

Extended Smooth Pathway Model (ESPM)

weighted distribution key: population and emissions in base year 2019

| in Mill. t | budget 2020 - 2100 | weighted key | actual emissions 2018 |
|------------------------|--------------------------|-----------------|-----------------------------|
| Afghanistan | 399,63 | 0,10% | 10,48 |
| Albania | 67,87 | 0,02% | 4,80 |
| Algeria | 1.916,92 | 0,47% | 165,33 |
| Angola | 518,70 | 0,13% | 30,05 |
| Anguilla | 0,38 | 0,00% | 0,03 |
| Antigua and Barbuda | 6,78 | 0,00% | 0,64 |
| Argentina | 2.289,07 | 0,57% | 210,16 |
| Armenia | 78,53 | 0,02% | 5,79 |
| Aruba | 10,08 | 0,00% | 0,99 |
| Australia | 4.056,77 | 1,00% | 415,31 |
| Austria | 743,42 | 0,18% | 71,44 |
| Azerbaijan | 409,49 | 0,10% | 34,70 |
| Bahamas | 31,94 | 0,01% | 3,08 |
| Bahrain | 330,37 | 0,08% | 34,23 |
| Bangladesh | 2.170,89 | 0,54% | 92,89 |
| Barbados | 33,67 | 0,01% | 3,32 |
| Belarus | 687,72 | 0,17% | 64,26 |
| Belgium | 1.085,64 | 0,27% | 105,75 |
| Belize | 7,29 | 0,00% | 0,45 |
| Benin | 164,88 | 0,04% | 7,54 |
| Bermuda | 4,62 | 0,00% | 0,44 |
| Bhutan | 20,77 | 0,01% | 1,55 |
| Bolivia | 308,24 | 0,08% | 22,81 |
| Bosnia and Herzegovina | 280,93 | 0,07% | 27,44 |
| Botswana | 88,98 | 0,02% | 7,43 |
| Brazil | 6.332,45 | 1,56% | 500,09 |

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| weighting population key in the weighted key | 15% |
| global CO2 budget 2018 - 2100 | 570 |
| to distribute from this budget here 2020 - 2100 in Gt* | 405 |

* without AFOLU and int. shipping and aviation

| sorted by 'budget' in Mill. t | budget 2020 - 2100 | weighted key | actual emissions 2018 | scope years |
|------------------------------------|--------------------------|-----------------|-----------------------------|----------------|
| China | 117.236 | 28,9% | 11.256 | 10,4 |
| United States | 52.151 | 12,9% | 5.275 | 9,9 |
| India | 35.785 | 8,8% | 2.622 | 13,6 |
| EU28 | 35.515 | 8,8% | 3.457 | 10,3 |
| EU27 | 31.596 | 7,8% | 3.085 | 10,2 |
| Russia | 17.686 | 4,4% | 1.748 | 10,1 |
| Japan | 12.039 | 3,0% | 1.199 | 10,0 |
| Iran | 7.599 | 1,9% | 728 | 10,4 |
| Indonesia | 7.452 | 1,8% | 558 | 13,4 |
| Germany | 7.441 | 1,8% | 753 | 9,9 |
| South Korea | 7.039 | 1,7% | 695 | 10,1 |
| Brazil | 6.332 | 1,6% | 500 | 12,7 |
| Saudi Arabia | 6.112 | 1,5% | 625 | 9,8 |
| Canada | 5.847 | 1,4% | 594 | 9,8 |
| Mexico | 5.609 | 1,4% | 496 | 11,3 |
| South Africa | 4.870 | 1,2% | 477 | 10,2 |
| Turkey | 4.637 | 1,1% | 417 | 11,1 |
| Australia | 4.057 | 1,0% | 415 | 9,8 |
| United Kingdom | 3.905 | 1,0% | 372 | 10,5 |
| Italy, San Marino and the Holy See | 3.648 | 0,9% | 345 | 10,6 |
| Pakistan | 3.578 | 0,9% | 196 | 18,2 |
| France and Monaco | 3.513 | 0,9% | 323 | 10,9 |
| Poland | 3.481 | 0,9% | 334 | 10,4 |
| Vietnam | 3.351 | 0,8% | 271 | 12,3 |
| Thailand | 3.203 | 0,8% | 281 | 11,4 |
| Egypt | 3.151 | 0,8% | 251 | 12,6 |

