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

Summary

This report presents the results of the simplified review of the 2025 national inventory report of Germany, 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_2F_6	hexafluoroethane
C_3F_8	octafluoropropane
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
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_2O	nitrous oxide
NA	not applicable
NE	not estimated
NIR	national inventory report
NO	not occurring
PFC	perfluorocarbon
SF_6	sulfur hexafluoride

I. Introduction

1. This report covers the simplified review of the NIR of Germany 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 23 May 2025 a draft version of this report was transmitted to the Government of Germany,[3] which did not provide any comments on individual findings. In addition, Germany did not provide any general comments on the report.

3. The secretariat conducted the simplified review of Germany'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 Germany'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, 15 April 2025	
	2024 submission: CRTs, 10 January 2025	
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 (**336.01 kt CO_2 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 threshold are evaluated using the z-score method,[b] where outliers	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.

Area of review	*Description*	*Assessment*
	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 CO_2 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 Germany'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.A.1.c. Manufacture of solid fuels and other energy industries	Table1	CO_2	2022	9 149.86	9 641.34	–491.48	kt	–5.1	–491.48
I.1.2.	1.A.2.f. Non-metallic minerals	Table1	CO_2	2022	12 482.29	13 153.69	–671.41	kt	–5.1	–671.41
I.1.3.	1.A.2.g. Other	Table1	CO_2	2022	64 443.94	67 597.27	–3 153.33	kt	–4.7	–3 153.33
I.1.4.	2.C.1. Iron and steel production	Table2(I)	CO_2	2022	14 743.19	15 181.55	–438.36	kt	–2.9	–438.36
I.1.5.	3.A.1.b. Non-dairy cattle	Table3	CH_4	1990	545.48	560.68	–15.19	kt	–2.7	–425.44
I.1.6.	3.A.4. Other livestock	Table3	CH_4	1990	27.11	12.43	14.68	kt	118.1	411.03
I.1.7.	3.B.5. Indirect N_2O emissions	Table3	N_2O	1990	5.47	3.85	1.62	kt	42.0	428.20
I.1.8.	3.D.1.c. Urine and dung deposited by grazing animals	Table3	N_2O	1990	1.97	6.44	–4.46	kt	–69.4	–1 182.96
I.1.9.	3.D.1.d. Crop residues	Table3	N_2O	1990	6.57	4.61	1.96	kt	42.4	518.35
I.1.10.	3.D.1.e. Mineralization/immobilization associated with loss/gain of soil organic matter	Table3	N_2O	1990	1.39	0.09	1.30	kt	1 454.2	343.82
I.1.11.	3.D.2. Indirect N_2O emissions from managed soils	Table3	N_2O	1990	18.61	15.59	3.02	kt	19.4	799.90
I.1.12.	3.A.4. Other livestock	Table3	CH_4	2022	29.17	14.48	14.69	kt	101.5	411.38
I.1.13.	3.D.1.c. Urine and dung deposited by grazing animals	Table3	N_2O	2022	1.10	3.53	–2.43	kt	–68.9	–643.83
I.1.14.	3.D.1.d. Crop residues	Table3	N_2O	2022	8.09	5.43	2.66	kt	49.0	705.11
I.1.15.	3.D.2. Indirect N_2O emissions from managed soils	Table3	N_2O	2022	11.74	8.43	3.30	kt	39.2	875.31
I.1.16.	4.A.1. Forest land remaining forest land	Table4	Net CO_2 emissions/removals	1990	–25 943.54	–19 880.12	–6 063.42	kt CO_2 eq	–30.5	–6 063.42
I.1.17.	4.A.2. Land converted to forest land	Table4	Net CO_2 emissions/removals	1990	106.82	–242.54	349.36	kt CO_2 eq	144.0	349.36
I.1.18.	4.B.1. Cropland remaining cropland	Table4	Net CO_2 emissions/removals	1990	16 239.63	10 988.28	5 251.35	kt CO_2 eq	47.8	5 251.35
I.1.19.	4.B.2. Land converted to cropland	Table4	Net CO_2 emissions/removals	1990	4 142.13	3 383.71	758.42	kt CO_2 eq	22.4	758.42

