

reference values selected scenariotype: RM-5 rad	target year 2030		target year 2050		projection emissions 2019 in Mill. t	per capita emissions 2019 in t	
	vs. reference year	1990	2010	1990			2010
Afghanistan		309%	84%	291%	76%	10.76	0.28
Albania		-52%	-31%	-85%	-78%	4.86	1.69
Algeria		54%	-10%	-69%	-82%	169.83	3.94
Angola		81%	-15%	-15%	-60%	28.85	0.91
Anguilla		204%	-23%	-11%	-77%	0.03	1.94
Antigua and Barbuda		76%	10%	-71%	-82%	0.65	6.66
Argentina		14%	-33%	-79%	-87%	208.42	4.65
Armenia		-82%	-14%	-95%	-75%	5.94	2.01
Aruba		101%	20%	-70%	-82%	0.99	9.36
Australia		-11%	-40%	-88%	-92%	415.29	16.48
Austria		-31%	-42%	-89%	-91%	72.43	8.09
Azerbaijan		-62%	-11%	-92%	-81%	35.56	3.54
Bahamas		23%	7%	-81%	-83%	3.11	7.98
Bahrain		70%	-29%	-79%	-91%	34.17	20.82
Bangladesh		431%	26%	230%	-22%	95.41	0.59
Barbados		161%	-13%	-63%	-88%	3.38	11.78
Belarus		-63%	-40%	-94%	-90%	66.01	6.98
Belgium		-44%	-44%	-92%	-92%	107.07	9.28
Belize		65%	23%	-34%	-51%	0.45	1.16
Benin		1303%	14%	711%	-34%	7.74	0.66
Bermuda		-20%	-25%	-87%	-88%	0.44	7.10
Bhutan		389%	-23%	38%	-78%	1.59	2.08
Bolivia		130%	1%	-34%	-71%	23.42	2.03
Bosnia and Herzegovina		-33%	-25%	-90%	-89%	27.44	8.31
Botswana		68%	36%	-63%	-70%	7.62	3.31
Brazil		40%	-28%	-64%	-81%	502.65	2.38
British Virgin Islands		258%	32%	-35%	-76%	0.15	5.13
Brunei		24%	-43%	-84%	-93%	7.04	16.24
Bulgaria		-67%	-44%	-95%	-91%	44.53	6.36
Burkina Faso		1063%	136%	1269%	177%	3.81	0.19
Burundi		578%	528%	1248%	1149%	0.33	0.03
Cambodia		1948%	66%	1060%	-6%	11.14	0.68
Cameroon		136%	5%	50%	-33%	14.56	0.56
Canada		-22%	-37%	-90%	-92%	597.67	15.98
Cape Verde		1305%	106%	312%	-39%	1.06	1.93
Cayman Islands		108%	8%	-68%	-83%	0.51	7.87
Central African Republic		395%	123%	648%	238%	0.47	0.10
Chad		683%	403%	1365%	841%	0.68	0.04
Chile		71%	-22%	-68%	-85%	92.16	4.86
China		187%	-25%	-55%	-88%	11,403.32	7.95
Colombia		13%	-11%	-66%	-73%	90.92	1.81
Comoros		342%	61%	349%	64%	0.21	0.25
Congo		102%	-10%	-26%	-67%	7.25	1.35
Cook Islands		-36%	-53%	-84%	-88%	0.04	2.46
Costa Rica		101%	-19%	-38%	-75%	9.01	1.79
Côte d'Ivoire		272%	48%	138%	-5%	14.40	0.56
Croatia		-52%	-44%	-91%	-89%	19.72	4.77
Cuba		-53%	-48%	-88%	-87%	27.82	2.45
Curaçao		-8%	-19%	-89%	-91%	8.49	51.96
Cyprus		2%	-42%	-83%	-90%	7.64	6.37
Czechia		-59%	-44%	-94%	-92%	111.64	10.44
Democratic Republic of the Congo		218%	258%	520%	599%	2.84	0.03
Denmark		-64%	-60%	-94%	-93%	32.04	5.55
Djibouti		-33%	-34%	-72%	-73%	1.07	1.10
