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Report on the simplified review of the national inventory report of Spain submitted in 2025

Summary

This report presents the results of the simplified review of the 2025 national inventory report of Spain, conducted by the secretariat 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.



Abbreviations and acronyms

C ₂ F ₆	hexafluoroethane
C ₃ F ₈	octafluoropropane
C ₄ F ₁₀	perfluorobutane
CF ₄	tetrafluoromethane
CH ₄	methane
CO ₂	carbon dioxide
CO ₂ eq	carbon dioxide equivalent
CRT	common reporting table
GHG	greenhouse gas
HFC	hydrofluorocarbon
HWP	harvested wood products
IE	included elsewhere
IEF	implied emission factor
LULUCF	land use, land-use change and forestry
MPGs	modalities, procedures and guidelines for the transparency framework for action and support referred to in Article 13 of the Paris Agreement
N	nitrogen
N ₂ O	nitrous oxide
NA	not applicable
NE	not estimated
NF ₃	nitrogen trifluoride
NIR	national inventory report
NO	not occurring
PFC	perfluorocarbon

I. Introduction

1. This report covers the simplified review of the NIR of Spain submitted in 2025. The review was conducted by the secretariat in accordance with the MPGs,¹ particularly chapter VII thereof, and the simplified review procedures.²
2. On 14 May 2025 a draft version of this report was transmitted to the Government of Spain, which provided comments on individual findings on 10 June 2025 that were addressed by the secretariat and incorporated, as appropriate, in this final version of the report.³ Spain did not provide any general comments on the report.
3. The secretariat conducted the simplified review of Spain's NIR, which involved an initial assessment of completeness and consistency with the MPGs.⁴
4. The findings of the initial assessment, presented in the annex, are the result of automated checks and do not necessarily indicate issues of completeness or consistency of the Party's reporting with the MPGs.
5. This report, including the findings listed in the annex and any comments provided by the Party (see para. 2 above), will be made available to and considered by the technical expert review team as part of the subsequent technical expert review of Spain's NIR.⁵

II. Initial assessment of completeness and consistency with the modalities, procedures and guidelines

A. Summary of findings

6. The table below provides a summary of the findings of the initial assessment by the secretariat. Tables I.1–I.7 list the findings and include detailed information on each one.

Summary of the initial assessment

Area of review	Description	Assessment
Dates of submission	2025 submission: CRTs, 13 March 2025 2024 submission: CRTs, 16 December 2024	
Recalculations	Recalculations that have changed estimated total GHG emissions or removals (excluding LULUCF) by more than 2 per cent for categories or subcategories above the threshold of significance (134.98 kt CO₂ eq for 2023) ^a Recalculations for 1990 (the reference year for the Party's nationally determined contribution) and 2022 since the previous submission	See table I.1
Completeness	Detection of notation key "NE", or of missing gases or sectors in CRT 10 emission trends summary	See table I.2
Notation keys	Changes in notation keys reported for 1990 and 2022 since the previous submission	See table I.3
Sectoral and reference approaches	Difference in estimated energy consumption or CO ₂ emissions, by fuel type, of more than 5 per cent between the reference and sectoral approaches for the latest reported year (2023)	See table I.4
Time-series consistency	The time series of emissions is assessed by calculating inter-annual changes for each category and gas and converting them to CO ₂ eq. Inter-annual changes exceeding the significance	See table I.5

¹ Decision 18/CMA.1, annex.

² Contained in paras. 15–19 of the conclusions and recommendations from the 2023 joint meeting of lead reviewers, available at <https://unfccc.int/documents/627213>.

³ As per para. 163 of the MPGs.

⁴ As per para. 155 of the MPGs.

⁵ As per para. 155 of the MPGs.

<i>Area of review</i>	<i>Description</i>	<i>Assessment</i>
	threshold are evaluated using the z-score method, ^b where outliers are identified as values exceeding a z-score of 3, based on the statistical distribution of the full time series	
IEFs	Comparison of IEFs reported for any significant subcategories under key categories with the range of IEFs reported by developed country Parties for the latest inventory year (2023) in their 2025 submission ^c	See table I.6
Key categories	New key categories identified since the previous submission for level (latest year) and trend	See table I.7
Previous areas of improvement	Status of implementation of previous areas of improvement identified in the latest report on the technical expert review of the Party's biennial transparency report	NA ^d

^a Threshold calculated by the secretariat as 0.05 per cent of the national total GHG emissions for 2023, excluding LULUCF, or 500 kt CO₂ eq, whichever is lower (see para. 32 of the MPGs).