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.1.20.	4.C.1. Grassland remaining grassland	Table4	Net CO_2 emissions/removals	1990	30 461.60	27 858.69	2 602.91	kt CO_2 eq	9.3	2 602.91
I.1.21.	4.C.1. Grassland remaining grassland	Table4	CH_4	1990	52.85	28.24	24.61	kt	87.2	689.11
I.1.22.	4.E.1. Settlements remaining settlements	Table4	Net CO_2 emissions/removals	1990	1 009.90	1 553.72	–543.82	kt CO_2 eq	–35.0	–543.82
I.1.23.	4.E.2. Land converted to settlements	Table4	Net CO_2 emissions/removals	1990	–685.71	–346.07	–339.65	kt CO_2 eq	–98.1	–339.65
I.1.24.	4.A.1. Forest land remaining forest land	Table4	Net CO_2 emissions/removals	2022	18 941.92	–40 311.26	59 253.18	kt CO_2 eq	147.0	59 253.18
I.1.25.	4.A.2. Land converted to forest land	Table4	Net CO_2 emissions/removals	2022	–622.11	73.72	–695.83	kt CO_2 eq	–943.8	–695.83
I.1.26.	4.B.1. Cropland remaining cropland	Table4	Net CO_2 emissions/removals	2022	13 416.84	7 874.79	5 542.05	kt CO_2 eq	70.4	5 542.05
I.1.27.	4.B.2. Land converted to cropland	Table4	Net CO_2 emissions/removals	2022	8 164.18	7 183.85	980.32	kt CO_2 eq	13.6	980.32
I.1.28.	4.C.1. Grassland remaining grassland	Table4	Net CO_2 emissions/removals	2022	30 250.49	23 226.22	7 024.27	kt CO_2 eq	30.2	7 024.27
I.1.29.	4.D.1. Wetlands remaining wetlands	Table4	Net CO_2 emissions/removals	2022	4 403.83	3 551.14	852.69	kt CO_2 eq	24.0	852.69
I.1.30.	4.E.2. Land converted to settlements	Table4	Net CO_2 emissions/removals	2022	–1 506.99	–793.04	–713.95	kt CO_2 eq	–90.0	–713.95

Table I.2
Findings on completeness

ID#	Sector, category or gas	CRT	Gas	Inventory year	Notation key	Finding type
I.2.1.	1.B.2.d. Other	Table1	CO_2	1990	NE	Reporting of “NE” detected
I.2.2.	1.B.2.d. Other	Table1	CH_4	1990	NE	Reporting of “NE” detected
I.2.3.	1.B.2.d. Other	Table1	N_2O	1990	NE	Reporting of “NE” detected
I.2.4.	1.B.2.d. Other	Table1	Total GHG emissions	1990	NE	Reporting of “NE” detected
I.2.5.	1.D.2. Multilateral operations	Table1	CO_2	1990	NE	Reporting of “NE” detected
I.2.6.	1.D.2. Multilateral operations	Table1	CH_4	1990	NE	Reporting of “NE” detected
I.2.7.	1.D.2. Multilateral operations	Table1	N_2O	1990	NE	Reporting of “NE” detected
I.2.8.	1.D.2. Multilateral operations	Table1	Total GHG emissions	1990	NE	Reporting of “NE” detected

ID#	Sector, category or gas	CRT	Gas	Inventory year	Notation key	Finding type
I.2.9.	1.B.2.d. Other	Table1	CO_2	2023	NE	Reporting of “NE” detected
I.2.10.	1.B.2.d. Other	Table1	CH_4	2023	NE	Reporting of “NE” detected
I.2.11.	1.B.2.d. Other	Table1	N_2O	2023	NE	Reporting of “NE” detected
I.2.12.	1.B.2.d. Other	Table1	Total GHG emissions	2023	NE	Reporting of “NE” detected
I.2.13.	1.D.2. Multilateral operations	Table1	CO_2	2023	NE	Reporting of “NE” detected
I.2.14.	1.D.2. Multilateral operations	Table1	CH_4	2023	NE	Reporting of “NE” detected
I.2.15.	1.D.2. Multilateral operations	Table1	N_2O	2023	NE	Reporting of “NE” detected
I.2.16.	1.D.2. Multilateral operations	Table1	Total GHG emissions	2023	NE	Reporting of “NE” detected
I.2.17.	2.B.6. Titanium dioxide production	Table2(I)	CO_2	1990	NE	Reporting of “NE” detected
I.2.18.	2.B.6. Titanium dioxide production	Table2(I)	Total GHG emissions	1990	NE	Reporting of “NE” detected
I.2.19.	2.B.6. Titanium dioxide production	Table2(I)	CO_2	2023	NE	Reporting of “NE” detected
I.2.20.	2.B.6. Titanium dioxide production	Table2(I)	Total GHG emissions	2023	NE	Reporting of “NE” detected
I.2.21.	6. Other	Table10s6	–	1990	NO	Gas or sector not reported
I.2.22.	6. Other	Table10s6	–	2023	NO	Gas or sector not reported

