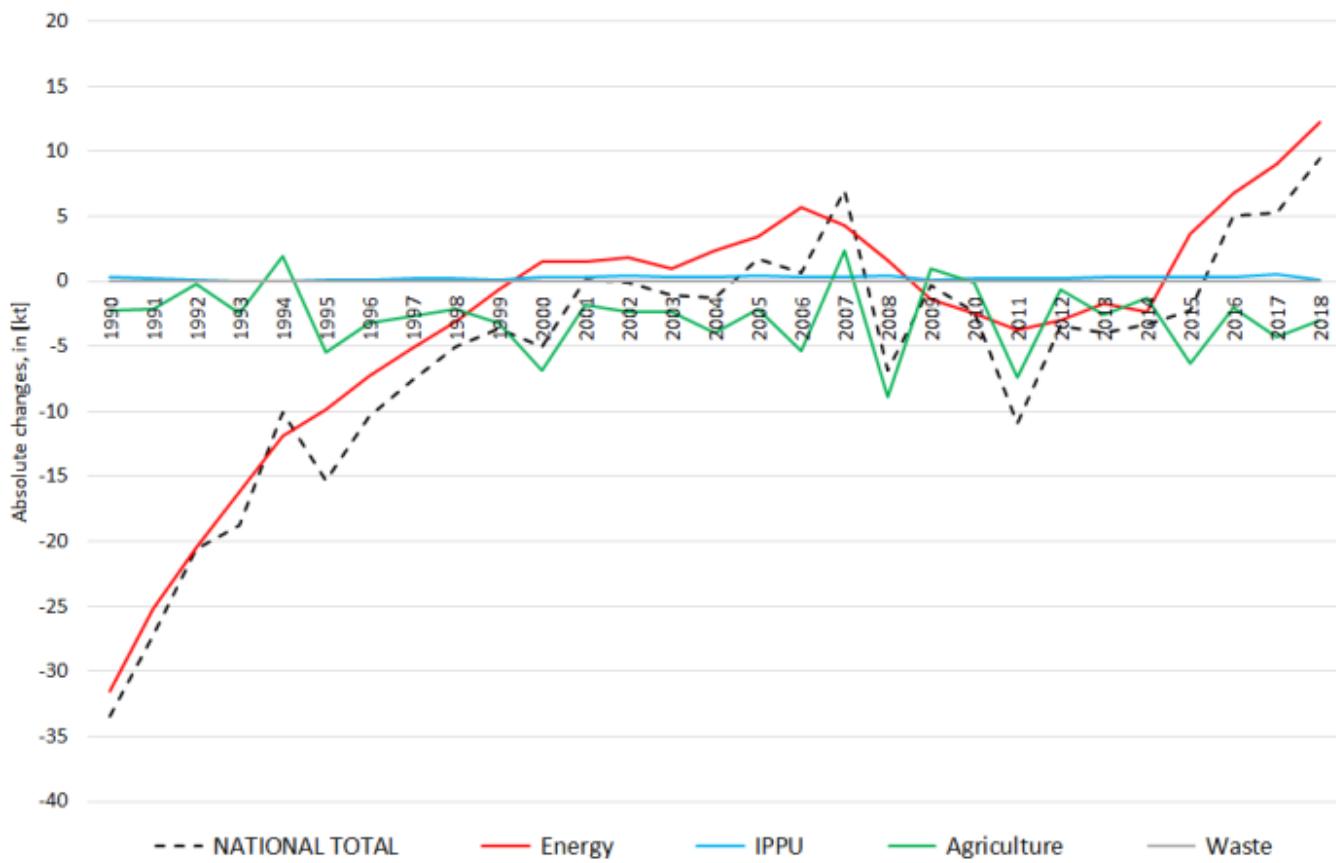
