pollutant-specific data:	NOx	NMVOC	SOx	NH3	PM2.5	PM10	TSP	BC	CO	Pb	Cd	Hg	As	Cr	Cu	Ni	Se	Zn	PCDD/F	B[a]P	B[b]F	B[k]F	I[x]P	PAH1-4	HCB	PCB

CHAPTER 9.1 - Recalculations

Generally, improvement of the emission inventory is an ongoing task and triggers recalculations for all source categories and pollutants frequently.

Further information regarding recalculations (especially due to changes in methods or activity data) can be found in the corresponding chapters of the **National Inventory Document 2026** (NID 2026) [1)].

Possible reasons for Recalculations

Due to the ever ongoing efforts to improve the inventory, more or less broad recalculations become necessary with each new submission.

Possible reasons for recalculations are

- **new** (sub-)**categories** to be included in the inventory or re-allocation of existing sub-categories within the inventory
- **data** (activity data & emission factors) for certain (sub-)categories **available for the first time**
- **change of data sources** (for activity data and emissions)
- use of **new emission factors** (due to: inquest, research projects, expert judgement etc.)
- **improvement of methods** used for calculating emissions
- **outcome of** ongoing **review** activities under both UN FCCC and UN ECE
- etc.

All these changes can effect *specific years* of the inventory as well as the *entire time series*, leading to more or less significant changes within the emission trends.

Declaration of Recalculations

Under UN FCCC reporting, parties have to comment any recalculations in any year leading to differences between latest and current submission for a given year or the time period or series. Thereby, highest attention is given to recalculations within

base year and the most current year of the latest submission:

Recalculations in Base Year data

- mostly rather small but of highest importance
- mostly due to changed methods or emission factors used for entire time series
- impact on basis of any evaluation

Recalculations in data of current year of the latest submission

- mostly because of **corrected activity data** (especially in Energy Production) from finalized Energy Balances
- also due to changed methods, emission factors, or data sources used
- impact on the amount of emission reduction reported in latest submission

Under UN ECE, within the IIR, Germany focusses on recalculations in values reported for **1990** for all MAIN POLLUTANTS, HEAVY METALS and POPS, **1995** for $PM_{2.5}$ and PM_{10} and **2000** for BLACK CARBON (BC), and the **last year of the previous submission**, providing the **quantity** (in absolute numbers and in %) of change for any recalculated emission **and the reasons** for the recalculations carried out

Recalculations in current submission

Table 1: Overview of impact of recalculations on the level of National Totals (For more detailed information please mouseclick the pollutant.)