^b Statistical measure that indicates how many standard deviations a data point is from the mean.

^c Range defined by the median plus or minus two times the standard deviation, calculated from all available data points per category.

^d As at the time of publication of this report, information on status of implementation of previous areas of improvement was not yet available.

B. Comments of the Party on the initial assessment

7. The Party did not provide any general comments.

Annex

Findings of the initial assessment of Spain's 2025 national inventory report

Tables I.1–I.7 detail the findings of the initial assessment by the secretariat of the Party's NIR.

Table I.1

Findings on recalculations

ID#	Category	CRT	Gas	Inventory year	Estimate in latest submission (2025)	Estimate in previous submission (2024)	Difference Unit	Difference (%)	Difference (kt CO ₂ eq)
I.1.1.	1.B.2.c. Venting and flaring	Table1	CH ₄	1990	6.62	0.85	5.78 kt	679.9	161.71
I.1.2.	1.A.2.c. Chemicals	Table1	CO ₂	2022	7 676.79	6 341.97	1 334.82 kt	21.0	1 334.82
I.1.3.	1.A.2.d. Pulp, paper and print	Table1	CO ₂	2022	3 343.59	3 639.21	–295.62 kt	–8.1	–295.62
I.1.4.	1.A.2.e. Food processing, beverages and tobacco	Table1	CO ₂	2022	3 661.53	3 972.76	–311.23 kt	–7.8	–311.23
I.1.5.	1.A.2.f. Non-metallic minerals	Table1	CO ₂	2022	10 600.56	11 042.97	–442.41 kt	–4.0	–442.41
I.1.6.	1.A.2.g. Other	Table1	CO ₂	2022	5 418.84	5 737.76	–318.92 kt	–5.6	–318.92
I.1.7.	3.D.1.b. Organic N fertilizers	Table3	N ₂ O	1990	3.84	2.99	0.85 kt	28.4	224.98
I.1.8.	3.F. Field burning of agricultural residues	Table3	CH ₄	1990	31.62	26.16	5.47 kt	20.9	153.02
I.1.9.	3.A.1.b. Non-dairy cattle	Table3	CH ₄	2022	323.12	336.06	–12.94 kt	–3.9	–362.35
I.1.10.	3.C. Rice cultivation	Table3	CH ₄	2022	11.31	16.28	–4.97 kt	–30.5	–139.28
I.1.11.	3.D.1.a. Inorganic N fertilizers	Table3	N ₂ O	2022	7.96	10.75	–2.79 kt	–26.0	–739.65
I.1.12.	3.D.1.b. Organic N fertilizers	Table3	N ₂ O	2022	4.28	3.48	0.81 kt	23.2	213.56
I.1.13.	4.A.1. Forest land remaining forest land	Table4	Net CO ₂ emissions/removals	1990	–22 508.92	–20 186.71	–2 322.21 kt CO ₂ eq	11.5	–2 322.21
I.1.14.	4.B.2. Land converted to cropland	Table4	Net CO ₂ emissions/removals	1990	2 036.66	2 182.48	–145.82 kt CO ₂ eq	–6.7	–145.82
I.1.15.	4.A.2. Land converted to forest land	Table4	Net CO ₂ emissions/removals	2022	–13 534.99	–9 506.31	–4 028.68 kt CO ₂ eq	42.4	–4 028.68
I.1.16.	4.C.2. Land converted to grassland	Table4	Net CO ₂ emissions/removals	2022	–901.34	–1 630.44	729.10 kt CO ₂ eq	–44.7	729.10
I.1.17.	4.E.2. Land converted to settlements	Table4	Net CO ₂ emissions/removals	2022	1 430.28	1 755.40	–325.12 kt CO ₂ eq	–18.5	–325.12
I.1.18.	5.D.1. Domestic wastewater	Table5	N ₂ O	1990	1.00	2.90	–1.90 kt	–65.5	–502.50
I.1.19.	5.A.1. Managed waste disposal sites	Table5	CH ₄	2022	386.13	367.24	18.90 kt	5.1	529.07
I.1.20.	5.C.2. Open burning of waste	Table5	CH ₄	2022	7.70	13.90	–6.20 kt	–44.6	–173.47