Dominica		159%	3%	-21%	-69%	0.13	1.81
Dominican Republic		101%	-25%	-47%	-80%	25.34	2.36
Ecuador		62%	-25%	-60%	-81%	44.95	2.59
Egypt		77%	-24%	-55%	-81%	254.04	2.53
El Salvador		105%	-20%	-21%	-69%	8.00	1.24
Equatorial Guinea		2058%	-52%	455%	-88%	3.32	2.45
Eritrea		318%	89%	325%	93%	0.88	0.25

reference values selected scenariotype: RM-5 rad	target year 2030		target year 2050		projection emissions 2019 in Mill. t	per capita emissions 2019 in t	
	vs. reference year	1990	2010	1990			2010
Estonia		-61%	-33%	-95%	-91%	24.99	18.85
Eswatini		44%	-58%	-40%	-82%	1.26	1.09
Ethiopia		826%	223%	1089%	314%	17.26	0.15
Falkland Islands		86%	4%	-74%	-86%	0.04	12.00
Faroese		324%	236%	704%	536%	0.00	0.04
Fiji		-13%	-26%	-71%	-75%	1.35	1.52
Finland		-49%	-55%	-92%	-93%	48.87	8.83
France and Monaco		-49%	-48%	-91%	-90%	322.88	4.95
French Guiana		33%	-7%	-68%	-77%	0.78	2.69
French Polynesia		-55%	-57%	-87%	-88%	0.59	2.11
Gabon		-33%	-32%	-85%	-84%	6.57	3.03
Georgia		-80%	13%	-95%	-73%	11.19	2.80
Germany		-57%	-46%	-93%	-92%	730.08	8.74
Ghana		383%	33%	173%	-25%	20.63	0.68
Gibraltar		183%	-14%	-64%	-89%	0.68	20.27
Greece		-43%	-50%	-91%	-92%	74.37	7.10
Greenland		10309%	-52%	1444%	-93%	0.53	9.36
Grenada		146%	29%	-39%	-68%	0.29	2.59
Guadeloupe		65%	22%	-72%	-79%	2.37	5.94
Guatemala		269%	23%	45%	-52%	21.07	1.20
Guinea		196%	129%	208%	138%	3.08	0.24
Guinea-Bissau		141%	17%	154%	23%	0.45	0.24
Guyana		268%	58%	-7%	-60%	1.96	2.51
Haiti		195%	43%	160%	26%	3.69	0.33
Honduras		206%	-10%	28%	-62%	10.53	1.08
Hong Kong		-20%	-36%	-86%	-89%	45.12	6.07
Hungary		-55%	-37%	-92%	-89%	53.56	5.53
Iceland		7%	-32%	-85%	-91%	4.19	12.36
India		192%	-1%	-15%	-71%	2,693.19	1.97
Indonesia		125%	-12%	-37%	-76%	572.68	2.12
Iran		120%	-21%	-67%	-88%	747.59	9.02
Iraq		71%	-6%	-69%	-83%	193.21	4.92
Ireland		-33%	-47%	-89%	-92%	36.43	7.46
Israel and Palestine, State of		17%	-43%	-79%	-90%	67.44	5.00
Italy, San Marino and the Holy See		-52%	-51%	-92%	-91%	341.32	5.63
Jamaica		-33%	-32%	-84%	-84%	8.02	2.72
Japan		-38%	-40%	-91%	-91%	1,188.26	9.37
Jordan		61%	-20%	-60%	-80%	26.00	2.57
Kazakhstan		-25%	-20%	-90%	-90%	317.66	17.12
Kenya		183%	39%	119%	8%	21.53	0.41
Kiribati		59%	-38%	53%	-40%	0.03	0.28
Kuwait		87%	-30%	-77%	-91%	102.36	24.33
Kyrgyzstan		-71%	4%	-91%	-66%	10.38	1.62
Laos		1276%	72%	823%	15%	3.71	0.52
Latvia		-76%	-46%	-95%	-89%	7.77	4.07
Lebanon		165%	-23%	-45%	-84%	25.60	3.73
Lesotho		553%	23%	463%	6%	0.73	0.34
Liberia		208%	123%	209%	124%	1.28	0.26