| in Mill. t | budget 2020 - 2100 | weighted key | actual emissions 2018 |
|----------------------------------|--------------------------|-----------------|-----------------------------|
| British Virgin Islands | 1,67 | 0,00% | 0,15 |
| Brunei | 68,80 | 0,02% | 6,93 |
| Bulgaria | 468,87 | 0,12% | 44,59 |
| Burkina Faso | 195,49 | 0,05% | 3,71 |
| Burundi | 93,91 | 0,02% | 0,32 |
| Cambodia | 233,38 | 0,06% | 10,85 |
| Cameroon | 339,17 | 0,08% | 14,48 |
| Canada | 5.847,30 | 1,44% | 594,20 |
| Cape Verde | 14,21 | 0,00% | 1,04 |
| Cayman Islands | 5,26 | 0,00% | 0,51 |
| Central African Republic | 41,77 | 0,01% | 0,47 |
| Chad | 131,96 | 0,03% | 0,70 |
| Chile | 1.005,46 | 0,25% | 91,14 |
| China | 117.236,30 | 28,94% | 11.255,88 |
| Colombia | 1.241,27 | 0,31% | 90,05 |
| Comoros | 8,69 | 0,00% | 0,21 |
| Congo | 109,78 | 0,03% | 7,06 |
| Cook Islands | 0,54 | 0,00% | 0,04 |
| Costa Rica | 123,49 | 0,03% | 8,82 |
| Côte d'Ivoire | 336,39 | 0,08% | 14,02 |
| Croatia | 215,73 | 0,05% | 19,44 |
| Cuba | 347,70 | 0,09% | 27,55 |
| Curaçao | 80,18 | 0,02% | 8,43 |
| Cyprus | 80,39 | 0,02% | 7,46 |
| Czechia | 1.121,40 | 0,28% | 110,94 |
| Democratic Republic of the Congo | 710,07 | 0,18% | 2,89 |
| Denmark | 343,12 | 0,08% | 33,13 |
| Djibouti | 17,65 | 0,00% | 1,05 |
| Dominica | 1,77 | 0,00% | 0,13 |
| Dominican Republic | 320,06 | 0,08% | 25,18 |

| sorted by 'budget' in Mill. t | budget 2020 - 2100 | weighted key | actual emissions 2018 | scope years |
|----------------------------------|--------------------------|-----------------|-----------------------------|----------------|
| Kazakhstan | 3.097 | 0,8% | 309 | 10,0 |
| Spain and Andorra | 2.996 | 0,7% | 276 | 10,9 |
| Taiwan | 2.883 | 0,7% | 285 | 10,1 |
| Malaysia | 2.703 | 0,7% | 258 | 10,5 |
| Nigeria | 2.639 | 0,7% | 111 | 23,8 |
| Argentina | 2.289 | 0,6% | 210 | 10,9 |
| Philippines | 2.263 | 0,6% | 148 | 15,3 |
| Bangladesh | 2.171 | 0,5% | 93 | 23,4 |
| Iraq | 2.105 | 0,5% | 188 | 11,2 |
| Ukraine | 2.102 | 0,5% | 197 | 10,7 |
| United Arab Emirates | 2.090 | 0,5% | 214 | 9,8 |
| Algeria | 1.917 | 0,5% | 165 | 11,6 |
| Netherlands | 1.606 | 0,4% | 162 | 9,9 |
| Venezuela | 1.297 | 0,3% | 120 | 10,8 |
| Colombia | 1.241 | 0,3% | 90 | 13,8 |
| Uzbekistan | 1.208 | 0,3% | 102 | 11,9 |
| Czechia | 1.121 | 0,3% | 111 | 10,1 |
| Belgium | 1.086 | 0,3% | 106 | 10,3 |
| Ethiopia | 1.043 | 0,3% | 17 | 62,1 |
| Chile | 1.005 | 0,2% | 91 | 11,0 |
| Qatar | 994 | 0,2% | 103 | 9,7 |
| Kuwait | 984 | 0,2% | 100 | 9,8 |
| Morocco | 939 | 0,2% | 68 | 13,7 |
| Romania | 909 | 0,2% | 80 | 11,3 |
| Oman | 852 | 0,2% | 85 | 10,0 |
| Turkmenistan | 850 | 0,2% | 84 | 10,1 |
| Peru | 787 | 0,2% | 57 | 13,7 |
| Greece | 773 | 0,2% | 72 | 10,7 |
| Austria | 743 | 0,2% | 71 | 10,4 |
| Myanmar/Burma | 737 | 0,2% | 33 | 22,6 |

