United Nations

Framework Convention on Climate Change

FCCC/ETF/TERR.1/2024/ESP

Distr.: General
10 September 2025

English only

# Report on the technical expert review of the first biennial transparency report of Spain

*Summary*

This report presents the results of the technical expert review of the first biennial transparency report of Spain, 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 24 to 28 February 2025 in Madrid.

# Abbreviations and acronyms

| | |
|---|---|
| 2006 IPCC Guidelines | *2006 IPCC Guidelines for National Greenhouse Gas Inventories* |
| AEA | annual emission allocation |
| BTR | biennial transparency report |
| $CO_2$ | carbon dioxide |
| $CO_2$ eq | carbon dioxide equivalent |
| CRT | common reporting table |
| CTF | common tabular format |
| ESR | European Union effort-sharing regulation |
| EU | European Union |
| EU ETS | European Union Emissions Trading System |
| GDP | gross domestic product |
| GHG | greenhouse gas |
| 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 |
| NA | not applicable |
| NDC | nationally determined contribution |
| NE | not estimated |
| NID | national inventory document |
| PaMs | policies and measures |
| QA/QC | quality assurance/quality control |
| SDG | Sustainable Development Goal |
| 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 Spain. The review was organized by the secretariat and conducted by the TERT in accordance with the MPGs,[1] particularly chapter VII thereof.

2. A draft version of this report was transmitted to the Government of Spain, which provided comments that were taken into account, as appropriate, in this final version of the report.[2]

3. The review was conducted as an in-country review from 24 to 28 February 2025 in Madrid by the following team of nominated experts from the UNFCCC roster of experts: Buket Akay (Türkiye), Jorge Alvarez (Peru), Niculina Mihaela Balanescu (Romania), Christopher John Dore (United Kingdom of Great Britain and Northern Ireland), Diana Guzman Barraza (Mexico), Phindile Mangwana (South Africa) and Koki Okawa (Japan). Jorge Alvarez and Christopher John Dore were the lead reviewers. The review was coordinated by Stefania D Annibali and Andrea Nuesse (secretariat).

## B. Scope

4. The TERT conducted a technical expert review of the information reported in the BTR1 of Spain as per the scope of the review defined in paragraph 146 of the MPGs, 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[3] for the Party related to implementation of Article 13 of the Paris Agreement (see chap. II.D below).

## C. Summary

5. Spain submitted its BTR1 on 7 November 2024, before the deadline of 31 December 2024 mandated in decision 18/CMA.1. Spain submitted its NID as a stand-alone document on 25 October 2024, before the deadline of 31 December 2024. Spain also submitted its CRTs on 16 December 2024 and CTF tables on 7 November 2024, both before the deadline of 31 December 2024.[4]

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]

[1] Decision 18/CMA.1, annex.
[2] As per para. 162(e) of the MPGs.
[3] As referred to in paras. 7, 8, 146(d) and 162(d) of the MPGs.
[4] The technical expert review was conducted on the basis of the versions of the NID and CRTs submitted on 16 December 2024 and the versions of the CTF tables and their corrigendum submitted on 20 January and 12 February 2025 respectively.
[5] Contained in document FCCC/ETF/TERR.1/2024/ESP/Add.1, available at https://unfccc.int/first-biennial-transparency-reports.

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

7. Spain considers itself a developed country Party under the Paris Agreement and as such 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 Spain 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.

[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 Spain's national inventory report and review of consistency with the modalities, procedures and guidelines**

| *Element* | *Elements of information to be reported* | *Summary of information reported* | *ID#(s) for the area(s) of improvement identified*[a] |
|---|---|---|---|
| Submission type (para. 12 of the MPGs) | Has the national inventory report been submitted as a stand-alone document? | No | No areas of improvement 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 were identified |
| Metrics (para. 37 of the MPGs) | Has the Party used the 100-year global warming potential values from the IPCC Fifth Assessment Report? | Yes | No areas of improvement were identified |
| | Has the Party used other metrics? | No | No areas of improvement were identified |
| Gases (paras. 47–49 and 51 of the MPGs) | Which gases have been reported? | $CO_2$, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, sulfur hexafluoride, nitrogen trifluoride | 7.W.1 |
| Indirect emissions (para. 52 of the MPGs) | Has the Party reported indirect $CO_2$ emissions and national totals with and without indirect $CO_2$? | No | 4.I.3 |
| | Has the Party reported indirect nitrous oxide emissions from sources other than those in the agriculture and LULUCF sectors as a memo item? | No | No areas of improvement were identified |
| 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? | Yes | No areas of improvement were identified |
| Methodologies, parameters and data (paras. 20–24 of the MPGs) | Has the Party used the 2006 IPCC Guidelines? | Yes | No areas of improvement were identified |
| | Has the Party used other IPCC methodological guidance? | Yes, the *2019 Refinement to the 2006 IPCC Guidelines for National Greenhouse Gas Inventories* and the *2013 Revised Supplementary Methods and Good Practice Guidance Arising from the Kyoto Protocol* | No areas of improvement were identified |

