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

Summary

This report presents the results of the technical expert review of the first biennial transparency report of Portugal, 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. The review took place from 23 to 27 March 2026 in Lisbon.

* 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	*2006 IPCC Guidelines for National Greenhouse Gas Inventories*
2019 Refinement to the 2006 IPCC Guidelines	*2019 Refinement to the 2006 IPCC Guidelines for National Greenhouse Gas Inventories*
AD	activity data
AR	Assessment Report of the Intergovernmental Panel on Climate Change
BTR	biennial transparency report
CH_4	methane
CO_2	carbon dioxide
CO_2 eq	carbon dioxide equivalent
CRT	common reporting table
CTF	common tabular format
EF	emission factor
ENAAC	National Climate Change Adaptation Strategy of Portugal
ESR	European Union effort-sharing regulation
EU	European Union
EU ETS	European Union Emissions Trading System
GHG	greenhouse gas
HFC	hydrofluorocarbon
IPCC	Intergovernmental Panel on Climate Change
IPPU	industrial processes and product use
LULUCF	land use, land-use change and forestry
MPGs	modalities, procedures and guidelines for the transparency framework for action and support referred to in Article 13 of the Paris Agreement
N_2O	nitrous oxide
NA	not applicable
NDC	nationally determined contribution
NE	not estimated
NF_3	nitrogen trifluoride
NID	national inventory document
NIR	national inventory report
P-3AC	Action Plan for Adaptation to Climate Change of Portugal
PaMs	policies and measures
PFC	perfluorocarbon
QA/QC	quality assurance/quality control
SF_6	sulfur hexafluoride
TERT	technical expert review team
WAM	‘with additional measures’
WM	‘with measures’

I. Introduction and summary

A. Introduction

1. This report covers the technical expert review of the BTR1 of Portugal. The review was organized by the secretariat and conducted by the TERT in accordance with the MPGs,[1] particularly chapter VII thereof. Portugal, on a voluntary basis, requested the secretariat to organize a review of the information reported in the BTR1 pursuant to chapter IV of the MPGs as part of the technical expert review.[2] The outcome of the voluntary review is presented in annex I.

2. A draft version of this report was transmitted on 20 May 2026 to the Government of Portugal, which provided comments on 22 June 2026 that were taken into account, as appropriate, in this final version of the report.[3]

3. The review was conducted as an in-country review from 23 to 27 March 2026 in Lisbon by the following team of nominated experts from the UNFCCC roster of experts: Natalia D'Alessandro (Brazil), Javier Fernandez (Democratic Republic of the Congo), Barbora Koci (Czechia), Nkanyiso Ndlovu (Zimbabwe), Karima Oustadi (Italy), Ingeborg Rønning (Norway), Janka Szemesova (Slovakia), Samir Tantawi (Egypt) and Verica Taseska Gjorgievska (North Macedonia). Janka Szemesova and Samir Tantawi were the lead reviewers. The review was coordinated by Jeeyoon Jung and Andrea Nuesse (secretariat).

B. Scope

4. The TERT conducted a technical expert review of the information reported in the BTR1 of Portugal as per the scope of the review defined in paragraph 146 of the MPGs and decision 9/CMA.4, consisting of:

(a) Review of the consistency of the information submitted by the Party under Article 13, paragraphs 7 and 9, of the Paris Agreement with the MPGs (see chap. II.A below);

(b) Consideration of the Party's implementation and achievement of its NDC under Article 4 of the Paris Agreement (see chap. II.B below);

(c) Consideration of the support provided by the Party, as relevant (see chap. II.C below);

(d) Identification of areas of improvement[4] for the Party related to implementation of Article 13 of the Paris Agreement (see chap. II.D below);

(e) Voluntary review of the information reported by the Party pursuant to chapter IV of the MPGs (see annex I).

C. Summary

5. Portugal submitted its BTR1 on 30 December 2024, before the deadline of 31 December 2024 mandated in decision 18/CMA.1. Portugal submitted its NID as a stand-alone document on 30 December 2024, before the deadline. Portugal submitted its CRTs on 12 December 2024, before the deadline, and CTF tables on 30 December 2024, before the deadline.

[1] Decision 18/CMA.1, annex.
[2] See decision 9/CMA.4, para. 1.
[3] As per para. 162(e) of the MPGs.
[4] As referred to in paras. 7, 8, 146(d) and 162(d) of the MPGs.

6. A list of the areas of improvement identified on the basis of the review of the consistency of the reported information with the MPGs can be found in the assessment tables.[5]

D. Information provided by the Party pursuant to paragraphs 143–145 of the modalities, procedures and guidelines

7. Portugal does not consider itself subject to the reporting obligations applicable to developing country Parties pursuant to Article 13, paragraph 10, of the Paris Agreement. Accordingly, the Party did not report information on support needed and received for implementing Article 13 of the Paris Agreement and transparency-related activities, including for transparency-related capacity-building.

II. Technical expert review[6]

A. Review of the consistency of the submitted information with the modalities, procedures and guidelines[7]

1. National inventory report[8]

8. The TERT assessed the information reported in the BTR1 of Portugal and identified areas of improvement relating to consistency with the MPGs, which are described in tables 2–7 of the assessment tables referred to in paragraph 6 above and summarized in table 1.

[5] Contained in document FCCC/ETF/TERR.1/2024/PRT/Add.1, available at https://unfccc.int/first-biennial-transparency-reports.

[6] As per para. 187 of the MPGs.

[7] As per para. 146(a) of the MPGs.

[8] As per para. 150(a) of the MPGs.

Table 1
Information reported in Portugal's national inventory report and review of consistency with the modalities, procedures and guidelines

Element	*Information to be reported*	*Response and summary as relevant*	*ID#(s) for the area(s) of improvement identified*[a]
Submission type (para. 12 of the MPGs)	Has the NIR been submitted as a stand-alone document?	Yes	No areas of improvement relating to recommendations were identified
Time series (paras. 57–58 of the MPGs)	What years have been reported and is the time series in accordance with the MPGs?	1990–2022, in accordance with the MPGs	No areas of improvement relating to recommendations were identified
Metrics (para. 37 of the MPGs)	Has the Party used the 100-year global warming potential values from the AR5?	Yes	No areas of improvement relating to recommendations were identified
	Has the Party used other metrics?	No	No areas of improvement relating to recommendations were identified
Gases (paras. 48–49 of the MPGs)	Which gases have been reported?	CO_2, CH_4, N_2O, HFCs, PFCs, SF_6, NF_3	No areas of improvement relating to recommendations were identified
Indirect emissions (para. 52 of the MPGs)	Has the Party reported indirect CO_2 emissions and national totals with and without indirect CO_2?	Yes	4.I.3
	Has the Party reported indirect N_2O emissions from sources other than those in the agriculture and LULUCF sectors as a memo item?	No	NA
National circumstances and institutional arrangements (paras. 18–19 of the MPGs)	Has the Party reported information on the functions related to inventory planning, preparation and management?	Partly	No areas of improvement relating to recommendations were identified
Methodologies, parameters and data (paras. 20–24 of the MPGs)	Has the Party used the 2006 IPCC Guidelines?	Yes	3.E.4, 3.E.6, 3.E.7, 4.I.1, 4.I.2, 4.I.4, 5.A.3, 6.L.1, 6.L.7, 7.W.5
	Has the Party used other IPCC methodological guidance?	Yes, the 2019 Refinement to the 2006 IPCC Guidelines	No areas of improvement relating to recommendations were identified