Libya		-6%	-43%	-86%	-91%	58.02	8.56
Lithuania		-74%	-35%	-95%	-88%	14.81	5.37
Luxembourg		-48%	-46%	-93%	-93%	10.22	16.61
Macao		-13%	-28%	-76%	-80%	1.32	2.07
Madagascar		694%	153%	880%	212%	4.55	0.17
Malawi		555%	104%	916%	216%	1.71	0.09
Malaysia		175%	-27%	-58%	-89%	263.84	8.26
Maldives		792%	-34%	183%	-79%	0.90	1.69
Mali		617%	376%	1163%	738%	1.13	0.06
Malta		-60%	-64%	-91%	-92%	1.51	3.43
Martinique		59%	12%	-74%	-81%	2.48	6.60
Mauritania		258%	19%	92%	-36%	3.33	0.74
Mauritius		135%	-24%	-50%	-84%	4.50	3.55

reference values selected scenario type: RM-5 rad	target year 2030		target year 2050		projection emissions 2019 in Mill. t	per capita emissions 2019 in t	
	vs. reference year	1990	2010	1990			2010
Mexico		5%	-36%	-79%	-87%	495.57	3.88
Moldova		-82%	-32%	-95%	-82%	8.85	2.19
Mongolia		-7%	-15%	-84%	-86%	20.07	6.22
Morocco		102%	-13%	-40%	-74%	70.17	1.92
Mozambique		680%	151%	580%	118%	10.15	0.33
Myanmar/Burma		426%	200%	215%	79%	33.54	0.62
Namibia		92%	-4%	-42%	-71%	4.57	1.83
Nepal		772%	93%	617%	59%	10.59	0.37
Netherlands		-41%	-49%	-91%	-92%	158.42	9.27
New Caledonia		176%	-10%	-66%	-89%	7.54	26.65
New Zealand		-6%	-34%	-85%	-90%	37.07	7.75
Nicaragua		127%	-4%	3%	-57%	6.31	0.96
Niger		341%	170%	566%	307%	2.33	0.10
Nigeria		18%	-3%	-25%	-38%	113.69	0.57
North Korea		-83%	-59%	-94%	-84%	32.45	1.26
North Macedonia		-55%	-44%	-91%	-89%	8.25	3.96
Norway		-16%	-33%	-88%	-90%	51.84	9.64
Oman		235%	-1%	-57%	-87%	87.53	17.59
Pakistan		121%	-6%	2%	-56%	201.51	0.93
Palau		-64%	-63%	-96%	-96%	1.31	72.59
Panama		176%	-20%	-34%	-81%	12.03	2.83
Papua New Guinea		43%	7%	4%	-22%	3.99	0.45
Paraguay		134%	2%	-3%	-57%	7.70	1.09
Peru		77%	-17%	-45%	-74%	57.19	1.76
Philippines		132%	15%	-18%	-59%	151.87	1.40
Poland		-44%	-37%	-92%	-91%	342.61	9.04
Portugal		-26%	-39%	-87%	-89%	53.18	5.20
Puerto Rico		8%	21%	-55%	-50%	3.26	1.11
Qatar		265%	-11%	-57%	-90%	104.60	36.93
Réunion		88%	-36%	-59%	-86%	3.06	3.44
Romania		-73%	-39%	-95%	-88%	81.37	4.20
Russia		-55%	-36%	-94%	-91%	1,779.97	12.20
Rwanda		284%	155%	500%	298%	1.14	0.09
Saint Helena, Ascension and Tristan da		20%	-1%	-72%	-77%	0.02	3.01
Saint Kitts and Nevis		338%	6%	-18%	-80%	0.25	4.66
Saint Lucia		219%	13%	-10%	-68%	0.38	2.06
Saint Pierre and Miquelon		-67%	36%	-96%	-82%	0.08	13.88
Saint Vincent and the Grenadines		218%	12%	1%	-64%	0.19	1.67
Samoa		-21%	-14%	-56%	-52%	0.14	0.69
São Tomé and Príncipe		141%	-15%	33%	-53%	0.15	0.71
Saudi Arabia		117%	-22%	-72%	-90%	628.82	18.35
