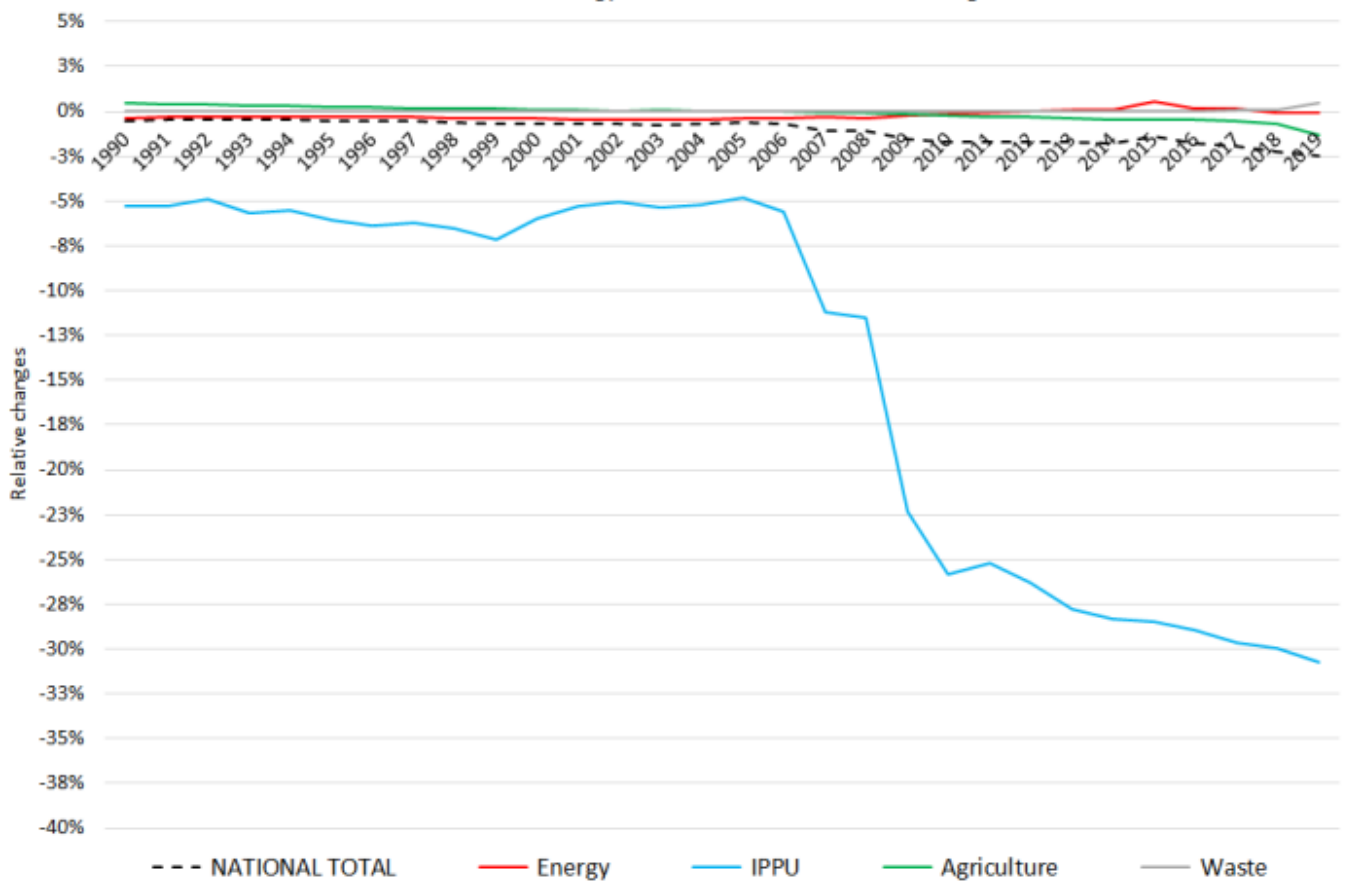


# Recalculations - Nitrogen Oxides

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



Changes within the **National Total reported for 1990 (-14.72 kt | -0.52 %)** are dominated by changes in NFRs **1.A.3.d ii** (-9.73 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

absolute changes in emissions reported for 1990					Submission 2021	Submission 2022	Difference	Reasoning
NFR Code	[kt]			relative	see description and reasoning in:			
<b>NATIONAL TOTAL</b>	<b>2.850,05</b>	<b>2.835,33</b>	<b>-14,72</b>	<b>-0,52%</b>	<b>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	-9,18	-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	-51,95%	<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	-5,68	-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	0,01443	0,01427	0,00	-1,145%	<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 small changes within the **National Total reported for 2019 (+8.22 kt | +0.68 %)** are dominated by changes in **NFRs 1 and 3**. Here, the most significant relative change occurs for **NFR 2.G with minus 49 %**.