<i>ID#</i>	<i>Category</i>	<i>CRT</i>	<i>Gas</i>	<i>Inventory year</i>	<i>Estimate in latest submission (2025)</i>	<i>Estimate in previous submission (2024)</i>	<i>Difference</i>	<i>Unit</i>	<i>Difference (%)</i>	<i>Difference (kt CO₂ eq)</i>
I.1.21.	5.D.1. Domestic wastewater	Table5	N ₂ O	2022	0.94	3.01	–2.07	kt	–68.7	–547.25

Table I.2
Findings on completeness

<i>ID#</i>	<i>Sector, category or gas</i>	<i>CRT</i>	<i>Gas</i>	<i>Inventory year</i>	<i>Notation key</i>	<i>Finding type</i>
I.2.1.	1.D.2. Multilateral operations	Table1	CO ₂	1990	NE	Reporting of “NE” detected
I.2.2.	1.D.2. Multilateral operations	Table1	CH ₄	1990	NE	Reporting of “NE” detected
I.2.3.	1.D.2. Multilateral operations	Table1	N ₂ O	1990	NE	Reporting of “NE” detected
I.2.4.	1.D.2. Multilateral operations	Table1	Total GHG emissions	1990	NE	Reporting of “NE” detected
I.2.5.	1.D.2. Multilateral operations	Table1	CO ₂	2023	NE	Reporting of “NE” detected
I.2.6.	1.D.2. Multilateral operations	Table1	CH ₄	2023	NE	Reporting of “NE” detected
I.2.7.	1.D.2. Multilateral operations	Table1	N ₂ O	2023	NE	Reporting of “NE” detected
I.2.8.	1.D.2. Multilateral operations	Table1	Total GHG emissions	2023	NE	Reporting of “NE” detected
I.2.9.	5.F.1. Long-term storage of carbon in waste disposal sites	Table5	CO ₂	1990	NE	Reporting of “NE” detected
I.2.10.	5.F.1. Long-term storage of carbon in waste disposal sites	Table5	Total GHG emissions	1990	NE	Reporting of “NE” detected
I.2.11.	5.F.2. Annual change in total long-term carbon storage	Table5	CO ₂	1990	NE	Reporting of “NE” detected
I.2.12.	5.F.2. Annual change in total long-term carbon storage	Table5	Total GHG emissions	1990	NE	Reporting of “NE” detected
I.2.13.	5.F.3. Annual change in total long-term carbon storage in HWP waste	Table5	CO ₂	1990	NE	Reporting of “NE” detected
I.2.14.	5.F.3. Annual change in total long-term carbon storage in HWP waste	Table5	Total GHG emissions	1990	NE	Reporting of “NE” detected
I.2.15.	5.B.2. Anaerobic digestion at biogas facilities	Table5	N ₂ O	2023	NE	Reporting of “NE” detected
I.2.16.	5.F.1. Long-term storage of carbon in waste disposal sites	Table5	CO ₂	2023	NE	Reporting of “NE” detected
I.2.17.	5.F.1. Long-term storage of carbon in waste disposal sites	Table5	Total GHG emissions	2023	NE	Reporting of “NE” detected
I.2.18.	5.F.2. Annual change in total long-term carbon storage	Table5	CO ₂	2023	NE	Reporting of “NE” detected

<i>ID#</i>	<i>Sector, category or gas</i>	<i>CRT</i>	<i>Gas</i>	<i>Inventory year</i>	<i>Notation key Finding type</i>
I.2.19.	5.F.2. Annual change in total long-term carbon storage	Table5	Total GHG emissions	2023	NE Reporting of “NE” detected
I.2.20.	5.F.3. Annual change in total long-term carbon storage in HWP waste	Table5	CO ₂	2023	NE Reporting of “NE” detected
I.2.21.	5.F.3. Annual change in total long-term carbon storage in HWP waste	Table5	Total GHG emissions	2023	NE Reporting of “NE” detected
I.2.22.	Unspecified mix of HFCs and PFCs	Table10s6	–	1990	NA, NO Gas or sector not reported
I.2.23.	NF ₃	Table10s6	–	1990	NO Gas or sector not reported
I.2.24.	NF ₃	Table10s6	–	2023	NO Gas or sector not reported
I.2.25.	6. Other	Table10s6	–	1990	NO Gas or sector not reported
I.2.26.	6. Other	Table10s6	–	2023	NO Gas or sector not reported