| *Element* | *Elements of information to be reported* | *Summary of information reported* | *ID#(s) for the area(s) of improvement identified*[a] |
|---|---|---|---|
| Key category analysis (paras. 25 and 41–42 of the MPGs) | Has the Party reported a key category analysis? | Yes, a key category analysis was performed using approaches 1 and 2 and a 95 per cent threshold for level and trend assessment for the starting year (1990) and the latest reporting year (2022) and with and without LULUCF | No areas of improvement were identified |
| Time-series consistency and recalculations (paras. 26–28 and 43 of the MPGs) | Has the Party reported a consistent time series? | Yes | No areas of improvement were identified |
| | Has the Party provided justification and explanatory information for recalculations? | Partly | 5.A.2, 6.L.3 |
| 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? | Yes, including level and trend uncertainty, reported using approaches 1 and 2 for the starting year (1990) and the latest reporting year (2022) | 2.G.1 |
| 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? | Yes, including information on the inventory agency responsible for implementing QA/QC, an inventory QA/QC plan, general QC procedures and category-specific QC for key categories and for individual categories for which significant methodological changes and/or data revisions have occurred | No areas of improvement were identified |
| Assessment of completeness (paras. 30–33, 45 and 50 of the MPGs) | Have any areas of improvement for lack of completeness been identified for the following sectors? | | 2.G.2 |
| | Energy | No | No areas of improvement were identified |
| | IPPU | Yes | 4.I.3 |
| | Agriculture | No | No areas of improvement were identified |
| | LULUCF | No | No areas of improvement were identified |
| | Waste | Yes | 7.W.1, 7.W.3, 7.W.5 |

| *Element* | *Elements of information to be reported* | *Summary of information reported* | *ID#(s) for the area(s) of improvement identified*[a] |
|---|---|---|---|
| Threshold for reporting significant categories (para. 32 of the MPGs) | 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? | Yes | No areas of improvement were identified |
| Methodologies, emission factors, parameters and activity data (paras. 39–40 and 53–56 of the MPGs) | Has information been reported on categories, gases, methodologies (including the rationale for selecting them), emission factors and activity data at a disaggregated level for the following sectors? | Partly | |
| | Energy | Partly | 3.E.1 |
| | 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 | No areas of improvement were identified |
| | 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? | Yes | No areas of improvement were identified |
| | IPPU | Partly | 4.I.1, 4.I.2 |
| | Agriculture | Partly | 5.A.1 |
| | LULUCF | Partly | 6.L.1, 6.L.3, 6.L.4 |
| | Waste | Partly | 7.W.2, 7.W.4 |

[a] See document FCCC/ETF/TERR.1/2024/ESP/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 Spain and identified areas of improvement relating to consistency with the MPGs, which are described in tables 8, 11 and 13 of the assessment tables referred to in paragraph 6 above and summarized in table 2.

Table 2
**Information reported in Spain's submission**

| *Topic* | *ID#(s) for the area(s) of improvement identified*[a] |
|---|---|
| National circumstances and institutional arrangements (paras. 59–63 of the MPGs) | 8.1, 8.2 |
| Description of the NDC under Article 4 of the Paris Agreement, including updates (para. 64 of the MPGs) | No areas of improvement 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 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 were identified |
| Projections of GHG emissions and removals (paras. 92–102 of the MPGs) | 13.1 |

[a] See document FCCC/ETF/TERR.1/2024/ESP/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. Spain reported information on financial, technology development and transfer, and capacity-building support provided under Articles 9–11 of the Paris Agreement.