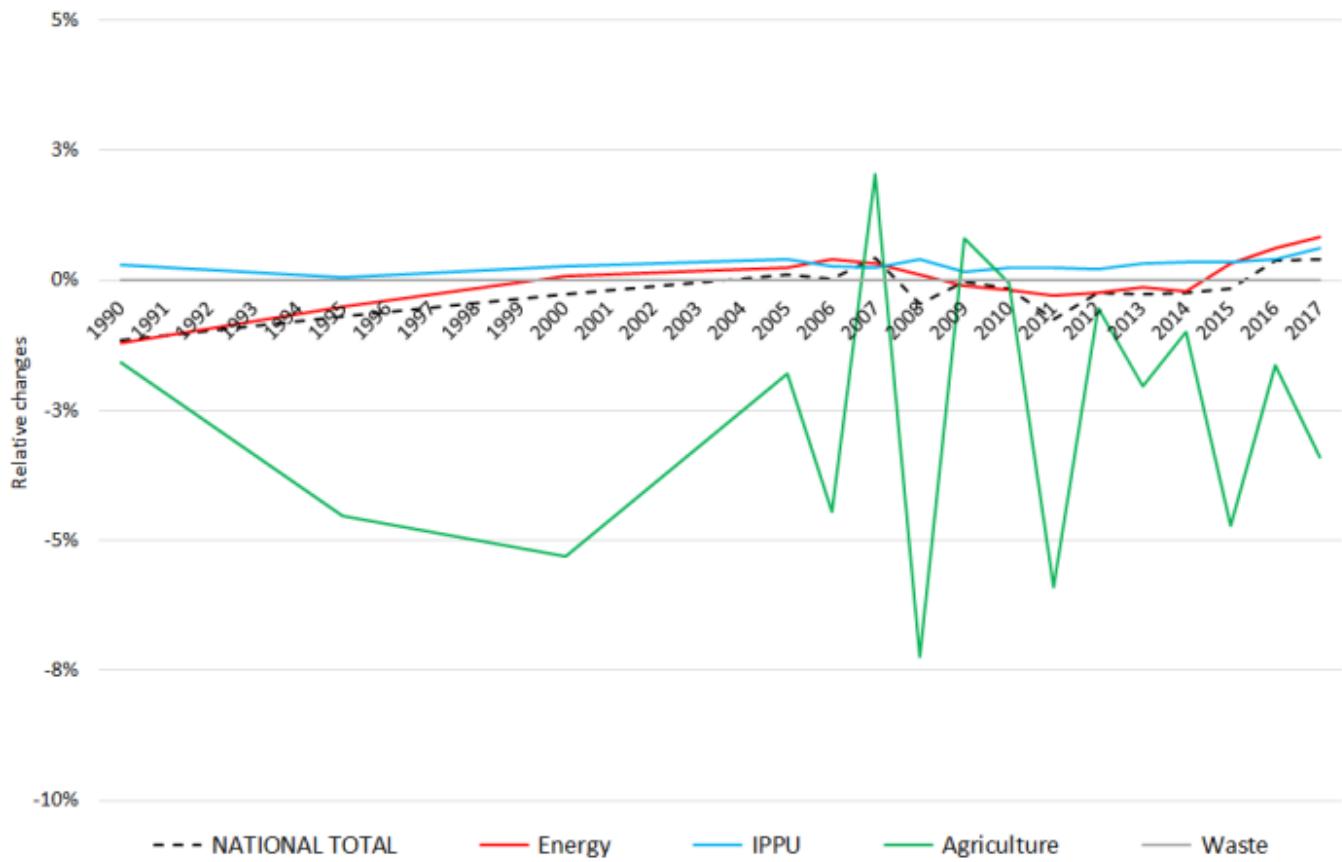


