**Supplementary Table 1** Amounts of foods by food group for the observed and modelled diets a, and their corresponding percent differences b

1A: Men (g/2500kcal)

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Denmark** | | | | | | | **Czech Republic** | | | | | | | **Italy** | | | | | | | **France** | | | | | | |
| Obs | MaxP | %d | MaxH | %d | MaxS | %d | Obs | MaxP | %d | MaxH | %d | MaxS | %d | Obs | MaxP | %d | MaxH | %d | MaxS | %d | Obs | MaxP | %d | MaxH | %d | MaxS | %d |
| Solid foods | 1388 | 1515 | 9% | 1643 | 18% | 1616 | 16% | 1094 | 1169 | 7% | 1359 | 24% | 1235 | 13% | 1480 | 1629 | 10% | 1832 | 24% | 1797 | 21% | 1324 | 1448 | 9% | 1674 | 26% | 1536 | 16% |
| Whole grains | 77 | 98 | 27% | 150 | 95% | 159 | 106% | 7 | 13 | 86% | 28 | 300% | 20 | 186% | 55 | 80 | 45% | 91 | 65% | 119 | 116% | 37 | 58 | 57% | 107 | 189% | 95 | 157% |
| Refined grains | 186 | 158 | -15% | 138 | -26% | 142 | -24% | 302 | 270 | -11% | 265 | -12% | 284 | -6% | 355 | 322 | -9% | 333 | -6% | 311 | -12% | 223 | 193 | -13% | 155 | -30% | 189 | -15% |
| Potatoes | 114 | 121 | 6% | 106 | -7% | 89 | -22% | 81 | 90 | 11% | 118 | 46% | 95 | 17% | 55 | 55 | 0% | 67 | 22% | 40 | -27% | 78 | 78 | 0% | 135 | 73% | 62 | -21% |
| Vegetables | 142 | 175 | 23% | 216 | 52% | 196 | 38% | 101 | 121 | 20% | 202 | 100% | 142 | 41% | 255 | 308 | 21% | 340 | 33% | 372 | 46% | 178 | 217 | 22% | 270 | 52% | 264 | 48% |
| Fruit | 157 | 206 | 31% | 332 | 111% | 279 | 78% | 80 | 103 | 29% | 117 | 46% | 111 | 39% | 193 | 245 | 27% | 263 | 36% | 320 | 66% | 144 | 182 | 26% | 240 | 67% | 205 | 42% |
| Legumes and nuts and seeds | 25 | 36 | 44% | 39 | 56% | 36 | 44% | 11 | 22 | 100% | 21 | 91% | 21 | 91% | 36 | 55 | 53% | 102 | 183% | 64 | 78% | 24 | 38 | 58% | 67 | 179% | 34 | 42% |
| Legumes | 23 | 31 | 35% | 34 | 48% | 32 | 39% | 8 | 14 | 75% | 15 | 88% | 14 | 75% | 35 | 52 | 49% | 100 | 186% | 62 | 77% | 21 | 33 | 57% | 64 | 205% | 30 | 43% |
| Nuts and seeds | 3 | 5 | 67% | 5 | 67% | 4 | 33% | 4 | 7 | 75% | 6 | 50% | 8 | 100% | 1 | 2 | 100% | 2 | 100% | 1 | 0% | 3 | 5 | 67% | 4 | 33% | 4 | 33% |
| Total dairy | 377 | 394 | 5% | 364 | -3% | 414 | 10% | 140 | 166 | 19% | 243 | 74% | 192 | 37% | 198 | 210 | 6% | 183 | -8% | 217 | 10% | 248 | 273 | 10% | 279 | 13% | 299 | 21% |
| Dairy | 337 | 358 | 6% | 329 | -2% | 384 | 14% | 112 | 134 | 20% | 199 | 78% | 156 | 39% | 130 | 140 | 8% | 134 | 3% | 166 | 28% | 200 | 226 | 13% | 247 | 24% | 255 | 28% |
| Cheese | 40 | 36 | -10% | 35 | -13% | 30 | -25% | 27 | 32 | 19% | 43 | 59% | 36 | 33% | 69 | 71 | 3% | 49 | -29% | 51 | -26% | 48 | 47 | -2% | 32 | -33% | 45 | -6% |
| Meat/Fish/Eggs | 181 | 181 | 0% | 167 | -8% | 166 | -8% | 219 | 213 | -3% | 206 | -6% | 186 | -15% | 181 | 184 | 2% | 244 | 35% | 183 | 1% | 216 | 214 | -1% | 229 | 6% | 189 | -13% |
| Meat | 143 | 132 | -8% | 106 | -26% | 100 | -30% | 190 | 176 | -7% | 136 | -28% | 139 | -27% | 112 | 94 | -16% | 95 | -15% | 65 | -42% | 163 | 143 | -12% | 117 | -28% | 107 | -34% |