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

ID#	Category	CRT	Gas	Inventory year	Notation key reported in latest submission (2025)	Notation key reported in previous submission (2024)
I.3.1.	2.B.9. Fluorochemical production	Table2(I)	HFCs	1990	IE, NO	NA, NO
I.3.2.	2.B.9. Fluorochemical production	Table2(I)	SF_6	1990	IE, NO	0.01
I.3.3.	2.B.10. Other	Table2(I)	CO_2	1990	NA	NE
I.3.4.	2.C.3. Aluminium production	Table2(I)	SF_6	1990	IE, NO	IE
I.3.5.	2.C.7. Other	Table2(I)	CO_2	1990	IE, NA, NO	IE
I.3.6.	2.C.7. Other	Table2(I)	CH_4	1990	IE, NA, NO	IE
I.3.7.	2.E.3. Photovoltaics	Table2(I)	PFCs	1990	IE, NO	NO
I.3.8.	2.E.3. Photovoltaics	Table2(I)	Total GHG emissions	1990	IE, NO	NO
I.3.9.	2.E.4. Heat transfer fluid	Table2(I)	PFCs	1990	IE, NO	IE
I.3.10.	2.E.4. Heat transfer fluid	Table2(I)	Total GHG emissions	1990	IE, NO	IE
I.3.11.	2.E.5. Other	Table2(I)	N_2O	1990	NO	IE
I.3.12.	2.E.5. Other	Table2(I)	Total GHG emissions	1990	NO	IE, NO
I.3.13.	2.F.5. Solvents	Table2(I)	HFCs	1990	IE, NO	IE
I.3.14.	2.F.5. Solvents	Table2(I)	Total GHG emissions	1990	IE, NO	IE
I.3.15.	2.G.2. SF_6 and PFCs from other product use	Table2(I)	PFCs	1990	IE, NO	NO
I.3.16.	2.G.4. Other	Table2(I)	CO_2	1990	IE, NO	IE, NA