Recalculations - Nitrogen Oxides

Revision of NO_x emissions over time

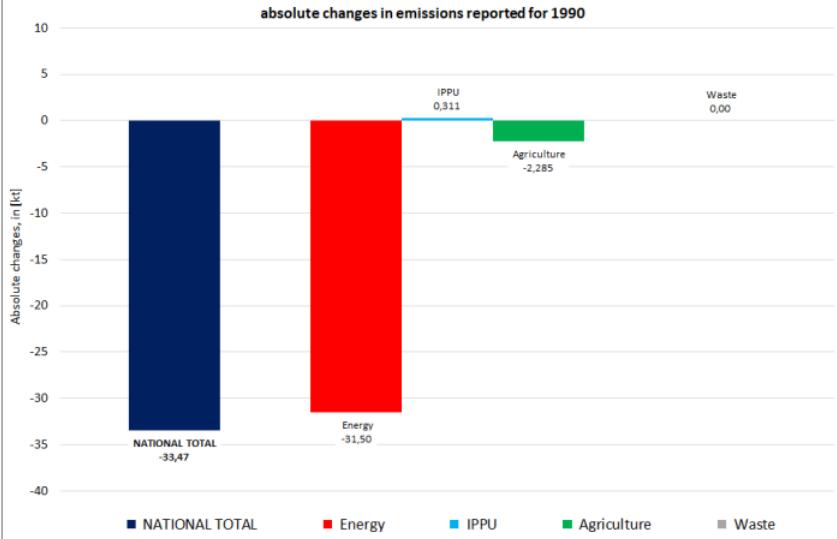




The small changes within the **National Total reported for 1990 (-4.38 kt | -0.15 %)** are dominated by changes in **NFRs 1.A.3.b i, 1.A.3.b ii and 1.A.3.b iii** together with less significant revisions throughout NFRs 1, 2 and 3. Here, the strongest relative change occurs for **NFR 1.B.2.a iv (+222,250 %)**.

Table 1: Changes of emission estimates 1990

| | | absolute changes in emissions reported for 1990 | | | | |
|----------------|--|---|-----------------|-----------------------|---------------|---|
| | | Submission 2020 | Submission 2021 | Difference | Reasoning | |
| | | NATIONAL TOTAL -33,47 | | | | |
| | | Energy -31,50 | IPPU 0,311 | Agriculture -2,285 | Waste 0,00 | |
| | | | | | | |
| NFR Code | | | | | [kt] | relative |
| NATIONAL TOTAL | | | | 2.884,38 | 2.850,05 | -34,334 -1,19% |
| NFR 1 - Energy | | | | 2.634,24 | 2.601,88 | -32,360 -1,23% |
| | | | | | | see description and reasoning in: sub-category chapters |

|  <p>absolute changes in emissions reported for 1990</p> <p>Absolute changes, in [kt]</p> <ul style="list-style-type: none"> NATIONAL TOTAL -33,47 Energy +31,50 IPPU 0,311 Agriculture -2,285 Waste 0,00 | | Submission 2020 | Submission 2021 | Difference | Reasoning |
|---|--------|-----------------|-----------------|------------|--|
| NFR Code | [kt] | | | relative | see description and reasoning in: |
| 1.A.2.g vii | 49,60 | 50,23 | 0,633 | 1,28% | 1.A.2.g vii - Mobile Combustion in Manufacturing Industries & Construction] |
| 1.A.3.a i(i) | 3,88 | 3,94 | 0,060 | 1,54% | 1.A.3.a i (i) - International Civil Aviation: LTO] |
| 1.A.3.a ii(i) | 2,85 | 2,80 | -0,054 | -1,90% | 1.A.3.a ii (i) - Domestic Civil Aviation: LTO] |
| 1.A.3.b i | 808,22 | 765,68 | -42,539 | -5,26% | 1.A.3.b i - Road Transport: Passenger Cars] |
| 1.A.3.b ii | 41,49 | 31,49 | -10,006 | -24,11% | 1.A.3.b ii - Road Transport: Light duty vehicles] |
| 1.A.3.b iii | 485,89 | 506,00 | 20,111 | 4,14% | 1.A.3.b iii - Road Transport: Heavy duty vehicles] |
| 1.A.3.b iv | 2,61 | 2,45 | -0,162 | -6,18% | 1.A.3.b iv - Road Transport: Mopeds & Motorcycles] |
| 1.A.4.a ii | 11,52 | 11,60 | 0,077 | 0,67% | 1.A.4.a ii - Commercial & Institutional: Mobile] |
| 1.A.4.b ii | 0,07 | 0,06 | -0,006 | -8,44% | 1.A.4.b ii - Households: Mobile] |
| 1.A.4.c ii | 49,78 | 49,31 | -0,475 | -0,95% | 1.A.4.c ii - Agriculture / Forestry / Fishery: Mobile] |
| NFR 2 - IPPU | 106,06 | 106,37 | 0,311 | 0,29% | sub-category chapters |
| 2.C.3 | NA | 0,74 | 0,74 | | 2.C.3 - Aluminum Production] |
| 2.G | 0,74 | 0,31 | -0,429 | -58,05% | 2.G - Other Product Use] |
| NFR 3 - Agriculture | 143,55 | 141,27 | -2,28 | -1,59% | sub-category chapters |
| 3.B.1.a | 0,72 | 0,67 | -0,051 | -7,07% | 3.B - Manure Management] |
| 3.B.1.b | 0,7876 | 0,6958 | -0,0918 | -11,65% | 3.B - Manure Management] |

