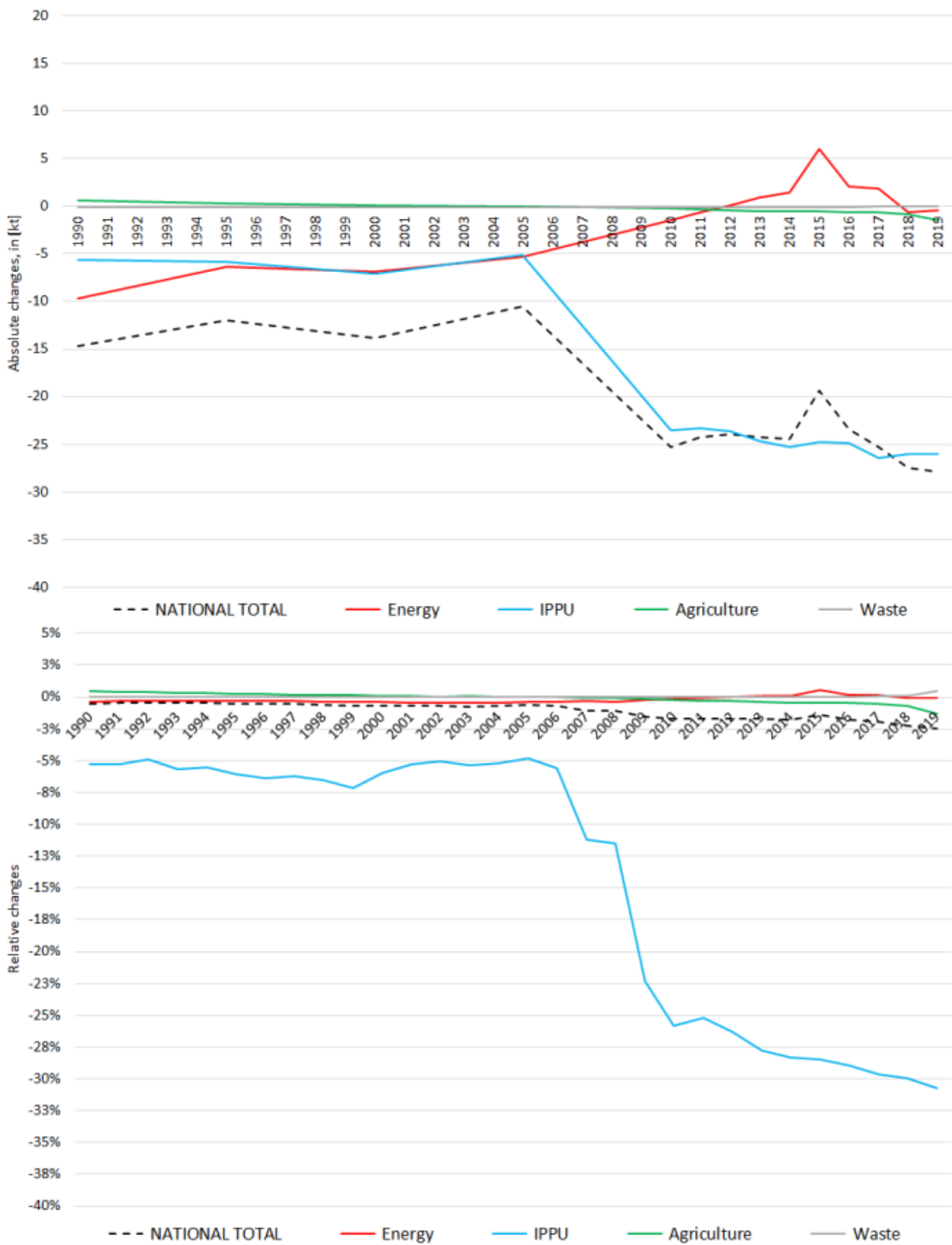


# Recalculations - Nitrogen Oxides

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

|                            | Submission 2022 | Submission 2023 | Difference  |              | Reasoning                         |
|----------------------------|-----------------|-----------------|-------------|--------------|-----------------------------------|
| NFR Sector                 | [kt]            |                 |             | relative     | see description and reasoning in: |
| <b>NATIONAL TOTAL</b>      | <b>2.835,33</b> | <b>2.843,28</b> | <b>7,95</b> | <b>0,28%</b> | <b>sub-category chapters</b>      |
| <b>NFR 1 - Energy</b>      | <b>2.592,15</b> | <b>2.599,50</b> | <b>7,35</b> | <b>0,28%</b> | <b>sub-category chapters</b>      |
| 1.A.2.g vii                | 50,23           | 50,30           | 0,07        | 0,13%        | <a href="#">here</a>              |
| 1.A.3.a i(i)               | 3,94            | 3,68            | -0,26       | -6,58%       | <a href="#">here</a>              |
| 1.A.3.a ii(i)              | 2,78            | 2,60            | -0,18       | -6,53%       | <a href="#">here</a>              |
| 1.A.3.b i                  | 765,68          | 795,98          | 30,30       | 3,96%        | <a href="#">here</a>              |
| 1.A.3.b ii                 | 31,49           | 32,82           | 1,33        | 4,22%        | <a href="#">here</a>              |
| 1.A.3.b iii                | 505,99          | 482,15          | -23,84      | -4,71%       | <a href="#">here</a>              |
| 1.A.3.b iv                 | 2,45            | 2,49            | 0,03        | 1,37%        | <a href="#">here</a>              |
| 1.A.4.a ii                 | 11,60           | 11,58           | -0,01       | -0,11%       | <a href="#">here</a>              |
| 1.A.4.b ii                 | 0,08            | 0,08            | 0,00        | -0,02%       | <a href="#">here</a>              |
| 1.A.4.c ii                 | 49,31           | 49,23           | -0,08       | -0,17%       | <a href="#">here</a>              |
| <b>NFR 2 - IPPU</b>        | <b>100,73</b>   | <b>100,73</b>   | <b>0,00</b> | <b>0,00%</b> |                                   |
| <b>NFR 3 - Agriculture</b> | <b>141,92</b>   | <b>142,52</b>   | <b>0,60</b> | <b>0,42%</b> | <b>sub-category chapters</b>      |
| 3.B.4.g i                  | 0,01427         | 0,01425         | 0,00        | -0,081%      | <a href="#">here</a>              |
| 3.D.a.2.a                  | 44,14           | 44,52           | 0,38        | 0,85%        | <a href="#">here</a>              |
| 3.D.a.2.c                  | 0,002           | 0,224           | 0,22        | 11,677%      | <a href="#">here</a>              |
| 3.D.a.3                    | 8,40            | 8,40            | 0,00        | 0,02%        | <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> |                                   |

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

|                       | Submission 2022 | Submission 2023 | Difference    |               | Reasoning                         |
|-----------------------|-----------------|-----------------|---------------|---------------|-----------------------------------|
| NFR Sector            | [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.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               | 0.20            | 0.19            | -0.01         | -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>              |
| 1.A.3.d ii            | 21.63           | 21.62           | 0.00          | -0.01%        | <a href="#">here</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>              |

|                            | Submission 2022 | Submission 2023 | Difference    |               | Reasoning                         |
|----------------------------|-----------------|-----------------|---------------|---------------|-----------------------------------|
| NFR Sector                 | [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.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                    | 0.218           | 0.220           | 0.002         | 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                      | 0.26            | 0.24            | -0.02         | -5.30%        | <a href="#">here</a>              |
| 3.B.4.g i                  | 0.019           | 0.018           | -0.001        | -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.l                        | 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>   |               |                                   |