical time series and that they are analysed in the context of sectoral activity.</p> <p>The TERT recommends that Uruguay enhance the transparency of its reporting on sector-specific QA/QC procedures by providing more comprehensive information on the procedures in place for GHG inventory compilation and the procedures followed for checking data from external sources, including how measurement, reporting and verification activities are applied to the outcome of the comparisons and evaluations and how the data are recorded, archived and approved for use in the GHG inventory.</p>
4.I.2	Specified in paragraphs 29 and 44 of the MPGs  2.A.1 Cement production – CO <sub>2</sub>	<p>The Party reported its assumptions for the uncertainty estimation for category 2.A.1 cement production, a key category (estimated using the tier 2 approach), in NID table 4.15. However, the TERT noted that only uncertainty values for AD and EFs are reported, together with a total uncertainty value, whereas table 2.3 of the 2006 IPCC Guidelines (vol. 3, chap. 2) provides guidance (with uncertainty ranges) for more elements relevant to estimating overall uncertainty when applying the tier 2 approach to cement production.</p> <p>During the review, the Party clarified that the uncertainty of the EFs is determined by combining the uncertainty of the CaO fraction (average of the range) under the assumption that the CaO is derived entirely from calcium carbonate (value defined within the default range according to information from each plant) and the assumption that 100 per cent of the carbonate is calcined (default value) and that the uncertainty of the AD corresponds to the default value when clinker production data for each plant are available (average of the range).</p> <p>The TERT recommends that Uruguay provide more transparent information on which uncertainty parameters have been applied in estimating the overall uncertainty of emissions from cement production (based on the tier 2 methodology), how they relate to the elements of uncertainty set out in the 2006</p>

ID#	Reporting requirement	Description of area of improvement with recommendation or encouragement
4.I.3	Specified in paragraphs 20-21 and 39-40 of the MPGs 2.C.1 Iron and steel production – CO <sub>2</sub>	<p>IPCC Guidelines and how they affect the overall uncertainty for the category, as reported.</p> <p>In NID table 4.34, Uruguay reported the AD values for steel production used in estimating emissions for category 2.C.1 iron and steel production. The AD for between 2006 and 2022 is 959–1,086 t and varies, on average, around 1 kt/year over the whole time series. However, the TERT noted that the World Steel Association reports a production of approximately 50 kt steel for Uruguay (64–48 kt for 2020–2022) (see <a href="https://worldsteel.org/data/annual-production-steel-data/?ind=P1_crude_steel_total_pub/URY">https://worldsteel.org/data/annual-production-steel-data/?ind=P1_crude_steel_total_pub/URY</a>), and it was not clear to the TERT why the reported AD differ from the World Steel Association data. The Party also reported that only electric arc furnace steel production occurs in the country and that it applies the tier 2 methodology, based on the carbon content of materials and inputs, to estimate emissions for category 2.C.1 (following table 4.3 of the 2006 IPCC Guidelines (vol. 3, chap. 4)). Furthermore, for 2020, 2021 and 2022, the Party reported the same implied EF value for CO<sub>2</sub> (being the stoichiometric ratio of CO<sub>2</sub> to carbon) in CRTs 2(I).A–H, but the rationale for reporting a constant EF equal to the stoichiometric ratio of CO<sub>2</sub> to carbon was not clear to the TERT.</p> <p>During the review, the Party clarified that the data presented in NID table 4.34 do not correspond to steel production. The Party provided the TERT with steel production data and explained that, while the national steel production data used for the NID are somewhat higher than those reported for Uruguay by the World Steel Association, they are of the same order of magnitude. The Party noted that it could not determine the origin of the data published by the World Steel Association. The Party also clarified that the reported AD in NID table 4.34 and CRT 2(I).A–H are carbon inputs from the materials used for steel production; therefore, the implied CO<sub>2</sub> EF is indeed constant for the whole time series.</p> <p>The TERT recommends that Uruguay enhance the transparency, the comparability and the adherence of its reporting to the 2006 IPCC Guidelines by (1) providing the appropriate AD for steel production in kt steel produced and the corresponding EF in kt CO<sub>2</sub>/kt steel and (2) explaining how the carbon input in domestic steel production has been determined.</p>
4.I.4	Specified in paragraph 40 of the MPGs 2.A.1 Cement production – CO <sub>2</sub>	<p>In NID table 4.13, the Party explained that there are four clinker production plants in the country and that cement production is a key category. Regarding plant 4, Uruguay reported a tier 2 method for estimating 2020 emissions. However, it was not clear to the TERT why for plant 4 the 2020 national average of CaO content (understood to be the average of plant 1 and plant 2) was applied for this year rather than a plant-specific value. In addition, NID table 4.13 indicates that for 2021, a hybrid tier 1 and 2 approach was used for estimating emissions from plant 4, but the Party did not explain why applying a tier 2 method for this plant was not possible for 2020 or 2021. Furthermore, it was not clear in NID table 4.13 which tier was applied for plant 4 for 2022.</p> <p>During the review, the Party clarified that plant 4 began operating in 2021 and not in 2020, as reported in the NID. It also clarified that at the time of preparing the NID, the following AD were available for plant 4: annual cement production for 2021 and 2022, and annual clinker production for 2021. Clinker production data for 2022 were unavailable, and the clinker to cement ratio for 2021 was not considered valid as a reference because a significant volume of waste clinker was generated as the plant was starting up. The Party further clarified that for recent years (2023–2024), complete plant-specific data are available for plant 4.</p> <p>The TERT recommends that Uruguay provide accurate information on clinker production for plant 4 in terms of its years of operation and AD and EFs.</p>
4.I.5	Specified in paragraphs 26 and 57 of the MPGs 2.F.1 Refrigeration and air conditioning – F-gases	<p>In NID table 4.47, the time series for each gas and per use is not complete; in particular, for HFC-134a, use in aerosols is reported for 2012, 2014 and 2016, but not for 2013 and 2015. In addition, while the Party reported in NID section 4.7.3 (p.197) that linear interpolation was applied for 2000–2010 based on 2012–2016 values, NID table 4.47 shows a non-linear time series for 2000–2010, with inter-annual increases and decreases over adjacent years.</p> <p>During the review, the Party clarified that the use of HFC-134a in aerosols began in 2011 following the introduction of ordinance 774 of the Ministry of Public Health, which prohibited the marketing, import and manufacture of metered-dose</p>

<i>ID#</i>	<i>Reporting requirement</i>	<i>Description of area of improvement with recommendation or encouragement</i>
		<p>inhalers using chlorofluorocarbons as propellants. It also clarified that although the NID mentions linear interpolation, extrapolation was in fact performed to differentiate between the uses of HFC-134a while maintaining the proportion between the different uses (i.e. mobile and stationary air conditioning) and that data on total HFC-134a imports were obtained from the National Customs Directorate.</p> <p>The TERT, while noting that Uruguay applied the flexibility provision with regard to reporting a complete time series of GHG emissions in its BTR1, recommends that the Party provide an explanation of how it completed the time series when data for some years were not available and describe the calculation method presented during the review (an extrapolation method that maintains the proportion between the different uses (i.e. mobile and stationary air conditioning) of HFC-134-a, using the total HFC-134a imports data obtained from the National Customs Directorate).</p>
4.I.6	Specified in paragraphs 31 and 47 of the MPGs 2.F.1 Refrigeration and air conditioning – F-gases	<p>In CRT 2(II).B-Hs2, for category 2.F.1, the Party reported HFC and PFC emissions only for subcategories 2.F.1.a commercial refrigeration and 2.F.1.e mobile air conditioning. The TERT noted that for the other subcategories (2.F.1.b–d and 2.F.1.f) the Party reported “NO” for HFC and PFC emissions in the same CRT, even though the Party stated in NID sections 4.7.4.1 and 4.7.4.2 (pp.199–200) that other uses of stationary refrigeration and air conditioning occur in the country.</p> <p>During the review, the Party clarified that the appropriate notation key for reporting HFC and PFC emissions for subcategories 2.F.1.b–d and 2.F.1.f is “IE”, given that those emissions do occur, but that because information disaggregated by all applications is unavailable, the Party could only disaggregate the emissions into two subcategories. The Party mentioned that the IPCC inventory software’s category disaggregation for reporting F-gases does not align with the CRT format.</p> <p>The TERT recommends that Uruguay (1) report disaggregated emissions, by gas and by application, for all subcategories of category 2.F.1 refrigeration and air conditioning or, if it is not possible to do so, use the appropriate notation keys in its reporting (including, if using “IE”, indicating where the 2.F.1 emissions are reported) and (2) perform an ex post correction if the notation keys for F-gas categories generated by the IPCC inventory software are incorrect.</p>
4.I.7	Specified in paragraph 35 of the MPGs 2.F.1 Refrigeration and air conditioning – F-gases	<p>The TERT noted that Uruguay used IPCC default values from table 7.5 of the 2006 IPCC Guidelines (vol. 3, chap. 7) for product life factor to estimate emissions for category 2.F.1 refrigeration and air conditioning in NID tables 4.50 and 4.51 and for subcategory 2.F.2.a (p.204 and NID table 4.53), while in CRT 2(II).B-Hs2, the Party reported different product life emissions for categories 2.F.1 refrigeration and air conditioning and 2.F.2.a closed-cell foam.</p> <p>During the review, the Party confirmed that the default values included in NID tables 4.50, 4.51 and 4.53 were used for calculating emissions and entered into the IPCC inventory software. It clarified that the values do not directly correspond to the percentages in elements of the CRTs because they constitute an implicit EF from the IPCC inventory software derived by dividing emissions by AD.</p> <p>The TERT encourages Uruguay to perform a QC check to ensure consistency between the product life factors entered into the IPCC inventory software for estimating emissions for category 2.F.1 and the national values reported for that parameter in the CRTs and provide a clarification of any differences.</p>