Senegal		243%	17%	95%	-34%	10.99	0.67
Serbia and Montenegro		-46%	-40%	-91%	-90%	59.25	6.30
Seychelles		110%	-35%	-70%	-91%	1.01	10.30
Sierra Leone		131%	133%	170%	172%	1.49	0.19
Singapore		9%	-32%	-84%	-90%	57.43	9.89
Slovakia		-61%	-40%	-94%	-90%	39.12	7.17
Slovenia		-43%	-47%	-91%	-92%	15.63	7.52
Solomon Islands		14%	-17%	29%	-7%	0.14	0.20
Somalia		219%	168%	451%	362%	0.97	0.06
South Africa		-8%	-38%	-86%	-90%	474.51	8.10
South Korea		58%	-29%	-79%	-90%	714.26	13.94
Spain and Andorra		-26%	-41%	-87%	-90%	282.82	6.04
Sri Lanka		295%	21%	61%	-51%	24.14	1.13
Sudan and South Sudan		235%	11%	162%	-13%	21.67	0.40
Suriname		56%	-18%	-68%	-83%	2.30	3.95
Sweden		-53%	-49%	-91%	-90%	44.41	4.42
Switzerland and Liechtenstein		-44%	-46%	-90%	-90%	40.74	4.72
Syria		-42%	-69%	-82%	-90%	29.10	1.70
Taiwan		40%	-36%	-81%	-91%	290.21	12.21
Tajikistan		-63%	47%	-78%	-15%	6.09	0.65

reference values selected scenariotype: RM-5 rad	target year 2030		target year 2050		projection emissions 2019 in Mill. t	per capita emissions 2019 in t	
	vs. reference year	1990	2010	1990			2010
Tanzania		584%	101%	616%	110%	13.80	0.24
Thailand		89%	-28%	-62%	-86%	285.68	4.10
The Gambia		313%	30%	311%	29%	0.62	0.26
Timor-Leste		139%	23%	156%	32%	0.29	0.23
Togo		246%	4%	182%	-15%	3.02	0.37
Tonga		32%	-52%	-48%	-81%	0.13	1.20
Trinidad and Tobago		69%	-45%	-79%	-93%	35.95	25.77
Tunisia		44%	-24%	-66%	-82%	33.82	2.89
Turkey		75%	-15%	-68%	-85%	428.38	5.13
Turkmenistan		13%	-16%	-85%	-89%	86.43	14.55
Turks and Caicos Islands		1406%	-1%	188%	-81%	0.17	4.49
Uganda		1149%	113%	1630%	195%	5.64	0.13
Ukraine		-85%	-62%	-97%	-93%	188.97	4.30
United Arab Emirates		126%	-25%	-72%	-91%	216.65	22.17
United Kingdom		-62%	-56%	-93%	-92%	363.06	5.38
United States		-37%	-43%	-92%	-92%	5,334.43	16.21
Uruguay		17%	-29%	-67%	-80%	7.08	2.05
Uzbekistan		-48%	-41%	-88%	-87%	102.01	3.09
Vanuatu		-37%	-32%	-40%	-35%	0.08	0.28
Venezuela		-31%	-62%	-86%	-92%	115.40	4.05
Vietnam		766%	13%	104%	-73%	278.85	2.89
Western Sahara		63%	-12%	11%	-40%	0.29	0.50
Yemen		48%	-63%	14%	-71%	11.95	0.41
Zambia		70%	125%	59%	109%	5.31	0.30
Zimbabwe		-45%	-5%	-74%	-56%	13.40	0.91
EU28		-53%	-48%	-92%	-91%	3,388.14	6.61
EU27		-52%	-46%	-92%	-91%	3,023.61	6.79
sub sum						43,476.37	
EU27						-3,023.61	
EU28						-3,388.14	
sum						37,064.62	
base data: projection global 2019*						37,064.62	
difference						0.00	

* excl. FOLU resp. npLUC and international shipping and aviation (ISA)

