

# Recalculations - Sulphur Oxides

The marginal changes in the **National Total reported for 1990 (+1.51 kt | +0.03 %)** result almost entirely from revised emission estimates in **NFR 2.C.7.a** together with less significant changes throughout NFRs 1 and 2.

Table 1: Changes in emission estimates for 1990

| NFR Code                   | Submission 2021 | Submission 2022 | Difference    |               | Reasoning                         |
|----------------------------|-----------------|-----------------|---------------|---------------|-----------------------------------|
|                            | [kt]            |                 |               | relative      | see description and reasoning in: |
| <b>NATIONAL TOTAL</b>      | <b>5.474,42</b> | <b>5.460,02</b> | <b>-14,40</b> | <b>-0,26%</b> | <b>sub-category chapters</b>      |
| <b>NFR 1 - Energy</b>      | <b>5.297,93</b> | <b>5.284,38</b> | <b>-13,55</b> | <b>-0,26%</b> | <b>sub-category chapters</b>      |
| 1.A.3.a ii(i)              | 0,18            | 0,18            | 0,00          | -0,03%        | <a href="#">here</a>              |
| 1.A.3.c                    | 7,73            | 8,24            | 0,51          | 6,56%         | <a href="#">here</a>              |
| 1.A.3.d ii                 | 24,67           | 10,87           | -13,80        | -55,94%       | <a href="#">here</a>              |
| 1.A.4.c iii                | 0,36            | 0,19            | -0,18         | -48,74%       | <a href="#">here</a>              |
| 1.A.5.b                    | 3,55            | 3,47            | -0,08         | -2,27%        | <a href="#">here</a>              |
| <b>NFR 2 - IPPU</b>        | <b>176,39</b>   | <b>175,54</b>   | <b>-0,85</b>  | <b>-0,48%</b> | <b>sub-category chapters</b>      |
| 2.B.6                      | C               | 1,73            | 1,73          |               | <a href="#">here</a>              |
| 2.B.10.a                   | 56,50           | 53,93           | -2,58         | -4,56%        | <a href="#">here</a>              |
| <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 (+2.8 kt | +1 %)** result mainly from revisions in **NFR sub-categories 1.A.1.a, 1.A.1.b, 1.A.1.c and 1.A.2.g viii** together with less relevant changes throughout NFRs 1 and 2.