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 21 and 23 of the MPGs 3.A.2 Sheep – CH <sub>4</sub> 3.C Rice cultivation – CH <sub>4</sub>	<p>The Party reported in NID table 5.7 using a tier 1 method for estimating CH<sub>4</sub> emissions for categories 3.A.2 sheep and 3.C rice cultivation. However, the TERT noted that both categories are key categories, therefore, a higher-tier method is more appropriate.</p> <p>During the review, Uruguay explained the reasons for not using the recommended method (tier level) for those categories in accordance with the 2006 IPCC Guidelines. Regarding category 3.A.2, while methodological advances exist for estimating CH<sub>4</sub> emissions from enteric fermentation of sheep, the need for</p>

ID#	Reporting requirement	Description of area of improvement with recommendation or encouragement
5.A.2	Specified in paragraphs 21 and 23 of the MPGs 3.D Direct and indirect N <sub>2</sub> O emissions from agricultural soils – N <sub>2</sub> O	<p>continued validation of the relevant parameters and methods by national experts remains. Regarding category 3.C, the Party does not prioritize moving towards a higher-tier methodological approach and EF.</p> <p>The TERT recommends that Uruguay use an appropriate method from the 2006 IPCC Guidelines or document in the NID the reason for not following the relevant decision tree from the 2006 IPCC Guidelines (vol. 4) with regard to estimating CH<sub>4</sub> emissions for the key categories 3.A.2 sheep and 3.C rice cultivation.</p> <p>The Party reported in NID table 5.7 using a mix of tier 1 and tier 2 methods for estimating emissions for categories 3.D.1 direct N<sub>2</sub>O emissions from managed soils and 3.D.2 indirect N<sub>2</sub>O emissions from managed soils. The TERT noted that the Party did not provide the reasons for using a mix of methods for those key categories.</p> <p>During the review, the Party clarified that the methodology applied represents an intermediate approach – more advanced than a tier 1 method but not yet fully consistent with a tier 2 method. The nitrogen excretion parameter for dairy and non-dairy cattle is country-specific and therefore corresponds to tier 2. However, the EFs correspond to tier 1 and the Party lacks comprehensive national data to refine the EFs. The Party indicated that developing country-specific EFs for direct and indirect N<sub>2</sub>O emissions from agricultural soils will require research and agronomic trials over long time frames.</p> <p>The TERT recommends that Uruguay use an appropriate method from the 2006 IPCC Guidelines or document in the NID the reason for not following the relevant decision tree from the 2006 IPCC Guidelines (vol. 4) (for example, as indicated during the review, lacking country-specific EFs) with regard to estimating direct and indirect N<sub>2</sub>O emissions from agricultural soils under category 3.D.</p>
5.A.3	Specified in paragraph 31 of the MPGs 3.B Manure management – N <sub>2</sub> O	<p>The Party reported in CRT 3.B(b) “NO” for N<sub>2</sub>O emissions for subcategories other than 3.B.1.a dairy cattle (emissions of 0.01 kt CO<sub>2</sub> eq reported), 3.B.3 swine (emissions of 0.05 kt CO<sub>2</sub> eq reported) and poultry (emissions of 0.004 kt CO<sub>2</sub> eq reported), while it reported AD and EFs in the same CRT. However, the TERT noted that emission estimates were reported for pasture range and paddock for the following animal categories: 3.B.1.b non-dairy cattle, 3.B.2 sheep, 3.B.4.d goats, 3.B.4.e horses and 3.B.4.f mules and asses.</p> <p>During the review, the Party explained that N<sub>2</sub>O emissions were estimated only for those animal categories for which MMS are in place and, therefore, direct emissions from those MMS can be calculated, namely, for dairy cattle, swine and poultry. The Party also explained that for categories for which excreta are deposited directly on the field, direct and indirect N<sub>2</sub>O emissions from agricultural soils were estimated and reported in CRT 3.D – the inclusion of estimates for pasture range and paddock for categories 3.B.1.b, 3.B.2, 3.B.4.d, 3.B.4.e and 3.B.4.f in CRT 3.B(b) was a compilation error.</p> <p>The TERT recommends that Uruguay report both AD and N<sub>2</sub>O emissions for pasture range and paddock as “IE” in CRT 3.B(b) for the following categories under 3.B manure management for which excreta are deposited directly on the field: 3.B.1.b non-dairy cattle, 3.B.2 sheep, 3.B.4.d goats, 3.B.4.e horses and 3.B.4.f mules and asses.</p>
5.A.4	Specified in paragraphs 31, 32 and 47 of the MPGs 3.G Liming – CO <sub>2</sub>	<p>The Party reported in CRT 3.G “NE” for CO<sub>2</sub> emissions from liming. The TERT noted that the Party also reported that emissions for subcategory 3.G.liming of soils were not estimated (NID section 5.5, p.247). However, the reason was not reported.</p> <p>During the review, the Party explained that emissions from liming are not estimated as no national data or suitable proxy data are available to be used as AD. Based on its knowledge of the sector, the Party indicated that those barriers do not allow an assessment of whether emissions from liming are significant. The Party informed the TERT that it is developing an improvement plan for its GHG emission estimates, which include the future incorporation of liming. However, the Party emphasized that it has identified other priorities, such as progressing towards applying the tier 2 methodology for key categories.</p>

<i>ID#</i>	<i>Reporting requirement</i>	<i>Description of area of improvement with recommendation or encouragement</i>
		<p>The TERT recommends that Uruguay report CO<sub>2</sub> emissions from liming or, if continuing to report these emissions as “NE”, indicate the reason for not estimating them.</p> <p>The TERT encourages the Party to use approximate AD and IPCC default EFs to derive a likely level of emissions to prove the insignificance of category 3.G liming, thereby justifying the use of “NE” for this category.</p>
5.A.5	Specified in paragraphs 39–40 of the MPGs 3.B Manure management – N <sub>2</sub> O	<p>In CRT 3.B(a) the Party reported “NA” or left cells empty for all animal categories for some parameters related to MMS, such as anaerobic lagoon; liquid system; daily spread; solid storage; pit storage; dry lot; deep bedding; pasture, range and paddock; composting; digesters; and burned for fuel or as waste. However, the TERT noted that a nitrogen excretion rate is reported in CRT 3.B(b) for many MMS referred to in CRT 3.B(a).</p> <p>During the review, the Party indicated that additional information on the MMS for dairy cattle, swine and poultry should have been included in CRT 3.B(a).</p> <p>The TERT recommends that Uruguay report information on parameters related to MMS for dairy cattle, swine and poultry such as: anaerobic lagoon; liquid system; daily spread; solid storage; pit storage; dry lot; deep bedding; pasture, range and paddock; composting; digesters; burned for fuel or as waste in CRT 3.B(a) in a manner consistent with CRT 3.B(b).</p>
5.A.6	Specified in paragraph 52 of the MPGs 3.E Prescribed burning of savannahs – CO and NO <sub>x</sub> 3.F Field burning of agricultural residues – CO and NO <sub>x</sub>	<p>The Party reported in NID section 5.5.3 (p.251) CO and NO<sub>x</sub> emissions from biomass burning related to agriculture (category 3.E prescribed burning of savannahs and category 3.F field burning of agricultural residues). However, the TERT noted that the Party reported sources of indirect emissions for CO (6.79 kt) and NO<sub>x</sub> (0.29 kt) in CRT 6, under the LULUCF sector.</p> <p>During the review, the Party clarified that indirect emissions of CO and NO<sub>x</sub> correspond to the categories 3.E prescribed burning of savannahs and 3.F field burning of agricultural residues and as such should be reported in CRT 3 (under the agriculture sector), and that the emissions were reported in CRT 6 (under the LULUCF sector) as a result of a compilation error.</p> <p>The TERT encourages Uruguay to report indirect emissions of CO and NO<sub>x</sub> corresponding to biomass burning in CRT 3, under the agriculture sector.</p>

