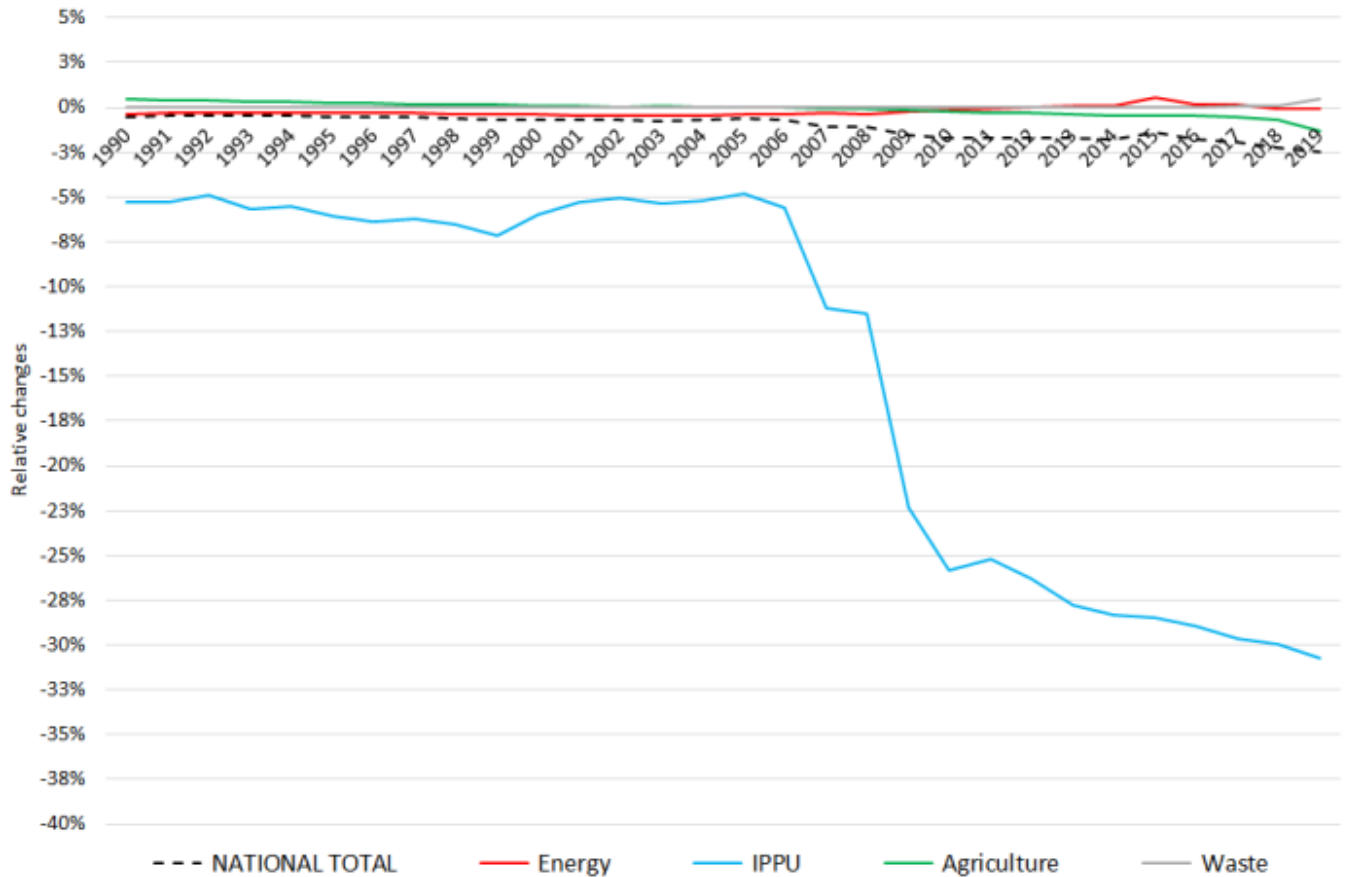