Table 2: Changes in emission estimates for 2018

| NFR Code              | Submission 2020 | Submission 2021 | Difference  |              | Reasoning                         |
|-----------------------|-----------------|-----------------|-------------|--------------|-----------------------------------|
|                       | [kt]            |                 |             | relative     | see description and reasoning in: |
| <b>NATIONAL TOTAL</b> | <b>288,97</b>   | <b>291,78</b>   | <b>2,81</b> | <b>0,97%</b> | <b>sub-category chapters</b>      |
| <b>NFR 1 - Energy</b> | <b>219,59</b>   | <b>222,08</b>   | <b>2,49</b> | <b>1,13%</b> | <b>sub-category chapters</b>      |
| 1.A.1.a               | 120,87          | 123,03          | 2,16        | 1,78%        | <a href="#">here</a>              |
| 1.A.1.b               | 31,02           | 32,70           | 1,68        | 5,42%        | <a href="#">here</a>              |
| 1.A.1.c               | 7,98            | 9,54            | 1,56        | 19,61%       | <a href="#">here</a>              |
| 1.A.2.a               | 5,08            | 5,01            | -0,07       | -1,33%       | <a href="#">here</a>              |
| 1.A.2.b               | 0,40            | 0,39            | -0,01       | -3,38%       | <a href="#">here</a>              |
| 1.A.2.e               | 0,74            | 0,80            | 0,05        | 7,03%        | <a href="#">here</a>              |
| 1.A.2.g vii           | 0,017           | 0,018           | 0,001       | 7,64%        | <a href="#">here</a>              |
| 1.A.2.g viii          | 29,41           | 26,44           | -2,97       | -10,11%      | <a href="#">here</a>              |
| 1.A.3.a i(i)          | 0,67            | 0,65            | -0,02       | -2,40%       | <a href="#">here</a>              |
| 1.A.3.a ii(i)         | 0,15            | 0,16            | 0,01        | 9,19%        | <a href="#">here</a>              |
| 1.A.3.b i             | 0,506           | 0,515           | 0,01        | 1,75%        | <a href="#">here</a>              |
| 1.A.3.b ii            | 0,059           | 0,060           | 0,001       | 0,97%        | <a href="#">here</a>              |
| 1.A.3.b iii           | 0,25            | 0,24            | -0,01       | -3,36%       | <a href="#">here</a>              |
| 1.A.3.b iv            | 0,0070          | 0,0069          | -0,0001     | -1,19%       | <a href="#">here</a>              |
| 1.A.3.c               | 0,2251          | 0,2246          | -0,0005     | -0,23%       | <a href="#">here</a>              |
| 1.A.3.d ii            | 0,6685          | 0,6782          | 0,01        | 1,45%        | <a href="#">here</a>              |
| 1.A.3.e i             | 0,00332         | 0,00334         | 0,00002     | 0,45%        | <a href="#">here</a>              |
| 1.A.4.a i             | 1,06            | 1,01            | -0,05       | -5,06%       | <a href="#">here</a>              |
| 1.A.4.a ii            | 0,005           | 0,004           | 0,001       | -18,48%      | <a href="#">here</a>              |
| 1.A.4.b i             | 11,92           | 12,12           | 0,20        | 1,64%        | <a href="#">here</a>              |
| 1.A.4.c i             | 2,38            | 2,32            | -0,06       | -2,56%       | <a href="#">here</a>              |
| 1.A.4.c ii            | 0,0220          | 0,0213          | -0,0006     | -2,90%       | <a href="#">here</a>              |
| 1.A.4.c iii           | 0,1068          | 0,1097          | 0,0029      | 2,70%        | <a href="#">here</a>              |
| 1.A.5.a               | 0,02647         | 0,02651         | 0,00004     | 0,16%        | <a href="#">here</a>              |

|                            | Submission 2020 | Submission 2021 | Difference  |              | Reasoning                         |
|----------------------------|-----------------|-----------------|-------------|--------------|-----------------------------------|
| NFR Code                   | [kt]            |                 | absolute    | relative     | see description and reasoning in: |
| <b>NATIONAL TOTAL</b>      | <b>288,97</b>   | <b>291,78</b>   | <b>2,81</b> | <b>0,97%</b> | <b>sub-category chapters</b>      |
| <b>NFR 1 - Energy</b>      | <b>219,59</b>   | <b>222,08</b>   | <b>2,49</b> | <b>1,13%</b> | <b>sub-category chapters</b>      |
| 1.A.5.b                    | 0,0229          | 0,0230          | 0,0001      | 0,32%        | <a href="#">here</a>              |
| 1.B.1.b                    | 0,811           | 0,806           | -0,005      | -0,62%       | <a href="#">here</a>              |
| <b>NFR 2 - IPPU</b>        | <b>69,24</b>    | <b>69,57</b>    | <b>0,32</b> | <b>0,47%</b> | <b>sub-category chapters</b>      |
| 2.A.3                      | 10,24           | 10,22           | -0,02       | -0,19%       | <a href="#">here</a>              |
| 2.C.7.a                    | 2,01            | 2,37            | 0,36        | 17,72%       | <a href="#">here</a>              |
| 2.G                        | 0,14            | 0,13            | -0,01       | -9,46%       | <a href="#">here</a>              |
| <b>NFR 3 - Agriculture</b> | <b>NA</b>       |                 |             |              |                                   |
| <b>NFR 5 - Waste</b>       | <b>0,14</b>     | <b>0,14</b>     | <b>0,00</b> | <b>0,00%</b> |                                   |
| <b>NFR 6 - Other</b>       | <b>NA</b>       |                 |             |              |                                   |