ID#	*Category*	*CRT*	*Gas*	*Inventory year*	*Notation key reported in latest submission (2025)*	*Notation key reported in previous submission (2024)*
I.3.17.	2.B.9. Fluorochemical production	Table2(I)	HFCs	2022	IE, NO	NA, NO
I.3.18.	2.B.9. Fluorochemical production	Table2(I)	SF_6	2022	IE, NO	0.00
I.3.19.	2.B.10. Other	Table2(I)	CO_2	2022	NA	NE
I.3.20.	2.C.3. Aluminium production	Table2(I)	SF_6	2022	IE, NO	IE
I.3.21.	2.C.7. Other	Table2(I)	CO_2	2022	IE, NA, NO	IE
I.3.22.	2.C.7. Other	Table2(I)	CH_4	2022	IE, NA, NO	IE
I.3.23.	2.E.3. Photovoltaics	Table2(I)	PFCs	2022	IE, NO	NO
I.3.24.	2.E.4. Heat transfer fluid	Table2(I)	PFCs	2022	IE, NO	IE
I.3.25.	2.E.4. Heat transfer fluid	Table2(I)	Total GHG emissions	2022	IE, NO	IE
I.3.26.	2.E.5. Other	Table2(I)	N_2O	2022	NO	IE
I.3.27.	2.E.5. Other	Table2(I)	Total GHG emissions	2022	NO	IE, NO
I.3.28.	2.F.5. Solvents	Table2(I)	HFCs	2022	IE, NO	IE
I.3.29.	2.F.5. Solvents	Table2(I)	Total GHG emissions	2022	IE, NO	IE
I.3.30.	2.G.2. SF_6 and PFCs from other product use	Table2(I)	PFCs	2022	IE, NO	NO
I.3.31.	2.G.4. Other	Table2(I)	CO_2	2022	IE, NO	IE, NA
I.3.32.	2.B.9. Fluorochemical production	Table2(II)	HFC-23	1990	IE, NO	NA, NO
I.3.33.	2.B.9. Fluorochemical production	Table2(II)	HFC-134a	1990	IE, NO	NA, NO
I.3.34.	2.B.9. Fluorochemical production	Table2(II)	SF_6	1990	IE, NO	5.00
I.3.35.	2.B.9.a. By-product emissions	Table2(II)	HFC-23	1990	IE, NO	NO
I.3.36.	2.B.9.b. Fugitive emissions	Table2(II)	HFC-134a	1990	IE, NO	NA
I.3.37.	2.B.9.b. Fugitive emissions	Table2(II)	SF_6	1990	IE, NO	5.00
I.3.38.	2.C.3. Aluminium production	Table2(II)	SF_6	1990	IE, NO	IE
I.3.39.	2.E.3. Photovoltaics	Table2(II)	CF_4	1990	IE	NO
I.3.40.	2.G.2. SF_6 and PFCs from other product use	Table2(II)	C_3F_8	1990	IE, NO	NO
I.3.41.	2.B.9. Fluorochemical production	Table2(II)	HFC-23	2022	IE, NO	NA, NO
I.3.42.	2.B.9. Fluorochemical production	Table2(II)	HFC-134a	2022	IE, NO	NA, NO
I.3.43.	2.B.9. Fluorochemical production	Table2(II)	SF_6	2022	IE, NO	0.05
I.3.44.	2.B.9.a. By-product emissions	Table2(II)	HFC-23	2022	IE, NO	NO
I.3.45.	2.B.9.b. Fugitive emissions	Table2(II)	HFC-134a	2022	IE, NO	NA
I.3.46.	2.B.9.b. Fugitive emissions	Table2(II)	SF_6	2022	IE, NO	0.05
I.3.47.	2.C.3. Aluminium production	Table2(II)	SF_6	2022	IE, NO	IE
I.3.48.	2.E.3. Photovoltaics	Table2(II)	CF_4	2022	IE	NO
I.3.49.	2.G.2. SF_6 and PFCs from other product use	Table2(II)	C_3F_8	2022	IE, NO	NO
I.3.50.	4.D.2. Land converted to wetlands	Table4	Net CO_2 emissions/removals	1990	IE, NO	14.43
I.3.51.	4.D.2. Land converted to wetlands	Table4	CH_4	1990	IE, NO	0.18
I.3.52.	4.D.2. Land converted to wetlands	Table4	N_2O	1990	IE, NO	0.00

ID#	Category	CRT	Gas	Inventory year	Notation key reported in latest submission (2025)	Notation key reported in previous submission (2024)
I.3.53.	4.D.2. Land converted to wetlands	Table4	Total GHG emissions/removals	1990	IE, NO	19.72
I.3.54.	4.F.2. Land converted to other land	Table4	N_2O	1990	NO	IE, NA, NO
I.3.55.	4.F.2. Land converted to other land	Table4	Total GHG emissions/removals	1990	NO	IE, NA, NO
I.3.56.	4.F.2. Land converted to other land	Table4	N_2O	2022	NO	IE, NA, NO
I.3.57.	4.F.2. Land converted to other land	Table4	Total GHG emissions/removals	2022	NO	IE, NA, NO
I.3.58.	5.E. Other (please specify)	Table5	CO_2	1990	NA	NE
I.3.59.	5.E. Other (please specify)	Table5	CH_4	1990	NA	NE
I.3.60.	5.E. Other (please specify)	Table5	N_2O	1990	NA	NE
I.3.61.	5.E. Other (please specify)	Table5	Total GHG emissions	1990	NA	NE
I.3.62.	5.E. Other (please specify)	Table5	CO_2	2022	NA	NE

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	8.6
I.4.2.	Table1.A(c)	Other fossil fuels	Energy consumption	–28.3
I.4.3.	Table1.A(c)	Other fossil fuels	CO_2 emissions	–30.2