Element	*Information to be reported*	*Response and summary as relevant*	*ID#(s) for the area(s) of improvement identified*[a]
Key category analysis (paras. 25, 41 and 42 of the MPGs)	Has the Party reported a key category analysis?	Yes, a key category analysis was performed for emissions sources using approach 1 and a 95 per cent threshold for level assessment for the starting inventory year (1990) and the latest reporting year (2022) and with and without LULUCF	No areas of improvement relating to recommendations were identified
Time-series consistency and recalculations (paras. 26–28, 43 and 57 of the MPGs)	Has the Party reported a consistent time series?	Partly	3.E.3
	Has the Party reported recalculations and provided justification and explanatory information for them?	Yes, in relation to its 2023 GHG inventory submission under the Convention	No areas of improvement relating to recommendations were identified
Uncertainty assessment (paras. 29 and 44 of the MPGs)	Has the Party reported the results of the uncertainty analysis and the methods used, underlying assumptions and trends?	Partly, including level and trend uncertainty, reported using approach 1 for 1990 and the latest reporting year (2022)	2.G.2
QA/QC plan and procedures (paras. 34–36 and 46 of the MPGs)	Has the Party elaborated information on an inventory QA/QC plan, including information on the inventory agency responsible for implementing QA/QC, and current and future QA/QC procedures?	Partly, including information on the inventory agency responsible for implementing QA/QC, an inventory QA/QC plan and general QC procedures	2.G.4, 4.I.2
Assessment of completeness (paras. 30–33, 45, 47 and 50 of the MPGs)	Have any areas of improvement for lack of completeness been identified for the following sectors?	Yes	2.G.3
	Energy	No	No areas of improvement relating to recommendations were identified
	IPPU	No	No areas of improvement relating to recommendations were identified
	Agriculture	No	No areas of improvement relating to recommendations were identified
	LULUCF	No	No areas of improvement relating to recommendations were identified
	Waste	Yes	7.W.3

Element	*Information to be reported*	*Response and summary as relevant*	*ID#(s) for the area(s) of improvement identified*[a]
Threshold for reporting significant categories (para. 32 of the MPGs)	Are the estimated emissions for all categories and in total for all gases and categories reported insignificant below the relevant thresholds?	Yes	No areas of improvement relating to recommendations were identified
	For categories reported as "NE" owing to insignificance, has information been reported showing that the likely level of emissions is below the threshold of significance?	No	NA
Methodologies, EFs, parameters and AD (paras. 39, 40 and 53–56 of the MPGs)	Has information been transparently reported on categories, gases, methodologies (including the rationale for selecting them), EFs and AD at a disaggregated level for the following sectors?	Yes	No areas of improvement relating to recommendations were identified
	Energy	Partly	3.E.1, 3.E.2, 3.E.4, 3.E.5, 3.E.7
	Has information been reported on international aviation and marine bunker fuel emissions as two separate entries and such emissions distinctly reported from national totals?	Yes	NA
	Has information been reported indicating how feedstocks and non-energy use of fuels have been accounted for in the inventory, under the energy or IPPU sector?	Partly	4.I.2
	IPPU	Partly	4.I.4
	Agriculture	Partly	5.A.1, 5.A.2, 5.A.4
	LULUCF	Partly	6.L.2, 6.L.3, 6.L.4, 6.L.5, 6.L.6
	Did the Party provide supplementary information on the approach to reporting emissions and removals from harvested wood products in accordance with IPCC guidance other than the production approach, and provide supplementary information on emissions and removals from harvested	Partly	6.L.9

Element	*Information to be reported*	*Response and summary as relevant*	*ID#(s) for the area(s) of improvement identified*[a]
	wood products estimated using the production approach?		
	Waste	Partly	7.W.1, 7.W.2, 7.W.4, 7.W.5, 7.W.6

[a] See document FCCC/ETF/TERR.1/2024/PRT/Add.1. The areas of improvement referred to in this table comprise only those relating to recommendations in that document.

2. Information necessary to track progress in implementing and achieving the nationally determined contribution[9]

9. The TERT assessed the information reported in the BTR1 of Portugal and identified areas of improvement relating to consistency with the MPGs, which are described in tables 11 and 13 of the assessment tables referred to in paragraph 6 above and summarized in table 2.

Table 2
Information reported in Portugal's submission

Topic	*ID#(s) for the area(s) of improvement identified*[a]
National circumstances and institutional arrangements (paras. 59–63 of the MPGs)	No areas of improvement relating to recommendations were identified
Description of the NDC under Article 4 of the Paris Agreement, including updates (para. 64 of the MPGs)	No areas of improvement relating to recommendations were identified
Information necessary to track progress in implementing and achieving the NDC under Article 4 of the Paris Agreement (paras. 65–79 of the MPGs)	No areas of improvement relating to recommendations were identified
Mitigation PaMs, actions and plans related to implementing and achieving the NDC under Article 4 of the Paris Agreement (paras. 80–90 of the MPGs)	11.1
Summary of GHG emissions and removals (para. 91 of the MPGs)	No areas of improvement relating to recommendations were identified
Projections of GHG emissions and removals (paras. 92–102 of the MPGs)	13.2

[a] See document FCCC/ETF/TERR.1/2024/PRT/Add.1. The areas of improvement referred to in this table comprise only those relating to recommendations in that document.

3. Financial, technology development and transfer, and capacity-building support provided[10]

10. Portugal considers itself subject to the reporting obligations applicable to developed country Parties pursuant to Article 13, paragraph 9, of the Paris Agreement and, in accordance with the MPGs, reported information on financial, technology development and transfer, and capacity-building support provided to developing country Parties under Articles 9–11 of the Paris Agreement in its BTR1.[11]

11. The TERT assessed the information reported in the BTR1 of Portugal and identified areas of improvement relating to consistency with the MPGs, which are described in tables 15–20 of the assessment tables referred to in paragraph 6 above and summarized in table 3.