reference values scenario: RM-5 rad sorted by 'emissions 2019'	target year 2030		target year 2050		projection emissions 2019 in Mill. t	per capita emissions 2019 in t	share in the global emissions in 2019	share cumulative emissions without EU
	vs. reference year	1990	2010	1990				
China	187%	-25%	-55%	-88%	11,403	8.0	30.8%	31%
United States	-37%	-43%	-92%	-92%	5,334	16.2	14.4%	45%
EU28	-53%	-48%	-92%	-91%	3,388	6.6	9.1%	45%
EU27	-52%	-46%	-92%	-91%	3,024	6.8	8.2%	45%
India	192%	-1%	-15%	-71%	2,693	2.0	7.3%	52%
Russia	-55%	-36%	-94%	-91%	1,780	12.2	4.8%	57%
Japan	-38%	-40%	-91%	-91%	1,188	9.4	3.2%	60%
Iran	120%	-21%	-67%	-88%	748	9.0	2.0%	62%
Germany	-57%	-46%	-93%	-92%	730	8.7	2.0%	64%
South Korea	58%	-29%	-79%	-90%	714	13.9	1.9%	66%
Saudi Arabia	117%	-22%	-72%	-90%	629	18.3	1.7%	68%
Canada	-22%	-37%	-90%	-92%	598	16.0	1.6%	70%
Indonesia	125%	-12%	-37%	-76%	573	2.1	1.5%	71%
Brazil	40%	-28%	-64%	-81%	503	2.4	1.4%	73%
Mexico	5%	-36%	-79%	-87%	496	3.9	1.3%	74%
South Africa	-8%	-38%	-86%	-90%	475	8.1	1.3%	75%
Turkey	75%	-15%	-68%	-85%	428	5.1	1.2%	76%
Australia	-11%	-40%	-88%	-92%	415	16.5	1.1%	77%
United Kingdom	-62%	-56%	-93%	-92%	363	5.4	1.0%	78%
Poland	-44%	-37%	-92%	-91%	343	9.0	0.9%	79%
Italy, San Marino and the Holy S	-52%	-51%	-92%	-91%	341	5.6	0.9%	80%

sum emissions 2020 - 2100 - national budgets -	RM-1	RM-2	RM-3	RM-4	RM-5	RM-6	average	scope	
	const	exp	lin	quadr	rad	abs	budget	average	
in Mill. t							RM 2 - 6	budget	budget
Afghanistan	494.67	314.45	367.28	307.47	412.84	371.07	354.6	33	
Albania	83.61	74.14	76.96	73.81	79.34	77.11	76.3	16	
Algeria	2,357.37	2,316.25	2,329.91	2,315.94	2,339.73	2,328.77	2,326.1	14	
Angola	640.12	509.85	548.24	504.97	581.10	550.73	539.0	19	
Anguilla	0.47	0.43	0.44	0.43	0.45	0.44	0.4	15	
Antigua and Barbuda	8.33	8.51	8.46	8.52	8.41	8.45	8.5	13	
Argentina	2,814.29	2,804.35	2,809.26	2,805.55	2,811.06	2,806.97	2,807.4	13	
Armenia	96.71	87.97	90.59	87.68	92.78	90.70	89.9	15	
Aruba	12.38	12.87	12.74	12.90	12.61	12.72	12.8	13	
Australia	4,981.60	5,283.81	5,199.37	5,298.82	5,121.49	5,187.82	5,218.3	13	
Austria	913.37	943.15	935.13	944.87	927.35	933.61	936.8	13	
Azerbaijan	503.67	489.86	494.25	489.60	497.62	494.12	493.1	14	
Bahamas	39.24	40.49	40.15	40.56	39.83	40.09	40.2	13	
Bahrain	405.64	432.67	425.09	434.00	418.13	424.09	426.8	12	
Bangladesh	2,682.37	1,960.87	2,172.89	1,933.34	2,355.10	2,187.41	2,121.9	22	
Barbados	41.36	43.40	42.84	43.51	42.31	42.75	43.0	13	