| Red and processed meat | 121 | 98 | -19% | 87 | -28% | 80 | -34% | 160 | 146 | -9% | 82 | -49% | 94 | -41% | 90 | 65 | -28% | 60 | -33% | 45 | -50% | 123 | 97 | -21% | 88 | -28% | 66 | -46% |
| Beef | 33 | 24 | -27% | 21 | -36% | 15 | -55% | 15 | 13 | -13% | 11 | -27% | 6 | -60% | 42 | 30 | -29% | 30 | -29% | 15 | -64% | 47 | 38 | -19% | 26 | -45% | 18 | -62% |
| Pork | 85 | 73 | -14% | 65 | -24% | 65 | -24% | 113 | 107 | -5% | 58 | -49% | 75 | -34% | 45 | 36 | -20% | 30 | -33% | 31 | -31% | 64 | 53 | -17% | 56 | -13% | 41 | -36% |
| Other meat | 2 | 2 | 0% | 1 | -50% | 1 | -50% | 10 | 11 | 10% | 6 | -40% | 12 | 20% | 6 | 5 | -17% | 3 | -50% | 3 | -50% | 15 | 9 | -40% | 7 | -53% | 7 | -53% |
| Poultry | 22 | 34 | 55% | 19 | -14% | 20 | -9% | 25 | 21 | -16% | 32 | 28% | 26 | 4% | 19 | 24 | 26% | 32 | 68% | 16 | -16% | 38 | 43 | 13% | 28 | -26% | 40 | 5% |
| Fish | 19 | 28 | 47% | 33 | 74% | 34 | 79% | 12 | 15 | 25% | 30 | 150% | 17 | 42% | 43 | 59 | 37% | 110 | 156% | 62 | 44% | 35 | 48 | 37% | 92 | 163% | 43 | 23% |
| Eggs | 19 | 22 | 16% | 28 | 47% | 32 | 68% | 17 | 22 | 29% | 40 | 135% | 30 | 76% | 26 | 31 | 19% | 39 | 50% | 56 | 115% | 18 | 23 | 28% | 21 | 17% | 39 | 117% |
| Fats and oils | 36 | 34 | -6% | 23 | -36% | 31 | -14% | 37 | 37 | 0% | 43 | 16% | 40 | 8% | 45 | 47 | 4% | 57 | 27% | 49 | 9% | 40 | 44 | 10% | 42 | 5% | 44 | 10% |
| Soft fats and vegetables oils | 3 | 3 | 0% | 3 | 0% | 4 | 33% | 17 | 21 | 24% | 29 | 71% | 27 | 59% | 41 | 45 | 10% | 54 | 32% | 48 | 17% | 19 | 23 | 21% | 25 | 32% | 24 | 26% |
| Hard fats and butter | 34 | 31 | -9% | 21 | -38% | 27 | -21% | 20 | 16 | -20% | 14 | -30% | 13 | -35% | 4 | 2 | -50% | 3 | -25% | 1 | -75% | 21 | 20 | -5% | 17 | -19% | 20 | -5% |
| Miscellaneous | 68 | 76 | 12% | 70 | 3% | 70 | 3% | 104 | 112 | 8% | 95 | -9% | 123 | 18% | 72 | 69 | -4% | 52 | -28% | 58 | -19% | 111 | 116 | 5% | 83 | -25% | 121 | 9% |
| Drinks | 2397 | 2486 | 4% | 2277 | -5% | 2113 | -12% | 1620 | 1612 | 0% | 1752 | 8% | 1472 | -9% | 1066 | 1098 | 3% | 1103 | 3% | 1236 | 16% | 1635 | 1699 | 4% | 2307 | 41% | 1582 | -3% |
| Coffee, tea and water | 1727 | 1908 | 10% | 1895 | 10% | 1758 | 2% | 913 | 986 | 8% | 1413 | 55% | 1082 | 19% | 830 | 924 | 11% | 983 | 18% | 1101 | 33% | 1243 | 1390 | 12% | 2102 | 69% | 1367 | 10% |
| Sweet beverages | 253 | 210 | -17% | 98 | -61% | 136 | -46% | 130 | 94 | -28% | 63 | -52% | 63 | -52% | 64 | 47 | -27% | 22 | -66% | 32 | -50% | 163 | 126 | -23% | 64 | -61% | 102 | -37% |
| Alcoholic beverages | 417 | 368 | -12% | 284 | -32% | 219 | -47% | 578 | 531 | -8% | 276 | -52% | 327 | -43% | 172 | 127 | -26% | 99 | -42% | 103 | -40% | 229 | 183 | -20% | 141 | -38% | 113 | -51% |
| **Total** | 3760 | 3964 | 5% | 3881 | 3% | 3693 | -2% | 2702 | 2758 | 2% | 3090 | 14% | 2686 | -1% | 2510 | 2672 | 6% | 2833 | 13% | 2970 | 18% | 2935 | 3110 | 6% | 3914 | 33% | 3084 | 5% |

