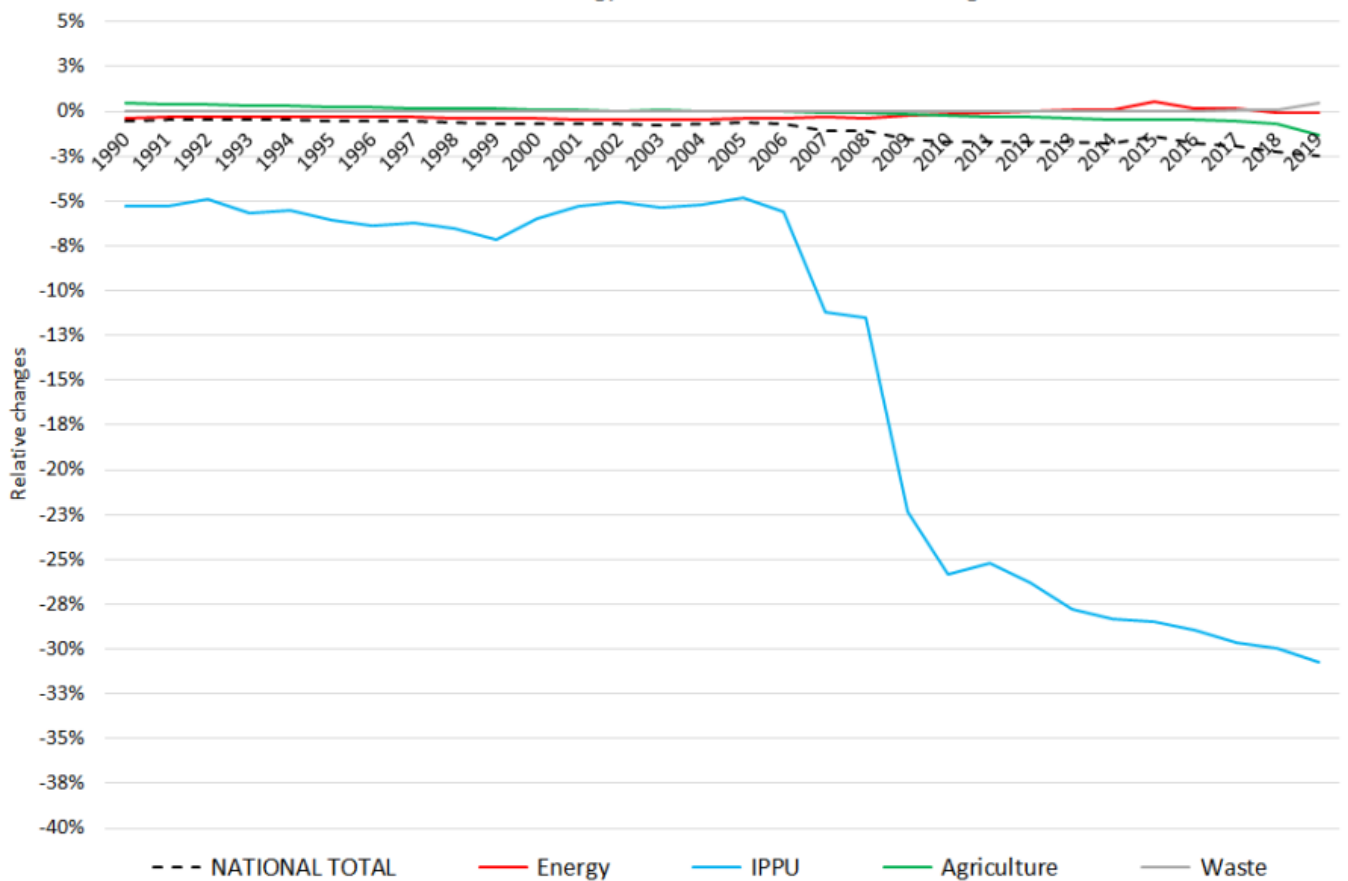
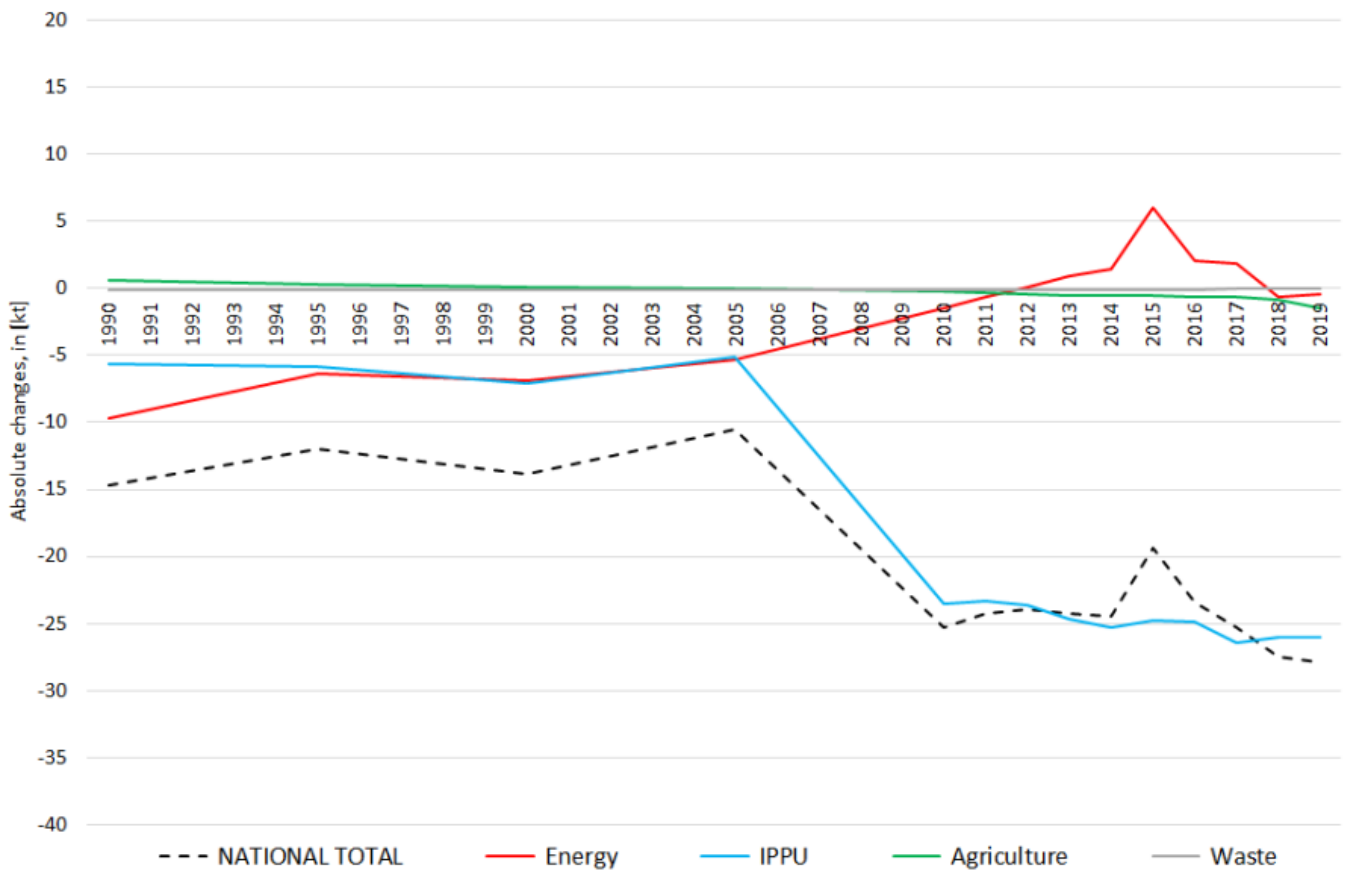


Recalculations - Nitrogen Oxides

Revision of NO_x emissions over time



The changes within the **National Total reported for 1990 (-34 kt | -1.19 %)** 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 2.G with minus 58 %**.