11. The TERT assessed the information reported in the BTR1 of Spain and identified areas of improvement relating to consistency with the MPGs, which are described in tables 19–20 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 Spain'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) | No areas of improvement were identified |
| Underlying assumptions, definitions and methodologies (paras. 121–122 of the MPGs) | No areas of improvement were identified |
| Information on financial support provided under Article 9 of the Paris Agreement (paras. 123–124 of the MPGs) | No areas of improvement were identified |
| Information on support for technology development and transfer provided under Article 10 of the Paris Agreement (paras. 126–127 of the MPGs) | 19.1 |

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

| *Topic* | *ID#(s) for the area(s) of improvement identified*[a] |
|---|---|
| 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/ESP/Add.1.

## B. Consideration of the Party's implementation and achievement of its nationally determined contribution[11]

12. In considering Spain'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.[12]

13. Spain 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 EU LULUCF regulations – significantly influence Spain'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. Spain's ESR target for 2030 is a 37.7 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 42 Mt $CO_2$ eq. The EU LULUCF regulation sets a net removal target of 310 Mt $CO_2$ eq within the scope of NDCs.

14. Spain reported information on the actions and PaMs that support the implementation and achievement of the joint NDC of the EU. Table 4 provides a summary of the reported information on the key PaMs of Spain.

Table 4
**Summary of information on key policies and measures reported by Spain**

| *Sector* | *Key PaMs* | *Estimate of mitigation impact in 2030 (kt $CO_2$ eq)* |
|---|---|---|
| Energy supply and renewables | Increasing the use of renewable energy | 22 881.20 |
| | Improving energy efficiency in industrial end-use sectors, promoting the switch to less-carbon-intensive fuels, increasing the use of renewable energy | 10 395.10 |
| | Promoting the switch to less-carbon-intensive fuels, increasing the use of renewable energy for, inter alia, heating and cooling, improving the energy efficiency of residential, commercial and institutional buildings and appliances | 3 223.30 |
| | Promoting the switch to less-carbon-intensive fuels, demand management in refineries | 2 784.60 |
| | Promoting the switch to less-carbon-intensive fuels, demand management, improving energy efficiency in the commercial and institutional sectors | 2 061.50 |

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

[12] 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* | *Estimate of mitigation impact in 2030 (kt $CO_2$ eq)* |
|---|---|---|
| Transport | Promoting the switch to less-carbon-intensive fuels, promoting the use of low-carbon fuels for electric cars, promoting the use of electric road transport, improving the energy efficiency of vehicles, promoting the shift to public or non-motorized transport, improving demand management, improving transport infrastructure | 25 913.10 |
| | Reducing emissions from international air and maritime transport | 283.90 |
| | National programme to control atmospheric pollution: demand management reduction, improving behaviour, efficiency improvements of vehicles, electric road transport, modal shift to public transport or non-motorized transport, low-carbon fuels, reducing emissions from international air or maritime transport | 113.40 |
| Agriculture | | |
| Livestock | Improving animal waste management systems, improving livestock management | 3 253.20 |
| Crops | Reducing fertilizer manure use on cropland, improving management of organic soils, improving demand management and cropland management | 138.90 |
| LULUCF | Promoting sustainable forest management practices, enhancing natural carbon sinks through afforestation, reforestation and restoration of degraded lands | 2 555.91 |

*Sources*: Spain's BTR1 and CTF table 5.

15. The TERT noted that PaMs have contributed to GHG emission reductions in many sectors. GHG emissions from electricity generation have decreased significantly since 2005, despite Spain's growing population and increasing GDP per capita, owing to the shift from fossil fuels to renewable energy for electricity generation. Drops in GHG emissions from industrial combustion have also been observed since 2005, primarily driven by increased use of renewable energy, enhanced energy efficiency and improved production efficiencies, while emissions from agriculture have not fallen significantly despite the implementation of a comprehensive package of PaMs in this sector, with the 2022 emission level comparable with the 2005 level. The TERT noted that the Party has an extensive list of implemented PaMs, which will continue to contribute to GHG emission reductions, and planned PaMs, which are expected to deliver additional reductions.

16. The TERT noted that Spain's GHG emission trends in 1990−2013 were closely linked to its economic development and energy consumption, despite the increasing decoupling of GHG emissions from GDP since 2005, after which emission levels stabilized until 2017. Spain saw a decrease in GHG emissions in 2018−2020, followed by an increase in 2021–2022 owing to economic recovery after the coronavirus disease 2019 pandemic. GHG emissions from the energy sector have closely followed this general trend, contributing 75.5 per cent of total GHG emissions in 2022.