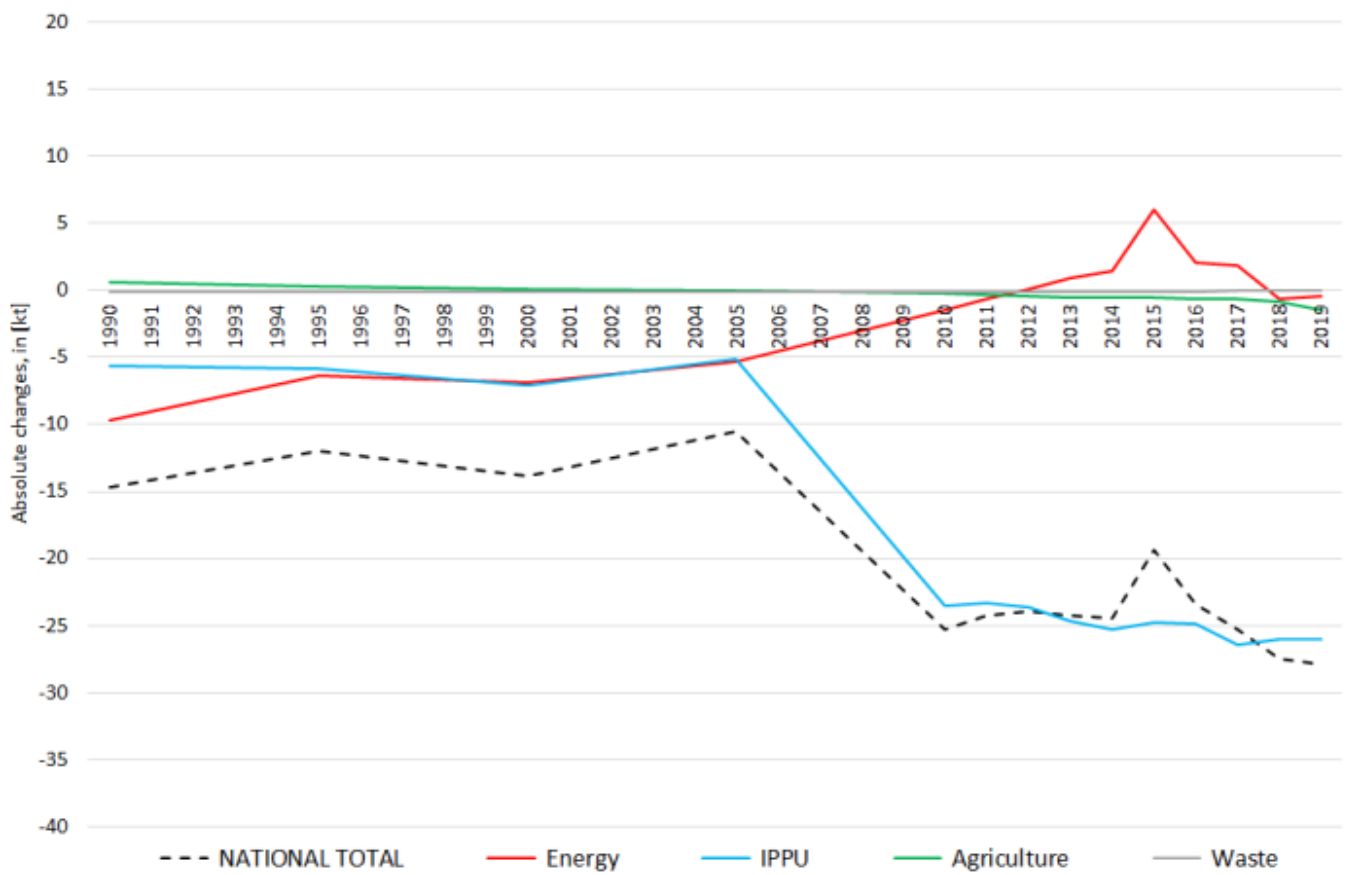


