

# Recalculations - Sulphur Oxides

## Revision of SO<sub>2</sub> emissions over time:

The negligibly small changes in the **National Total** reported for **1990 (+4.1 kt or +0.07 %)** result almost entirely from revised emission estimates in the sub-categories of **NFR 1.A.3.b** together with less significant changes throughout NFR 1.

Here, the strongest percental change occurs for **1.A.3.b ii with plus 35 %**.

Table 1: Changes in emission estimates for 1990

NFR Sector	Submission 2022	Submission 2023	Difference		Reasoning
	[kt]		absolute	relative	
<b>NATIONAL TOTAL</b>	<b>5.460,02</b>	<b>5.464,11</b>	<b>4,08</b>	<b>0,07%</b>	see description and reasoning in: sub-category chapters
<b>NFR 1 - Energy</b>	<b>5.284,38</b>	<b>5.288,46</b>	<b>4,08</b>	<b>0,08%</b>	sub-category chapters
1.A.2.g vii	3,84	3,85	0,01	0,17%	<a href="#">here</a>
1.A.3.a i(i)	0,26	0,24	-0,02	-6,58%	<a href="#">here</a>
1.A.3.a ii(i)	0,18	0,17	-0,01	-6,58%	<a href="#">here</a>
1.A.3.b i	33,07	35,68	2,61	7,91%	<a href="#">here</a>
1.A.3.b ii	2,34	3,16	0,83	35,49%	<a href="#">here</a>
1.A.3.b iii	36,55	37,21	0,66	1,81%	<a href="#">here</a>
1.A.3.b iv	0,22	0,23	0,01	2,99%	<a href="#">here</a>
1.A.4.a ii	0,63	0,63	0,00	-0,09%	<a href="#">here</a>
1.A.4.c ii	4,49	4,48	-0,01	-0,14%	<a href="#">here</a>
<b>NFR 2 - IPPU</b>	<b>175,54</b>	<b>175,54</b>	<b>0,00</b>	<b>0,00%</b>	
<b>NFR 3 - Agriculture</b>	<b>NA</b>				
<b>NFR 5 - Waste</b>	<b>0,11</b>	<b>0,11</b>	<b>0,00</b>	<b>0,00%</b>	
<b>NFR 6 - Other</b>	<b>NA</b>				

Changes in the **National Total** reported for **2019 (-3.84 kt or -1.46 %)** result mainly from revisions in **NFR sub-categories 1.A.1.c, 1.A.2.g viii and 2.A.3** together with less relevant changes throughout NFRs 1, 2 and 5.

Table 2: Changes in emission estimates for 2019

NFR Sector	Submission 2022	Submission 2023	Difference		Reasoning
	[kt]		absolute	relative	
<b>NATIONAL TOTAL</b>	<b>232,69</b>	<b>241,26</b>	<b>8,58</b>	<b>3,69%</b>	see description and reasoning in: sub-category chapters
<b>NFR 1 - Energy</b>	<b>171,42</b>	<b>179,05</b>	<b>7,63</b>	<b>4,45%</b>	sub-category chapters
1.A.1.a	83,84	83,28	-0,56	-0,67%	<a href="#">here</a>
1.A.1.b	30,48	31,07	0,58	1,92%	<a href="#">here</a>
1.A.1.c	7,57	6,98	-0,59	-7,80%	<a href="#">here</a>
1.A.2.a	4,40	4,29	-0,11	-2,44%	<a href="#">here</a>
1.A.2.b	0,36	0,40	0,04	11,98%	<a href="#">here</a>
1.A.2.e	0,74	0,65	-0,09	-12,41%	<a href="#">here</a>
1.A.2.g vii	0,019	0,020	0,001	2,74%	<a href="#">here</a>
1.A.2.g viii	23,69	31,96	8,27	34,92%	<a href="#">here</a>
1.A.3.a i(i)	0,29	0,27	-0,02	-6,63%	<a href="#">here</a>
1.A.3.a ii(i)	0,076	0,071	-0,005	-6,73%	<a href="#">here</a>
1.A.3.b i	0,4526	0,4522	-0,0004	-0,09%	<a href="#">here</a>
1.A.3.b ii	0,060	0,061	0,001	2,24%	<a href="#">here</a>
1.A.3.b iii	0,233	0,230	-0,003	-1,49%	<a href="#">here</a>
1.A.3.b iv	0,0070	0,0071	0,0001	1,11%	<a href="#">here</a>
1.A.3.c	0,2030	0,2032	0,0002	0,11%	<a href="#">here</a>
1.A.4.a i	1,23	1,35	0,13	10,22%	<a href="#">here</a>
1.A.4.a ii	0,00400	0,00402	0,00002	0,51%	<a href="#">here</a>
1.A.4.b i	9,79	9,84	0,05	0,51%	<a href="#">here</a>
1.A.4.b ii	0,0016	0,0012	-0,0004	-21,39%	<a href="#">here</a>

	Submission 2022	Submission 2023	Difference		Reasoning
NFR Sector	[kt]			relative	see description and reasoning in:
<b>NATIONAL TOTAL</b>	<b>232,69</b>	<b>241,26</b>	<b>8,58</b>	<b>3,69%</b>	<b>sub-category chapters</b>
<b>NFR 1 - Energy</b>	<b>171,42</b>	<b>179,05</b>	<b>7,63</b>	<b>4,45%</b>	<b>sub-category chapters</b>
1.A.4.c i	1,829	1,826	-0,003	-0,17%	<a href="#">here</a>
1.A.4.c ii	0,0229	0,0233	0,0004	1,78%	<a href="#">here</a>
1.A.5.a	0,0116	0,0117	0,0001	1,17%	<a href="#">here</a>
1.B.1.b	0,800	0,741	-0,059	-7,34%	<a href="#">here</a>
<b>NFR 2 - IPPU</b>	<b>61,16</b>	<b>62,10</b>	<b>0,94</b>	<b>1,54%</b>	<b>sub-category chapters</b>
2.A.1	6,35	6,83	0,48	7,54%	<a href="#">here</a>
2.A.3	7,64	7,71	0,07	0,88%	<a href="#">here</a>
2.H.1	0,49	0,88	0,39	81,00%	<a href="#">here</a>
<b>NFR 3 - Agriculture</b>	<b>0,00</b>	<b>0,00</b>	<b>0,00</b>		
<b>NFR 5 - Waste</b>	<b>0,107</b>	<b>0,107</b>	<b>0,00</b>	<b>0,00%</b>	
<b>NFR 6 - Other</b>	<b>0,00</b>	<b>0,00</b>	<b>0,00</b>		