Table I.3
Changes in notation keys reported since the previous submission

<i>ID#</i>	<i>Category</i>	<i>CRT</i>	<i>Gas</i>	<i>Inventory year</i>	<i>Notation key reported in latest submission (2025)</i>	<i>Notation key reported in previous submission (2024)</i>
I.3.1.	1.B.1.b. Fuel transformation	Table1	N ₂ O	1990	IE	NE
I.3.2.	1.B.2.a. Oil	Table1	N ₂ O	1990	NA	NA, NE
I.3.3.	1.B.1.b. Fuel transformation	Table1	N ₂ O	2022	IE	NE
I.3.4.	1.B.2.a. Oil	Table1	N ₂ O	2022	NA	NA, NE
I.3.5.	2.G.4. Other	Table2(I)	N ₂ O	1990	–	NO
I.3.6.	2.G.4. Other	Table2(I)	Unspecified mix of HFCs and PFCs	1990	–	NO
I.3.7.	2.G.4. Other	Table2(I)	N ₂ O	2022	–	NO
I.3.8.	2.G.4. Other	Table2(I)	Unspecified mix of HFCs and PFCs	2022	–	NO
I.3.9.	2.F.4. Aerosols	Table2(II)	C ₂ F ₆	1990	–	NO
I.3.10.	2.G.4. Other	Table2(II)	HFC-23	1990	–	NO
I.3.11.	2.G.4. Other	Table2(II)	HFC-32	1990	–	NO
I.3.12.	2.G.4. Other	Table2(II)	HFC-125	1990	–	NO
I.3.13.	2.G.4. Other	Table2(II)	HFC-134a	1990	–	NO
I.3.14.	2.G.4. Other	Table2(II)	HFC-143a	1990	–	NO
I.3.15.	2.G.4. Other	Table2(II)	HFC-152a	1990	–	NO
I.3.16.	2.G.4. Other	Table2(II)	HFC-227ea	1990	–	NO
I.3.17.	2.G.4. Other	Table2(II)	HFC-236fa	1990	–	NO
I.3.18.	2.G.4. Other	Table2(II)	HFC-245fa	1990	–	NO
I.3.19.	2.G.4. Other	Table2(II)	HFC-365mfc	1990	–	NO

ID#	Category	CRT	Gas	Inventory year	Notation key reported in latest	Notation key reported in previous
					submission (2025)	submission (2024)
I.3.20.	2.G.4. Other	Table2(II)	CF ₄	1990	–	NO
I.3.21.	2.G.4. Other	Table2(II)	C ₂ F ₆	1990	–	NO
I.3.22.	2.G.4. Other	Table2(II)	C ₃ F ₈	1990	–	NO
I.3.23.	2.G.4. Other	Table2(II)	C ₄ F ₁₀	1990	–	NO
I.3.24.	2.G.4. Other	Table2(II)	Unspecified mix of HFCs and PFCs	1990	–	NO
I.3.25.	2.F.4. Aerosols	Table2(II)	C ₂ F ₆	2022	–	NO
I.3.26.	2.G.4. Other	Table2(II)	HFC-23	2022	–	NO
I.3.27.	2.G.4. Other	Table2(II)	HFC-32	2022	–	NO
I.3.28.	2.G.4. Other	Table2(II)	HFC-125	2022	–	NO
I.3.29.	2.G.4. Other	Table2(II)	HFC-134a	2022	–	NO
I.3.30.	2.G.4. Other	Table2(II)	HFC-143a	2022	–	NO
I.3.31.	2.G.4. Other	Table2(II)	HFC-152a	2022	–	NO
I.3.32.	2.G.4. Other	Table2(II)	HFC-227ea	2022	–	NO
I.3.33.	2.G.4. Other	Table2(II)	HFC-236fa	2022	–	NO
I.3.34.	2.G.4. Other	Table2(II)	HFC-245fa	2022	–	NO
I.3.35.	2.G.4. Other	Table2(II)	HFC-365mfc	2022	–	NO
I.3.36.	2.G.4. Other	Table2(II)	CF ₄	2022	–	NO
I.3.37.	2.G.4. Other	Table2(II)	C ₂ F ₆	2022	–	NO
I.3.38.	2.G.4. Other	Table2(II)	C ₃ F ₈	2022	–	NO
I.3.39.	2.G.4. Other	Table2(II)	C ₄ F ₁₀	2022	–	NO
I.3.40.	2.G.4. Other	Table2(II)	Unspecified mix of HFCs and PFCs	2022	–	NO
I.3.41.	3.F. Field burning of agricultural residues	Table3	CH ₄	2022	NO	0.63
I.3.42.	3.F. Field burning of agricultural residues	Table3	N ₂ O	2022	NO	0.02
I.3.43.	3.F. Field burning of agricultural residues	Table3	Total GHG emissions	2022	NO	22.10
I.3.44.	5.B.2. Anaerobic digestion at biogas facilities	Table5	N ₂ O	2022	NE	NE, NO
I.3.45.	5.C.1. Waste incineration	Table5	CO ₂	2022	IE, NO	IE