Table 1: Changes of emission estimates 1990

| absolute changes in emissions reported for 1990 | | | | | Submission 2020 | Submission 2021 | Difference | Reasoning |
|---|-----------------|-----------------|---------------|---------------|-----------------------------------|-----------------|------------|-----------|
| | | | | | | | | |
| NFR Code | [kt] | | | relative | see description and reasoning in: | | | |
| NATIONAL TOTAL | 2.884,38 | 2.850,05 | -34,33 | -1,19% | sub-category chapters | | | |
| NFR 1 - Energy | 2.634,24 | 2.601,88 | -32,36 | -1,23% | sub-category chapters | | | |
| 1.A.2.g vii | 49,60 | 50,23 | 0,63 | 1,28% | here | | | |
| 1.A.3.a i(i) | 3,88 | 3,94 | 0,06 | 1,54% | here | | | |
| 1.A.3.a ii(i) | 2,85 | 2,80 | -0,05 | -1,90% | here | | | |
| 1.A.3.b i | 808,22 | 765,68 | -42,54 | -5,26% | here | | | |
| 1.A.3.b ii | 41,49 | 31,49 | -10,00 | -24,11% | here | | | |
| 1.A.3.b iii | 485,89 | 506,00 | 20,11 | 4,14% | here | | | |
| 1.A.3.b iv | 2,61 | 2,45 | -0,16 | -6,18% | here | | | |
| 1.A.4.a ii | 11,52 | 11,60 | 0,08 | 0,67% | here | | | |
| 1.A.4.b ii | 0,07 | 0,06 | -0,01 | -8,44% | here | | | |
| 1.A.4.c ii | 49,78 | 49,31 | -0,475 | -0,95% | here | | | |
| NFR 2 - IPPU | 106,06 | 106,37 | 0,31 | 0,29% | sub-category chapters | | | |
| 2.C.3 | NA | 0,74 | 0,74 | | here | | | |
| 2.G | 0,74 | 0,31 | -0,43 | -58,05% | here | | | |
| NFR 3 - Agriculture | 143,55 | 141,27 | -2,28 | -1,59% | sub-category chapters | | | |
| 3.B.1.a | 0,72 | 0,67 | -0,05 | -7,07% | here | | | |
| 3.B.1.b | 0,79 | 0,70 | -0,09 | -11,65% | here | | | |
| 3.B.4.g iii | 0,00337 | 0,00339 | 0,00002 | 0,48% | here | | | |
| 3.D.a.1 | 85,31 | 86,57 | 1,256 | 1,47% | here | | | |
| 3.D.a.2.a | 46,65 | 43,46 | -3,19 | -6,84% | here | | | |
| 3.D.a.3 | 8,65 | 8,44 | -0,21 | -2,42% | here | | | |
| 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 2018

| absolute changes in emissions reported for 2018 | | | | | Submission 2020 | Submission 2021 | Difference | Reasoning |
|---|-----------------|-----------------|--------------|--------------|--|-----------------------------------|------------|-----------|
| | | | | | | | | |
| NFR Code | [kt] | | | | relative | see description and reasoning in: | | |
| NATIONAL TOTAL | 1.202,28 | 1.210,50 | 8,22 | 0,68% | sub-category chapters | | | |
| NFR 1 - Energy | 996,11 | 1.007,16 | 11,05 | 1,11% | sub-category chapters | | | |
| 1.A.1.a | 239,65 | 241,73 | 2,08 | 0,87% | 1.A.1.a - Public electricity and heat production | | | |
| 1.A.1.b | 13,03 | 16,16 | 3,13 | 24,04% | 1.A.1.b - Petroleum refining | | | |