| | | Submission 2020 | Submission 2021 | Difference | Reasoning |
|----------------------|--|--------------------|--------------------|------------|-----------|
| | <p>Absolute changes, in [kt]</p> <p>NATIONAL TOTAL -33,47</p> <p>Energy +31,50</p> <p>IPPU 0,311</p> <p>Agriculture -2,285</p> <p>Waste 0,00</p> <p>Legend: NATIONAL TOTAL (dark blue), Energy (red), IPPU (light blue), Agriculture (green), Waste (yellow)</p> | | | | |
| NFR Code | | | | [kt] | relative |
| 3.B.4.g iii | | 0,0033688 | 0,0033850 | 0,0000162 | 0,48% |
| 3.D.a.1 | | 85,31 | 86,57 | 1,256 | 1,47% |
| 3.D.a.2.a | | 46,65 | 43,46 | -3,189 | -6,84% |
| 3.D.a.3 | | 8,65 | 8,44 | -0,209 | -2,42% |
| NFR 5 - Waste | | 0,53 | 0,53 | 0,00 | 0,00% |
| NFR 6 - Other | | | | NA | |

The changes within the **National Total reported for 2017 (+100.56 kt | +8.47 %)** are dominated by changes in **NFRs 1.A.3.b i, 1.A.3.b ii and 1.A.3.b iii** together with less significant revisions throughout NFRs 1, 2 and 3.

Here, the strongest relative change occurs for **NFR 1.B.2.a iv (+824,150 %)**.

Table 2: Changes of emission estimates 2017

| | | = | = Submission 2019 | = Submission 2020 | = Difference | = Reasoning |
|------------|---|---|----------------------|----------------------|--------------|-------------------------------------|
| | <p>Absolute changes, in [kt]</p> <p>NATIONAL TOTAL 5,25</p> <p>Energy 8,97</p> <p>IPPU 0,54</p> <p>Agriculture -4,27</p> <p>Legend: NATIONAL TOTAL (dark blue), Energy (red), IPPU (light blue), Agriculture (yellow), Waste (yellow)</p> | | | | | |
| = NFR Code | | | | [kt] | relative | < see description and reasoning in: |