Table I.4

Differences between the sectoral and reference approaches for the latest reported year

ID#	CRT table	Fuel type	Description	Difference between reference and sectoral approaches (%)
I.4.1.	Table1.A(c)	Solid fuels (excluding international bunkers)	Energy consumption	28.0
I.4.2.	Table1.A(c)	Other fossil fuels	Energy consumption	–55.9
I.4.3.	Table1.A(c)	Other fossil fuels	CO ₂ emissions	–66.1

Table I.5
Findings on time-series consistency

ID#	Category	CRT	Gas	Year 1	Year 2	Value 1	Value 2	Difference	Unit	Difference (CO ₂ eq)	Difference (%)	Z-score
I.5.1.	1.A.1.c. Manufacture of solid fuels and other energy industries	Table1	CO ₂	2005	2006	1 026.19	4 564.03	3 537.84	kt	3 537.84	344.8	4.8
I.5.2.	1.A.1.c. Manufacture of solid fuels and other energy industries	Table1	CH ₄	2005	2006	0.34	6.76	6.41	kt	179.54	1 868.8	4.9
I.5.3.	1.A.2.b. Non-ferrous metals	Table1	CO ₂	1996	1997	1 631.74	2 719.91	1 088.17	kt	1 088.17	66.7	3.1
I.5.4.	1.A.2.e. Food processing, beverages and tobacco	Table1	CO ₂	2005	2006	5 168.39	2 967.49	-2 200.90	kt	-2 200.90	-42.6	-3.2
I.5.5.	1.A.2.g. Other	Table1	CO ₂	2005	2006	14 773.12	10 039.77	-4 733.35	kt	-4 733.35	-32.0	-3.4
I.5.6.	1.A.2.g. Other	Table1	CH ₄	2005	2006	15.32	7.10	-8.23	kt	-230.34	-53.7	-4.1
I.5.7.	1.A.3.a. Domestic aviation	Table1	CO ₂	2019	2020	3 143.92	1 520.88	-1 623.04	kt	-1 623.04	-51.6	-4.1
I.5.8.	1.A.3.b. Road transportation	Table1	CO ₂	2019	2020	83 614.08	68 770.33	-14 843.75	kt	-14 843.75	-17.8	-3.5
I.5.9.	1.A.3.b. Road transportation	Table1	N ₂ O	1993	1994	2.24	3.96	1.73	kt	457.48	77.2	3.3
I.5.10.	1.A.3.b. Road transportation	Table1	N ₂ O	1999	2000	5.02	3.45	-1.58	kt	-418.07	-31.4	-3.2
I.5.11.	1.A.4.a. Commercial/institutional	Table1	CH ₄	2012	2013	11.56	5.74	-5.82	kt	-162.95	-50.4	-4.6
I.5.12.	1.A.4.b. Residential	Table1	CO ₂	2010	2011	20 564.71	17 003.21	-3 561.50	kt	-3 561.50	-17.3	-3.4
I.5.13.	1.A.4.b. Residential	Table1	CH ₄	2015	2016	34.39	25.44	-8.95	kt	-250.67	-26.0	-4.6
I.5.14.	1.A.5.b. Mobile	Table1	CO ₂	2022	2023	225.17	517.29	292.11	kt	292.11	129.7	3.8