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 19 of the MPGs 4. General (LULUCF) – CO <sub>2</sub>	<p>Uruguay applied expert judgment in several areas of the LULUCF inventory, for example, in assuming that 30 per cent of the total native forest area is growing, resulting in an adjusted growth rate based on this percentage (NID section 6.3.5, p.285). It also applied expert judgment in selecting SOC parameters (FLU, FMG and FI, as applicable) (NID table 6.15, p.294). However, it was not clear to the TERT how expert judgment was compiled and documented and whether it was done in accordance with the 2006 IPCC Guidelines.</p> <p>During the review, Uruguay explained that the GHG inventory team was involved when developing and agreeing on those assumptions; however, such expert judgment was not documented according to IPCC guidelines.</p> <p>The TERT recommends that Uruguay describe in the NID how it applied the 2006 IPCC Guidelines with respect to compiling and documenting expert judgment, and whether it followed the protocol set out in those Guidelines (vol. 1, chap. 2, and annex 2A.1).</p>
6.L.2	Specified in paragraphs 21 and 23 of the MPGs 4. General (LULUCF) – CO <sub>2</sub>	<p>Uruguay applied the tier 2 methods for estimating CO<sub>2</sub> emissions from the biomass pool for most key categories under the LULUCF sector, except for 4.B.1 cropland remaining cropland, 4.B.2 land converted to cropland, 4.C.1 grassland remaining grassland and 4.F.2 land converted to other land (for which tier 1 methods and values were used). Furthermore, tier 1 methods were applied for all other carbon pools estimated across the sector. The TERT noted that the reason for not using a higher-tier methodology for the key categories 4.B.2, 4.C.1 and 4.F.2, as well as</p>

ID#	Reporting requirement	Description of area of improvement with recommendation or encouragement
		for DOM and SOC for relevant LULUCF categories, was not explained in the NID.
		During the review, Uruguay explained that it lacks the information and resources required to implement tier 2 methods for some key categories.
		The TERT recommends that Uruguay include in the NID an explanation for using tier 1 methods for estimating CO <sub>2</sub> emissions from the biomass pool for some key categories and to make every effort to use a higher-tier method for those categories, in line with IPCC good practice, and to report information on how it is addressing or intends to address the issue for the categories 4.B.1 cropland remaining cropland, 4.B.2 land converted to cropland, 4.C.1 grassland remaining grassland and 4.F.2 land converted to other land, as well as for DOM and SOC for key LULUCF categories where the tier 1 method was applied.
6.L.3	Specified in paragraphs 20, 31, 32 and 47 of the MPGs 4. General (LULUCF) – all gases	Uruguay reported several LULUCF categories and/or pools as “NE” in CRTs 4.A, 4.B, 4.C, 4.D, 4.E, 4.F, 4.G.s1, 4(II) and 4(IV) relating to the following categories or pools: biomass (categories 4.B.1, 4.B.2, 4.C.2.b, 4.C.2.d, 4.D.1.a, 4.D.1.c, 4.E.1, 4.E.2.b, 4.E.2.c and 4.F.2.b), DOM (categories 4.A.1, 4.A.2.a, 4.A.2.b, 4.A.2.e, 4.B.1, 4.D.1.a, 4.D.1.c, 4.E.2.b and 4.E.2.c), SOC (categories 4.D.1.a and 4.D.1.c), CO <sub>2</sub> (categories 4.G, 4(II).A.1, 4(II).A.2, 4(II).B.1, 4(II).B.2, 4(II).C.1, 4(II).C.2 and 4(II).E.1) and all gases (4(II).D and 4(IV).E.1). The TERT noted that, while some of those categories and/or pools may be insignificant, the following are key categories: for the biomass pool, categories 4.B.1, 4.B.2, 4.C.2.b, 4.C.2.d and 4.F.2.b; and for the DOM pool, categories 4.A.1, 4.A.2.a, 4.A.2.b, 4.A.2.e and 4.B.1.
		During the review, Uruguay explained that it lacks the information and resources required to estimate emissions for those categories and/or pools and that some of those categories and/or pools are not significant. The Party confirmed that the <i>2013 Supplement to the 2006 IPCC Guidelines for National Greenhouse Gas Inventories: Wetlands</i> was not used for estimating GHG emissions reported in the BTR1.
		The TERT recommends that Uruguay report estimates of emissions and removals for all categories, gases and carbon pools considered in the GHG inventory in accordance with the 2006 IPCC Guidelines and when insignificant categories, gases or pools are reported as “NE”, indicate the reason for not estimating emissions from sources and removals by sinks and associated data.
		The TERT encourages the Party to use the <i>2013 Supplement to the 2006 IPCC Guidelines for National Greenhouse Gas Inventories: Wetlands</i> for estimating emissions and removals for the LULUCF sector, to the extent possible.
6.L.4	Specified in paragraph 31 of the MPGs 4(IV) Biomass burning – all gases	The Party reported non-CO <sub>2</sub> emissions from biomass burning for categories 4(IV).A, 4(IV).B, 4(IV).C, 4(IV).D and 4(IV).E as “IE” in NID tables 6.2 (p.270) and 6.6 (p.277), as well as CRT 4(IV). However, it was not clear to the TERT where those emissions are reported.
		During the review, the Party clarified that 100 per cent of non-CO <sub>2</sub> emissions are assumed to occur under categories 4.B.1 cropland remaining cropland and 4.C.1 grassland remaining grassland. It also clarified that those emissions were reported under the agriculture sector.
		The TERT recommends that Uruguay report where in the inventory non-CO <sub>2</sub> emissions from biomass burning are included, and to clarify whether the emissions reported as “IE” under the LULUCF sector are related to natural burning or should, rather, be included under the agriculture sector.
6.L.5	Specified in paragraph 39 of the MPGs 4. General (LULUCF) – CO <sub>2</sub>	Uruguay reported values for the SOC parameters FLU, FMG and FI in NID table 6.15. However, the TERT noted that the Party did not report the methods used to estimate those parameter values.
		During the review, Uruguay provided details on the sources of information and the assumptions with regard to the SOC parameters, and how expert judgment was integrated into their selection. For example, FLU was derived from expert judgment, based on information from Uruguay’s Land Use and Soil Management Plans and combined with carbon data from the long-term experiment at the National Agricultural Research Institute. FLU for the dryland crop–pasture rotation was calculated using the FLU values for annual crops and natural pastures,

<i>ID#</i>	<i>Reporting requirement</i>	<i>Description of area of improvement with recommendation or encouragement</i>
		<p>considering a 50 per cent time allocation for the crop and 50 per cent for pasture within the rotation. Similar methodological information was provided for the parameters FMG and FI.</p> <p>The TERT recommends that Uruguay provide a methodological description of how values for the SOC parameters FLU, FMG and FI were estimated.</p>
6.L.6.	<p>Specified in paragraph 39 of the MPGs</p> <p>Land representation – all gases</p>	<p>According to NID section 6.3.1 (p.279), Uruguay used the Collect Earth tool of the Food and Agriculture Organization of the United Nations for land representation, establishing a robust, systematic sample covering the entire national territory, in line with 2006 IPCC Guidelines. However, the TERT was unable to find a description of how Uruguay ensured equal sampling probability considering its intensification of the sample for a specific region of the country.</p> <p>During the review, the Party provided information on how equal sampling probability was ensured, namely, by using fixed strata as part of the sample stratification, as well as information on the accuracy associated with plot interpretation, which is not included in the BTR or the NID.</p> <p>The TERT recommends that Uruguay report information on how equal sampling probability is ensured over time by using fixed sampling strata and on how the accuracy of plot interpretation is ensured across interpreters.</p>
6.L.7	<p>Specified in paragraphs 39 and 47 of the MPGs</p> <p>4.A.1 Forest land remaining forest land – CO<sub>2</sub></p>	<p>Uruguay reported in NID section 6.3.5 (p.285) that forest growth rates and biomass carbon stocks were obtained from the General Directorate of Forestry. The TERT noted that while Uruguay reported the source of the information, the method for data collection was not specified.</p> <p>During the review, Uruguay clarified that the data were collected in field inventories, noting that the data used for forest land representation and methods for collecting them are not publicly available and that the data it collected were through field inventories. The TERT took note of the confidentiality of the information.</p> <p>The TERT recommends that Uruguay report the method for collecting data on forest growth rates and biomass carbon stocks (namely, field inventories, as specified during the review).</p>