1A: Women (g/2000kcal)

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Denmark** | | | | | | | **Czech Republic** | | | | | | | **Italy** | | | | | | | **France** | | | | | | |
|  | Obs | MaxP | %d | MaxH | %d | MaxS | %d | Obs | MaxP | %d | MaxH | %d | MaxS | %d | Obs | MaxP | %d | MaxH | %d | MaxS | %d | Obs | MaxP | %d | MaxS | %d | MaxS | %d |
| Solid foods | 1325 | 1480 | 12% | 1725 | 30% | 1565 | 18% | 1018 | 1084 | 6% | 1232 | 21% | 1132 | 11% | 1327 | 1477 | 11% | 1758 | 32% | 1581 | 19% | 1202 | 1349 | 12% | 1497 | 25% | 1486 | 24% |
| Whole grains | 67 | 88 | 31% | 87 | 30% | 88 | 31% | 12 | 20 | 67% | 23 | 92% | 24 | 100% | 42 | 68 | 62% | 107 | 155% | 99 | 136% | 31 | 49 | 58% | 68 | 119% | 87 | 181% |
| Refined grains | 140 | 117 | -16% | 110 | -21% | 112 | -20% | 215 | 198 | -8% | 194 | -10% | 191 | -11% | 276 | 232 | -16% | 244 | -12% | 221 | -20% | 149 | 119 | -20% | 121 | -19% | 102 | -32% |
| Potatoes | 71 | 72 | 1% | 51 | -28% | 60 | -15% | 71 | 78 | 10% | 82 | 15% | 77 | 8% | 46 | 49 | 7% | 68 | 48% | 59 | 28% | 64 | 63 | -2% | 50 | -22% | 44 | -31% |
| Vegetables | 180 | 226 | 26% | 281 | 56% | 252 | 40% | 107 | 125 | 17% | 168 | 57% | 123 | 15% | 238 | 266 | 12% | 293 | 23% | 310 | 30% | 186 | 227 | 22% | 258 | 39% | 254 | 37% |
| Fruit | 235 | 290 | 23% | 477 | 103% | 391 | 66% | 147 | 170 | 16% | 224 | 52% | 176 | 20% | 208 | 270 | 30% | 366 | 76% | 284 | 37% | 168 | 218 | 30% | 300 | 79% | 226 | 35% |
| Legumes and nuts and seeds | 27 | 41 | 52% | 66 | 144% | 60 | 122% | 12 | 18 | 50% | 15 | 25% | 20 | 67% | 31 | 52 | 68% | 81 | 161% | 73 | 135% | 16 | 29 | 81% | 53 | 231% | 24 | 50% |
| Legumes | 24 | 34 | 42% | 54 | 125% | 52 | 117% | 9 | 14 | 56% | 12 | 33% | 14 | 56% | 30 | 48 | 60% | 79 | 163% | 72 | 140% | 14 | 26 | 86% | 21 | 50% | 49 | 250% |
| Nuts and seeds | 4 | 7 | 75% | 12 | 200% | 8 | 100% | 3 | 4 | 33% | 3 | 0% | 6 | 100% | 1 | 4 | 300% | 3 | 200% | 1 | 0% | 2 | 3 | 50% | 3 | 50% | 3 | 50% |
| Total dairy | 369 | 396 | 7% | 386 | 5% | 345 | -7% | 167 | 191 | 14% | 253 | 51% | 242 | 45% | 208 | 246 | 18% | 294 | 41% | 242 | 16% | 259 | 283 | 9% | 268 | 3% | 344 | 33% |
| Dairy | 336 | 364 | 8% | 363 | 8% | 319 | -5% | 140 | 156 | 11% | 217 | 55% | 213 | 52% | 153 | 190 | 24% | 242 | 58% | 195 | 27% | 223 | 245 | 10% | 238 | 7% | 315 | 41% |
| Cheese | 33 | 32 | -3% | 23 | -30% | 26 | -21% | 27 | 35 | 30% | 36 | 33% | 30 | 11% | 55 | 57 | 4% | 51 | -7% | 47 | -15% | 36 | 38 | 6% | 30 | -17% | 30 | -17% |
| Meat/Fish/Eggs | 122 | 126 | 3% | 128 | 5% | 108 | -11% | 138 | 136 | -1% | 137 | -1% | 120 | -13% | 145 | 145 | 0% | 154 | 6% | 122 | -16% | 167 | 183 | 10% | 233 | 40% | 179 | 7% |
| Meat | 88 | 79 | -10% | 77 | -13% | 61 | -31% | 109 | 98 | -10% | 88 | -19% | 79 | -28% | 85 | 71 | -16% | 57 | -33% | 40 | -53% | 115 | 106 | -8% | 118 | 3% | 74 | -36% |