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.a. Public electricity and heat production	Table1	CH_4	2002	2003	12.95	31.27	18.32	kt	512.93	141.4	3.6
I.5.2.	1.A.1.c. Manufacture of solid fuels and other energy industries	Table1	CO_2	1991	1992	59 996.96	49 687.71	–10 309.25	kt	–10 309.25	–17.2	–3.1
I.5.3.	1.A.2.b. Non-ferrous metals	Table1	CO_2	1990	1991	1 376.62	859.68	–516.94	kt	–516.94	–37.6	–4.0
I.5.4.	1.A.2.e. Food processing, beverages and tobacco	Table1	CO_2	2001	2002	1 473.98	369.40	–1 104.58	kt	–1 104.58	–74.9	–4.2
I.5.5.	1.A.2.g. Other	Table1	CO_2	1990	1991	125 780.18	108 384.25	–17 395.94	kt	–17 395.94	–13.8	–3.4
I.5.6.	1.A.3.a. Domestic aviation	Table1	CO_2	2019	2020	2 054.57	919.87	–1 134.70	kt	–1 134.70	–55.2	–4.9
I.5.7.	1.A.3.b. Road transportation	Table1	CO_2	2019	2020	157 882.87	141 292.97	–16 589.90	kt	–16 589.90	–10.5	–3.2
I.5.8.	1.A.3.b. Road transportation	Table1	N_2O	2001	2002	5.09	3.48	–1.61	kt	–425.49	–31.5	–4.4
I.5.9.	1.A.4.a. Commercial/institutional	Table1	CH_4	1990	1991	58.46	37.34	–21.13	kt	–591.53	–36.1	–4.0