Table 3
Review of the consistency of the information on financial, technology development and transfer, and capacity-building support reported in Portugal's submission with the modalities, procedures and guidelines

Topic	*ID#(s) for the area(s) of improvement identified*[a]
National circumstances and institutional arrangements (paras. 119–120 of the MPGs)	15.1
Underlying assumptions, definitions and methodologies (paras. 121–122 of the MPGs)	16.1, 16.2
Information on financial support provided under Article 9 of the Paris Agreement (paras. 123–124 of the MPGs)	17.1, 18.1

[9] As per para. 150(b) of the MPGs.
[10] As per para. 150(c) of the MPGs.
[11] As per para. 118 of the MPGs.

Topic	*ID#(s) for the area(s) of improvement identified*[a]
Information on support for technology development and transfer provided under Article 10 of the Paris Agreement (paras. 126–127 of the MPGs)	19.1, 19.2
Information on capacity-building support provided under Article 11 of the Paris Agreement (paras. 128–129 of the MPGs)	20.1

[a] See document FCCC/ETF/TERR.1/2024/PRT/Add.1.

B. Consideration of the Party's implementation and achievement of its nationally determined contribution[12]

12. In considering Portugal's progress in implementing and achieving its NDC, the TERT noted that the EU and its member States have a joint NDC with a target of an economy-wide net domestic reduction in emissions of at least 55 per cent by 2030 compared with the 1990 level.[13]

13. Portugal reported information on the actions and PaMs that support the implementation and achievement of its NDC. Three overarching EU PaMs – the EU ETS directive, and the ESR and the EU LULUCF regulations – significantly influence Portugal's portfolio of PaMs. The EU ETS covers mainly GHG emission point sources in the energy, industry, maritime shipping and aviation sectors. An EU-wide emission cap was put in place for 2021–2030 for the EU ETS with the goal of reducing emissions by 62 per cent below the 2005 level by 2030. The ESR sets binding annual GHG emission targets for member States covering the transport, buildings, agriculture and waste sectors, as well as industry sectors not covered by the EU ETS. The ESR-covered sectors are required to collectively contribute to a 40 per cent reduction in emissions at the EU level by 2030 compared with the 2005 level, with individual member States' reduction targets ranging from 10 to 50 per cent below the 2005 level. Portugal's ESR target for 2030 is a 28.7 per cent reduction compared with the 2005 level. EU member States must achieve binding national LULUCF targets to contribute to the EU-wide target for 2030. The member States' targets for 2030 are defined as the average of net emissions and removals in 2016–2018 plus an individual binding target, which collectively corresponds to an additional 42 Mt CO_2 eq net removals. The EU LULUCF regulation sets a total net removal target of 310 Mt CO_2 eq for 2030 within the scope of NDCs. Portugal's LULUCF indicative target for 2030 is net removals of 1.36 Mt CO_2 eq below the base-year level.

14. Table 4 provides a summary of the reported information on the key national PaMs of Portugal.

Table 4
Summary of information on key national policies and measures reported by Portugal

Sector	*Key PaMs*[a]	*Estimate of expected GHG emission reductions in 2030 (kt CO_2 eq)*
Policy framework and cross-sectoral measures	Carbon tax for non-EU ETS sectors[b]	NE
	Setting up a voluntary carbon market	NE
Energy		
Energy supply and renewables	Promote new energy storage solutions (batteries and hydrogen)[b]	NE
	Promote the production and consumption of renewable gases[b]	NE

[12] As per para. 146(b) of the MPGs.

[13] The consideration of the implementation and achievement of the joint EU NDC is in the context of the NDC submitted by the EU on 17 December 2020 and updated on 17 October 2023.

Sector	*Key PaMs*[a]	*Estimate of expected GHG emission reductions in 2030 (kt CO_2 eq)*
Energy efficiency	Improve the management of energy consumption in the various sectors of the national economy[b]	NE
Transport	Promote efficiency and expansion of public transport systems[b]	NE
IPPU	Promote decarbonization of industry through eco-innovation and cleaner production processes and promote industry digitization	NE
	Implementation of the fluorinated gas regime[b]	NE
Agriculture	Promote decarbonization of livestock activity[b]	NE
	Promote a low-carbon diet	NE
LULUCF	Improve natural sink potential of agriculture and forest[b]	NE
Waste	Promote the transition to a circular economy[b]	NE

Sources: Portugal's BTR1 and CTF table 5.
[a] Names of PaMs reproduced as reported in Portugal's BTR1.
[b] Included in the WM scenario projections.

15. The TERT noted that, although the BTR1 did not provide estimates of achieved GHG emission reductions for individual PaMs, according to the GHG inventory information in CTF table 6 and the CRTs, PaMs have contributed to significant GHG emission reductions in the energy, IPPU and waste sectors; in 2005–2022, GHG emissions decreased by 40.9, 28.4 and 17.1 per cent in the energy, IPPU and waste sectors respectively. In the agriculture sector, GHG emissions remained stable between 2005 and 2022. CO_2 emissions from the LULUCF sector decreased in 2013–2022, and the sector represents a stable net sink for all years except 2016 and 2017, when extreme wildfires occurred.

16. Portugal has made significant strides in reducing GHG emissions across the energy sector, with changes driven by rapid growth in renewable electricity production, a decline in energy consumption, reduced dependency on energy imports and the phase-out of coal, while in the IPPU sector reductions were supported by eco-innovation; cleaner, digitalized production processes; electrification; industrial symbiosis; and resource optimization. In the waste sector, GHG emissions increased rapidly between 1990 and 2004 owing to growing urbanization and heavy reliance on landfill disposal, but this trend was reversed in 2005, with GHG emissions declining until 2022 owing to the use of biogas recovery and a gradual shift towards mechanical biological treatment and recycling of waste.

17. The transport sector accounted for some 30 per cent of total emissions in 2022. Road transport emissions were rising steadily up until the early 2000s, then were generally in decline up until 2013, before increasing again from 2013 onward, indicating that the impacts of the growing vehicle fleet and its ageing profile have outweighed the emission reductions achieved through the rapid growth in the number of electric vehicles in use.