I.5.15.	1.B.1.a. Coal mining and handling	Table1	CH ₄	1990	1991	64.81	51.71	-13.10	kt	-366.89	-20.2	-3.6
I.5.16.	1.B.2.a. Oil	Table1	CO ₂	2011	2012	2 341.70	2 984.73	643.04	kt	643.04	27.5	3.0
I.5.17.	1.D.1.a. Aviation	Table1	CO ₂	2019	2020	18 477.26	6 213.98	-12 263.28	kt	-12 263.28	-66.4	-4.9
I.5.18.	2.A.4. Other process uses of carbonates	Table2(I)	CO ₂	2008	2009	1 897.42	1 107.56	-789.86	kt	-789.86	-41.6	-3.7
I.5.19.	2.B.1. Ammonia production	Table2(I)	CO ₂	2009	2010	259.90	403.10	143.20	kt	143.20	55.1	3.0
I.5.20.	2.B.8. Petrochemical and carbon black production	Table2(I)	CO ₂	2007	2008	2 359.78	1 788.46	-571.32	kt	-571.32	-24.2	-3.6
I.5.21.	2.B.9. Fluorochemical production	Table2(I)	HFCs	2000	2001	6 789.78	3 188.04	-3 601.73	kt CO ₂ eq	-3 601.73	-53.0	-3.4
I.5.22.	2.C.2. Ferroalloys production	Table2(I)	CO ₂	2008	2009	681.28	269.99	-411.28	kt	-411.28	-60.4	-3.4
I.5.23.	2.C.2. Ferroalloys production	Table2(I)	CO ₂	2009	2010	269.99	620.62	350.63	kt	350.63	129.9	3.0
I.5.24.	2.C.3. Aluminium production	Table2(I)	CO ₂	2021	2022	334.07	8.52	-325.55	kt	-325.55	-97.4	-4.1
I.5.25.	2.C.3. Aluminium production	Table2(I)	PFCs	1999	2000	768.84	444.33	-324.51	kt CO ₂ eq	-324.51	-42.2	-4.2
I.5.26.	2.F.1. Refrigeration and air conditioning	Table2(I)	HFCs	2014	2015	13 964.16	7 596.67	-6 367.49	kt CO ₂ eq	-6 367.49	-45.6	-3.9
I.5.27.	2.F.2. Foam blowing agents	Table2(I)	HFCs	2003	2004	38.91	452.37	413.47	kt CO ₂ eq	413.47	1 062.7	4.1
I.5.28.	2.F.4. Aerosols	Table2(I)	HFCs	1997	1998	2.70	390.33	387.63	kt CO ₂ eq	387.63	14 342.9	4.1
I.5.29.	2.B.9. Fluorochemical production	Table2(II)	HFC-23	2000	2001	540.40	248.10	-292.30	t	-3 624.52	-54.1	-3.4
I.5.30.	2.B.9.a. By-product emissions	Table2(II)	HFC-23	2000	2001	540.40	248.10	-292.30	t	-3 624.52	-54.1	-3.1
I.5.31.	2.C.3. Aluminium production	Table2(II)	CF ₄	1999	2000	101.95	59.23	-42.72	t	-283.22	-41.9	-4.2
I.5.32.	2.F.1. Refrigeration and air conditioning	Table2(II)	HFC-32	2022	2023	537.21	845.56	308.34	t	208.75	57.4	3.2