ID#	*Category*	*CRT*	*Gas*	*Year 1*	*Year 2*	*Value 1*	*Value 2*	*Difference*	*Unit*	*Difference (CO_2 eq)*	*Difference (%)*	*Z-score*
I.5.10.	1.A.4.b. Residential	Table1	CH_4	1990	1991	99.39	70.31	–29.08	kt	–814.13	–29.3	–4.0
I.5.11.	1.A.5.a. Stationary	Table1	CO_2	1991	1992	5 148.34	3 741.33	–1 407.01	kt	–1 407.01	–27.3	–3.3
I.5.12.	1.A.5.b. Mobile	Table1	CO_2	1990	1991	5 537.58	3 264.43	–2 273.16	kt	–2 273.16	–41.0	–4.6
I.5.13.	1.D.1.a. Aviation	Table1	CO_2	2019	2020	29 800.77	13 742.89	–16 057.87	kt	–16 057.87	–53.9	–4.8
I.5.14.	2.A.2. Lime production	Table2(I)	CO_2	2008	2009	5 526.32	4 399.99	–1 126.33	kt	–1 126.33	–20.4	–3.3
I.5.15.	2.A.4. Other process uses of carbonates	Table2(I)	CO_2	1993	1994	1 652.56	1 993.53	340.96	kt	340.96	20.6	3.2
I.5.16.	2.B.1. Ammonia production	Table2(I)	CO_2	2013	2014	6 739.00	4 797.00	–1 942.00	kt	–1 942.00	–28.8	–3.3
I.5.17.	2.B.2. Nitric acid production	Table2(I)	N_2O	2008	2009	12.75	4.17	–8.59	kt	–2 275.19	–67.3	–4.6
I.5.18.	2.B.3. Adipic acid production	Table2(I)	N_2O	1997	1998	64.07	20.92	–43.15	kt	–11 433.46	–67.3	–4.1
I.5.19.	2.B.5. Carbide production	Table2(I)	CO_2	1990	1991	443.16	95.02	–348.14	kt	–348.14	–78.6	–5.5
I.5.20.	2.B.9. Fluorochemical production	Table2(I)	Unspecified mix of HFCs and PFCs	1999	2000	3 019.38	1 488.61	–1 530.77	kt CO_2 eq	–1 530.77	–50.7	–3.7
I.5.21.	2.C.3. Aluminium production	Table2(I)	CO_2	2008	2009	828.31	398.84	–429.47	kt	–429.47	–51.8	–3.7
I.5.22.	2.D.3. Other	Table2(I)	CO_2	1993	1994	2 397.11	1 952.96	–444.15	kt	–444.15	–18.5	–3.5
I.5.23.	2.F.2. Foam blowing agents	Table2(I)	HFCs	1992	1993	131.95	1 979.25	1 847.30	kt CO_2 eq	1 847.30	1 400.0	4.5
I.5.24.	2.G.2. SF_6 and PFCs from other product use	Table2(I)	SF_6	1998	1999	0.19	0.12	–0.06	kt	–1 468.81	–33.5	–3.3
I.5.25.	2.B.9. Fluorochemical production	Table2(II)	Unspecified mix of HFCs and PFCs	1999	2000	3 019.38	1 488.61	–1 530.77	kt CO_2 eq	–1 530.77	–50.7	–3.7
I.5.26.	2.B.9.b. Fugitive emissions	Table2(II)	Unspecified mix of HFCs and PFCs	1999	2000	3 019.38	1 488.61	–1 530.77	kt CO_2 eq	–1 530.77	–50.7	–3.7
I.5.27.	2.F.2. Foam blowing agents	Table2(II)	HFC-134a	1992	1993	101.50	1 522.50	1 421.00	t	1 847.30	1 400.0	4.7
I.5.28.	2.G.2. SF_6 and PFCs from other product use	Table2(II)	SF_6	1998	1999	186.79	124.29	–62.50	t	–1 468.81	–33.5	–3.3
I.5.29.	3.A.1.a. Dairy cattle	Table3	CH_4	1990	1991	708.73	638.72	–70.01	kt	–1 960.37	–9.9	–4.6
I.5.30.	3.A.1.b. Non-dairy cattle	Table3	CH_4	1990	1991	545.48	476.61	–68.87	kt	–1 928.46	–12.6	–4.6
I.5.31.	3.B.3. Swine	Table3	CH_4	1990	1991	110.49	95.88	–14.61	kt	–409.13	–13.2	–3.2
I.5.32.	4.A.1. Forest land remaining forest land	Table4	Net CO_2 emissions/removals	1990	1991	–25 943.54	–80 404.55	–54 461.01	kt CO_2 eq	–54 461.01	209.9	–3.1
I.5.33.	4.A.1. Forest land remaining forest land	Table4	Net CO_2 emissions/removals	2017	2018	–44 206.97	23 029.37	67 236.34	kt CO_2 eq	67 236.34	–152.1	3.7
I.5.34.	4.A.2. Land converted to forest land	Table4	Net CO_2 emissions/removals	2007	2008	469.13	–1 116.73	–1 585.86	kt CO_2 eq	–1 585.86	–338.0	–4.5
I.5.35.	4.B.2. Land converted to cropland	Table4	Net CO_2 emissions/removals	2005	2006	7 023.07	5 349.16	–1 673.91	kt CO_2 eq	–1 673.91	–23.8	–3.4
I.5.36.	4.E.1. Settlements remaining settlements	Table4	Net CO_2 emissions/removals	2017	2018	795.69	1 567.87	772.17	kt CO_2 eq	772.17	97.0	3.7
I.5.37.	4.E.2. Land converted to settlements	Table4	Net CO_2 emissions/removals	2000	2001	–679.54	3 299.53	3 979.07	kt CO_2 eq	3 979.07	–585.6	3.8

ID#	Category	CRT	Gas	Year 1	Year 2	Value 1	Value 2	Difference	Unit	Difference (CO_2 eq)	Difference (%)	Z-score
I.5.38.	4.E.2. Land converted to settlements	Table4	Net CO_2 emissions/removals	2005	2006	1 303.03	–2 221.04	–3 524.07	kt CO_2 eq	–3 524.07	–270.5	–3.3
I.5.39.	4.G. Harvested wood products	Table4	Net CO_2 emissions/removals	2007	2008	–15 963.86	–5 638.73	10 325.13	kt CO_2 eq	10 325.13	–64.7	4.3
I.5.40.	5.A.1. Managed waste disposal sites	Table5	CH_4	1990	1991	1 328.26	1 404.38	76.12	kt	2 131.25	5.7	3.1
I.5.41.	5.D.1. Domestic wastewater	Table5	CH_4	1990	1991	133.06	109.03	–24.03	kt	–672.88	–18.1	–4.2