| in Mill. t | budget 2020 - 2100 | weighted key | actual emissions 2018 |
|-------------------|--------------------------|-----------------|-----------------------------|
| Ecuador | 554,44 | 0,14% | 44,39 |
| Egypt | 3.150,98 | 0,78% | 250,66 |
| El Salvador | 125,14 | 0,03% | 7,90 |
| Equatorial Guinea | 41,49 | 0,01% | 3,31 |
| Eritrea | 35,73 | 0,01% | 0,86 |
| Estonia | 242,59 | 0,06% | 24,33 |
| Eswatini | 20,72 | 0,01% | 1,23 |
| Ethiopia | 1.043,29 | 0,26% | 16,80 |
| Falkland Islands | 0,40 | 0,00% | 0,04 |
| Faroese | 0,40 | 0,00% | 0,00 |
| Fiji | 19,57 | 0,00% | 1,32 |
| Finland | 497,65 | 0,12% | 48,80 |
| France and Monaco | 3.513,08 | 0,87% | 323,28 |
| French Guiana | 9,57 | 0,00% | 0,77 |
| French Polynesia | 7,67 | 0,00% | 0,57 |
| Gabon | 78,18 | 0,02% | 6,59 |
| Georgia | 135,41 | 0,03% | 10,89 |
| Germany | 7.440,61 | 1,84% | 752,65 |
| Ghana | 431,30 | 0,11% | 20,09 |
| Gibraltar | 6,61 | 0,00% | 0,68 |
| Greece | 773,46 | 0,19% | 72,40 |
| Greenland | 5,37 | 0,00% | 0,53 |
| Grenada | 3,58 | 0,00% | 0,29 |
| Guadeloupe | 25,21 | 0,01% | 2,35 |
| Guatemala | 334,21 | 0,08% | 20,51 |
| Guinea | 129,27 | 0,03% | 3,00 |
| Guinea-Bissau | 19,35 | 0,00% | 0,44 |
| Guyana | 24,40 | 0,01% | 1,92 |
| Haiti | 123,01 | 0,03% | 3,65 |
| Honduras | 174,63 | 0,04% | 10,35 |

| sorted by 'budget' in Mill. t | budget 2020 - 2100 | weighted key | actual emissions 2018 | scope years |
|----------------------------------|--------------------------|-----------------|-----------------------------|----------------|
| Israel and Palestine, State of | 733 | 0,2% | 67 | 10,9 |
| Democratic Republic of the Congo | 710 | 0,2% | 3 | 245,4 |
| Belarus | 688 | 0,2% | 64 | 10,7 |
| Sudan and South Sudan | 626 | 0,2% | 21 | 29,7 |
| Serbia and Montenegro | 624 | 0,2% | 59 | 10,6 |
| Kenya | 614 | 0,2% | 21 | 29,3 |
| Libya | 592 | 0,1% | 56 | 10,5 |
| Tanzania | 585 | 0,1% | 13 | 43,6 |
| Singapore | 579 | 0,1% | 56 | 10,4 |
| Portugal | 575 | 0,1% | 53 | 10,9 |
| Hungary | 574 | 0,1% | 52 | 11,0 |
| Ecuador | 554 | 0,1% | 44 | 12,5 |
| Norway | 524 | 0,1% | 50 | 10,4 |
| Angola | 519 | 0,1% | 30 | 17,3 |
| North Korea | 504 | 0,1% | 32 | 15,9 |
| Finland | 498 | 0,1% | 49 | 10,2 |
| Sweden | 492 | 0,1% | 45 | 11,0 |
| Hong Kong | 478 | 0,1% | 45 | 10,5 |
| Bulgaria | 469 | 0,1% | 45 | 10,5 |
| Switzerland and Liechtenstein | 447 | 0,1% | 41 | 10,9 |
| Ghana | 431 | 0,1% | 20 | 21,5 |
| Azerbaijan | 409 | 0,1% | 35 | 11,8 |
| Slovakia | 406 | 0,1% | 38 | 10,7 |
| Tunisia | 406 | 0,1% | 33 | 12,3 |
| Syria | 405 | 0,1% | 29 | 14,0 |
| Uganda | 401 | 0,1% | 5 | 73,1 |
| Afghanistan | 400 | 0,1% | 10 | 38,1 |
| Sri Lanka | 392 | 0,1% | 24 | 16,5 |
| New Zealand | 382 | 0,1% | 36 | 10,5 |
| Ireland | 377 | 0,1% | 37 | 10,1 |