18. The TERT noted that Portugal's progress in implementing and achieving its NDC is supported by an established climate policy framework and the Party's institutional arrangements for implementing climate policy and coordinating and monitoring its implementation. The Climate Framework Law (law 98/2021 of 31 December 2021) provides the overarching domestic framework for climate action and is complemented by key strategic instruments, including the National Energy and Climate Plan 2030, revised at the end of 2024, and the Roadmap for Carbon Neutrality 2050 as Portugal's long-term strategy under the Paris Agreement. These instruments set out Portugal's commitment to reducing GHG emissions by 55 per cent by 2030 compared with the 2005 level, as well as its medium- to long-term milestones, including a 65–75 per cent GHG emission reduction by 2040 compared with the 2005 level. The TERT noted that the Roadmap is being updated to ensure consistency with the revised National Energy and Climate Plan 2030 and reflect the enhanced ambition of

Portugal's revised targets, including the climate neutrality target being brought forward to 2045.

19. Implementation of the Climate Framework Law is coordinated through an interministerial governance structure. The Interministerial Commission for Climate Action functions as the coordination body between the relevant governmental areas for the application of the Climate Framework Law and provides political oversight of the implementation of the National Energy and Climate Plan 2030. Institutional capacity for climate action was further strengthened through the establishment of the Portuguese Climate Agency in 2025, which plays a central role in supporting the coordination and implementation of national climate policies. The Portuguese Climate Agency, together with the Directorate-General for Energy and Geology, supports the coordination and monitoring of the National Energy and Climate Plan 2030. The National System of Policies and Measures and Projections supports the monitoring, assessment and reporting of climate PaMs and their projected impact on GHG emissions. The National System for the Inventory of Emissions by Sources and Removals by Sinks of Atmospheric Pollutants, in turn, monitors and reports GHG emissions and removals.

20. The TERT noted that the voluntary carbon market is being deployed as part of the Party's broader policy framework following the entry into force of decree-law 4/2024 on 5 January 2024 and subsequent steps, including the launch of a national carbon-credit registry platform and the Party's first afforestation methodology in October 2025, with additional methodologies for reforestation and improved forest management currently under development.

21. The TERT noted that maintaining progress may become more challenging in sectors not covered by the EU ETS, particularly transport and agriculture, which continue to present significant decarbonization challenges, and, although mitigation efforts are being pursued in those sectors, more ambitious and effective action are likely to be needed.

22. Portugal's annual emission allocations, which correspond to its national emission reduction obligation for ESR-covered sectors, decrease from 2021 to 2030. Portugal reported information on its ESR-covered emissions as a way to track its contribution towards the joint EU NDC target. The level of emissions in 2021 and 2022 was 6.2 and 2.6 per cent respectively below the annual emission allocations for those years. The TERT noted that the Party's cumulative surplus of annual emission allocations through 2022 is 3.68 Mt CO_2 eq, which suggests that Portugal is contributing to the joint EU NDC target.

23. Portugal reported projections for 2025–2040 under the WM scenario.[14] The WM scenario reported by the Party includes PaMs implemented and adopted until the end of June 2022 for the energy sector, including transport and industrial processes, and until the end of 2023 for waste and wastewater, agriculture, forestry and other land use, and F-gases. In addition to the WM scenario, Portugal reported the WAM scenario. The projected emission levels are presented in table 5. The TERT noted that information on GHG emission projections was not used in considering Portugal's progress in implementing the joint EU NDC.

Table 5
Summary of greenhouse gas emission projections for Portugal

	GHG emissions (kt CO_2 eq/year)	*Change in relation to 2020 level (%)*	*Change in relation to 2022 level (%)*
Inventory data 2020	57 500.97		
Inventory data 2022	56 254.52	–2.2	
WM projections for 2030	44 378.30	–22.8	–21.1
WAM projections for 2030	37 260.35	–35.2	–33.8
WM projections for 2040	30 992.05	–46.1	–44.9
WAM projections for 2040	23 868.22	–58.5	–57.6

[14] Note that, as per para. 93 of the MPGs, projections shall not be used to assess progress towards the implementation and achievement of an NDC under Article 4 of the Paris Agreement unless the Party has identified a reported projection as its baseline.

Sources: Portugal's BTR1 and CTF tables 6–8. Portugal provided updated projections during the review.
Note: The projections are for GHG emissions without LULUCF and excluding indirect CO_2 emissions.

24. In its BTR1 and during the review, Portugal described its contribution to the progress towards the joint EU NDC target. The TERT noted that the consideration of progress by the EU and its member States towards the joint EU NDC is contained in the report on the technical expert review of the BTR1 of the EU,[15] which states that the EU and its member States are on track to achieving the joint 2030 NDC target by implementing mitigation actions; however, maintaining this pace of emission reductions will require the full implementation of the EU 2030 legal framework and its related investment flows.

C. Consideration of the Party's support provided[16]

25. Portugal considers itself subject to the reporting obligations applicable to developed country Parties pursuant to Article 13, paragraph 9, of the Paris Agreement and reported information on financial, technology development and transfer, and capacity-building support provided to developing country Parties under Articles 9–11 of the Paris Agreement as per those reporting obligations (see para. 10 above).

26. In its BTR1 Portugal reported information on national circumstances and institutional arrangements relevant to reporting on the provision and mobilization of support. The Party reported information on the systems and processes used to identify, track and report on support provided; challenges and limitations; experience relating to public policy and regulatory frameworks for private climate financing and investment; and efforts to enhance the comparability and accuracy of the information reported on financial support provided.

27. Portugal employed key strategies and policies for the provision of its financial support. The Portuguese Development Cooperation Strategy 2030, adopted in 2022, is fully aligned with the 2030 Agenda for Sustainable Development and the Paris Agreement. The strategy includes a pillar dedicated to climate action and the green transition, which is aimed at supporting developing countries in addressing climate-related goals. Portuguese climate cooperation budget planning involves different institutions, namely the Camões Institute for Cooperation and Language, a public institute; the Ministry of Foreign Affairs; and the Ministry of Environment and Energy. One of Portugal's key channels of support is its Environmental Fund, which is aimed at supporting environmental policies in pursuit of the Sustainable Development Goals under the 2030 Agenda for Sustainable Development and contributing to the achievement of national and international objectives related to climate change, water resources, waste, nature conservation and biodiversity.

28. The Portuguese development cooperation model is decentralized and mainly directed towards territories and sectors where Portugal has greater capacity to intervene. The Party's support focuses primarily on Portuguese-speaking African countries and Timor-Leste, as well as on regions where there is potential to achieve comparative added value through Portugal's engagement, notably in Africa, particularly North and West Africa, and in Latin America. Most of the countries supported are least developed countries and/or small island developing States. When initiatives or activities include several lusophone countries, the Climate Change Network of the Community of Portuguese-speaking Countries is usually consulted as part of the development cooperation process.

29. Portugal's BTR1 contains key information on underlying assumptions, methodologies and definitions used by the Party to identify and/or report information on financial support provided.