17. Spain's AEAs, which correspond to its national emission targets for ESR sectors, decrease from 2021 to 2030. The level of emissions in 2021 and 2022 was 3.2 and 1.9 per cent respectively below the AEAs for those years. The TERT noted that Spain's cumulative surplus of AEAs in 2021 and 2022 is 10,167 kt $CO_2$ eq, which suggests that Spain is contributing to the joint EU target.

18. Spain reported projections for 2030 under the WM scenario in CTF table 7, and projections for 2040 under the WM scenario in BTR table 11.[13] The WM scenario reported by the Party includes PaMs implemented and adopted until 2023. In addition to the WM

[13] 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.

scenario, Spain reported the WAM scenario. The projected emission levels are presented in table 5.

Table 5
**Summary of greenhouse gas emission projections for Spain**

| | *GHG emissions (kt $CO_2$ eq/year)* | *Change in relation to 2022 level (%)* | *Change in relation to 2020 level (%)* |
|---|---|---|---|
| Inventory data 2020 | 224 191.41 | –9.2 | NA |
| Inventory data 2022 | 246 780.49 | NA | 10.1 |
| WM projections for 2030 | 234 614.73 | –4.9 | 4.6 |
| WAM projections for 2030 | 156 065.07 | –36.9 | –30.4 |

*Source*: Spain's CTF tables 6–9.
*Note*: The projections are for GHG emissions with LULUCF and excluding indirect $CO_2$ emissions.

19. In its BTR1, Spain described the progress made 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[14] 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 related investment flows.

## C. Consideration of the Party's support provided[15]

20. In its BTR1 Spain 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 and good practices 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.

21. Spain described its national circumstances and institutional arrangements relevant to the provision of technology development and transfer, and capacity-building support. The Spanish Climate Change Office coordinates the collection, monitoring and reporting of data on technology development and transfer, and on capacity-building initiatives annually, gathering information from key institutions such as the Spanish Agency for International Development Cooperation, the National Renewable Energy Centre and the Ministry for Ecological Transition and the Demographic Challenge. Additional contributions of data to the national reporting process come from agencies such as the Centre for the Development of Industrial Technology and the Energy, Environmental and Technological Research Centre. Each institution and agency uses its own systems to monitor the implementation and outcomes of technology development and transfer, and of capacity-building activities.

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

23. Spain's BTR1 contains key information on underlying assumptions, methodologies and definitions used by the Party to identify and report information on technology development and transfer, and capacity-building support provided. Spain reported in its BTR1 that its contributions to capacity-building and technology development and transfer objectives are not systematically monitored and reported, owing to limitations in the official development assistance information system in which all information on official development assistance is compiled and processed (Info@OD system). During the review, Spain confirmed these limitations and provided clarification regarding its ongoing efforts to enhance financial data collection and reporting, namely by considering introducing additional

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

tracking mechanisms to complement the Info@OD system to provide more comprehensive reporting on its contributions to capacity-building and technology development and transfer.

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

#### (a) Bilateral, regional and other channels

24. Spain provided financial support through bilateral, regional and other channels, focusing mainly on countries in Latin America (e.g. Bolivia (Plurinational State of), Guatemala, Nicaragua), Africa (e.g. Ethiopia, Senegal) and Asia (e.g. Philippines). The projects, programmes or activities that received financial support related to promoting the use of renewable energy in Latin America, improving water and sanitation infrastructure in Ethiopia and supporting climate-resilient agriculture in Senegal. Other significant projects involved improving energy efficiency and enhancing food security in partner countries. The majority of financial support provided through bilateral, regional and other channels was allocated to the following sectors: transport (54.2 per cent), energy (21.5 per cent), other (14.0 per cent), agriculture (5.6 per cent) and water and sanitation (4.0 per cent).