| in Mill. t | budget 2020 - 2100 | weighted key | actual emissions 2018 |
|------------------------------------|--------------------------|-----------------|-----------------------------|
| Hong Kong | 477,72 | 0,12% | 45,31 |
| Hungary | 573,91 | 0,14% | 52,14 |
| Iceland | 41,59 | 0,01% | 4,09 |
| India | 35.785,30 | 8,83% | 2.621,92 |
| Indonesia | 7.452,41 | 1,84% | 557,53 |
| Iran | 7.598,61 | 1,88% | 727,81 |
| Iraq | 2.104,67 | 0,52% | 188,10 |
| Ireland | 376,87 | 0,09% | 37,21 |
| Israel and Palestine, State of | 732,87 | 0,18% | 67,06 |
| Italy, San Marino and the Holy See | 3.648,24 | 0,90% | 344,81 |
| Jamaica | 97,75 | 0,02% | 7,95 |
| Japan | 12.038,73 | 2,97% | 1.198,55 |
| Jordan | 321,15 | 0,08% | 26,04 |
| Kazakhstan | 3.097,33 | 0,76% | 309,25 |
| Kenya | 614,17 | 0,15% | 20,96 |
| Kiribati | 1,23 | 0,00% | 0,03 |
| Kuwait | 984,08 | 0,24% | 100,34 |
| Kyrgyzstan | 146,97 | 0,04% | 10,13 |
| Laos | 90,95 | 0,02% | 3,61 |
| Latvia | 87,17 | 0,02% | 7,82 |
| Lebanon | 291,88 | 0,07% | 25,59 |
| Lesotho | 23,48 | 0,01% | 0,72 |
| Liberia | 50,77 | 0,01% | 1,24 |
| Libya | 592,41 | 0,15% | 56,48 |
| Lithuania | 159,30 | 0,04% | 14,42 |
| Luxembourg | 99,84 | 0,02% | 9,95 |
| Macao | 17,35 | 0,00% | 1,29 |
| Madagascar | 254,75 | 0,06% | 4,43 |
| Malawi | 162,69 | 0,04% | 1,67 |
| Malaysia | 2.702,89 | 0,67% | 257,84 |

| sorted by 'budget' in Mill. t | budget 2020 - 2100 | weighted key | actual emissions 2018 | scope years |
|----------------------------------|--------------------------|-----------------|-----------------------------|----------------|
| Cuba | 348 | 0,1% | 28 | 12,6 |
| Trinidad and Tobago | 345 | 0,1% | 36 | 9,6 |
| Denmark | 343 | 0,1% | 33 | 10,4 |
| Yemen | 341 | 0,1% | 12 | 29,0 |
| Cameroon | 339 | 0,1% | 14 | 23,4 |
| Côte d'Ivoire | 336 | 0,1% | 14 | 24,0 |
| Guatemala | 334 | 0,1% | 21 | 16,3 |
| Mozambique | 334 | 0,1% | 10 | 33,7 |
| Bahrain | 330 | 0,1% | 34 | 9,7 |
| Nepal | 324 | 0,1% | 10 | 31,4 |
| Jordan | 321 | 0,1% | 26 | 12,3 |
| Dominican Republic | 320 | 0,1% | 25 | 12,7 |
| Bolivia | 308 | 0,1% | 23 | 13,5 |
| Lebanon | 292 | 0,1% | 26 | 11,4 |
| Bosnia and Herzegovina | 281 | 0,1% | 27 | 10,2 |
| Madagascar | 255 | 0,1% | 4 | 57,5 |
| Estonia | 243 | 0,1% | 24 | 10,0 |
| Zimbabwe | 240 | 0,1% | 13 | 18,4 |
| Cambodia | 233 | 0,1% | 11 | 21,5 |
| Senegal | 230 | 0,1% | 11 | 21,5 |
| Croatia | 216 | 0,1% | 19 | 11,1 |
| Mongolia | 212 | 0,1% | 20 | 10,8 |
| Niger | 205 | 0,1% | 2 | 90,6 |
| Burkina Faso | 195 | 0,0% | 4 | 52,7 |
| Zambia | 190 | 0,0% | 5 | 36,8 |
| Honduras | 175 | 0,0% | 10 | 16,9 |
| Mali | 165 | 0,0% | 1 | 150,5 |
| Benin | 165 | 0,0% | 8 | 21,9 |
| Malawi | 163 | 0,0% | 2 | 97,5 |
| Slovenia | 162 | 0,0% | 16 | 10,4 |