| Red and processed meat | 70 | 55 | -21% | 41 | -41% | 37 | -47% | 81 | 70 | -14% | 54 | -33% | 57 | -30% | 66 | 51 | -23% | 41 | -38% | 21 | -68% | 85 | 63 | -26% | 49 | -42% | 48 | -44% |
| Beef | 22 | 16 | -27% | 10 | -55% | 9 | -59% | 10 | 7 | -30% | 8 | -20% | 4 | -60% | 35 | 29 | -17% | 30 | -14% | 9 | -74% | 37 | 26 | -30% | 23 | -38% | 11 | -70% |
| Pork | 47 | 37 | -21% | 24 | -49% | 27 | -43% | 58 | 51 | -12% | 35 | -40% | 43 | -26% | 30 | 22 | -27% | 13 | -57% | 15 | -50% | 40 | 33 | -18% | 24 | -40% | 36 | -10% |
| Other meat | 2 | 1 | -50% | 7 | 250% | 1 | -50% | 5 | 5 | 0% | 10 | 100% | 5 | 0% | 4 | 3 | -25% | 1 | -75% | 1 | -75% | 10 | 9 | -10% | 29 | 190% | 4 | -60% |
| Poultry | 18 | 24 | 33% | 36 | 100% | 24 | 33% | 26 | 28 | 8% | 30 | 15% | 23 | -12% | 16 | 17 | 6% | 14 | -13% | 16 | 0% | 29 | 37 | 28% | 42 | 45% | 23 | -21% |
| Fish | 17 | 28 | 65% | 32 | 88% | 32 | 88% | 14 | 21 | 50% | 34 | 143% | 18 | 29% | 40 | 48 | 20% | 71 | 78% | 46 | 15% | 35 | 50 | 43% | 83 | 137% | 58 | 66% |
| Eggs | 16 | 20 | 25% | 19 | 19% | 15 | -6% | 16 | 17 | 6% | 16 | 0% | 23 | 44% | 19 | 26 | 37% | 26 | 37% | 37 | 95% | 17 | 28 | 65% | 32 | 88% | 47 | 176% |
| Fats and oils | 26 | 23 | -12% | 22 | -15% | 23 | -12% | 35 | 34 | -3% | 38 | 9% | 36 | 3% | 38 | 38 | 0% | 38 | 0% | 38 | 0% | 38 | 40 | 5% | 42 | 11% | 41 | 8% |
| Soft fats and vegetables oils | 2 | 3 | 50% | 3 | 50% | 4 | 100% | 16 | 19 | 19% | 22 | 38% | 21 | 31% | 35 | 36 | 3% | 35 | 0% | 37 | 6% | 19 | 22 | 16% | 22 | 16% | 22 | 16% |
| Hard fats and butter | 24 | 20 | -17% | 19 | -21% | 19 | -21% | 19 | 15 | -21% | 16 | -16% | 15 | -21% | 3 | 2 | -33% | 3 | 0% | 1 | -67% | 19 | 18 | -5% | 20 | 5% | 19 | 0% |
| Miscellaneous | 61 | 60 | -2% | 52 | -15% | 64 | 5% | 102 | 98 | -4% | 83 | -19% | 103 | 1% | 64 | 61 | -5% | 33 | -48% | 59 | -8% | 108 | 109 | 1% | 80 | -26% | 133 | 23% |
| Drinks | 2394 | 2528 | 6% | 2604 | 9% | 2526 | 6% | 1465 | 1645 | 12% | 1844 | 26% | 1430 | -2% | 977 | 995 | 2% | 908 | -7% | 867 | -11% | 1604 | 1907 | 19% | 1834 | 14% | 1642 | 2% |
| Coffee, tea and water | 1994 | 2178 | 9% | 2363 | 19% | 2295 | 15% | 1229 | 1446 | 18% | 1694 | 38% | 1283 | 4% | 864 | 930 | 8% | 880 | 2% | 825 | -5% | 1403 | 1780 | 27% | 1762 | 26% | 1563 | 11% |
| Sweet beverages | 231 | 201 | -13% | 127 | -45% | 125 | -46% | 124 | 103 | -17% | 83 | -33% | 74 | -40% | 52 | 30 | -42% | 14 | -73% | 24 | -54% | 128 | 79 | -38% | 31 | -76% | 52 | -59% |
| Alcoholic beverages | 169 | 149 | -12% | 114 | -33% | 106 | -37% | 111 | 96 | -14% | 67 | -40% | 74 | -33% | 61 | 35 | -43% | 14 | -77% | 18 | -70% | 73 | 47 | -36% | 40 | -45% | 27 | -63% |
| **Total** | 3691 | 3967 | 7% | 4264 | 16% | 4030 | 9% | 2471 | 2711 | 10% | 3062 | 24% | 2543 | 3% | 2273 | 2421 | 7% | 2585 | 14% | 2374 | 4% | 2789 | 3227 | 16% | 3306 | 19% | 3075 | 10% |