# Recalculations - Nitrogen Oxides

Revision of NO<sub>x</sub> emissions over time:



Changes within the **National Total** reported for **1990 (-14.72 kt or -0.52 %)** are dominated by changes in NFRs **1.A.3.d ii** (-9.18 kt) and **2.B.2** (-5.68 kt) together with less significant revisions throughout NFRs 1, 2 and 3.

The most significant percental change occurs for **NFR 1.A.4.c iii with minus 52 %**.

Table 1: Changes of emission estimates 1990

NFR Sector	Submission 2021	Submission 2022	Difference		Reasoning
	[kt]			relative	
<b>NATIONAL TOTAL</b>	<b>2.850,05</b>	<b>2.835,33</b>	<b>-14,72</b>	<b>-0,52%</b>	<b>see description and reasoning in: sub-category chapters</b>
<b>NFR 1 - Energy</b>	<b>2.601,88</b>	<b>2.592,15</b>	<b>-9,73</b>	<b>-0,37%</b>	<b>sub-category chapters</b>
1.A.3.a i(i)	3,94	3,94	0,00	-0,02%	<a href="#">here</a>
1.A.3.a ii(i)	2,80	2,78	-0,01	-0,38%	<a href="#">here</a>
1.A.3.b iii	506,00	505,99	-0,01	0,00%	<a href="#">here</a>
1.A.3.c	45,05	45,32	0,26	0,59%	<a href="#">here</a>
1.A.3.d ii	60,65	51,47	<u>-9,18</u>	-15,13%	<a href="#">here</a>
1.A.4.b ii	0,06	0,08	0,02	30,65%	<a href="#">here</a>
1.A.4.c iii	0,81	0,39	-0,42	<u>-51,95%</u>	<a href="#">here</a>
1.A.5.b	41,60	41,20	-0,40	-0,96%	<a href="#">here</a>
<b>NFR 2 - IPPU</b>	<b>106,37</b>	<b>100,73</b>	<b>-5,64</b>	<b>-5,30%</b>	<b>sub-category chapters</b>
2.B.2	16,98	11,30	<u>-5,68</u>	-33,44%	<a href="#">2.B.2 - Nitric Acid Production</a>
2.B.6	NE	0,04	0,04		<a href="#">2.B.6 - Titanium Dioxide Production</a>
<b>NFR 3 - Agriculture</b>	<b>141,27</b>	<b>141,92</b>	<b>0,65</b>	<b>0,46%</b>	<b>sub-category chapters</b>
3.B.1.b	0,6958	0,6896	-0,01	-0,89%	<a href="#">here</a>
3.B.3	0,26	0,28	0,02	6,48%	<a href="#">here</a>
3.B.4.g i	0,0144	0,0143	0,0001	-1,15%	<a href="#">here</a>
3.B.4.g iv	0,00251	0,00248	-0,00003	-1,33%	<a href="#">here</a>
3.D.a.2.a	43,46	44,14	0,68	1,58%	<a href="#">here</a>
3.D.a.3	8,44	8,40	-0,04	-0,49%	<a href="#">here</a>
<b>NFR 5 - Waste</b>	<b>0,53</b>	<b>0,53</b>	<b>0,00</b>	<b>0,00%</b>	
<b>NFR 6 - Other</b>	<b>NA</b>				

The changes within the **National Total** reported for **2019 (-28 kt or -2.46 %)** are dominated by changes in **NFR 2.B.2** (-25.6 kt) together with less significant revisions **throughout NFRs 1 and 3**.

Here, the most significant percental changes occur for NFRs **2.C.3 with plus 104 %** and **2.B.2 with minus 96 %**.

Table 2: Changes of emission estimates 2019

NFR Sector	Submission 2022	Submission 2023	Difference		Reasoning
	[kt]			relative	
<b>NATIONAL TOTAL</b>	<b>1.136,79</b>	<b>1.108,82</b>	<b>-27,97</b>	<b>-2,46%</b>	<b>see description and reasoning in: sub-category chapters</b>
<b>NFR 1 - Energy</b>	<b>938,97</b>	<b>938,49</b>	<b>-0,48</b>	<b>-0,05%</b>	<b>sub-category chapters</b>
1.A.1.a	186,93	186,02	-0,91	-0,49%	<a href="#">here</a>
1.A.1.b	13,98	14,42	0,44	3,16%	<a href="#">here</a>
1.A.1.c	12,85	13,10	0,25	1,97%	<a href="#">here</a>
1.A.2.a	3,61	3,57	-0,04	-1,06%	<a href="#">here</a>
1.A.2.b	0,93	0,92	-0,01	-1,04%	<a href="#">here</a>
1.A.2.e	0,202	0,188	-0,014	-6,98%	<a href="#">here</a>
1.A.2.g vii	14,39	14,62	0,23	1,58%	<a href="#">here</a>
1.A.2.g viii	64,41	70,35	5,94	9,23%	<a href="#">here</a>
1.A.3.a i(i)	5,39	5,04	-0,36	-6,63%	<a href="#">here</a>
1.A.3.a ii(i)	1,13	1,05	-0,08	-6,71%	<a href="#">here</a>
1.A.3.b i	211,62	200,13	-11,49	-5,43%	<a href="#">here</a>
1.A.3.b ii	48,72	48,97	0,25	0,51%	<a href="#">here</a>
1.A.3.b iii	92,85	90,66	-2,20	-2,37%	<a href="#">here</a>
1.A.3.b iv	1,55	1,57	0,02	1,32%	<a href="#">here</a>
1.A.3.c	8,13	8,69	0,56	6,84%	<a href="#">here</a>