Table 2: Changes of emission estimates 2019

absolute changes in emissions reported for 2018					Submission 2021	Submission 2022	Difference		Reasoning
<b>NFR Sector</b>		<b>[kt]</b>					<b>relative</b>	<b>see description and reasoning in:</b>	
<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.1.a		208,92		208,57		-0,34	-0,16%	<a href="#">here</a>	
1.A.1.b		16,66		16,66		0,01	0,05%	<a href="#">here</a>	
1.A.1.c		12,01		13,38		1,37	11,43%	<a href="#">here</a>	
1.A.2.a		3,95		4,15		0,21	5,25%	<a href="#">here</a>	
1.A.2.b		1,01		0,98		-0,03	-2,88%	<a href="#">here</a>	
1.A.2.c		IE		IE		#WERT!	#WERT!	<a href="#">here</a>	
1.A.2.d		IE		IE		#WERT!	#WERT!	<a href="#">here</a>	
1.A.2.e		0,21		0,21		0,00	-0,67%	<a href="#">here</a>	
1.A.2.f		IE		IE		#WERT!	#WERT!	<a href="#">here</a>	
1.A.2.g vii		14,81		14,74		-0,07	-0,47%	<a href="#">here</a>	
1.A.2.g viii		68,68		67,08		-1,61	-2,34%	<a href="#">here</a>	
1.A.3.a i(i)		11,77		11,93		0,16	1,37%	<a href="#">here</a>	
1.A.3.a ii(i)		2,61		2,65		0,03	1,28%	<a href="#">here</a>	
1.A.3.b i		275,95		271,75		-4,20	-1,52%	<a href="#">here</a>	
1.A.3.b ii		56,31		55,69		-0,61	-1,09%	<a href="#">here</a>	
1.A.3.b iii		106,05		106,65		0,60	0,56%	<a href="#">here</a>	
1.A.3.b iv		1,61		1,60		-0,02	-1,10%	<a href="#">here</a>	
1.A.3.b v		NA		NA		#WERT!	#WERT!	<a href="#">here</a>	
1.A.3.b vi		NA		NA		#WERT!	#WERT!	<a href="#">here</a>	
1.A.3.b vii		NA		NA		#WERT!	#WERT!	<a href="#">here</a>	
1.A.3.c		7,33		7,99		0,66	8,94%	<a href="#">here</a>	
1.A.3.d i(ii)		IE		IE		#WERT!	#WERT!		
1.A.3.d ii		24,70		24,75		0,05	0,22%	<a href="#">here</a>	
1.A.3.e i		1,35		1,35		0,00	0,00%	<a href="#">1.A.3.e i - Pipeline Transport ]</a>	
1.A.3.e ii		NA		NA		#WERT!	#WERT!	<a href="#">1.A.3.e ii - Other Transport: Other ]</a>	
1.A.4.a i		20,65		20,43		-0,22	-1,06%	<a href="#">here</a>	
1.A.4.a ii		7,96		7,92		-0,04	-0,55%	<a href="#">here</a>	
1.A.4.b i		56,94		60,05		3,11	5,47%	<a href="#">here</a>	
1.A.4.b ii		0,4913		0,5745		0,08	16,94%	<a href="#">here</a>	
1.A.4.c i		6,03		7,01		0,98	16,21%	<a href="#">here</a>	
1.A.4.c ii		26,87		26,87		0,00	0,00%	<a href="#">here</a>	
1.A.4.c iii		0,5584		0,3768		-0,18	-32,53%	<a href="#">here</a>	
1.A.5.a		0,22		0,23		0,01	4,92%	<a href="#">here</a>	
1.A.5.b		3,52		3,10		-0,43	-12,09%	<a href="#">here</a>	
1.B.1.a		NA		NA		#WERT!	#WERT!	<a href="#">here</a>	
1.B.1.b		0,67		0,67		0,00	0,00%	<a href="#">here</a>	
1.B.1.c		NA		NA		#WERT!	#WERT!	<a href="#">here</a>	
1.B.2.a i		NA		NA		#WERT!	#WERT!		
1.B.2.a iv		0,7171		0,7172		0,0001	0%		
1.B.2.a v		NA		NA		#WERT!	#WERT!		
1.B.2.b		0,03		0,03		0,00	0,00%		