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	<p>Specified in paragraphs 39 and 47 of the MPGs</p> <p>5.A Solid waste disposal on land – CH<sub>4</sub></p>	<p>In the NID (p.336), the Party mentioned three documents on which it based its estimates of the amount of municipal solid waste generated and disposed of. However, the TERT noted that it is unclear how the Party used the information in those documents to estimate the per capita waste generation values reported in NID table 7.7.</p> <p>During the review, the Party provided the page numbers in the above-mentioned documents from where it obtained (1) per capita waste generation rates for 2019, by department, (2) per capita waste generation rates for 2012 and (3) per capita waste generation rates for 1995. The Party explained that the time series 1996–2011 and 2013–2018 were derived by interpolation, using the values for 1995, 2012 and 2019. For the per capita waste generation rates for 2012, the Party noticed during the review that the values reported in the NID might in fact correspond to disposal rates at SWDS rather than to generation rates and, therefore, indicated that the estimates might need to be revised. The revision would affect the interpolated time series 1996–2018.</p> <p>The TERT recommends that Uruguay (1) report the exact location (page and table numbers) in the supporting documents where justification for the applied per capita waste generation rates can be found and (2) verify the per capita waste generation rates for 1996–2018 and recalculate emissions for 1996 if the per capita waste generation rates are revised.</p>
7.W.2	<p>Specified in paragraph 39 of the MPGs</p>	<p>In NID table 7.18, the Party provided an overview of the classification of its SWDS over time. In many regions of the country, SWDS are considered uncategorized or are categorized as shallow, deep or unmanaged. However,</p>

<i>ID#</i>	<i>Reporting requirement</i>	<i>Description of area of improvement with recommendation or encouragement</i>
5.A	Solid waste disposal on land – CH <sub>4</sub>	<p>according to the TERT more information might be available on SWDS management classification for 1950–2022. In addition, it was not clear to the TERT whether the Party’s classification corresponds to the definition of managed SWDS in the 2006 IPCC Guidelines (vol. 5, chap. 3, p.3.14), and if so, how. For example, when the TERT viewed the city of Paysandú in Google Earth, one SWDS appeared to have an office at the entrance and roads for transport (requiring compaction of the waste below), and a large part of the surface of the site appeared to be covered by sand, although some active dumping phases seemed to remain open. Therefore, according to the TERT, this site should have been characterized as managed.</p> <p>During the review, the Party clarified that the characterization presented for Paysandú in the BTR corresponds to the region rather than the city, and is based on a weighted average of the region’s SWDS. The Party also more clearly explained its approach to the classification of SWDS and indicated that it considered the presence of bottom liners and daily and monthly covers in its evaluation. However, the TERT noted that the presence of a bottom liner and a daily or monthly cover is not included in the definition of anaerobic managed SWDS in the 2006 IPCC Guidelines (vol. 5, chap. 3, p.3.14). Such SWDS must have controlled deposition of waste (i.e. waste directed to specific areas, a degree of control over scavenging and a degree of control over fires) and include at least one of the following: cover material, mechanical compacting or levelling of the waste.</p> <p>The TERT recommends that Uruguay describe the criteria it uses for SWDS classification and clearly indicate how they correspond to the criteria for classification defined in the 2006 IPCC Guidelines (vol. 5, chap. 3, p.3.14).</p>
7.W.3	Specified in paragraph 39 of the MPGs 5.D.1 Domestic wastewater – CH <sub>4</sub> and N <sub>2</sub> O	<p>In the NID (p.400), for category 5.D.1 domestic wastewater, the Party reported CH<sub>4</sub> emissions only for the plants applying anaerobic treatment. However, the TERT noted that, according to the 2006 IPCC Guidelines, centralized aerobic wastewater treatment plants may also produce limited CH<sub>4</sub> emissions from anaerobic pockets (vol. 5, chap. 6, p.6.8). The Guidelines note that only when aerobic wastewater treatment plants are well managed can an MCF of zero can be assumed and that aerobic wastewater treatment plants might be neglected when calculating CH<sub>4</sub> emissions from wastewater (vol. 5, chap. 6, p.6.13).</p> <p>During the review, the Party explained that aerobic wastewater treatment plants built in recent years are generally oversized relative to current demand (they are built in anticipation of an increase in connections). The Party assumes that the plants are currently functioning correctly, thus their MCF is assumed to be zero. In addition, Uruguay informed the TERT that a working group is in place (which includes the national sanitation manager responsible for the entire country except Montevideo, which only has pretreatment plants), whose work is considered an opportunity for analysing the operations of these plants.</p> <p>The TERT recommends that Uruguay provide a clear justification for the assumption that the MCF for aerobic wastewater treatment plants is zero.</p>

### **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**

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

Table 9

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

<i>ID#</i>	<i>Reporting requirement</i>	<i>Description of area of improvement with recommendation or encouragement</i>
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**

<i>ID#</i>	<i>Reporting requirement</i>	<i>Description of area of improvement with recommendation or encouragement</i>
10.1	Specified in paragraph 68 of the MPGs	<p>In CTF table 4, Uruguay did not report the most recent information for some of the indicators selected for tracking progress in implementing and achieving its NDC for each reporting year during the implementation period under Article 4, as follows:</p> <p>(a) For the indicators related to the intensity of CH<sub>4</sub> and N<sub>2</sub>O emissions per unit of gross domestic product and the intensity of CH<sub>4</sub> and N<sub>2</sub>O emissions from beef production per unit of product, the Party reported “NE” for 2022 but did not provide an explanation for the use of this notation key in the documentation box, instead referring to a conditional CO<sub>2</sub> target that does not correspond to the indicators;</p> <p>(b) For the LULUCF indicators area of shelterbelts and shade forests, area of grassland under good management practices for natural rangeland and cow–calf systems, and area of peatland in good or fair conservation status, the Party reported values for 2020 but “NE” for 2021 and 2022.</p> <p>During the review, the Party provided the following corresponding clarifications:</p> <p>(a) The CH<sub>4</sub> and N<sub>2</sub>O intensity indicators are calculated using a five-year average (years <math>t - 3</math> to <math>t + 1</math>). As a result, estimating the indicator for 2022 requires inventory data for 2023, which were not available at the time of preparation of the BTR1. The reference in the documentation box is a typographical error;</p> <p>(b) The information for these indicators is derived from cartographic products that are not produced annually but rather on a demand-driven basis that is very resource intensive. For area of shelterbelts and shade forests, the value reported for 2020 corresponds to cartographic information from 2018, which is the most recent year for which data are available after the base year (2012). No updated information has been generated to verify progress for any years of the implementation period reported in CTF table 4 for this indicator.</p> <p>The TERT recommends that Uruguay (1) report the most recent values for all indicators selected for tracking progress in implementing and achieving its NDC for each reporting year during the implementation period and (2) clearly explain in CTF table 4 or in the accompanying documentation box the reasons for reporting “NE”, as applicable, including issues stemming from limitations in data availability or methodological requirements.</p>
10.2	Specified in paragraphs 74(c) and 75(d) of the MPGs	<p>Uruguay did not provide the necessary information to explain how the base-year values were determined for some of the LULUCF indicators; specifically, the Party did not report the data sources, years of data collection or methodological assumptions for the indicators relating to grassland area (base year 2020), peatland area (base year 2020) and cropland area (the emissions avoided component of the indicator) (base year 2016).</p> <p>During the review, Uruguay clarified that the above-mentioned information is included in the website “Nationally determined contribution progress viewer”, which contains technical factsheets with details on the indicators. Regarding the cropland area indicator, the Party noted that a typographical error occurred in CTF table 4.11 and the base year should be 2020 instead of 2016.</p> <p>The TERT recommends that Uruguay clearly indicate the base year and explain how the base-year values are determined for each indicator, providing information on data sources, years of data collection and methodological assumptions, noting that this information could be included in the main text or annexed to the BTR in</p>