25. 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 Spain**

| | *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 | 55.85 | 31.19 | 149.34 | 236.38 | 19.3 |
| Concessional loan | 51.24 | 415.82 | – | 467.06 | 38.1 |
| Non-concessional loan | 3.56 | 112.91 | 12.32 | 128.79 | 10.5 |
| Equity | – | 10.70 | – | 10.70 | 0.9 |
| Guarantee | – | 119.77 | – | 119.77 | 9.8 |
| Insurance | – | 231.92 | – | 231.92 | 18.9 |
| Other | – | 32.00 | – | 32.00 | 2.6 |
| **Total** | **110.65** | **954.31** | **161.66** | **1 226.61** | **100** |
| **Share of total for bilateral, regional and other channels (%)** | **9.0** | **77.8** | **13.2** | **100** | – |

*Sources*: Spain's BTR1 and CTF table III.1.

#### (b) Multilateral channels

26. Spain provided financial support through multilateral channels, focusing primarily on global and regional initiatives benefiting developing countries across Africa, Asia and Latin America. Significant contributions were made to key institutions, including the Adaptation Fund, the African Development Fund, the Global Environment Facility, the Green Climate Fund and the United Nations Environment Programme. These contributions targeted cross-cutting climate goals, addressing both mitigation and adaptation priorities. The projects, programmes and activities that received financial support related to promoting renewable energy (e.g. through International Renewable Energy Agency and International Energy Agency initiatives) and improving agricultural policy (e.g. through projects of the Food and Agriculture Organization of the United Nations). The majority of financial support provided through multilateral channels was allocated to cross-cutting activities in 2021–2022 (approximately 83 per cent), reflecting their broad impact on both mitigation and adaptation. In terms of sectoral distribution, the largest shares of financial support provided through multilateral channels were allocated to multisectoral aid (43.8 per cent), biosphere protection (30.0 per cent) and other (16.6 per cent), with smaller shares directed towards sectors such as agriculture and energy.

27. 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 Spain**
(USD million)

| | *Climate-specific amount[a] (face value)* | | | |
|---|---|---|---|---|
| *Institution* | *Adaptation* | *Mitigation* | *Cross-cutting* | *Total* |
| Adaptation Fund | 53.81 | – | – | 53.81 |
| African Development Bank | – | – | 8.14 | 8.14 |
| African Development Fund | – | – | 36.94 | 36.94 |
| Asian Development Bank | – | – | 0.58 | 0.58 |
| Climate Investment Funds | – | – | 9.51 | 9.51 |
| Global Environment Facility | – | – | 9.00 | 9.00 |
| Green Climate Fund | – | – | 53.50 | 53.50 |
| International Finance Corporation | – | – | 24.57 | 24.57 |
| Joint SDG Fund | – | – | 13.75 | 13.75 |
| Multilateral Fund for the Implementation of the Montreal Protocol | – | – | 12.72 | 12.72 |
| Resilience and Sustainability Trust of the International Monetary Fund | – | – | 32.11 | 32.11 |
| United Nations Environment Programme | – | – | 1.28 | 1.28 |
| World Bank[b] | – | 20.41 | 142.01 | 162.42 |
| Other[c] | 2.73 | 1.34 | 47.33 | 51.40 |
| **Total** | **56.54** | **21.75** | **391.43** | **469.72** |
| **Share of total (%)** | **12.0** | **4.6** | **83.3** | **100** |

*Sources*: Spain's BTR1 and CTF table III.2.
[a] The Party reported climate-specific financial support provided through multilateral channels as inflow values.
[b] Including the International Bank for Reconstruction and Development, and the International Development Association.
[c] Central American Bank for Economic Integration, Central Emergency Response Fund, International Centre for Advanced Mediterranean Agronomic Studies, Organization for Security and Co-operation in Europe, Council of Europe Development Bank, Development Bank of Latin America, IPCC, International Energy Agency, International Labour Organization, International Organization for Migration, International Renewable Energy Agency, Organization of Ibero-American States for Education, Science and Culture, Strategic Climate Fund, United Nations Human Settlements Programme, United Nations Convention to Combat Desertification, United Nations Educational, Scientific and Cultural Organization, UNFCCC, United Nations Industrial Development Organization, United Nations Office for Disaster Risk Reduction, Food and Agriculture Organization of the United Nations, United Nations Entity for Gender Equality and the Empowerment of Women, World Health Organization, World Meteorological Organization and United Nations World Tourism Organization.