ID#	Category	CRT	Gas	Year 1	Year 2	Value 1	Value 2	Difference	Unit	Difference (CO ₂ eq)	Difference (%)	Z-score
I.5.33.	2.F.1. Refrigeration and air conditioning	Table2(II)	HFC-125	2014	2015	1 850.65	1 011.74	-838.91	t	-2 659.35	-45.3	-3.9
I.5.34.	2.F.1. Refrigeration and air conditioning	Table2(II)	HFC-134a	2014	2015	2 531.01	1 735.53	-795.48	t	-1 034.13	-31.4	-3.2
I.5.35.	2.F.1. Refrigeration and air conditioning	Table2(II)	HFC-143a	2014	2015	917.05	381.80	-535.26	t	-2 569.23	-58.4	-4.2
I.5.36.	2.F.4. Aerosols	Table2(II)	HFC-134a	1997	1998	2.08	300.25	298.18	t	387.63	14 342.9	4.1
I.5.37.	3.C. Rice cultivation	Table3	CH ₄	1995	1996	8.30	15.80	7.50	kt	210.04	90.4	3.0
I.5.38.	4.A.1. Forest land remaining forest land	Table4	Net CO ₂ emissions/removals	1999	2000	-25 462.12	-27 083.69	-1 621.57	kt CO ₂ eq	-1 621.57	6.4	-3.2
I.5.39.	4.A.1. Forest land remaining forest land	Table4	CH ₄	1993	1994	1.90	12.84	10.95	kt	306.54	577.7	3.2
I.5.40.	4.A.1. Forest land remaining forest land	Table4	N ₂ O	1993	1994	0.10	0.71	0.61	kt	160.49	577.7	3.2
I.5.41.	4.B.2. Land converted to cropland	Table4	Net CO ₂ emissions/removals	2006	2007	2 282.45	1 637.08	-645.37	kt CO ₂ eq	-645.37	-28.3	-4.3
I.5.42.	4.E.2. Land converted to settlements	Table4	Net CO ₂ emissions/removals	2006	2007	1 029.78	2 362.16	1 332.38	kt CO ₂ eq	1 332.38	129.4	4.5
I.5.43.	4.E.2. Land converted to settlements	Table4	Net CO ₂ emissions/removals	2012	2013	2 329.30	1 422.18	-907.12	kt CO ₂ eq	-907.12	-38.9	-3.2
I.5.44.	5.D.1. Domestic wastewater	Table5	N ₂ O	2010	2011	1.90	1.18	-0.72	kt	-191.35	-38.0	-4.7

Table I.6

Comparison between implied emission factors reported for key categories and the range of implied emission factors from the 2025 national inventory reports of developed country Parties

ID#	Category	CRT	Gas	Unit	IEF reported	Comparison
I.6.1.	1.A.2 Manufacturing industries and construction – liquid fuels	Table1.A(a)s2	CO ₂	t/TJ	87.112	Above range
I.6.2.	1.A.4 Other sectors – solid fuels	Table1.A(a)s4	CO ₂	t/TJ	106.371	Above range
I.6.3.	2.F.1.a. Commercial refrigeration – HFC-32	Table2(II).B-Hs2	Product life factor	%	100.000	Above range
I.6.4.	2.F.1.a. Commercial refrigeration – HFC-134a	Table2(II).B-Hs2	Product life factor	%	100.000	Above range
I.6.5.	2.F.1.a. Commercial refrigeration – HFC-152a	Table2(II).B-Hs2	Product life factor	%	100.000	Above range
I.6.6.	2.F.1.b. Domestic refrigeration – HFC-134a	Table2(II).B-Hs2	Product life factor	%	100.000	Above range
I.6.7.	2.F.1.c. Industrial refrigeration – HFC-23	Table2(II).B-Hs2	Product life factor	%	100.000	Above range
I.6.8.	2.F.1.c. Industrial refrigeration – HFC-32	Table2(II).B-Hs2	Product life factor	%	100.000	Above range
I.6.9.	2.F.1.c. Industrial refrigeration – HFC-125	Table2(II).B-Hs2	Product life factor	%	100.000	Above range
I.6.10.	2.F.1.c. Industrial refrigeration – HFC-134a	Table2(II).B-Hs2	Product life factor	%	100.000	Above range
I.6.11.	2.F.1.c. Industrial refrigeration – HFC-143a	Table2(II).B-Hs2	Product life factor	%	100.000	Above range
I.6.12.	2.F.1.c. Industrial refrigeration – HFC-227ea	Table2(II).B-Hs2	Product life factor	%	100.000	Above range
I.6.13.	2.F.1.c. Industrial refrigeration – C ₂ F ₆	Table2(II).B-Hs2	Product life factor	%	100.000	Above range
I.6.14.	2.F.1.c. Industrial refrigeration – C ₃ F ₈	Table2(II).B-Hs2	Product life factor	%	100.000	Above range