ID#	Reporting requirement	Description of area of improvement with recommendation or encouragement
10.3	Specified in paragraphs 75(d–f) and 76(d) of the MPGs	<p>the technical factsheets referred to during the review, which contain this information.</p> <p>Uruguay provided information on each methodology or accounting approach used to track its NDC in both textual (BTR) and tabular (CTF) format. However, the TERT noted the following issues in the information reported in CTF table 3:</p> <p>(a) Information on existing methods and guidance established under the Convention and its related legal instruments was not provided in accordance with paragraph 75(d) and (f) of the MPGs. Instead, Uruguay referred to emissions and subsequent removals from natural disturbances on managed lands, which relates to paragraph 75(d)(i) of the MPGs;</p> <p>(b) Information on the methodologies used to estimate mitigation co-benefits of adaptation actions and/or economic diversification plans was not provided in accordance with paragraph 75(e) of the MPGs. Instead, Uruguay referred to emissions and removals from HWP, which relates to paragraph 75(d)(ii) of the MPGs;</p> <p>(c) Information on how double counting of net GHG emission reductions has been avoided, including in accordance with guidance developed in relation to Article 6, was not provided in accordance with paragraph 76(d) of the MPGs. Instead, Uruguay referred to the effects of age-class structure in forests, which relates to paragraph 75(d)(iii) of the MPGs.</p> <p>During the review, the Party explained that errors had occurred when uploading information to the ETF reporting tools and provided the following corresponding clarifications:</p> <p>(a) The information under both provisions of the MPGs should have been reported as “NA”;</p> <p>(b) The information under both provisions of the MPGs should have been reported as “NA”;</p> <p>(c) The information that should have been provided for paragraph 76(d) is “The country has not participated in cooperative approaches”, while for paragraph 75(d)(iii), the information should have been reported as “NA”.</p> <p>The TERT recommends that Uruguay provide accurate information in CTF table 3 for the provisions specified in paragraphs 75(d) and 76(d) of the MPGs or clearly explain the reasons any of the provisions are not applicable: (1) existing methods and guidance established under the Convention and its related legal instruments, (2) emissions and subsequent removals from natural disturbances on managed lands, (3) the methodologies used to estimate mitigation co-benefits of adaptation actions and/or economic diversification plans, (4) emissions and removals from HWP, (5) how double counting of net GHG emission reductions has been avoided, including in accordance with guidance developed in relation to Article 6, and (4) the effects of forest age-class structure.</p>
10.4	Specified in paragraph 76(c) of the MPGs	<p>Uruguay reported in its BTR1 information on six indicators that rely on land area for tracking progress in implementing and achieving its NDC. However, the TERT noted that the Party did not clearly describe in the BTR1 how the monitoring system used for those indicators relates to the land-use monitoring system described in the NID, nor did it explain potential methodological inconsistencies between the two systems.</p> <p>During the review, Uruguay clarified that the data sources for the indicators differ from the sources used to monitor land use for the NID. The forest-related indicators are based on official forest maps for native forests, plantation forests, and shelterbelts and shade forests, which are produced at varying intervals depending on financial resources. The grassland indicator is based on a telephone survey of 368 livestock farmers, the cropland indicator relies on the national Soil Use and Management Plans and the peatland indicator is derived from a study for 2020, based on satellite image processing and on-site verification. Uruguay explained that, because those data sources differ from the Collect Earth survey used for the NID, methodological differences between the land-use systems result. The TERT recommends that Uruguay explain any methodological inconsistencies between the land-area indicators used for tracking progress in implementing and</p>

<i>ID#</i>	<i>Reporting requirement</i>	<i>Description of area of improvement with recommendation or encouragement</i>
10.5	Specified in paragraph 77(a) of the MPGs	<p>achieving its NDC and the land-use monitoring system described in its NID or explain why this provision of the MPGs is not applicable to the Party.</p> <p>Uruguay did not provide a structured summary containing all elements required to track the emissions avoided component of the cropland indicator. This indicator consists of two components: avoiding CO<sub>2</sub> emissions from SOC in 75 per cent of cropland area under the national Soil Use and Management Plans (1,147,000 ha) and sequestering CO<sub>2</sub> in the remaining 25 per cent of cropland area (383,000 ha), totalling 1,530,000 ha. The TERT noted that the total cropland area is reported in CTF table 1 as representing 100 per cent of cropland under the national Soil Use and Management Plans for 2016; however, CTF table 4.11 includes only the 1,147,000 ha associated with the avoided emissions component of the indicator.</p> <p>During the review, Uruguay explained that it unintentionally omitted the indicator component related to CO<sub>2</sub> sequestration in the remaining 383,000 ha from the BTR. The Party provided up-to-date information for this missing component via a publicly available visualization tool of the Ministry of Environment (<a href="https://www.gub.uy/ministerio-ambiente/sites/ministerio-ambiente/files/documentos/publicaciones/OBJ_21_FT_Objetoivo_UTCUTS_Tierras_Cultivo_1.4_0.pdf">https://www.gub.uy/ministerio-ambiente/sites/ministerio-ambiente/files/documentos/publicaciones/OBJ_21_FT_Objetoivo_UTCUTS_Tierras_Cultivo_1.4_0.pdf</a>) and indicated that this information will be included in the next BTR.</p> <p>The TERT recommends that Uruguay provide consistent information for the cropland area indicator in CTF tables 1 and 4 and, as applicable, include information on progress or outcomes related to the CO<sub>2</sub> sequestration component of the indicator (383,000 ha) in the BTR and in CTF tables 1 and 4, as presented in the publicly available visualization tool of the Ministry of Environment.</p>
10.6	Specified in paragraph 77(b–c) of the MPGs	<p>In its CTF tables, Uruguay provided neither information on total GHG emissions and removals consistent with the coverage of its NDC (in accordance with para. 77(b) of the MPGs) nor estimates of the contribution from the LULUCF sector for each year of the target period (para. 77(c) of the MPGs) for any of the 11 indicators it has selected for tracking progress in implementing and achieving its NDC.</p> <p>During the review, Uruguay explained that “NA” should have been entered into the relevant cells in the CTF tables and indicated that it will apply this notation key in the next BTR. The Party also clarified that the LULUCF indicators are expressed in area (hectares), as they track carbon-stock maintenance rather than annual emissions or removals.</p> <p>The TERT recommends that Uruguay provide the information required under paragraphs 77(b–c) of the MPGs, by either reporting numerical estimates (e.g. in kt CO<sub>2</sub> eq) or, where this is not applicable or feasible, using the appropriate notation keys together with providing brief explanations in the documentation box of the relevant CTF table.</p>

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 paragraph 80 of the MPGs	<p>Uruguay did not include in its BTR1 information on PaMs in the IPPU sector that support the implementation and achievement of its NDC and relate to emissions for key categories in the national GHG inventory. In particular, no PaMs were reported for category 2.A.1 cement production, which is identified as a key category in both the level and the trend assessments in Uruguay’s NID (CRT 7).</p> <p>During the review, Uruguay confirmed the significance of category 2.A.1. Regarding PaMs relevant to this category, the Party explained that the Ministry of Industry, Energy and Mining launched dialogues on decarbonizing heavy industry in 2024, building on ongoing engagement with the private sector. The dialogues are aimed at finding ways to reduce GHG emissions in the steel and cement industries. The Party also noted efforts by domestic cement producers to increase the proportion of filler in cement, thereby reducing emissions from clinker production. Although this activity was not reported as a policy or measure in the BTR1, progress in its implementation is being monitored via a publicly available</p>