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.1. Energy industries – biomass	Table1.A(a)s1	CH_4	kg/TJ	121.188	Above range
I.6.2.	1.A.2. Manufacturing industries and construction – solid fuels	Table1.A(a)s2	CO_2	t/TJ	140.119	Above range
I.6.3.	2.F.1.c. Industrial refrigeration – HFC-227ea	Table2(II).B-Hs2	Product manufacturing factor	%	100.000	Above range
I.6.4.	2.F.1.a. Commercial refrigeration – HFC-23	Table2(II).B-Hs2	Disposal loss factor	%	20.000	Below range
I.6.5.	2.F.1.a. Commercial refrigeration – HFC-125	Table2(II).B-Hs2	Disposal loss factor	%	20.872	Below range
I.6.6.	2.F.1.a. Commercial refrigeration – HFC-134a	Table2(II).B-Hs2	Disposal loss factor	%	23.017	Below range
I.6.7.	2.F.1.a. Commercial refrigeration – HFC-143a	Table2(II).B-Hs2	Disposal loss factor	%	20.885	Below range
I.6.8.	2.F.1.a. Commercial refrigeration – C_2F_6	Table2(II).B-Hs2	Disposal loss factor	%	35.000	Below range
I.6.9.	2.F.1.b. Domestic refrigeration – HFC-125	Table2(II).B-Hs2	Disposal loss factor	%	35.000	Below range
I.6.10.	2.F.1.c. Industrial refrigeration – HFC-23	Table2(II).B-Hs2	Disposal loss factor	%	20.000	Below range
I.6.11.	2.F.1.c. Industrial refrigeration – HFC-32	Table2(II).B-Hs2	Disposal loss factor	%	20.000	Below range
I.6.12.	2.F.1.c. Industrial refrigeration – HFC-125	Table2(II).B-Hs2	Disposal loss factor	%	20.000	Below range
I.6.13.	2.F.1.c. Industrial refrigeration – HFC-134a	Table2(II).B-Hs2	Disposal loss factor	%	28.693	Below range
I.6.14.	2.F.1.c. Industrial refrigeration – HFC-143a	Table2(II).B-Hs2	Disposal loss factor	%	20.000	Below range
I.6.15.	2.F.1.d. Transport refrigeration – HFC-32	Table2(II).B-Hs2	Disposal loss factor	%	34.280	Below range
I.6.16.	2.F.1.d. Transport refrigeration – HFC-125	Table2(II).B-Hs2	Disposal loss factor	%	34.280	Below range
I.6.17.	2.F.1.d. Transport refrigeration – HFC-134a	Table2(II).B-Hs2	Disposal loss factor	%	34.280	Below range
I.6.18.	2.F.1.d. Transport refrigeration – HFC-143a	Table2(II).B-Hs2	Disposal loss factor	%	34.280	Below range
I.6.19.	2.F.1.e. Mobile air conditioning – HFC-134a	Table2(II).B-Hs2	Disposal loss factor	%	51.078	Below range
I.6.20.	2.F.1.f. Stationary air conditioning – HFC-32	Table2(II).B-Hs2	Disposal loss factor	%	28.922	Below range
I.6.21.	2.F.1.f. Stationary air conditioning – HFC-125	Table2(II).B-Hs2	Disposal loss factor	%	29.060	Below range
I.6.22.	2.F.1.f. Stationary air conditioning – HFC-134a	Table2(II).B-Hs2	Disposal loss factor	%	164.032	Above range

ID#	*Category*	*CRT*	*Gas*	*Unit*	*IEF reported*	*Comparison*
I.6.23.	3.B.4.e. Horses	Table3.B(b)	N_2O	kg N_2O/head/year	0.818	Above range
I.6.24.	3.D.1.a. Inorganic N fertilizers	Table3.D	N_2O	kg N_2O-N/kg N	0.000	Below range
I.6.25.	3.D.1.b. Organic N fertilizers	Table3.D	N_2O	kg N_2O-N/kg N	0.000	Below range
I.6.26.	3.D.1.b. Organic N fertilizers – 3.D.1.b.i. Animal manure applied to soils	Table3.D	N_2O	kg N_2O-N/kg N	0.000	Below range
I.6.27.	3.D.1.b. Organic N fertilizers – 3.D.1.b.ii. Sewage sludge applied to soils	Table3.D	N_2O	kg N_2O-N/kg N	0.000	Below range

Table I.7
Identification of new key categories

ID#	*New key category*	*Gas*	*Criteria*	*Inventory year*
I.7.1.	3.G. Liming	CO_2	Level	2023
I.7.2.	4.C.2. Land converted to grassland	CO_2	Level	2023