a All modelled diets improved on the dietary components mentioned in Table 1. MaxP is the most preferred diet based on minimal deviation from the observed diet, MaxH the most healthy diet based on NRD15.3 for nutrient quality, and MaxS the most environmentally sustainable diet based on GHGE. b Percentage difference (%d) between observed and modelled diets.

**Supplementary Table 2** Evaluation of greenhouse gas emissions (GHGE), nutrient quality (NRD15.3) and nutrient intake for the observed and modelled diets, for men and women a,b

3A: Men

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  | | | | 15 nutrients to encourage as included in the NRD15.3 (+ magnesium) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 3 nutrients to limit | | | | | | | | | | | |
|  | GHGE | | NRD15.3 c | | MUFA | | Protein | Dietary fibre | Calcium | Iron | | Potassium | | Vitamin A | | | Vitamin C | | | Vitamin E | | | Vitamin D | | | Zinc | | | Vitamin B1 | | | Vitamin B2 | | | Vitamin B12 | | | Folates | | | Magnesium | | | SFA | | | | Sodium | | | | | | | Added sugar |
| **Denmark** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Observed | 100 | | 100 | | | 128 | 195 | 89 | 148 | | 192 | | 106 | | | 233 | | | 113 | | | 59 | | | 24 | | | 163 | | | 191 | | | 139 | | | 156 | | | 133 | | | 112 | | | 69 | | | | 61 d | | | | | 117e |
| MaxP | 95 | | 107 | | | 128 | 199 | 103 | 152 | | 197 | | 113 | | | 258 | | | 126 | | | 69 | | | 28 | | | 162 | | | 193 | | | 143 | | | 165 | | | 149 | | | 120 | | | 72 | | | | 61 d | | | | | 134e |
| MaxH | 88 | | 115 | | | 123 | 197 | 128 | 158 | | 209 | | 117 | | | 294 | | | 137 | | | 78 | | | 34 | | | 164 | | | 201 | | | 137 | | | 161 | | | 165 | | | 129 | | | 84 | | | | 64 d | | | | | 208e |
| MaxS | 80 | | 111 | | | 120 | 194 | 125 | 159 | | 205 | | 111 | | | 280 | | | 129 | | | 78 | | | 31 | | | 162 | | | 203 | | | 143 | | | 174 | | | 160 | | | 130 | | | 81 | | | | 66 d | | | | | 129e |
| **Czech Republic** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Observed | 100 | | 100 | | | 151 | 186 | 72 | 94 | | 209 | | 73 | | | 132 | | | 81 | | | 105 | | | 24 | | | 118 | | | 182 | | | 98 | | | 146 | | | 95 | | | 97 | | | 75 | | | | 45 d | | | | 151e | |