ID#	Reporting requirement	Description of area of improvement with recommendation or encouragement
11.2	Specified in paragraph 82 of the MPGs	<p>visualization tool of the Ministry of Environment (<a href="https://www.gub.uy/ministerio-ambiente/sites/ministerio-ambiente/files/documentos/publicaciones/48X-FT-Sustituci%C3%B3n%20Parcial%20del%20Clinker%20en%20la%20producci%C3%B3n%20del%20Cemento%20-%20OTROS.pdf">https://www.gub.uy/ministerio-ambiente/sites/ministerio-ambiente/files/documentos/publicaciones/48X-FT-Sustituci%C3%B3n%20Parcial%20del%20Clinker%20en%20la%20producci%C3%B3n%20del%20Cemento%20-%20OTROS.pdf</a>). In addition, Uruguay has initiated work on a sustainable construction policy that is expected to establish a legal framework for decarbonization in the cement industry.</p> <p>The TERT recommends that Uruguay report, to the extent possible, complete information on PaMs that support the achievement of its NDC targets, with particular attention to measures affecting key categories in the national GHG inventory, such as cement production.</p> <p>Uruguay provided information on PaMs that support the implementation and achievement of its NDC in both textual (BTR) and tabular (CTF) format. However, the TERT noted inconsistencies in the information presented in CTF table 5. Specifically, the PaMs relating to implementation of the Energy Efficiency Plan 2015–2024 (energy sector), use of biofuels (transport sector) and electrification of transport (transport sector) were reported as adopted although the descriptions indicate that these measures have already been implemented, with the energy sector measure reportedly finalized in 2024.</p> <p>During the review, Uruguay confirmed that the status of all three PaMs is implemented.</p> <p>The TERT recommends that Uruguay report consistent information on actions and PaMs in the BTR and the CTF tables.</p>
11.3	Specified in paragraph 83 of the MPGs	<p>Uruguay provided information in narrative format on PaMs that support the implementation and achievement of its NDC. However, the TERT noted that it did not report for each policy and measure information on costs, non-GHG mitigation benefits or how it interacts with other PaMs, as appropriate.</p> <p>During the review, Uruguay explained that, with support provided under the CBIT 2 project on strengthening institutional and technical capacities to meet commitments under the ETF, it plans to conduct cost–benefit analyses of certain PaMs. It has also previously engaged consultants to conduct cost–benefit assessments of some PaMs during preparation of its NDCs. A detailed analysis of the interactions between PaMs across different sectors is not available, but such interactions were considered when developing its long-term low-emission development strategy. For example, an increase in forest area for energy and industrial uses was considered by the Party when projecting future energy supply and demand. However, given that reporting on these assessments is not mandatory, the Party did not include these evaluations in the BTR1.</p> <p>The TERT encourages Uruguay to provide information on the costs and non-GHG mitigation benefits of PaMs and how PaMs interact with each other or explain why such information was not provided.</p>
11.4	Specified in paragraph 85 of the MPGs	<p>Uruguay reported in BTR chapter 2 the achieved GHG emission reductions for several key PaMs, including some in the energy and agriculture sectors. However, the TERT noted that the Party did not report expected GHG emission reductions for most of its PaMs, applying flexibility under paragraph 85 of the MPGs.</p> <p>During the review, the Party confirmed its plans to estimate emission reductions for its PaMs, as outlined in BTR table 6.1, reiterating that work is under way to develop the required methodologies. Uruguay also confirmed the estimated time frame for improvements. Emission reduction estimates for the energy sector will be included in the BTR2 (2026) and estimates for the remaining sectors will be included in the BTR3 (2028).</p> <p>The TERT, while noting that Uruguay applied the flexibility provision with regard to reporting estimates of expected and achieved GHG emission reductions for its actions and PaMs, encourages the Party to estimate and report, to the extent possible, both expected and achieved GHG emission reductions for its PaMs in the tabular format referred to in paragraph 82 of the MPGs.</p>
11.5	Specified in paragraph 88 of the MPGs	<p>Uruguay did not report information on PaMs that influence GHG emissions from international transport.</p>

<i>ID#</i>	<i>Reporting requirement</i>	<i>Description of area of improvement with recommendation or encouragement</i>
		<p>During the review, Uruguay clarified that it has no measures in place targeting emissions from international transport. The Party noted, however, that it is a participating member of the Carbon Offsetting and Reduction Scheme for International Aviation and the International Maritime Organization and it is therefore considering the actions outlined in the strategies of the Scheme and Organization.</p> <p>The TERT encourages Uruguay to provide information on PaMs that influence GHG emissions from international transport or explain why such information was not provided.</p>
11.6	Specified in paragraph 90 of the MPGs	<p>Uruguay did not report information on the assessment of economic and social impacts of response measures.</p> <p>During the review, Uruguay explained that ongoing work under the CBIT 2 project on strengthening institutional and technical capacities to meet commitments under the ETF includes estimating the effects of selected response measures on macroeconomic variables and assessing their social impacts, including gender equality, using an intersectional approach. The Party noted that partial assessments of macroeconomic impacts have previously been conducted (primarily to support the prioritization of measures for inclusion in the Party’s NDCs) and that some measures have been analysed in terms of their implications on gender equality. As reporting on these assessments is not mandatory, the Party did not include them in the BTR1. Uruguay also indicated that while further capacity-building related to this provision of the MPGs may be useful, this reporting requirement is not a current priority for the Party.</p> <p>The TERT encourages Uruguay to provide, to the extent possible, information on available assessments of the economic and social impacts of response measures or explain why such information was not provided.</p>

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>
NA	NA	No areas of improvement identified

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 96(a) of the MPGs	<p>Uruguay did not provide complete information in the BTR1 on the models and/or approaches used and key underlying assumptions and parameters used for projections, specifically the methodology used for the stationary energy sector. The Party reported in the BTR1 (p.88) that the projections were based on measures included in the Energy Efficiency Plan 2015–2024 being implemented and that the methodology was based on LEAP, WASP and SimSEE models. However, it was not clear to the TERT whether the methodology described in the BTR1 and the parameters used from the Plan align with those used to estimate energy emissions in the GHG inventory.</p> <p>During the review, Uruguay explained that the assumptions and parameters used for the projections for the stationary energy sector are based on the indicative plan for the expansion of the electricity generation park 2024–2043 and on the energy prospective study conducted in 2023 for the development of the second NDC. In addition, Uruguay clarified that the projections were developed following the same methodology as that followed for estimating emissions for the GHG inventory and that 2022 was used as the base year for the projections.</p> <p>The TERT encourages Uruguay to enhance the transparency of its reporting by explaining which data are used for developing the projections for the stationary energy sector in the base year and how the methodology applied aligns with that applied for the inventory; and providing the sources (and links, if possible) to the documents in which the methodologies, key assumptions and parameters used to project emissions for the stationary energy sector are described.</p>

<i>ID#</i>	<i>Reporting requirement</i>	<i>Description of area of improvement with recommendation or encouragement</i>
13.2	Specified in paragraph 96(a) of the MPGs	<p>Uruguay did not provide complete information in the BTR1 on the models and/or approaches used and key underlying assumptions and parameters used for projections for the transport sector. The Party reported in the BTR1 (p.87) that the transport projections were developed using LEAP and parameters such as the number of vehicles, average distance travelled and energy efficiency of vehicles. However, the TERT noted that in the national GHG inventory, the transport emissions are based on fuel consumption as AD and the corresponding EF. In this regard, it was not clear to the TERT whether consistency was maintained between the emissions estimated for the GHG inventory and for the projections, including emissions for the base year.</p> <p>During the review, Uruguay explained that the energy balance of the country and the amount of energy consumed in transport is estimated using the distance travelled by vehicles, with an adjustment being applied for the distance travelled by a particular vehicle type in order to ensure consistency between the energy balance (fuel consumption) and fuel consumption by vehicle type. The Party clarified that the parameters, AD and methodology used for developing the projections align with those used for preparing the GHG inventory.</p> <p>The TERT encourages Uruguay to enhance the transparency of its reporting by providing clear information on the assumptions and parameters used in the projections for the transport sector and explaining both the methodology followed for estimating transport emissions and the methodology followed for determining and adjusting fuel consumption of the transport sector (total consumption or energy efficiency, etc.).</p>
13.3	Specified in paragraph 96(a) of the MPGs	<p>Uruguay did not provide complete information in the BTR1 on the models and/or approaches used and key underlying assumptions and parameters used for projections, specifically on “other” emissions sources for the IPPU sector. The Party reported in the BTR1 (p.89) that various projection criteria are used for “other” emissions sources. However, it was not clear to the TERT what those criteria are and which categories, subcategories and activities are included in these other sources.</p> <p>During the review, Uruguay explained that “other” emissions sources comprise subcategories 2.A.4.a, 2.A.4.b, 2.B.5, 2.C.1, 2.D.1, 2.D.2, 2.G.1 and 2.G.3. The Party provided a detailed explanation of the considerations it made in projecting emissions for those subcategories, specifying that the projections were developed by projecting the emissions by each gas estimated for the inventory. The Party clarified that for those categories, the methodology used for developing projections is consistent with the methodology used for estimating emissions for the inventory.</p> <p>The TERT encourages Uruguay to enhance the transparency of its reporting by indicating the categories, subcategories and activities considered as “other” emissions sources in the IPPU sector; explaining the assumptions and parameters used for projecting emissions for each source; and clarifying whether and how the methodology and base-year information used for the projections aligns with those used for the GHG inventory.</p>
13.4	Specified in paragraph 96(a) of the MPGs	<p>Uruguay did not provide complete information in the BTR1 on the models and/or approaches used and key underlying assumptions and parameters used for projections of HFCs. The TERT noted a lack of information on the methodology followed for projecting HFC emissions and on whether the base-year data used for the projections aligns with the base-year data used for the national GHG inventory. The TERT also noted a difference between inventory emissions and projected emissions of HFCs for 2022: regarding projected emissions, 1.012 kt CO<sub>2</sub> eq was reported in CTF table 11 and the BTR1 (p.89), and regarding inventory emissions, 403 kt CO<sub>2</sub> eq was reported in CRT 2(I) and NID table 4.1.</p> <p>During the review, Uruguay clarified that the value reported in CTF table 11 corresponds to the consumption of HFCs, expressed as imports by substance, not emissions. The Party also clarified that the methodology applied for estimating HFC emissions for the projections aligns with the approach used for estimating HFC emissions for the national GHG inventory, with both relying on F-gas consumption as the primary AD. In addition, the Party further clarified that it had implemented the first reduction target established under the Kigali Amendment to the Montreal Protocol, under which the 10 per cent consumption reduction was</p>