absolute changes in emissions reported for 2018		Submission 2021	Submission 2022	Difference		Reasoning
<b>NFR Sector</b>		[kt]			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.B.2.c		0,38	0,38	0,00	0,01%	
1.B.2.d		NA	NA	#WERT!	#WERT!	
<b>NFR 2 - IPPU</b>		<b>84,76</b>	<b>58,71</b>	<b>-26,05</b>	<b>-30,73%</b>	<b>sub-category chapters</b>
2.A.1		12,49	12,49	0,00	0,00%	<a href="#">here</a>
2.A.2		3,843	3,843	0,000	0,00%	<a href="#">here</a>
2.A.3		11,14	10,67	-0,47	-4,20%	<a href="#">here</a>
2.A.5.a		NA	NA	#WERT!	#WERT!	<a href="#">here</a>
2.A.5.b		NA	NA	#WERT!	#WERT!	<a href="#">here</a>
2.A.5.c		NA	NA	#WERT!	#WERT!	<a href="#">here</a>
2.A.6		2,13	2,13	0,00	0,04%	<a href="#">here</a>
2.B.1		2,95	2,95	0,00	0,00%	<a href="#">here</a>
2.B.2		26,69	1,07	-25,62	-96,00%	<a href="#">here</a>
2.B.3		0,13	0,13	0,00	0,00%	<a href="#">here</a>
2.B.5		NA	NA	#WERT!	#WERT!	<a href="#">here</a>
2.B.6		NE	0,04	#WERT!	#WERT!	<a href="#">here</a>
2.B.7		NA	NA	#WERT!	#WERT!	<a href="#">here</a>
2.B.10.a		NA	NA	#WERT!	#WERT!	<a href="#">here</a>
2.B.10.b		NA	NA	#WERT!	#WERT!	<a href="#">here</a>
2.C.1		21,12	21,12	0,00	0,00%	<a href="#">here</a>
2.C.2		NE	NE	#WERT!	#WERT!	<a href="#">here</a>
2.C.3		0,51	0,51	0,53	104,34%	<a href="#">here</a>
2.C.4		NA	NA	#WERT!	#WERT!	<a href="#">here</a>
2.H.1		2,95	2,94	0,00	-0,11%	<a href="#">here</a>
<b>NFR 3 - Agriculture</b>		<b>112,24</b>	<b>110,79</b>	<b>-1,44</b>	<b>-1,29%</b>	<b>sub-category chapters</b>
3.B.1.a		0,489	0,507	0,017	3,52%	<a href="#">here</a>
3.B.1.b		0,487	0,515	0,029	5,88%	<a href="#">here</a>
3.B.3		0,3276	0,2616	-0,0660	-20,14%	<a href="#">here</a>
3.B.4.d		0,00187	0,00191	0,00004	2,35%	<a href="#">here</a>
3.B.4.e		0,0362	0,0386	0,0024	6,67%	<a href="#">here</a>
3.B.4.g i		0,0180	0,0182	0,0003	1,46%	<a href="#">here</a>
3.B.4.g ii		0,0179	0,0139	-0,0039	-21,88%	<a href="#">here</a>
3.B.4.g iii		0,0108	0,0100	-0,0007	-6,78%	<a href="#">here</a>
3.B.4.g iv		0,00202	0,00205	0,00002	1,06%	<a href="#">here</a>
3.D.a.1		55,97	55,34	-0,62	-1,11%	<a href="#">here</a>
3.D.a.2.a		37,54	37,05	-0,49	-1,30%	<a href="#">here</a>
3.D.a.2.b		0,51	0,56	0,05	10,17%	<a href="#">here</a>
3.D.a.2.c		11,55	11,56	0,01	0,08%	<a href="#">here</a>
3.D.a.3		5,10	4,73	-0,37	-7,21%	<a href="#">here</a>
3.I		0,172	0,169	-0,003	-1,86%	<a href="#">here</a>
<b>NFR 5 - Waste</b>		<b>0,826</b>	<b>0,830</b>	<b>0,004</b>	<b>0,50%</b>	<b>sub-category chapters</b>
5.C.2		0,283	0,288	0,004	1,44%	<a href="#">here</a>
<b>NFR 6 - Other</b>		<b>NA</b>				