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

28. Spain implemented measures or activities related to technology development and transfer, including activities undertaken by both the public and the private sector, that benefited developing country Parties. Spain employed several strategies to support technology development and transfer, including providing financial support for both material and immaterial technology transfer, undertaking capacity-building initiatives, creating knowledge-sharing networks and engaging in international and European programmes such as the EUROCLIMA+ programme, which supports climate action in Latin America, and bilateral cooperation frameworks supporting renewable energy and energy efficiency initiatives. Furthermore, the Party provided support at different stages of the technology cycle. For example, under EUROCLIMA+, Spain supported the implementation of a platform and geo-viewer in Ecuador, which facilitates climate risk assessment and adaptation planning by providing real-time data visualization and analysis tools, thus enabling the application of adaptation technologies. Another example is an initiative promoting the efficient use of biomass in Paraguay, under which a calculation tool was developed to assess biomass energy

used in the agroindustrial sector. The initiative contributed to the research and development stage of the technology cycle by providing a tool for identifying energy efficiency measures and optimizing biomass consumption.

29. Spain provided support for the deployment and enhancement of the endogenous capacities and technologies of developing country Parties. For example, it supported an exchange programme of experts from the EU and Cuba, financed by the EU and managed by the International and Ibero-American Foundation for Administration and Public Policies, which promoted the use of renewable energy sources and energy efficiency in Cuba by diversifying the country's energy matrix and strengthening its capacity for sustainable resource management.

30. Spain encouraged private sector activities aimed at supporting developing country Parties with technology development and transfer. One notable example is the collaboration between the Spanish Patent and Trademark Office and organizations managing technology platforms to facilitate access to patent information for companies, researchers and research and development managers in developing countries. These efforts included the creation and dissemination of technology bulletins and alerts, providing stakeholders with up-to-date information on the latest global patents relevant to their fields. The initiative was aimed at filling knowledge gaps and enabling private sector actors to adopt and deploy advanced technologies suited to the local needs of developing countries.

31. Spain engaged in measures and activities related to technology innovation, including research, development and deployment, using a collaborative approach. This includes initiatives such as the Partnership for Research and Innovation in the Mediterranean Area, which focuses on water management and agrifood systems, and the Centre for the Development of Industrial Technology bilateral collaboration programmes supporting cooperation on research and development through funding, partner matchmaking and knowledge-sharing activities.

32. Spain supported measures and activities related to technology development and transfer that focused mainly on promoting the use of renewable energy, water management, climate-smart agriculture and industrial energy efficiency in partner countries. In the field of climate resilience and early warning systems, for example, Spain contributed to the development of a dust and sandstorm warning system in Mauritania and Cabo Verde, enhancing the region's preparedness for extreme weather events. Another initiative, focused on providing adaptation support to small coffee growers in Nicaragua, saw the integration of geographic information system-based digital tools into climate risk management in agriculture. Such measures and activities covered the following target sectors: energy (10 per cent), transport (1 per cent), agriculture (11 per cent), water and sanitation (16 per cent) and other (62 per cent). Most of the technology development and transfer support provided related to adaptation (47 per cent), followed by cross-cutting (38 per cent) and mitigation (15 per cent). The types of technology that received support include early warning systems for climate-related disasters, digital communication tools for agricultural adaptation and geographic information system-based information systems for environmental and resource management. For the reporting period 2021–2022, most of the activities aimed at supporting technology development and transfer were reported as ongoing or completed. The recipient entities for Spain's technology development and transfer support were operating at the national, regional or global level.

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

33. Spain provided capacity-building support to developing country Parties for mitigation, adaptation and cross-cutting needs. The Party employed the following strategies to provide such capacity-building support: responding to needs and challenges jointly identified with recipient countries and ensuring alignment of Spain's strategies with recipient countries' sectoral plans, programmes and strategies, as well as with the broader policy frameworks of Spain and the EU. Spain provided examples of its capacity-building efforts, including its participation in the Systematic Observations Financing Facility, under which Spain, through its State Meteorological Agency, acts as a peer adviser for developing countries in identifying gaps in climate observation networks and developing national plans aligned with international meteorological standards. Spain also highlighted its role in the

INTERCOONECTA programme, which facilitates technical training and knowledge exchange pertaining to areas such as climate resilience, water resource management, meteorological observation, and early warning systems, by co-creating programmes with partner institutions, systematically documenting lessons learned and promoting best practices. Spain's capacity-building support responded to the existing and emerging capacity-building needs, priorities and gaps of developing country Parties by following the principles of national ownership, stakeholder participation, country-driven demand and cooperation between donors and across programmes.