| 1.A.1.c | 12,04 | 13,06 | 1,02 | 8,50% | here | | | |
| 1.A.2.a | 4,10 | 4,17 | 0,07 | 1,75% | 1.A.2.a - Stationary combustion in manufacturing industries and construction: Iron and Steel | | | |
| 1.A.2.b | 0,99 | 1,02 | 0,03 | 2,54% | 1.A.2.b - Stationary combustion in manufacturing industries and construction: Non-ferrous Metals | | | |
| 1.A.2.e | 0,19 | 0,21 | 0,02 | 9,42% | 1.A.2.e - Stationary combustion in manufacturing industries and construction: Food Processing, Beverages and Tobacco | | | |
| 1.A.2.g vii | 11,31 | 15,37 | 4,07 | 35,97% | here | | | |
| 1.A.2.g viii | 72,70 | 68,70 | -4,00 | -5,50% | 1.A.2.g viii - Stationary Combustion in Manufacturing Industries & Construction: Other | | | |
| 1.A.3.a i(i) | 11,77 | 11,84 | 0,07 | 0,61% | here | | | |
| 1.A.3.a ii(i) | 2,31 | 2,67 | 0,35 | 15,27% | here | | | |
| 1.A.3.b i | 286,10 | 294,97 | 8,87 | 3,10% | here | | | |
| 1.A.3.b ii | 60,49 | 60,37 | -0,12 | -0,20% | here | | | |
| 1.A.3.b iii | 119,39 | 116,30 | -3,09 | -2,59% | here | | | |
| 1.A.3.b iv | 1,63 | 1,66 | 0,03 | 1,59% | here | | | |
| 1.A.3.b v | NA | NA | #WERT! | #WERT! | here | | | |

| absolute changes in emissions reported for 2018 | | | | | Submission 2020 | Submission 2021 | Difference | Reasoning |
|---|-----------------|-----------------|--------------|---------------|---|-----------------|------------|-----------|
| | | | | | | | | |
| NFR Code | [kt] | | | relative | see description and reasoning in: sub-category chapters | | | |
| NATIONAL TOTAL | 1.202,28 | 1.210,50 | 8,22 | 0,68% | sub-category chapters | | | |
| NFR 1 - Energy | 996,11 | 1.007,16 | 11,05 | 1,11% | sub-category chapters | | | |
| 1.A.3.b vi | NA | NA | #WERT! | #WERT! | here | | | |
| 1.A.3.b vii | NA | NA | #WERT! | #WERT! | here | | | |
| 1.A.3.c | 8,71 | 7,49 | -1,23 | -14,07% | here | | | |
| 1.A.3.d i(ii) | IE | IE | #WERT! | #WERT! | | | | |
| 1.A.3.d ii | 26,09 | 27,28 | 1,20 | 4,60% | here | | | |
| 1.A.3.e i | 1,50 | 1,50 | 0,01 | 0,45% | 1.A.3.e i - Pipeline Transport] | | | |
| 1.A.3.e ii | NA | NA | #WERT! | #WERT! | 1.A.3.e ii - Other Transport: Other] | | | |
| 1.A.4.a i | 20,12 | 18,60 | -1,52 | -7,54% | here | | | |
| 1.A.4.a ii | 9,92 | 8,15 | -1,77 | -17,86% | here | | | |
| 1.A.4.b i | 52,65 | 54,48 | 1,83 | 3,49% | here | | | |
| 1.A.4.b ii | 0,4993 | 0,5009 | 0,0016 | 0,32% | here | | | |
| 1.A.4.c i | 6,07 | 5,84 | -0,23 | -3,80% | here | | | |
| 1.A.4.c ii | 27,29 | 27,43 | 0,14 | 0,51% | here | | | |
| 1.A.4.c iii | 2,6931 | 2,7658 | 0,0727 | 2,70% | | | | |
| 1.A.5.a | 0,25 | 0,25 | 0,00 | 0,22% | | | | |
| 1.A.5.b | 2,87 | 2,87 | 0,00 | 0,07% | | | | |