| in Mill. t | budget 2020 - 2100 | weighted key | actual emissions 2018 |
|------------------|--------------------------|-----------------|-----------------------------|
| Maldives | 12,52 | 0,00% | 0,87 |
| Mali | 165,35 | 0,04% | 1,10 |
| Malta | 17,51 | 0,00% | 1,51 |
| Martinique | 25,98 | 0,01% | 2,46 |
| Mauritania | 66,57 | 0,02% | 3,24 |
| Mauritius | 51,84 | 0,01% | 4,38 |
| Mexico | 5.609,08 | 1,38% | 495,78 |
| Moldova | 114,11 | 0,03% | 8,62 |
| Mongolia | 211,82 | 0,05% | 19,53 |
| Morocco | 939,18 | 0,23% | 68,31 |
| Mozambique | 333,54 | 0,08% | 9,88 |
| Myanmar/Burma | 737,39 | 0,18% | 32,65 |
| Namibia | 62,06 | 0,02% | 4,51 |
| Nepal | 323,76 | 0,08% | 10,31 |
| Netherlands | 1.606,47 | 0,40% | 162,29 |
| New Caledonia | 72,24 | 0,02% | 7,34 |
| New Zealand | 382,03 | 0,09% | 36,41 |
| Nicaragua | 110,15 | 0,03% | 6,25 |
| Niger | 205,27 | 0,05% | 2,27 |
| Nigeria | 2.639,45 | 0,65% | 110,69 |
| North Korea | 503,67 | 0,12% | 31,59 |
| North Macedonia | 93,08 | 0,02% | 8,07 |
| Norway | 523,96 | 0,13% | 50,47 |
| Oman | 852,34 | 0,21% | 85,21 |
| Pakistan | 3.578,23 | 0,88% | 196,18 |
| Palau | 12,29 | 0,00% | 1,27 |
| Panama | 145,18 | 0,04% | 11,75 |
| Papua New Guinea | 106,17 | 0,03% | 3,92 |
| Paraguay | 127,02 | 0,03% | 7,53 |
| Peru | 787,42 | 0,19% | 57,38 |

| sorted by 'budget' in Mill. t | budget 2020 - 2100 | weighted key | actual emissions 2018 | scope years |
|----------------------------------|--------------------------|-----------------|-----------------------------|----------------|
| Lithuania | 159 | 0,0% | 14 | 11,1 |
| Kyrgyzstan | 147 | 0,0% | 10 | 14,5 |
| Panama | 145 | 0,0% | 12 | 12,4 |
| Georgia | 135 | 0,0% | 11 | 12,4 |
| Chad | 132 | 0,0% | 1 | 189,3 |
| Somalia | 131 | 0,0% | 1 | 138,5 |
| Tajikistan | 130 | 0,0% | 6 | 21,9 |
| Guinea | 129 | 0,0% | 3 | 43,0 |
| Paraguay | 127 | 0,0% | 8 | 16,9 |
| El Salvador | 125 | 0,0% | 8 | 15,8 |
| Costa Rica | 123 | 0,0% | 9 | 14,0 |
| Haiti | 123 | 0,0% | 4 | 33,7 |
| Moldova | 114 | 0,0% | 9 | 13,2 |
| Nicaragua | 110 | 0,0% | 6 | 17,6 |
| Rwanda | 110 | 0,0% | 1 | 98,5 |
| Congo | 110 | 0,0% | 7 | 15,5 |
| Papua New Guinea | 106 | 0,0% | 4 | 27,1 |
| Luxembourg | 100 | 0,0% | 10 | 10,0 |
| Jamaica | 98 | 0,0% | 8 | 12,3 |
| Burundi | 94 | 0,0% | 0 | 291,3 |
| North Macedonia | 93 | 0,0% | 8 | 11,5 |
| Uruguay | 93 | 0,0% | 7 | 13,4 |
| Togo | 92 | 0,0% | 3 | 31,2 |
| Laos | 91 | 0,0% | 4 | 25,2 |
| Botswana | 89 | 0,0% | 7 | 12,0 |
| Latvia | 87 | 0,0% | 8 | 11,1 |
| Cyprus | 80 | 0,0% | 7 | 10,8 |
| Curaçao | 80 | 0,0% | 8 | 9,5 |
| Armenia | 79 | 0,0% | 6 | 13,6 |
| Gabon | 78 | 0,0% | 7 | 11,9 |