ID#	Reporting requirement	Description of area of improvement with recommendation or encouragement
13.5	Specified in paragraph 96(a) of the MPGs	<p>applied uniformly across all species, given the limited information available on projected consumption of individual F-gases. A linear consumption trajectory from the base year to 2029 was assumed in order to achieve this target.</p> <p>The TERT encourages Uruguay to clarify the values reported in CTF table 11; explain which main parameters and assumptions were used in developing its projections, such as the projected consumption of different F-gases for the WM scenario; provide more information on the parameters and assumptions considered in estimating the projected HFC emissions; and clarify whether the methodologies and base year used for projections and for the GHG inventory align.</p> <p>Uruguay did not provide complete information in the BTR1 on the models and/or approaches used and key underlying assumptions and parameters used for projections for the agriculture and LULUCF sectors. The TERT noted that:</p> <p>(a) While the projections for the agriculture and LULUCF sectors are reported in the BTR1 (pp.89–90) as being developed using different approaches – expert judgment (for assigning slaughter rates, rate changes, projections of the population of mules and donkeys, projections of wood harvest values), historical trends and models – there is no information on the rationale for the assumptions used;</p> <p>(b) The population of non-dairy cattle reported in CTF table 11 for 2022 (11,274,300 head) differs from the population reported in CRT 3.A and the NID (11,435,310 head);</p> <p>(c) The area of wetlands reported in CTF table 11 for 2022 (741,017 ha) differs from the area reported in CRT 4.D (493.67 kha);</p> <p>(d) The LULUCF sector projections reported in BTR table 2.23, which provides a summary of the emission projections for each sector, show significant variation, particularly between 2022–2025 and 2025–2030, while in CTF table 11, the projections of the underlying parameters for the LULUCF sector are relatively linear in those periods.</p> <p>During the review, Uruguay provided the following corresponding clarifications:</p> <p>(a) For a projection of cattle population, a country-specific model is applied, whereas for all other livestock (except mules and donkeys), the projections are based on observed stock trends and modelled by the General Directorate on Livestock Services and the Ministry of Livestock, Agriculture and Fisheries. Information regarding the use of expert judgment was considered confidential and not included in the BTR1. The methodology followed for estimating projected emissions for the agriculture and LULUCF sectors aligns with the methodology followed for estimating emissions for the national GHG inventory;</p> <p>(b) The livestock data in CTF table 11 are non-annualized values (agricultural years, from July to June), unlike the values reported in CRT 3.A, which are average values. For the projections, annualized data are used;</p> <p>(c) The area of wetlands in CTF table 11 includes managed and unmanaged wetlands (741,017 ha) while CRT table 4.D includes only managed wetlands area;</p> <p>(d) The significant variation in the projected LULUCF emissions relate to the construction and commencement of operations of a new pulp mill, which will increase wood extraction in the country significantly.</p> <p>The TERT encourages Uruguay to (1) include more detailed information on the models and/or approaches, parameters and assumptions used in developing the projections for the agriculture and LULUCF sectors, including on data, models used, assumptions made by expert judgment and alignment of methodologies used for the projections and for the GHG inventory, which could be provided in a spreadsheet; (2) maintain consistency between the values reported for the base year for the GHG inventory and the projections, namely for the population of non-dairy cattle and area of wetlands for 2022; and (3) explain the significant variations in the projections of the LULUCF sector related to the increase in wood extraction.</p>
13.6	Specified in paragraph 96(a) of the MPGs	<p>Uruguay did not provide complete information in the BTR1 on the models and/or approaches used and key underlying assumptions and parameters used for projections for the waste sector. The TERT noted that:</p>

ID#	Reporting requirement	Description of area of improvement with recommendation or encouragement
		<p>(a) The Party reported that the amount of CH<sub>4</sub> captured in managed SWDS is assumed to be 20 per cent (BTR1 p.91); however, the source for this assumption was not reported;</p> <p>(b) The Party reported that the methodology followed to estimate the projected capture of the CH<sub>4</sub> generated in the treatment of industrial wastewater was established on the basis of a correlation developed at the national level (BTR1 p.92); however, no information that would enable an understanding of the correlation was provided;</p> <p>(c) The Party described the methodology followed to estimate the emissions projected for solid waste disposal (BTR1 p.91); however, how the methodology aligns with that used for the national GHG inventory was not explained;</p> <p>(d) The Party described the methodology followed to estimate the emissions projected for the incineration and biological treatment of solid waste (BTR1 p.92); however, no QC procedures for ensuring that the projected values align with the country's total solid waste generation were reported.</p> <p>During the review, Uruguay provided the following corresponding clarifications:</p> <p>(a) The 20 per cent recovery rate is the default value provided in the 2006 IPCC Guidelines (vol. 5, chap. 3, p.3.19);</p> <p>(b) The national-level correlation was developed in a CBIT project study, and the parameters projected are COD removal and CH<sub>4</sub> generation relative to gross domestic product;</p> <p>(c) The AD used and projected align with the AD used in the inventory and the emissions are estimated using the IPCC Waste Model for both the projections and the national GHG inventory;</p> <p>(d) The amount of solid waste that is biologically treated and incinerated corresponds to industrial solid waste.</p> <p>The TERT encourages Uruguay to (1) explain the sources of the assumptions used in the projections, namely the assumption that 20 per cent of CH<sub>4</sub> is captured in SWDS, and provide more information on the study used to develop the correlation for the capture of CH<sub>4</sub> in industrial wastewater; (2) explain the methodological approach used for the projections and specify whether it aligns with that used for the national GHG inventory; and (3) clarify the type of waste referred to in the BTR as being incinerated and biologically treated.</p>
13.7	Specified in paragraph 96(c) of the MPGs	<p>Uruguay did not provide in its BTR information on the assumptions related to PaMs included in the WM scenario projections. Specifically, the TERT noted that:</p> <p>(a) The Party provided information on the assumptions used for the projections for the energy sector, stating that, regarding energy demand, the targets included in the Energy Efficiency Plan 2015–2024 were used (BTR1 p.88); however, the WM scenario is projected to 2040 and no information was reported to explain the targets up until 2040;</p> <p>(b) The Party reported that the refinery projections consider improvements in the refinery process (BTR1 p.88); however, no specific information on those improvements and their assumed impact on the projected emissions was reported;</p> <p>(c) The Party reported that, regarding projections for the IPPU sector, an increase in the proportion of filler (additives in cement) is expected (BTR1 p.89); however, no further details about this measure were reported in the BTR or in CTF table 11;</p> <p>(d) The Party provided brief information on the projections related to the agriculture and LULUCF sectors (BTR1 p.90); however, no information on the PaMs and their targets included under those sectors in the WM scenario was reported;</p> <p>(e) The Party did not provide information on the assumptions related to PaMs included in the WM scenario projections for solid waste disposal from 2030 onward (BTR1 p.91);</p> <p>(f) The Party did not specify whether the WM scenario projections include the same PaMs as those in the NDC.</p>

<i>ID#</i>	<i>Reporting requirement</i>	<i>Description of area of improvement with recommendation or encouragement</i>
		<p>During the review, Uruguay provided the following corresponding clarifications:</p> <p>(a) All assumptions and methodologies not related to the Energy Efficiency Plan 2014–2024 used in developing the projections under the energy sector WM scenario for the BTR align with those used in developing the projections for the second NDC (which contains measures up until 2030), through the energy prospective study conducted in 2023. The measures from the Energy Efficiency Plan 2014–2024 are maintained to 2040 in the projections;</p> <p>(b) The actions included in the refinery projections are substituting fuel oil with natural gas, increasing condensate recovery and implementing advanced controls in some processes and equipment;</p> <p>(c) The measure considered (substitution of clinker with filler) is expected to show a progressive linear decrease in clinker production from 2025 to 2030, reaching a 2.5 per cent reduction by 2030 (for the ANCAP Minas and ANCAP Paysandú plants);</p> <p>(d) The PaMs considered for the LULUCF sector projections are reported in BTR section 2.6.1. The historical data inherently reflect the impact of sectoral policies, ensuring their effects are incorporated into projections. These policies foster sustainable development, with their influence accumulating over time;</p> <p>(e) The target by 2030 is the disposal of 80 per cent of collected solid waste in managed SWDS. The target is considered as constant from 2030 onward;</p> <p>(f) The PaMs included in the WM scenario projections are the same as those in the NDC, except for the energy sector measure related to biodiesel (because the legal requirement for this blend was removed in 2021) and the LULUCF sector measures do not include the measure related to intermittent rice irrigation technologies and pre-harvest soybean cover crops (as these have not been prioritized for implementation).</p> <p>The TERT encourages Uruguay to (1) provide a detailed, clear description of the sectoral PaMs included in the WM scenario projections, including references to the studies and documents used to support the projections (and a link to those documents, if possible) and a description of PaMs with specific targets (such as the clinker reduction and/or filler proportion); and (2) specify which PaMs from the NDC are included in the projections and/or explain the reasons for not including them.</p>
13.8	Specified in paragraph 96(d) of the MPGs	<p>Uruguay did not report a sensitivity analysis for its projections in the BTR1.</p> <p>During the review, Uruguay explained that, as this was the first time it developed a projection scenario, it did not have sufficient human resources to carry out in-depth work such as a sensitivity analysis for the projections.</p> <p>The TERT encourages Uruguay to carry out and report a sensitivity analysis of its projections.</p>