1. Financial support provided under Article 9 of the Paris Agreement

(a) Bilateral, regional and other channels

30. Portugal provided USD 4.74 million of financial support through bilateral, regional and other channels in the biennium 2021–2022. The financial support provided through

[15] FCCC/ETF/TERR.1/2024/EU.
[16] As per para. 146(c) of the MPGs.

bilateral, regional and other channels was allocated to the following sectors: environmental protection (57.4 per cent), agriculture (11.5 per cent), water and sanitation (11.4 per cent) and other, including multi-sector, reconstruction and relief, education and cross-cutting (19.7 per cent). The projects, programmes or activities that received financial support are related to (1) environmental protection, including ecosystem preservation, improving resilience of communities and landscape management; (2) water, sanitation and waste management (circular economy), with a focus on wastewater treatment and reuse, circular economy models in urban water cycles, sanitation training, and solid waste mapping and traceability; and (3) agriculture, food security and agroforestry, with a focus on adapting agricultural practices to climate change, ensuring food sovereignty and improving rural livelihoods.

31. Table 6 summarizes information on financial support provided by the Party through bilateral, regional and other channels by type of support.

Table 6
Summary of financial support provided through bilateral, regional and other channels in 2021–2022 by Portugal

	Amount (climate-specific) (face value – USD million)				*Share of total for bilateral, regional and other channels (%)*
Type of financial instrument	*Adaptation*	*Mitigation*	*Cross-cutting*	*Total*	
Grant	2.86	1.63	0.25	4.74	100.0
Total	**2.86**	**1.63**	**0.25**	**4.74**	**100.0**
Share of total for bilateral, regional and other channels (%)	**60.3**	**34.4**	**5.3**	**100.0**	–

Sources: Portugal's BTR1 and CTF table III.1.

(b) Multilateral channels

32. Portugal provided USD 5.07 million of financial support through multilateral channels in the biennium 2021–2022.

33. Table 7 summarizes information on financial support provided by the Party through multilateral channels by type of support.

Table 7
Summary of financial support provided through multilateral channels in 2021–2022 by Portugal

	Climate-specific inflows (face value – USD million)			
Institution/fund	*Adaptation*	*Mitigation*	*Cross-cutting*	*Total*
Adaptation Fund	1.053	–	–	1.053
African Development Bank	–	–	2.247	2.247
Asian Development Bank	–	–	0.004	0.004
Inter-American Development Bank	–	–	0.017	0.017
UNFCCC trust fund for supplementary activities	–	–	0.096	0.096
World Bank	–	–	1.652	1.652
Total	**1.053**	**0.000**	**4.016**	**5.069**
Share of total (%)	**20.8**	**0.0**	**79.2**	–

Sources: Portugal's BTR1 and CTF table III.2, and information provided by the Party during the review.

2. Technology development and transfer support provided under Article 10 of the Paris Agreement

34. Portugal implemented measures or activities related to technology development and transfer, including activities undertaken by the public sector, that benefited developing country Parties.

35. Portugal supported measures and activities related to technology development and transfer that focused mainly on waste management and sanitation infrastructure, environmental protection, environmental monitoring and sustainable agriculture.

Technological support was given to projects and programmes in Argentina, Cabo Verde, Colombia, Côte d'Ivoire, and Sao Tome and Principe. The types of technology that received support include information and data management technologies, agricultural and biochemical technologies, and technologies related to waste and sanitation engineering. For the reporting period 2021–2022, most of the measures and activities aimed at supporting technology development and transfer were reported as completed.

3. Capacity-building support provided under Article 11 of the Paris Agreement

36. Portugal provided capacity-building support to developing country Parties by integrating strong elements of technical assistance aimed at national capacity-building, education and knowledge transfer into its projects, programmes and activities. Information on capacity-building remains outside the scope of the data collected through the Creditor Reporting System of the Development Assistance Committee of the Organisation for Economic Co-operation and Development, which is Portugal's data source for reporting on the provision of financial, technology development and transfer, and capacity-building support; therefore, the Camões Institute for Cooperation and Language has adjusted its information technology system with a view to obtaining these additional data for inclusion in future reports, including by identifying projects that include capacity-building components.

D. Identification of areas of improvement[17]

37. During the technical expert review, the TERT identified areas of improvement in relation to Portugal's implementation of Article 13 of the Paris Agreement, which are summarized in chapter II.A above and included in the assessment tables referred to in paragraph 6 above.

III. Conclusions and recommendations

38. The TERT conducted a technical expert review of the information reported in the BTR1, NID, CRTs and CTF tables of Portugal in accordance with the MPGs.

39. The areas of improvement identified by the TERT on the basis of the review of the consistency of the information reported by Portugal with the MPGs are summarized in chapter II.A above and included in the assessment tables referred to in paragraph 6 above.

40. The EU and its member States have a joint NDC with a target of an economy-wide net domestic reduction in emissions of at least 55 per cent by 2030 compared with the 1990 level. In its BTR1 Portugal described its contribution to the progress towards the joint EU NDC target. The TERT noted that the consideration of progress by the EU and its member States towards the joint EU NDC is contained in the report on the technical expert review of the BTR1 of the EU, which states that the EU and its member States are on track to achieving the joint 2030 NDC target by implementing mitigation actions; however, maintaining this pace of emission reductions will require the full implementation of the EU 2030 legal framework and its related investment flows.

41. The TERT notes that PaMs have contributed to GHG emission reductions in the energy, IPPU and waste sectors. The TERT also notes that agriculture sector emissions remained relatively stable between 2005 and 2022, while the LULUCF sector continued to represent a net sink for most of 2015–2022, with the exception of two years in which extreme wildfires occurred. However, in the road transport sector, GHG emissions have increased, which indicates that the effects of the growing vehicle fleet and its ageing profile have outpaced the impact of mitigation PaMs in the short term.

42. Portugal considers itself subject to the reporting obligations applicable to developed country Parties pursuant to Article 13, paragraph 9, of the Paris Agreement and, in accordance with the MPGs, reported information on financial, technology development and

[17] As per para. 146(d) of the MPGs.

transfer, and capacity-building support provided to developing country Parties under Articles 9–11 of the Paris Agreement in its BTR1.

43. Portugal continued to provide financial support through bilateral, regional and other channels and through multilateral channels to developing country Parties. The financial support provided through bilateral, regional and other channels in 2021–2022 totalled USD 4.74 million, while the financial support provided through multilateral channels in 2021–2022 amounted to USD 5.07 million (inflows).

44. Portugal continued to provide support for technology development and transfer, and capacity-building. Priority for technological support was given to projects and programmes in lusophone island countries in Africa and Latin America. Capacity-building support was integrated into projects, programmes and activities, representing a key component of technical assistance provided for strengthening national capacities. Portugal is enhancing the tracking of such support by upgrading its reporting systems with a view to capturing information on capacity-building elements in a more systematic manner for future BTRs.