| MaxP | 97 | | 111 | | | 149 | 194 | 79 | 111 | | 225 | | 80 | | | 179 | | | 93 | | | 122 | | | 29 | | | 126 | | | 196 | | | 110 | | | 179 | | | 110 | | | 105 | | | 80 | | | | 45 d | | | | 164e | |
| MaxH | 94 | | 124 | | | 152 | 208 | 90 | 152 | | 245 | | 90 | | | 231 | | | 117 | | | 150 | | | 51 | | | 135 | | | 190 | | | 123 | | | 171 | | | 142 | | | 119 | | | 85 | | | | 47 d | | | | 221e | |
| MaxS | 85 | | 116 | | | 148 | 197 | 85 | 128 | | 223 | | 81 | | | 189 | | | 88 | | | 141 | | | 35 | | | 123 | | | 192 | | | 110 | | | 156 | | | 119 | | | 108 | | | 86 | | | | 47 d | | | | 168e | |
| **Italy** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Observed | | 100 | | 100 | | 176 | 215 | 82 | 112 | | 221 | | 96 | | 166 | | | | 151 | | | 110 | | | 18 | | | 177 | | | 162 | | | 125 | | | 174 | | | 155 | | | 91 | | | | 90 | | | | 107 d | | 70 e | | |
| MaxP | | 95 | | 105 | | 175 | 219 | 94 | 123 | | 240 | | 104 | | 233 | | | | 183 | | | 123 | | | 22 | | | 182 | | | 175 | | | 141 | | | 198 | | | 180 | | | 97 | | | | 95 | | | | 105 d | | 66 e | | |
| MaxH | | 95 | | 115 | | 191 | 237 | 103 | 122 | | 253 | | 112 | | 200 | | | | 200 | | | 138 | | | 39 | | | 190 | | | 215 | | | 144 | | | 193 | | | 190 | | | 99 | | | | 105 | | | | 115 d | | 78 e | | |
| MaxS | | 75 | | 106 | | 180 | 211 | 105 | 126 | | 242 | | 111 | | 215 | | | | 192 | | | 133 | | | 23 | | | 167 | | | 155 | | | 140 | | | 157 | | | 202 | | | 101 | | | | 102 | | | | 102 d | | 65 e | | |
| **France** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Observed | | 100 | | 100 | | 134 | 223 | 76 | 132 | | 252 | | 93 | | 226 | | | 102 | | | 86 | | | 18 | | | 165 | | | 188 | | | 161 | | | 162 | | | 121 | | | 92 | | | 66 | | | | 70 d | | | 61 e | | | |
| MaxP | | 97 | | 106 | | 130 | 228 | 84 | 145 | | 261 | | 97 | | 222 | | | 109 | | | 109 | | | 21 | | | 162 | | | 193 | | | 165 | | | 166 | | | 135 | | | 98 | | | 69 | | | | 68 d | | | 59 e | | | |
| MaxH | | 100 | | 114 | | 127 | 243 | 109 | 160 | | 303 | | 111 | | 260 | | | 129 | | | 121 | | | 27 | | | 159 | | | 225 | | | 173 | | | 255 | | | 178 | | | 117 | | | 76 | | | | 70 d | | | 64 e | | | |
| MaxS | | 79 | | 106 | | 136 | 220 | 92 | 151 | | 262 | | 95 | | 241 | | | 118 | | | 115 | | | 24 | | | 149 | | | 215 | | | 177 | | | 167 | | | 153 | | | 97 | | | 71 | | | | 65 d | | | 56 e | | | |