34. Spain reported in its BTR1 that various stakeholders, including public sector entities, private sector actors and civil society organizations, were involved in identifying climate change responses and implementing climate change actions. During the review, Spain clarified how stakeholder involvement is ensured in its capacity-building efforts. Stakeholder engagement is institutionalized through legal and strategic frameworks, such as Law 1/2023 on Sustainable Development Cooperation and Global Solidarity, which establishes mechanisms for inclusive participation in implementation and in the development of policies and actions. Under the law, Spain established the Development Co-operation Council, which brings together representatives from public administrations, private sector organizations, trade unions, universities, non-governmental organizations and other key actors. The Council serves as a platform for channelling stakeholder perspectives into the planning, execution and evaluation of cooperation policies. Spain also promotes decentralized cooperation, enabling autonomous communities and local entities to actively participate in identifying capacity-building needs in partner countries and designing initiatives aimed at strengthening local and institutional capacities.

35. Spain supported capacity-building measures or activities that focused mainly on strengthening institutional arrangements, improving national data management systems in partner countries and enhancing technical expertise in key sectors such as water management, climate resilience and circular economy. Most of the capacity-building measures or activities related to adaptation (41 per cent), followed by cross-cutting (40 per cent) and mitigation (19 per cent). For the reporting period 2021–2022, most of the capacity-building measures or activities were reported as ongoing or completed. The recipient entities for Spain's capacity-building support were operating at the national, regional or global level.

### D. Identification of areas of improvement[16]

36. During the technical expert review, the TERT identified areas of improvement in relation to Spain'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

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

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

39. 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 Spain described its contributions 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 achieve the joint 2030 NDC target by implementing mitigation actions; however, maintaining this pace of emission

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

reductions will require the full implementation of the EU 2030 legal framework and related investment flows.

40. The TERT notes that PaMs have contributed to GHG emission reductions in many sectors. In particular, GHG emissions from electricity generation have decreased significantly since 2005 despite Spain's growing population and increasing GDP per capita, owing to the shift from fossil fuels to renewable energy for electricity generation. Drops in GHG emissions have also been observed related to industrial combustion since 2005, primarily driven by increased use of renewable energy, enhanced energy efficiency and improved production efficiencies, while emissions from agriculture have not fallen significantly despite the implementation of a comprehensive package of PaMs in this sector.

41. Spain continued to provide financial support through bilateral, regional and other channels and through multilateral channels to developing countries. The financial support through bilateral, regional and other channels in 2021–2022 totalled USD 1,226.61 million. Similarly, financial support through multilateral channels in 2021–2022 amounted to USD 469.72 million (inflows).

42. Spain continued to provide support for technology development and transfer, and capacity-building. Priority for technological support was given to projects and programmes related to renewable energy, water management, climate-smart agriculture and industrial energy efficiency. Priority for capacity-building support was given to projects and programmes pertaining to strengthening institutional arrangements, improving national data management systems in partner countries and enhancing technical expertise in key sectors such as water management, climate resilience and circular economy.

# Annex

## Documents and information used during the review

### A. Reference documents

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

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

CRTs of Spain. 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.

"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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IPCC. 2019. *2019 Refinement to the 2006 IPCC Guidelines for National Greenhouse Gas Inventories*, E Buendia, K Tanabe, et al. (eds.). Geneva: IPCC. Available at https://www.ipcc-nggip.iges.or.jp/public/2019rf/.

"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.

### B. Additional information provided by the Party

Responses to questions during the review were received from María Navarro González-Valerio (Ministry for Ecological Transition and the Demographic Challenge of Spain), including additional material. The following references were provided by Spain and may not conform to UNFCCC editorial style as some have been reproduced as received:

Sistema Español de Inventario de Emisiones. 2023. *FICHA INTRODUCTORIA AL PROYECTO CARTOGRÁFICO DE LULUCF (introductory sheet to the LULUCF mapping project).* Available at intro-proyecto-cartografia_tcm30-553028.pdf.

Ministerio de Agricultura, Pesca, Alimentación y Medio Ambiente. 2022. Bases Zootécnicas para el Cálculo del Balance del Nitrógeno y Fosforo de Bovinos, Actualización para 1990 y 2020, Madrid. (Approved in 2024 but not published).