| in Mill. t | budget 2020 - 2100 | weighted key | actual emissions 2018 |
|--|--------------------------|-----------------|-----------------------------|
| Philippines | 2.262,71 | 0,56% | 147,86 |
| Poland | 3.481,43 | 0,86% | 333,86 |
| Portugal | 574,64 | 0,14% | 52,61 |
| Puerto Rico | 53,42 | 0,01% | 3,18 |
| Qatar | 994,09 | 0,25% | 102,91 |
| Réunion | 35,44 | 0,01% | 2,98 |
| Romania | 908,51 | 0,22% | 80,17 |
| Russia | 17.685,77 | 4,37% | 1.748,35 |
| Rwanda | 110,04 | 0,03% | 1,12 |
| Saint Helena, Ascension and Tristan da Cunha | 0,22 | 0,00% | 0,02 |
| Saint Kitts and Nevis | 2,70 | 0,00% | 0,24 |
| Saint Lucia | 4,94 | 0,00% | 0,37 |
| Saint Pierre and Miquelon | 0,80 | 0,00% | 0,08 |
| Saint Vincent and the Grenadines | 2,59 | 0,00% | 0,18 |
| Samoa | 2,82 | 0,00% | 0,13 |
| São Tomé and Príncipe | 3,11 | 0,00% | 0,15 |
| Saudi Arabia | 6.111,97 | 1,51% | 624,99 |
| Senegal | 230,49 | 0,06% | 10,70 |
| Serbia and Montenegro | 624,46 | 0,15% | 58,97 |
| Seychelles | 10,12 | 0,00% | 0,98 |
| Sierra Leone | 75,37 | 0,02% | 1,45 |
| Singapore | 579,29 | 0,14% | 55,91 |
| Slovakia | 406,46 | 0,10% | 38,09 |
| Slovenia | 161,62 | 0,04% | 15,55 |
| Solomon Islands | 6,54 | 0,00% | 0,13 |
| Somalia | 130,66 | 0,03% | 0,94 |
| South Africa | 4.869,69 | 1,20% | 477,25 |
| South Korea | 7.039,27 | 1,74% | 695,36 |
| Spain and Andorra | 2.996,27 | 0,74% | 276,05 |
| Sri Lanka | 392,23 | 0,10% | 23,81 |
| Sudan and South Sudan | 625,71 | 0,15% | 21,09 |