3B: Women

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  | | | | 15 nutrients to encourage as included in the NRD15.3 (+ magnesium) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 3 nutrients to limit | | | | | | | |
|  | GHGE | | NRD15.3 c | | MUFA | | | Protein | Dietary fibre | Calcium | Iron | | Potassium | | Vitamin A | | Vitamin C | | Vitamin E | | Vitamin D | | Zinc | | Vitamin B1 | | Vitamin B2 | | | Vitamin B12 | | | Folates | | | Magnesium | | | SFA | | | Sodium | | | | Added sugar |
| **Denmark** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Observed | 100 | | 100 | | | 119 | | 180 | 85 | 145 | | 134 | | 93 | | 208 | | 150 | | 69 | | 21 | | 156 | | 191 | | 116 | | | 112 | | | 130 | | | 112 | | | 72 | | | 79 d | | | 110 e |
| MaxP | 97 | | 111 | | | 119 | | 193 | 100 | 157 | | 143 | | 103 | | 233 | | 172 | | 91 | | 31 | | 162 | | 207 | | 127 | | | 132 | | | 164 | | | 126 | | | 78 | | | 77 d | | | 141 e |
| MaxH | 91 | | 120 | | | 121 | | 197 | 123 | 165 | | 152 | | 117 | | 243 | | 231 | | 123 | | 54 | | 162 | | 217 | | 127 | | | 134 | | | 211 | | | 145 | | | 87 | | | 87 d | | | 189 e |
| MaxS | 80 | | 116 | | | 117 | | 194 | 119 | 159 | | 150 | | 113 | | 217 | | 205 | | 136 | | 41 | | 162 | | 220 | | 118 | | | 121 | | | 240 | | | 141 | | | 86 | | | 84 d | | | 151 e |
| **Czech Republic** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Observed | 100 | | | 100 | | | 148 | 172 | 65 | 97 | | 156 | | 69 | | 156 | | 114 | | 114 | | 20 | | 111 | | 179 | | 87 | | | 104 | | | 91 | | | 97 | | | 69 | | | 58 d | | | 119 e |
| MaxP | 102 | | | 114 | | | 148 | 182 | 70 | 114 | | 173 | | 75 | | 271 | | 133 | | 132 | | 26 | | 117 | | 189 | | 106 | | | 151 | | | 111 | | | 106 | | | 73 | | | 58 d | | | 143 e |
| MaxH | 109 | | | 121 | | | 142 | 186 | 79 | 125 | | 191 | | 82 | | 476 | | 174 | | 143 | | 37 | | 120 | | 182 | | 127 | | | 215 | | | 133 | | | 113 | | | 73 | | | 58 d | | | 174 e |
| MaxS | 90 | | | 115 | | | 150 | 176 | 73 | 118 | | 169 | | 76 | | 311 | | 135 | | 140 | | 23 | | 112 | | 189 | | 114 | | | 148 | | | 114 | | | 104 | | | 75 | | | 61 d | | | 143 e |
| **Italy** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Observed | | 100 | | 100 | | | 180 | 202 | 73 | 102 | | 160 | | 85 | | 181 | | 165 | | 117 | | 17 | | 179 | | 177 | | | 113 | | | 145 | | | 141 | | | 89 | | | 88 | | | 145 d | | 61 e |
| MaxP | | 95 | | 107 | | | 174 | 212 | 87 | 116 | | 194 | | 96 | | 200 | | 204 | | 127 | | 19 | | 170 | | 188 | | | 133 | | | 158 | | | 179 | | | 102 | | | 95 | | | 141 d | | 58 e |
| MaxH | | 100 | | 112 | | | 163 | 224 | 107 | 125 | | 225 | | 114 | | 235 | | 299 | | 139 | | 40 | | 211 | | 212 | | | 155 | | | 153 | | | 220 | | | 127 | | | 104 | | | 152 d | | 58 e |
| MaxS | | 70 | | 108 | | | 170 | 204 | 103 | 113 | | 196 | | 101 | | 216 | | 253 | | 133 | | 18 | | 188 | | 189 | | | 133 | | | 149 | | | 206 | | | 115 | | | 106 | | | 139 d | | 57 e |
| **France** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Observed | | 100 | | 100 | | | 140 | 206 | 67 | 124 | | 177 | | 81 | | 248 | | 125 | | 104 | | 18 | | 160 | | 202 | | | 144 | | | 139 | | | 114 | | | 94 | | | 63 | | | 89 d | 52 e | |
| MaxP | | 98 | | 109 | | | 140 | 207 | 76 | 144 | | 186 | | 89 | | 304 | | 140 | | 130 | | 24 | | 162 | | 220 | | | 156 | | | 175 | | | 133 | | | 106 | | | 66 | | | 88 d | 51 e | |
| MaxH | | 97 | | 119 | | | 141 | 244 | 95 | 138 | | 224 | | 97 | | 346 | | 176 | | 149 | | 44 | | 164 | | 227 | | | 160 | | | 219 | | | 163 | | | 115 | | | 69 | | | 92 d | 59 e | |
| MaxS | | 79 | | 110 | | | 143 | 211 | 84 | 147 | | 172 | | 90 | | 287 | | 137 | | 131 | | 24 | | 151 | | 241 | | | 159 | | | 159 | | | 139 | | | 104 | | | 69 | | | 89 d | 51 e | |