	Submission 2022	Submission 2023	Difference		Reasoning
NFR Sector	[kt]		absolute	relative	see description and reasoning in:
<b>NATIONAL TOTAL</b>	<b>1.136,79</b>	<b>1.108,82</b>	<b>-27,97</b>	<b>-2,46%</b>	<b>sub-category chapters</b>
<b>NFR 1 - Energy</b>	<b>938,97</b>	<b>938,49</b>	<b>-0,48</b>	<b>-0,05%</b>	<b>sub-category chapters</b>
1.A.3.d ii	21,63	21,62	0,00	-0,01%	<a href="#">here</a>
1.A.3.e i	0,87	0,87	0,00	0,00%	<a href="#">1.A.3.e i - Pipeline Transport ]</a>
1.A.4.a i	19,51	22,22	2,72	13,93%	<a href="#">here</a>
1.A.4.a ii	7,61	7,63	0,02	0,27%	<a href="#">here</a>
1.A.4.b i	59,57	58,80	-0,76	-1,28%	<a href="#">here</a>
1.A.4.b ii	0,5268	0,4194	-0,11	-20,39%	<a href="#">here</a>
1.A.4.c i	7,08	7,03	-0,05	-0,76%	<a href="#">here</a>
1.A.4.c ii	27,12	27,39	0,27	1,00%	<a href="#">here</a>
1.A.5.a	0,22	0,22	0,00	1,06%	<a href="#">here</a>
1.A.5.b	2,38	2,28	-0,10	-4,05%	<a href="#">here</a>
1.B.1.b	0,59	0,57	-0,02	-3,37%	<a href="#">here</a>
<b>NFR 2 - IPPU</b>	<b>54,47</b>	<b>54,92</b>	<b>0,45</b>	<b>0,82%</b>	<b>sub-category chapters</b>
2.A.1	11,72	12,95	1,23	10,54%	<a href="#">here</a>
2.A.3	10,69	10,49	-0,20	-1,88%	<a href="#">here</a>
2.H.1	2,68	2,09	-0,59	-21,91%	<a href="#">here</a>
<b>NFR 3 - Agriculture</b>	<b>108,75</b>	<b>110,15</b>	<b>1,40</b>	<b>1,29%</b>	<b>sub-category chapters</b>
3.B.1.a	0,506	0,502	-0,004	-0,75%	<a href="#">here</a>
3.B.1.b	0,506	0,505	-0,001	-0,17%	<a href="#">here</a>
3.B.3	0,2581	0,2444	-0,0137	-5,30%	<a href="#">here</a>
3.B.4.g i	0,0186	0,0181	-0,0005	-2,66%	<a href="#">here</a>
3.B.4.g ii	0,0135	0,0137	0,0001	1,06%	<a href="#">here</a>
3.B.4.g iii	0,0094	0,0094	0,000008	0,09%	<a href="#">here</a>
3.B.4.g iv	0,00202	0,00202	0,000002	0,09%	<a href="#">here</a>
3.D.a.1	53,71	52,31	-1,40	-2,61%	<a href="#">here</a>
3.D.a.2.a	36,76	37,16	0,40	1,09%	<a href="#">here</a>
3.D.a.2.b	0,56	0,49	-0,07	-12,25%	<a href="#">here</a>
3.D.a.2.c	11,56	14,00	2,44	21,12%	<a href="#">here</a>
3.D.a.3	4,62	4,67	0,05	1,02%	<a href="#">here</a>
3.I	0,169	0,171	0,002	1,16%	<a href="#">here</a>
<b>NFR 5 - Waste</b>	<b>0,71</b>	<b>0,71</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>		