Annex I

Outcome of the review conducted on a voluntary basis of the information reported by the Party in its first biennial transparency report pursuant to chapter IV of the modalities, procedures and guidelines

I. Summary of reported information

1. In its BTR1 Portugal provided information related to climate change impacts and adaptation under Article 7 of the Paris Agreement pursuant to chapter IV of the MPGs and, as per paragraph 1 of decision 9/CMA.4, on a voluntary basis, requested the secretariat to organize a review of that information as part of the technical expert review pursuant to chapter VII of the MPGs.

2. In accordance with chapter IV of the MPGs, Portugal provided information on its climate change impacts; risks and vulnerabilities; adaptation priorities and barriers to implementing adaptation action; and cooperation, good practices, experience and lessons learned in relation to climate change impacts and adaptation, which are summarized in table I.1.

Table I.1
Summary of information on vulnerability and adaptation to climate change reported by the Party

Priority adaptation sector or area	*Vulnerability and adaptation measures reported*	*Challenges and constraints*	*Cooperation, good practices, experience and lessons learned*
Coastal zones	Vulnerability: high vulnerability to coastal erosion and overtopping, affecting areas where some 14 per cent of the population live and key economic activities occur; sediment deficit in several areas; modification of wave regime and magnitude of storms and flooding in urban areas; increase in saline contamination, affecting water supply systems, agriculture and ecosystems Adaptation measures: including adaptation measures in landscape planning and urban licensing, removing and relocating buildings in risk areas, beach profile replacement, dune recovery and coastal infrastructure works	High cost of actions The need to use updated socioeconomic scenarios to further refine coastal risk assessments and better support long-term adaptation planning	Assessment of future projected hydro-morphodynamic changes along coastlines Estimation of inaction and adaptation costs for certain solutions for sea level rise
Ecosystems and biodiversity[a]	Vulnerability: marked change in vegetation structure and composition, increasing mortality of trees, reduction in biological diversity, accelerating desertification processes, impacts on national food security and economic activities, projected changes in seawater temperature, salinity and ocean acidity affecting marine ecosystems Adaptation measures: refuge areas and ecological corridors; conservation of genetic heritage; recovery of rivers and their surroundings; restoration, preservation and enhancement of biodiversity; erosion prevention; and inclusion in regional forestry management programmes of scenarios based on climate models and measures for reducing risks	Difficulties with implementing large-scale measures on privately owned land The need to improve collaboration between researchers and local communities to encourage evidence-based decision-making at the local level	The LIFE Programme, an EU funding instrument, is important for biodiversity as it funds initiatives that enhance biodiversity and involve the local community
Floods and storms	Vulnerability: increase in unpredictable, intense and localized meteorological events, such as flooding, cyclones and tornadoes; soil saturation	Lack of capacity for in-depth analysis of	Flood risk management plans integrating climate scenarios, ensuring public

Priority adaptation sector or area	*Vulnerability and adaptation measures reported*	*Challenges and constraints*	*Cooperation, good practices, experience and lessons learned*
	from successive storms; impacts of previous forest fires have exacerbated erosion, soil loss and surface run-off Adaptation measures: good practice guidelines for resilience of critical infrastructure, mainstreaming adaptation in municipal master plans, integrating climate scenarios into the National Risk Assessment for Disaster Risk Management	data on loss and damage High implementation and adaptation costs for resilient physical infrastructure	participation and broadening discussions with representatives of economic sectors Risk assessment for the insurance sector
Food and agricultural production[a]	Vulnerability: decreasing trend in reservoir volume and water resource availability, increasing average temperature, reduction in productivity, and losses in agricultural production; most affected products: almonds, grapes, olives, apples, corn, potatoes and tomatoes Adaptation measures: including an adaptation objective under the Common Agricultural Policy, research on more climate-resilient species, soil management, efficient use of water and water management to reduce water losses, incentives to promote insurance coverage, strengthening meteorological early warning systems	The need to conduct climate modelling for crops not included in previous climate risk assessments Fragmentation of existing data across institutions and platforms capable of translating coherent decision-making and integrated planning	The National Competence Centre for Climate Change in the Agroforestry Sector, which is a partnership involving various sectors of public administration and academia Modelling of hydrological balance and agroforestry using different future scenarios for river basin districts
Forest fires	Vulnerability: increase in rural and large forest fires, including frequency of megafires and size of burned areas, particularly for Portugal's northern and central regions Adaptation measures: firebreaks, fire-resistant native species planted, forest fire detection system, fuel management in buffer zones, public awareness campaigns, evacuation plans and biomass clearing	Fragmented, small and abandoned forest areas hinder active management, increasing fire vulnerability and complicating coordinated prevention and response High proportion of private forests makes the implementation of large-scale management and prevention measures more challenging Lack of financial and human resources specialized in adaptation and fire management to face the scale of climate risks	Recent modelling of the probability of megafires and location-based risks using a sophisticated technical approach A study (Soares et al., 2024) that provides valuable storylines for decision-making processes for adaptation actions, including cost of inaction Key partnerships and public participation, such as in local climate adaptation and recovery plans
Water[a]	Vulnerability: increase in intensity and severity of meteorological droughts; reduction in river flows and aquifer recharge (particularly in the drier southern regions); rivers drying out for longer or shorter periods than previously experienced; degradation of water quality and soil; higher risk of desertification; growing water demand for irrigation and during heatwaves; cross-sectoral negative impacts include effects on health, ecosystems, forest fires, energy production, industry and agricultural productivity Adaptation measures: national programmes for efficient water use; national plan for managing	Coordination of water management in shared river basins (60 per cent of water resources originate in Spain) Knowledge gaps related to risks and water availability Data availability and information on adaptation costs	Real-time monitoring stations, useful for water management Two complementary governance structures for managing droughts: a technical mechanism for assessing water availability, working directly with water users to develop local solutions, and a ministerial commission, supported by

Priority adaptation sector or area	*Vulnerability and adaptation measures reported*	*Challenges and constraints*	*Cooperation, good practices, experience and lessons learned*
	drought situations; regulations and pilot projects on water reuse; improvements in water efficiency in infrastructure; water retention systems; structural interventions to manage flooding; hydrological and hydraulic forecasting models; and river ecosystems restoration		a multidisciplinary technical group, that provides strategic oversight and approves legal documents and financial support

[a] Thematic target under the United Arab Emirates Framework for Global Climate Resilience.

3. Portugal provided a description of its adaptation strategies, policies, plans and goals; the actions it has taken to integrate adaptation into national policies and strategies; and its progress in implementing adaptation action, and information on its monitoring and evaluation of adaptation action and processes, which is summarized within the context of the iterative adaptation cycle in table I.2.