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>
NA	NA	No areas of improvement identified

## II. Capacity-building needs<sup>3</sup> 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 <sup>a</sup>	Specified in paragraphs 18 and 61 of the MPGs	Generating, systematizing and processing the information required to prepare and enhance the quality of the data reported in the BTR (technical capacity) (high priority)
1_CBN.2 <sup>a</sup>	Specified in paragraph 1(a–b) of decision 5/CMA.3	Enhancing the automatization of reporting processes to simplify report preparation (technical capacity) (low priority)
1_CBN.3 <sup>a</sup>	Specified in paragraph 18 and 62 of the MPGs	Strengthening institutional arrangements and technical capacity related to systematizing data collection from private and public data providers (medium priority)
NIR		
2.G_CBN.1	Specified in paragraph 35 of the MPGs	Enhancing institutional arrangements and improving the technical capacity of the GHG inventory compilation team and line ministries to request from external sources (e.g. industry bodies, companies, institutions) any additional data (e.g. AD, EFs) required for GHG inventory compilation when data that are initially provided are assessed as being outliers, as well as the technical capacity to analyse those data (high priority)
2.G_CBN.2	Specified in paragraph 52 of the MPGs	Reporting indirect CO <sub>2</sub> emissions from the atmospheric oxidation of CH <sub>4</sub> , CO and NMVOCs and reporting indirect N <sub>2</sub> O emissions from sources other than those in the agriculture and LULUCF sectors (technical capacity) (low priority)
NIR – energy sector		
3.E_CBN.1 <sup>a</sup>	Specified in paragraph 40 of the MPGs	Developing a national database on road transportation, including by strengthening institutional capacity and technical skills (high priority)
3.E_CBN.2 <sup>a</sup>	Specified in paragraph 23–24 of the MPGs	Determining the carbon content of the gasoil consumed in the country (high priority)
3.E_CBN.3	Specified in paragraphs 23–24 of the MPGs	Developing a country-specific EF for gasoline used in the transport sector (technical capacity) (high priority)
NIR – IPPU sector		
4.I_CBN.1 <sup>a</sup>	Specified in paragraph 23 of the MPGs	Estimating HFC emissions using the tier 2 methodology (technical capacity) (high priority)
4.I_CBN.2 <sup>a</sup>	Specified in paragraph 39 of the MPGs	Collecting historical data on imports of sodium carbonate, calcium carbide, N <sub>2</sub> O and sulfur hexafluoride, including by strengthening institutional and technical capacity (low priority)

<sup>3</sup> 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>
4.I_CBN.3	Specified in paragraph 49 of the MPGs	Enhancing the technical capacity of the GHG inventory compilation team to understand the interaction between the domestically available time-series activity and EF data with the IPCC software F-gas model, as well as its capacity to implement QA/QC processes (high priority)
NIR – agriculture sector		
5.A_CBN.1 <sup>a</sup>	Specified in paragraph 39 of the MPGs	Improving the data required for estimating emissions (i.e. parameters) for categories 3.A enteric fermentation and 3.B manure management for swine, dairy cattle and non-dairy cattle (technical capacity) (low priority)
5.A_CBN.2 <sup>a</sup>	Specified in paragraph 23 of the MPGs	Estimating emissions for category 3.A enteric fermentation for sheep using the tier 2 methodology (technical capacity) (high priority)
5.A_CBN.3 <sup>a</sup>	Specified in paragraph 39 of the MPGs	Estimating emissions for category 3.G liming (technical capacity) (medium priority)
5.A_CBN.4 <sup>a</sup>	Specified in paragraph 39 of the MPGs	Estimating emissions for category 3.E prescribed burning of savannahs (technical capacity) (low priority)
NIR – LULUCF sector		
6.L_CBN.1 <sup>a</sup>	Specified in paragraph 39 of the MPGs	Estimating emissions and removals related to wetlands (technical capacity) (low priority)
6.L_CBN.2 <sup>a</sup>	Specified in paragraph 40 of the MPGs	Improving parameters needed for estimating carbon gains and losses related to woody biomass in native forests and plantation forests (technical capacity) (low priority)
6.L_CBN.3 <sup>a</sup>	Specified in paragraph 40 of the MPGs	Characterizing the age-class of native forests to enable the disaggregation of AD in growing native forests and mature native forests (technical capacity) (low priority)
6.L_CBN.4 <sup>a</sup>	Specified in paragraph 40 of the MPGs	Improving parameters needed for estimating carbon stock changes in soil organic matter, particularly in cropland (technical capacity) (medium priority)
NIR – waste sector		
7.W_CBN.1 <sup>a</sup>	Specified in paragraph 39 of the MPGs	Developing an open-access information system for tracking the composition and weight of waste entering all final waste disposal sites in the country in support of the national Single Integrated Waste Information System, and, as part of this system, installing a weighing system at each site and developing a methodology for sampling and determining the composition of deposited waste (technical capacity) (high priority)
7.W_CBN.2 <sup>a</sup>	Specified in paragraph 39 of the MPGs	Automating and systematizing the processing of data on industrial waste, wastewater treatment and the biological treatment of waste obtained from the national Environmental Information System (technical capacity) (high priority)
7.W_CBN.3 <sup>a</sup>	Specified in paragraph 57 of the MPGs	Collecting and systematizing historical information on waste incineration and the biological treatment of waste to improve the time series (technical capacity) (medium priority)
7.W_CBN.4 <sup>a</sup>	Specified in paragraph 40 of the MPGs	Developing technical documentation, including standardized methodologies, assumptions and calculation steps, on estimating emissions for the waste sector (technical capacity) (low priority)

Information necessary to track progress in implementing and achieving the NDC under Article 4 of the Paris Agreement

<i>ID#</i>	<i>Reporting requirement</i>	<i>Area in which capacity-building is needed</i>
8_CBN.1	Specified in paragraph 68 of the MPGs	Strengthening the system for tracking NDC implementation and achievement so that the most recent information can be reported for key non-GHG (land-area-based) indicators (i.e. total area used for shade and shelter, area of grassland under good management practices and area of peatland) and improve the tracking of these indicators for the first NDC and future NDCs for which they remain relevant (high priority)
13_CBN.1	Specified in paragraph 96(a) of the MPGs	Developing scenarios for projected consumption of F-gases in the country to gain an understanding of F-gas consumption trends and specific activities in which F-gases are consumed (technical capacity) (medium priority)
13_CBN.2	Specified in paragraph 96(d) of the MPGs	Strengthening institutional and technical capacity to conduct in-depth work on projections, including by hiring more staff to enable a sensitivity analysis of the projections (medium priority)

<sup>a</sup> Capacity-building need identified by the Party in its BTR1.

## Annex

### Documents and information used during the review

#### A. Reference documents

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

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

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

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“Guidance for operationalizing the modalities, procedures and guidelines for the enhanced transparency framework referred to in Article 13 of the Paris Agreement”. Decision 5/CMA.3. FCCC/PA/CMA/2021/10/Add.2. Available at <https://unfccc.int/documents/460951>.

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#### B. Additional information provided by the Party

Responses to questions during the review were received from Carla Zilli, Virginia Sena and Daniel Quiñones (Ministry of Environment), including additional material. The following references were provided by Uruguay and may not conform to UNFCCC editorial style as some have been reproduced as received:

Gobierno de Uruguay. 2025. Visualizador de emisiones y remociones de gases de efecto invernadero. Available at [https://visualizador.gobiernoabierto.gub.uy/visualizador/api/repos/%3Apublic%3Aorganismos%3Aambiente%3Avisualizador\\_inventario.wcdf/generatedContent](https://visualizador.gobiernoabierto.gub.uy/visualizador/api/repos/%3Apublic%3Aorganismos%3Aambiente%3Avisualizador_inventario.wcdf/generatedContent).

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