ID#	Category	CRT	Gas	Unit	IEF reported	Comparison
I.6.15.	2.F.1.d. Transport refrigeration – HFC-32	Table2(II).B-Hs2	Product life factor	%	100.000	Above range
I.6.16.	2.F.1.d. Transport refrigeration – HFC-125	Table2(II).B-Hs2	Product life factor	%	100.000	Above range
I.6.17.	2.F.1.f. Stationary air conditioning – HFC-32	Table2(II).B-Hs2	Product life factor	%	100.000	Above range
I.6.18.	2.F.1.f. Stationary air conditioning – HFC-125	Table2(II).B-Hs2	Product life factor	%	100.000	Above range
I.6.19.	2.F.1.f. Stationary air conditioning – HFC-134a	Table2(II).B-Hs2	Product life factor	%	100.000	Above range
I.6.20.	2.F.1.f. Stationary air conditioning – HFC-143a	Table2(II).B-Hs2	Product life factor	%	100.000	Above range
I.6.21.	2.F.1.a. Commercial refrigeration – HFC-125	Table2(II).B-Hs2	Disposal loss factor	%	11.001	Below range
I.6.22.	2.F.1.a. Commercial refrigeration – HFC-134a	Table2(II).B-Hs2	Disposal loss factor	%	11.001	Below range
I.6.23.	2.F.1.a. Commercial refrigeration – HFC-143a	Table2(II).B-Hs2	Disposal loss factor	%	11.001	Below range
I.6.24.	2.F.1.b. Domestic refrigeration – HFC-134a	Table2(II).B-Hs2	Disposal loss factor	%	11.001	Below range
I.6.25.	2.F.1.c. Industrial refrigeration – HFC-23	Table2(II).B-Hs2	Disposal loss factor	%	11.001	Below range
I.6.26.	2.F.1.c. Industrial refrigeration – HFC-32	Table2(II).B-Hs2	Disposal loss factor	%	11.001	Below range
I.6.27.	2.F.1.c. Industrial refrigeration – HFC-125	Table2(II).B-Hs2	Disposal loss factor	%	11.001	Below range
I.6.28.	2.F.1.c. Industrial refrigeration – HFC-134a	Table2(II).B-Hs2	Disposal loss factor	%	11.001	Below range
I.6.29.	2.F.1.c. Industrial refrigeration – HFC-143a	Table2(II).B-Hs2	Disposal loss factor	%	11.001	Below range
I.6.30.	2.F.1.c. Industrial refrigeration – C ₃ F ₈	Table2(II).B-Hs2	Disposal loss factor	%	11.001	Below range
I.6.31.	2.F.1.d. Transport refrigeration – HFC-125	Table2(II).B-Hs2	Disposal loss factor	%	11.001	Below range
I.6.32.	2.F.1.f. Stationary air conditioning – HFC-32	Table2(II).B-Hs2	Disposal loss factor	%	11.001	Below range
I.6.33.	2.F.1.f. Stationary air conditioning – HFC-125	Table2(II).B-Hs2	Disposal loss factor	%	11.001	Below range
I.6.34.	2.F.1.f. Stationary air conditioning – HFC-134a	Table2(II).B-Hs2	Disposal loss factor	%	11.001	Below range
I.6.35.	3.A.3. Swine	Table3.A	CH ₄	kg CH ₄ /head/year	0.803	Below range
I.6.36.	3.A.3.a. Other (please specify)	Table3.A	CH ₄	kg CH ₄ /head/year	0.803	Below range
I.6.37.	3.B.4.d. Goats	Table3.B(a)	CH ₄	kg CH ₄ /head/year	2.010	Above range
I.6.38.	3.B.4.f. Mules and asses	Table3.B(a)	CH ₄	kg CH ₄ /head/year	4.711	Above range

Table I.7

Identification of new key categories

ID#	New key category	Gas	Criteria	Inventory year
I.7.1.	1.A.4. Other sectors – liquid fuels	CO ₂	Trend	2023
I.7.2.	2.A.2. Lime production	CO ₂	Level	2023
I.7.3.	3.F. Field burning of agricultural residues	CH ₄	Trend	2023