a All modelled diets improved on the dietary components mentioned in Table 1. MaxP is the most preferred diet based on minimal deviation from the observed diet, MaxH the most healthy diet based on NRD15.3 for nutrient quality, and MaxS the most environmentally sustainable diet based on GHGE.

b Greenhouse gas emissions (GHGE) was evaluated using the observed GHGE as reference. Nutrient quality was evaluated using percentage daily references values (DRV) for nutrients to encourage and percentage maximum recommended values (MRV) for nutrients to limit using DRVs of European Federation of Safety Authority (EFSA) 1, i.e. average requirement (AR) and adequate intake (AI) if AR cannot be set, and MRVs of World Health Organisation 2, 3 and Food and Agriculture Organisation 4.

c NRD15.3 - based on the principles of the Nutrient Rich Food Index, NRF 5, 6 - is the unweighted sum of percentage DRV for nutrients to encourage minus the sum of percentage MRV for nutrients to limit, calculated for a 2500 kcal diet for men and a 2000 kcal diet for women and capped at 100%DRV. NRD15.3 included fifteen nutrients for which intake should be promoted (mono-unsaturated fatty acids (MUFA), protein, dietary fibre, calcium, iron, potassium, zinc, vitamin A, C, E, and D, B1, B2, B12, folates) and three nutrients for which intake should be limited (saturated fatty acids, added sugar and sodium).

d In Czech Republic, sodium intake included sodium intake from raw foods and discretionary salt, while in Italy discretionary salt was excluded, and in Denmark and France discretionary salt added at the table was excluded but discretionary salt added during cooking was included when a recipe was reported.

e In Denmark and Czech Republic, added sugar intake was calculated as total sugar intake minus the naturally occurring sugars from fruit, vegetables and dairy, while because of data availability total mono-and-disaccharides were used in Italy and France.

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