| sorted by 'budget' in Mill. t | budget 2020 - 2100 | weighted key | actual emissions 2018 | scope years |
|----------------------------------|--------------------------|-----------------|-----------------------------|----------------|
| Sierra Leone | 75 | 0,0% | 1 | 52,1 |
| New Caledonia | 72 | 0,0% | 7 | 9,8 |
| Brunei | 69 | 0,0% | 7 | 9,9 |
| Albania | 68 | 0,0% | 5 | 14,1 |
| Mauritania | 67 | 0,0% | 3 | 20,5 |
| Namibia | 62 | 0,0% | 5 | 13,8 |
| Puerto Rico | 53 | 0,0% | 3 | 16,8 |
| Mauritius | 52 | 0,0% | 4 | 11,8 |
| Liberia | 51 | 0,0% | 1 | 40,8 |
| Central African Republic | 42 | 0,0% | 0 | 89,4 |
| Iceland | 42 | 0,0% | 4 | 10,2 |
| Equatorial Guinea | 41 | 0,0% | 3 | 12,5 |
| Eritrea | 36 | 0,0% | 1 | 41,7 |
| Réunion | 35 | 0,0% | 3 | 11,9 |
| Barbados | 34 | 0,0% | 3 | 10,2 |
| Bahamas | 32 | 0,0% | 3 | 10,4 |
| Martinique | 26 | 0,0% | 2 | 10,6 |
| Suriname | 26 | 0,0% | 2 | 11,5 |
| Guadeloupe | 25 | 0,0% | 2 | 10,7 |
| Guyana | 24 | 0,0% | 2 | 12,7 |
| The Gambia | 24 | 0,0% | 1 | 40,4 |
| Lesotho | 23 | 0,0% | 1 | 32,7 |
| Bhutan | 21 | 0,0% | 2 | 13,4 |
| Eswatini | 21 | 0,0% | 1 | 16,8 |
| Fiji | 20 | 0,0% | 1 | 14,9 |
| Guinea-Bissau | 19 | 0,0% | 0 | 43,8 |
| Djibouti | 18 | 0,0% | 1 | 16,9 |
| Malta | 18 | 0,0% | 2 | 11,6 |
| Macao | 17 | 0,0% | 1 | 13,5 |
| Cape Verde | 14 | 0,0% | 1 | 13,7 |
| Timor-Leste | 13 | 0,0% | 0 | 44,7 |

| in Mill. t | budget 2020 - 2100 | weighted key | actual emissions 2018 |
|-------------------------------|--------------------------|-----------------|-----------------------------|
| Suriname | 25,92 | 0,01% | 2,25 |
| Sweden | 491,65 | 0,12% | 44,60 |
| Switzerland and Liechtenstein | 446,50 | 0,11% | 40,94 |
| Syria | 404,79 | 0,10% | 28,94 |
| Taiwan | 2.883,43 | 0,71% | 284,55 |
| Tajikistan | 129,99 | 0,03% | 5,93 |
| Tanzania | 585,13 | 0,14% | 13,43 |
| Thailand | 3.202,59 | 0,79% | 281,04 |
| The Gambia | 24,21 | 0,01% | 0,60 |
| Timor-Leste | 12,91 | 0,00% | 0,29 |
| Togo | 91,74 | 0,02% | 2,94 |
| Tonga | 1,99 | 0,00% | 0,12 |
| Trinidad and Tobago | 345,01 | 0,09% | 35,95 |
| Tunisia | 406,34 | 0,10% | 32,93 |
| Turkey | 4.637,11 | 1,14% | 417,05 |
| Turkmenistan | 849,77 | 0,21% | 84,14 |
| Turks and Caicos Islands | 1,89 | 0,00% | 0,17 |
| Uganda | 401,16 | 0,10% | 5,49 |
| Ukraine | 2.102,14 | 0,52% | 196,84 |
| United Arab Emirates | 2.089,77 | 0,52% | 214,11 |
| United Kingdom | 3.905,00 | 0,96% | 371,97 |
| United States | 52.151,11 | 12,87% | 5.275,48 |
| Uruguay | 93,07 | 0,02% | 6,93 |
| Uzbekistan | 1.207,53 | 0,30% | 101,90 |
| Vanuatu | 3,15 | 0,00% | 0,08 |

| sorted by 'budget' in Mill. t | budget 2020 - 2100 | weighted key | actual emissions 2018 | scope years |
|----------------------------------|--------------------------|-----------------|-----------------------------|----------------|
| Maldives | 13 | 0,0% | 1 | 14,3 |
| Palau | 12 | 0,0% | 1 | 9,7 |
| Seychelles | 10 | 0,0% | 1 | 10,3 |
| Aruba | 10 | 0,0% | 1 | 10,2 |
| French Guiana | 10 | 0,0% | 1 | 12,5 |
| Comoros | 9 | 0,0% | 0 | 41,7 |
| French Polynesia | 8 | 0,0% | 1 | 13,4 |
| Western Sahara | 7 | 0,0% | 0 | 25,7 |
| Belize | 7 | 0,0% | 0 | 16,2 |
| Antigua and Barbuda | 7 | 0,0% | 1 | 10,6 |
| Gibraltar | 7 | 0,0% | 1 | 9,7 |
| Solomon Islands | 7 | 0,0% | 0 | 49,2 |
| Greenland | 5 | 0,0% | 1 | 10,2 |
| Cayman Islands | 5 | 0,0% | 1 | 10,4 |
| Saint Lucia | 5 | 0,0% | 0 | 13,2 |
| Bermuda | 5 | 0,0% | 0 | 10,5 |
| Grenada | 4 | 0,0% | 0 | 12,4 |
| Vanuatu | 3 | 0,0% | 0 | 38,2 |
| São Tomé and Príncipe | 3 | 0,0% | 0 | 20,7 |
| Samoa | 3 | 0,0% | 0 | 21,2 |
| Saint Kitts and Nevis | 3 | 0,0% | 0 | 11,1 |
| Saint Vincent and the Grenadines | 3 | 0,0% | 0 | 14,1 |
| Tonga | 2 | 0,0% | 0 | 16,3 |
| Turks and Caicos Islands | 2 | 0,0% | 0 | 11,1 |
| Dominica | 2 | 0,0% | 0 | 13,7 |