| | | | | | |
|----------------------------|-------------------|-------------------|-----------------|-----------------|--------------------------|
| ~ NATIONAL TOTAL | > 1,187.50 | > 1,288.07 | > 100.56 | > 8.47% | < sub-category chapters |
| NFR 1 - Energy | > 972.26 | > 1,073.00 | > 100.74 | > 10.36% | < sub-category chapters |
| 1.A.1.a | > 257.85 | > 251.15 | > -6.69 | > -2.60% | < here] |
| 1.A.1.b | > 16.88 | > 14.64 | > -2.24 | > -13.26% | < here] |
| 1.A.1.c | > 12.51 | > 12.24 | > -0.27 | > -2.17% | < here] |
| 1.A.2.a | > 4.26 | > 4.21 | > -0.05 | > -1.10% | < here] |
| 1.A.2.b | > 1.25 | > 1.00 | > -0.24 | > -19.61% | < here] |
| 1.A.2.e | > 0.22 | > 0.19 | > -0.02 | > -11.33% | < here] |
| 1.A.2.g vii | > 13.44 | > 13.47 | > 0.03 | > 0.25% | < here] |
| 1.A.2.g viii | > 75.07 | > 72.79 | > -2.28 | > -3.04% | < here] |
| 1.A.3.a i(i) | > 10.98 | > 11.44 | > 0.46 | > 4.17% | < here] |
| 1.A.3.a ii(i) | > 2.81 | > 2.36 | > -0.45 | > -15.87% | < here] |
| 1.A.3.b i | > 244.99 | > 313.87 | > 68.88 | > 28.12% | < here] |
| 1.A.3.b ii | > 32.64 | > 65.78 | > 33.14 | > 102% | < here] |
| 1.A.3.b iii | > 122.05 | > 140.10 | > 18.05 | > 14.79% | < here] |
| 1.A.3.b iv | > 2.74 | > 1.74 | > -1.00 | > -36.58% | < here] |
| 1.A.3.c | > 11.78 | > 9.30 | > -2.47 | > -21.00% | < here] |
| 1.A.3.d ii | > 27.06 | > 26.11 | > -0.95 | > -3.52% | < here] |
| 1.A.4.a i | > 19.34 | > 21.31 | > 1.96 | > 10.15% | < here] |
| 1.A.4.a ii | > 10.32 | > 10.34 | > 0.02 | > 0.17% | < here] |
| 1.A.4.b i | > 57.94 | > 55.04 | > -2.90 | > -5.01% | < here] |
| 1.A.4.b ii | > 0.5137 | > 0.5135 | > -0.0002 | > -0.04% | < here] |
| 1.A.4.c i | > 9.54 | > 6.38 | > -3.16 | > -33.10% | < here] |
| 1.A.4.c ii | > 30.65 | > 30.82 | > 0.16 | > 0.54% | < here] |
| 1.A.4.c iii | > 1.3267 | > 1.3264 | > -0.0003 | > -0.02% | < here] |
| 1.A.5.a | > 0.27 | > 0.26 | > -0.01 | > -2.14% | < here] |
| 1.A.5.b | > 3.44 | > 3.36 | > -0.08 | > -2.43% | < here] |
| 1.B.2.a iv | > 0.0001 | > 0.7674 | > 0.7673 | > 824.150% | < here] |
| 1.B.2.c | > 0.33 | > 0.43 | > 0.10 | > 29.02% | < here] |
| NFR 2 - IPPU | > 88.67 | > 88.68 | > 0.01 | > 0.02% | < sub-category chapters |
| 2.A.2 | > 4.123 | > 4.122 | > -0.002 | > -0.04% | < here] |
| 2.A.6 | > 2.49 | > 2.13 | > -0.36 | > -14.51% | < here] |
| 2.G | > 0.434 | > 0.435 | > 0.001 | > 0.13% | < here] |
| 2.H.1 | > 2.78 | > 3.01 | > 0.23 | > 8.27% | < here] |
| NFR 3 - Agriculture | > 125.79 | > 125.60 | > -0.20 | > -0.16% | < sub-category chapters |
| 3.B.1.a | > 0.523 | > 0.522 | > -0.001 | > -0.19% | < here] |
| 3.B.1.b | > 0.574 | > 0.581 | > 0.007 | > 1.15% | < here] |
| 3.B.2 | > 0.011 | > 0.011 | > 0.000 | > 0.00% | < here] |
| 3.B.3 | > 0.3468 | > 0.3464 | > -0.0004 | > -0.11% | < here] |
| 3.B.4.g i | > 0.0171 | > 0.0176 | > 0.0005 | > 3.06% | < here] |
| 3.B.4.g ii | > 0.0174 | > 0.0177 | > 0.0003 | > 1.85% | < here] |
| 3.B.4.g iii | > 0.0103 | > 0.0109 | > 0.0006 | > 5.34% | < here] |
| 3.B.4.g iv | > 0.0023 | > 0.0020 | > -0.0002 | > -9.49% | < here] |
| 3.D.a.2.a | > 40.38 | > 40.45 | > 0.07 | > 0.17% | < here] |
| 3.D.a.2.b | > 0.74 | > 0.56 | > -0.18 | > -24.29% | < here] |
| 3.D.a.2.c | > 11.91 | > 11.72 | > -0.20 | > -1.64% | < here] |
| 3.D.a.3 | > 5.64 | > 5.75 | > 0.11 | > 1.88% | < here] |
| 3.I | > 0.178 | > 0.176 | > -0.002 | > -1.23% | < |
| NFR 5 - Waste | > 0.79 | > 0.79 | > 0.00 | > 0.00% | < |
| NFR 6 - Other | | | | | = NA |