Table I.2
Summary of information on the iterative adaptation cycle reported by the Party

Dimension	*Information on progress reported*
Impact, vulnerability and risk assessment	Impact, vulnerability and risk assessment: the National Roadmap for Adaptation 2100, published in 2024, updated the reference climate scenarios for mainland Portugal and the Portuguese archipelagos (Madeira and the Azores) and revised the climate risk assessment using regional climate models and downscaling methodologies, with a focus on coastal areas, droughts, agroforestry and forest fires. The Roadmap includes studies on the economic dimensions of adaptation, including the costs and impacts of inaction. All assessments developed under the road map involved partnerships with government institutions and universities and were used to support the revision of the ENAAC, which is expected to be published in 2026. Several tools and platforms, such as dataClima (https://dataclima.ipma.pt/), which provides modelled and observed climate indicators for mainland Portugal and the islands, and the Climate Portal (http://rna2100.portaldoclima.pt/), a central platform for historical climate data, regional projections and climate indicators, provide information on observed climate impacts, projections and data sets, ensuring easy public access. The Party reported that this information is widely used by multiple sectoral government entities and local administrations. Multi-hazard early warning systems: the Portuguese Institute for Sea and Atmosphere and the Portuguese Environment Agency monitor meteorological variables and water resources, providing real-time alerts to support civil protection, with systems such as the Water Resources Surveillance and Alert System, which predicts floods and integrates data from various sources to offer a comprehensive overview of Portugal's water status. Public warnings are issued by the National Authority for Emergency and Civil Protection to regional and local agents through channels such as cellular phone alerts and a website. Portugal also applies the EU early warning system. For the agroforestry sector there are climate warnings with information available at multiple spatial scales.
Planning	The main strategic documents at the national level are (1) the ENAAC, first published in 2010 and currently under review; (2) the P-3AC, published in 2019; and (3) the Portuguese Climate Framework Law, adopted in 2021. The Portuguese Climate Framework Law foresees the review of the ENAAC every 10 years, with an interim update. The ENAAC primarily establishes the governance structure and responsibilities of the public entities involved in addressing its three main objectives: (1) improving the level of knowledge on climate change; (2) implementing adaptation measures; and (3) promoting the mainstreaming of adaptation into sectoral policies. Additional objectives are defined for its nine sectoral working groups and six thematic areas. Because the ENAAC is aimed at mainstreaming adaptation in public policies, several plans and strategies have progressively integrated the consideration of climate risks and adaptation, including the National Risk Assessment for Disaster Risk Management, the National Programme for Spatial Planning Policies, protected area management plans, special programmes for coastal areas, the Tourism Strategy 2027, the Sustainable Tourism Plan, the Long-Term Strategy for Building Renovation, the Preventive Action

Dimension	*Information on progress reported*
	Plan for the National Gas System, the Emergency Plan for the National Gas System and the Risk Preparedness Plan for the Portuguese Electricity Sector. The Party reported that, at the local level, all municipalities are covered by municipal or intermunicipal climate change adaptation plans, and several regional strategies have recently been revised using scenarios based on climate models, such as the regional forestry management programmes and the river basin district management plans. The National Roadmap for Adaptation 2100 also contains guidelines and good practices for integrating climate change adaptation into municipal-level territorial planning instruments.
Implementation	The Party reported progress in producing, consolidating and disseminating scientific and technical knowledge, with support tools for decision-making made available. Additional results reported include 100 per cent of municipalities being covered by adaptation plans, and 99 per cent of municipalities having forest defence plans that integrate future climate vulnerability assessments and adaptation measures. In 2023, Portugal conducted a sectoral evaluation of adaptation measures, which was funded by the European Structural and Investment Funds. The evaluation concluded that the funds significantly increased adaptive capacity; reduced the vulnerability of people, assets, ecosystems and infrastructure; and improved preparedness through green infrastructure, coastal protection, resilient agriculture, early warning systems and risk reduction actions. For implementation, many actions rely on financing from the Party's Environmental Fund and EU grants.
Monitoring, evaluation and learning	The national monitoring, reporting and evaluation system is primarily based on the biennial progress reports of ENAAC and the monitoring activities conducted under the P-3AC. The autonomous regions of the Azores and Madeira operate their own structured monitoring systems. The biennial progress reports focus on various thematic areas and priority sectors, the current state of the art, the degree of integration of adaptation into public and sectoral policies, and the implementation of adaptation measures. Since the ENAAC was adopted, four biennial reports have been produced. The Party will publish a final evaluation report tracking the implementation of the ENAAC for 2015–2025. At present, progress related to adaptation policy is largely reported through qualitative information. The main national indicators currently in use were defined under the P-3AC, which established indicators and targets for 2020 and 2030 to monitor its progress. The Party noted that the national Climate Agency will be responsible for monitoring the implementation of the ENAAC and related actions.

II. Areas of improvement identified during the technical expert review of the reporting in the Party's first biennial transparency report on climate change impacts and adaptation under Article 7 of the Paris Agreement pursuant to chapter IV of the modalities, procedures and guidelines

4. The TERT assessed the information reported on climate change impacts and adaptation under Article 7 of the Paris Agreement pursuant to chapter IV of the MPGs in the BTR1 of Portugal and identified areas of improvement relating to consistency with the MPGs, which are described in table I.3. All encouragements contained in the table are for the next BTR, unless otherwise specified.

Table I.3
Areas of improvement of the reporting on climate change impacts and adaptation under Article 7 of the Paris Agreement

ID#	*Reporting requirement*	*Description of area of improvement with recommendation or encouragement*
I.3.1	Specified in paragraph 107(a) of the MPGs	Portugal included in its BTR1 a section on current and projected climate trends and hazards, which highlights key sectors for climate risk and vulnerability assessments and lists key climate-related hazards. However, the content largely focuses on impacts, rather than on climate trends and hazards, as required under the MPGs.