for reporting year:		BASE YEAR[1]				2023			
		prev. subm.	**curr. subm.**	**±**	**± %**	**prev. subm.**	**curr. subm.**	**±**	**± %**
Main pollutants									
NEC									
Nitrogen Oxides - NO_x (as NO_2)	[kt]	2,846.04	2,849.57	3.54	0.12%	844.88	841.23	-3.65	-0.43%
Non-Methane VOC - NMVOC	[kt]	3,953.69	3,941.76	-11.9	-0.30%	974.82	968.05	-6.77	-0.69%
Sulphur Oxides - SO_x (as SO_2)	[kt]	5,460.81	5,460.81	0.00	0.00%	216.62	210.47	-6.15	-2.84%
Ammonia - NH_3	[kt]	834.48	827.15	-7.32	-0.88%	569.00	531.54	-37.5	-6.58%
Particulate Matter									
Particles <2.5µm - $PM_{2.5}$	[kt]	199.77	197.47	-2.30	-1.15%	77.47	77.91	0.44	0.57%
Particles <10µm - PM_{10}	[kt]	337.92	334.41	-3.51	-1.04%	181.55	183.76	2.21	1.22%
Total Suspended Particles - TSP	[kt]	2,015.59	2,015.25	-0.34	-0.02%	333.54	334.83	1.29	0.39%
Black Carbon - BC	[kt]	39.20	39.01	-0.18	-0.46%	9.36	9.27	-0.09	-0.91%
Other									
Carbon Monoxide - CO	[kt]	13,320.53	13,319.31	-1.22	-0.009%	2,409.34	2,339.64	-69.7	-2.89%
Heavy Metals									
Priority HM									
Lead - Pb	[t]	1,899.27	1,921.37	22.10	1.16%	151.08	173.15	22.1	14.6%
Cadmium - Cd	[t]	29.10	29.19	0.09	0.29%	9.36	9.43	0.07	0.75%
Mercury - Hg	[t]	35.53	35.53	0.00	0.00%	5.43	5.42	-0.009	-0.17%
Other HM									
Arsenic - As	[t]	85.92	86.16	0.25	0.29%	5.05	5.28	0.22	4.45%
Chrome - Cr	[t]	165.69	174.06	8.37	5.05%	65.59	74.34	8.75	13.3%
Copper - Cu	[t]	619.88	804.80	184.92	29.83%	584.30	782.79	198	34.0%
Nickel - Ni	[t]	332.75	333.95	1.21	0.36%	123.07	127.74	4.67	3.79%
Selenium - Se	[t]	5.73	5.82	0.09	1.55%	2.68	2.76	0.08	3.03%
Zinc - Zn	[t]	474.15	511.59	37.43	7.89%	284.64	319.57	34.9	12.3%
Persistent Organic Pollutants - POPs									
Dioxines & Furanes - PCDD/F	[g]	805.10	805.10	0.00	0.00%	110.98	110.74	-0.24	-0.22%
Polycyclic Organic Hydrocarbons - PAHs									
Benzo(a)pyrene - B[a]P	[t]	26.99	27.03	0.04	0.15%	15.66	15.57	-0.09	-0.55%
Benzo(b)fluoranthene - B[b]F	[t]	35.83	36.71	0.87	2.44%	22.72	22.46	-0.26	-1.15%

Benzo(k)fluoranthene - B[k]F	[t]	16.26	17.10	0.84	5.14%	10.35	10.38	0.03	0.25%
Indeno(1,2,3-c,d)pyrene - I[1,2,3-c,d]P	[t]	23.03	23.22	0.19	0.83%	15.05	14.88	-0.17	-1.16%
Polycyclic Aromatic Hydrocarbons - PAH 1-4	[t]	115.67	117.61	1.94	1.68%	67.13	66.60	-0.53	-0.79%
Other POPs									
Hexachlorobenzene - HCB	[kg]	2,900.52	2,900.52	0.00	0.00%	3.85	3.85	0.00	-0.12%
Polychlorinated Biphenyls - PCBs	[kg]	1,735.78	1,735.78	0.00	0.00%	203.80	206.48	2.68	1.31%
[1]: Base Year of reporting: 1990; excumptions: $PM_{2.5}$ and PM_{10}: 1995 and BC: 2000									

Overview of reasons for recalculations against Submission 2026

(main changes only, without claim to completeness)

1. revision of (primary) activity data

- 1.A together with 2.C.1: finalisation of National Energy Balance 2024 [2)]
- 2.L: implementation of orginal activity data from the Kraftfahrtbundesamt (KBA) for 2015 replacing proxy data

2. update or revision of entire model

- 1.A.3.a: routine revision of TREMOD Aviation (TREMOD AV) [3)]
- 1.A.3.b: routine revision of TREMOD [4)]
- 1.A.2.g vii, 1.A.4.a ii, 1.A.4.b ii and 1.A.4.c ii: routine revision of TREMOD Mobile Machinery (TREMOD MM) [5)]
- 1.A.3.d: routine revision of E.M.M.A. model maintained by BSH [6)]

3. newly implemented acitivity and/or emission factors

4. revision of emission factors

5. re-allocation of activity data and/or emissions

- -

6. as an outcome of the ongoing review activities under both UNFCCC and UNECE