| in Mill. t | budget 2020 - 2100 | weighted key | actual emissions 2018 |
|-------------------------------|--------------------------|-----------------|-----------------------------|
| Venezuela | 1.296,78 | 0,32% | 120,21 |
| Vietnam | 3.350,57 | 0,83% | 271,47 |
| Western Sahara | 7,30 | 0,00% | 0,28 |
| Yemen | 340,76 | 0,08% | 11,77 |
| Zambia | 190,01 | 0,05% | 5,17 |
| Zimbabwe | 239,86 | 0,06% | 13,04 |
| EU28 | 35.514,63 | 8,77% | 3.457,28 |
| EU27 | 31.596,01 | 7,80% | 3.085,32 |
| sub sum | 472.211,15 | | 43.167,72 |
| EU28 + EU27 | -67.110,65 | | -6.542,60 |
| sum | 405.100,50 | | 36.625,12 |
| base data* | 405.110,26 | | |
| diff.: countries without data | 9,75 | | |

*global CO2 budget 2020 - 2100 excl.: AFOLU and int. shipping and aviation

| sorted by 'budget' in Mill. t | budget 2020 - 2100 | weighted key | actual emissions 2018 | scope years |
|---------------------------------------|--------------------------|-----------------|-----------------------------|----------------|
| British Virgin Islands | 2 | 0,0% | 0 | 10,9 |
| Kiribati | 1 | 0,0% | 0 | 38,3 |
| Saint Pierre and Miquelon | 1 | 0,0% | 0 | 10,1 |
| Cook Islands | 1 | 0,0% | 0 | 12,8 |
| Falkland Islands | 0 | 0,0% | 0 | 10,1 |
| Faroes | 0 | 0,0% | 0 | 208,8 |
| Anguilla | 0 | 0,0% | 0 | 13,5 |
| Saint Helena, Ascension and Tristan d | 0 | 0,0% | 0 | 12,2 |

Reference values for the largest emitters

| scenario type: | RM-5 rad | | weighting population: | | 15% | global budget in Gt: | | 570 | based on 2019 | |
|-----------------|-----------------|-------------|-----------------------|-------------|--|----------------------------|--------------------------------------|---------------------------|-----------------------------|--|
| target year: | 2030 | | 2050 | | projection emissions 2019 in Mill. t | per capita 2019 in t | share in global emissions 2019 | accu- mulated share | reduction rate used 2020 | Determination of the free parameter successful? |
| reference year: | 1990 | 2010 | 1990 | 2010 | | | | | | |
| China | 159% | -32% | -71% | -92% | 11.403 | 8,0 | 31% | 31% | -1,5% | yes |
| United States | -44% | -49% | -94% | -95% | 5.334 | 16,2 | 14% | 45% | -1,6% | yes |
| EU28 | -57% | -52% | -95% | -94% | 3.388 | 6,6 | 9% | 54% | -1,5% | yes |
| India | 176% | -6% | -52% | -84% | 2.693 | 2,0 | 7% | 62% | -1,3% | yes |
| Russia | -59% | -42% | -95% | -94% | 1.780 | 12,2 | 5% | 66% | -1,6% | yes |
| Japan | -45% | -47% | -94% | -94% | 1.188 | 9,4 | 3% | 70% | -2,0% | yes |

Here the start change rate for 2020 is 50% of the change rate for 2020 in scenario RM-6 abs.
 If you use the Excel tool, you can set start change rates yourself for 2020 and use six scenario types.