ID#	*Reporting requirement*	*Description of area of improvement with recommendation or encouragement*
		During the review, Portugal provided information on current and projected climate trends and hazards, including data available on public portals, such as dataClima and the Climate Portal. The TERT encourages Portugal to report existing data on current and projected climate trends and hazards, as appropriate, particularly regarding changes in temperature and precipitation patterns.
I.3.2	Specified in paragraph 109(c) of the MPGs	Portugal did not report transparently in its BTR1 on how gender perspectives and Indigenous, traditional and local knowledge are integrated into adaptation. During the review, Portugal clarified that gender perspectives are not directly incorporated into adaptation planning, although measures that address vulnerable groups may contribute to reducing gender-related impacts of climate change. The Party shared gender-disaggregated socioeconomic data on the population and explained that traditional and local knowledge is incorporated into adaptation planning through formal public participation processes and structured engagement with municipalities and local stakeholders. The TERT encourages the Party to provide information on how gender perspectives and traditional and local knowledge are integrated into adaptation, for example by reporting how these elements are integrated into risk and vulnerability assessments, as well as into planning processes, as appropriate. If the Party considers that it is not possible to report consistently with paragraph 109(c) of the MPGs, the TERT encourages it to provide an explanation for this in the BTR.
I.3.3	Specified in paragraph 113(c) of the MPGs	Portugal provided in its BTR1 an assessment of the evolution of subnational coverage of climate change adaptation strategies, as well as progress in mainstreaming consideration of climate risks and adaptation in strategic plans and programmes, and efforts to monitor the implementation of the P-3AC. However, the Party did not report how the assessment and the indicators used under these processes relate to monitoring, or the results of the evaluation of the effects of implementing adaptation measures, including the assessment of and indicators for (1) how adaptation has increased resilience and reduced impacts, (2) when adaptation is insufficient to avert impacts and (3) the effectiveness of implemented adaptation measures, as appropriate. Therefore, no information was reported on assessing whether the adaptation actions implemented are effective in reducing impacts and vulnerabilities. During the review, Portugal clarified that its national monitoring system is not yet fully implemented and the assessments are generally qualitative. Nonetheless, it recently took steps to begin integrating indicators from the global goal on adaptation into the review of the ENAAC with the aim of strengthening the monitoring, reporting and evaluation of adaptation actions, including by developing mechanisms to assess effectiveness, track progress over time and support evidence-based decision-making. Portugal also provided information on several monitoring frameworks and processes already in place at the national and regional level, including those under the P-3AC, the Operational Programme for Sustainability and Efficient Use of Resources, and the monitoring systems established by the autonomous regions. These frameworks and processes include sets of indicators with some quantitative results, and there is also information from fund assessments regarding the effectiveness of actions in reducing climate vulnerability. The TERT encourages Portugal to provide information on progress in monitoring and evaluation, including on the assessment of and indicators used for (1) how adaptation has increased resilience and reduced impacts, (2) when adaptation is insufficient to avert impacts and (3) the effectiveness of implemented adaptation measures, as appropriate.
I.3.4	Specified in paragraph 114(b) of the MPGs	Portugal provided in its BTR1 information on progress in achieving objectives and implementing actions. However, the Party did not report the results of adaptation actions, including in terms of their effectiveness and how they increased resilience and reduced climate impacts, or the sustainability of those results. During the review, Portugal provided information on results obtained through the implementation of the P-3AC, such as the municipalities covered by adaptation plans, and improvements in water use efficiency. Portugal also shared that a programme aimed at subnational governments has led to ongoing coordination

ID#	*Reporting requirement*	*Description of area of improvement with recommendation or encouragement*
		among municipalities and regions, making progress in climate governance more sustainable. The TERT encourages Portugal to provide information on the results of adaptation actions and the sustainability of those results, as appropriate.
I.3.5	Specified in paragraph 115 of the MPGs	Portugal did not report information related to enhancing understanding, action and support, on a cooperative and facilitative basis, to avert, minimize and address loss and damage associated with climate change impacts, taking into account projected changes in climate-related risks, vulnerabilities, adaptative capacities and exposure. During the review, Portugal clarified that it prioritized reporting on elements of the MPGs that use "should", and the provision under paragraph 115 uses "may". However, the Party indicated that it is considering working with civil defence to strengthen impact assessments and it may consider including additional information related to loss and damage in future submissions. The TERT encourages Portugal to report information related to enhancing understanding, action and support to avert, minimize and address loss and damage associated with climate change impacts, as appropriate, or explain in the BTR why this information was not reported.

Annex II

Documents and information used during the review

A. Reference documents

BTR1 of Portugal. Available at https://unfccc.int/first-biennial-transparency-reports.

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

BTR1 of the EU. Available at https://unfccc.int/first-biennial-transparency-reports.

BTR1 CTF tables of the EU. Available at https://unfccc.int/first-biennial-transparency-reports.

CRTs of Portugal. Available at https://unfccc.int/first-biennial-transparency-reports.

CRTs of the EU. Available at https://unfccc.int/first-biennial-transparency-reports.

"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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"Modalities, procedures and guidelines for the transparency framework for action and support referred to in Article 13 of the Paris Agreement". Annex to decision 18/CMA.1. FCCC/PA/CMA/2018/3/Add.2. Available at https://unfccc.int/documents/193408.

NDC of the EU. Available at https://unfccc.int/NDCREG.

NID of Portugal. Available at https://unfccc.int/first-biennial-transparency-reports.

NID of the EU. Available at https://unfccc.int/first-biennial-transparency-reports.

Report on the technical expert review of the BTR1 of the EU. FCCC/ETF/TERR.1/2024/EU and Add.1. Available at https://unfccc.int/first-biennial-transparency-reports.

"Reviews on a voluntary basis of the information reported pursuant to decision 18/CMA.1, annex, chapter IV, and respective training courses needed". Decision 9/CMA.4. FCCC/PA/CMA/2022/10/Add.2. Available at https://unfccc.int/documents/626570.

B. Additional information provided by the Party

Responses to questions during the review were received from Pedro Baptista, Ana Rita Branco and Paulo Lourenço (Climate Agency of Portugal), including additional material. The following references were provided by Portugal and may not conform to UNFCCC editorial style as some have been reproduced as received:

EMEP/EEA Air Pollutant Emission Inventory Guidebook 2023; Technical guidance to prepare national emission inventories; European Environmental Agency, ISBN 978-92-9480-598-0.

European Environment Agency. 2025. Waste management country profile with a focus on municipal and packaging waste. European Environment Agency. Portugal. Available at https://www.eea.europa.eu/en/topics/in-depth/waste-and-recycling/municipal-and-packaging-waste-management-country-profiles-2025/pt-municipal-waste-factsheet.pdf.

Eurostat. 2025. Municipal waste by waste management operations (ENV_WASMUN). Eurostat database. Available at https://ec.europa.eu/eurostat/databrowser/view/ENV_WASMUN/default/table (accessed 21 March 2026).

Soares, P. M. M., Dias, L. F., Lemos, G., et al. 2024. National Roadmap for Adaptation 2100: Portuguese Territorial Climate Change Vulnerability Assessment for XXI Century – Report WP7: Regional Adaptation Storylines. Lisbon: Instituto Dom Luiz & Project RNA2100. Available at https://zenodo.org/records/13920096.