| 1.B.1.a | NA | NA | #WERT! | #WERT! | 1.B.1 - Solid Fuels | | | |
| 1.B.1.b | 0,64 | 0,65 | 0,01 | 1,55% | 1.B.1 - Solid Fuels | | | |
| 1.B.1.c | NA | NA | #WERT! | #WERT! | 1.B.1 - Solid Fuels | | | |
| 1.B.2.a i | NA | NA | #WERT! | #WERT! | | | | |
| 1.B.2.a iv | 0,7229 | 0,7227 | -0,0001 | 0% | | | | |
| 1.B.2.a v | NA | NA | #WERT! | #WERT! | | | | |
| 1.B.2.b | 0,03 | 0,03 | 0,00 | 0,00% | | | | |
| 1.B.2.c | 0,38 | 0,38 | 0,00 | 0,00% | | | | |
| 1.B.2.d | NA | NA | #WERT! | #WERT! | | | | |
| NFR 2 - IPPU | 86,70 | 86,82 | 0,12 | 0,14% | sub-category chapters | | | |
| 2.A.3 | 11,71 | 11,51 | -0,20 | -1,67% | 2.A.3 - Glass Production | | | |
| 2.C.3 | NA | 0,53 | 0,53 | | here | | | |
| 2.G | 0,436 | 0,222 | -0,214 | -49,14% | here | | | |
| NFR 3 - Agriculture | 118,64 | 115,69 | -2,95 | -2,49% | sub-category chapters | | | |
| 3.B.1.a | 0,520 | 0,488 | -0,032 | -6,21% | here | | | |
| 3.B.1.b | 0,566 | 0,497 | -0,070 | -12,31% | here | | | |
| 3.B.3 | 0,3340 | 0,3352 | 0,0013 | 0,38% | here | | | |
| 3.B.4.g i | 0,0180 | 0,0178 | -0,0001 | -0,65% | here | | | |

| absolute changes in emissions reported for 2018 | | | | | Submission 2020 | Submission 2021 | Difference | Reasoning | |
|---|--|--|--|--|-------------------|-------------------|--------------|-----------------------------------|-------------------------------------|
| | | | | | | | | | |
| NFR Code | | | | | [kt] | | relative | see description and reasoning in: | |
| NATIONAL TOTAL | | | | | 1.202,28 | 1.210,50 | 8,22 | 0,68% | sub-category chapters |
| NFR 1 - Energy | | | | | 996,11 | 1.007,16 | 11,05 | 1,11% | sub-category chapters |
| 3.B.4.g ii | | | | | 0,0180 | 0,0180 | 0,0000 | -0,20% | here |
| 3.B.4.g iii | | | | | 0,0108 | 0,0108 | -0,0001 | -0,67% | here |
| 3.B.4.g iv | | | | | 0,0020 | 0,0020 | 0,0000 | -0,72% | here |
| 3.D.a.1 | | | | | 59,01 | 59,11 | 0,10 | 0,17% | here |
| 3.D.a.2.a | | | | | 39,94 | 37,80 | -2,14 | -5,35% | here |
| 3.D.a.2.b | | | | | 0,56 | 0,51 | -0,05 | -8,55% | here |
| 3.D.a.2.c | | | | | 11,77 | 11,55 | -0,22 | -1,91% | here |
| 3.D.a.3 | | | | | 5,66 | 5,13 | -0,54 | -9,47% | here |
| 3.I | | | | | 0,177 | 0,172 | -0,005 | -2,68% | |
| NFR 5 - Waste | | | | | 0,830 | 0,830 | 0,000 | 0,00% | |
| NFR 6 - Other | | | | | NA | | | | |
| absolute changes in emissions reported for 2018 | | | | | = | | | | |
| | | | | | | | | | |
| | | | | | = Submission 2019 | = Submission 2020 | = Difference | = Reasoning | |
| = 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(j) | > 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 |