Belarus	845.08	865.72	860.31	867.03	854.86	859.07	861.4	13	
Belgium	1,333.67	1,386.23	1,371.88	1,389.10	1,358.21	1,369.45	1,375.0	13	
Belize	8.99	7.49	7.93	7.44	8.31	7.96	7.8	17	
Benin	203.67	152.31	167.41	150.35	180.38	168.43	163.8	21	
Bermuda	5.67	5.82	5.78	5.82	5.74	5.77	5.8	13	
Bhutan	25.57	23.38	24.04	23.30	24.59	24.06	23.9	15	
Bolivia	379.57	345.85	355.94	344.71	364.39	356.39	353.5	15	
Bosnia and Herzegovina	345.14	356.88	353.71	357.55	350.65	353.13	354.4	13	
Botswana	109.46	105.75	106.91	105.66	107.82	106.90	106.6	14	
Brazil	7,795.10	7,252.81	7,416.30	7,235.42	7,551.78	7,422.05	7,375.7	15	
British Virgin Islands	2.05	2.06	2.06	2.06	2.06	2.06	2.1	13	
Brunei	84.49	89.58	88.16	89.84	86.85	87.96	88.5	13	
Bulgaria	576.21	587.00	584.27	587.76	581.39	583.50	584.8	13	
Burkina Faso	242.18	143.90	172.69	140.08	197.54	174.78	165.8	44	
Burundi	116.54	58.88	75.76	56.63	90.34	77.00	71.7	217	
Cambodia	288.25	216.84	237.84	214.12	255.87	239.25	232.8	21	
Cameroon	419.12	304.02	337.84	299.62	366.91	340.16	329.7	23	
Canada	7,180.44	7,609.63	7,489.79	7,631.02	7,379.17	7,473.30	7,516.6	13	
Cape Verde	17.50	15.83	16.33	15.78	16.75	16.36	16.2	15	
Cayman Islands	6.46	6.67	6.61	6.68	6.56	6.60	6.6	13	
Central African Republic	51.79	28.42	35.26	27.50	41.17	35.76	33.6	71	
Chad	163.71	84.21	107.48	81.10	127.59	109.20	101.9	150	
Chile	1,236.08	1,235.95	1,236.88	1,236.65	1,236.59	1,235.77	1,236.4	13	
China	144,041.00	148,608.49	147,381.51	148,874.70	146,187.01	147,145.46	147,639.4	13	
Colombia	1,528.97	1,369.70	1,417.18	1,364.16	1,457.16	1,419.54	1,405.5	15	
Comoros	10.76	6.71	7.90	6.55	8.92	7.98	7.6	36	
Congo	135.33	115.76	121.56	115.05	126.49	121.90	120.2	17	
Cook Islands	0.66	0.62	0.63	0.62	0.64	0.63	0.6	15	
Costa Rica	152.12	136.04	140.83	135.48	144.87	141.07	139.7	15	
Côte d'Ivoire	415.70	301.23	334.86	296.86	363.77	337.18	326.8	23	
Croatia	265.22	264.82	265.13	264.95	265.16	264.90	265.0	13	
Cuba	427.98	399.71	408.25	398.82	415.31	408.53	406.1	15	
Curaçao	98.43	106.38	104.13	106.75	102.09	103.86	104.6	12	
Cyprus	98.79	100.65	100.18	100.79	99.69	100.05	100.3	13	
Czechia	1,377.46	1,439.02	1,422.08	1,442.28	1,406.12	1,419.40	1,425.8	13	
Democratic Republic of the Congo	881.08	447.49	574.38	430.52	684.07	583.76	544.0	192	
Denmark	421.75	425.81	424.93	426.21	423.79	424.45	425.0	13	
Djibouti	21.77	17.98	19.10	17.84	20.05	19.17	18.8	18	
Dominica	2.18	1.96	2.02	1.95	2.08	2.03	2.0	15	
Dominican Republic	394.00	366.16	374.55	365.27	381.50	374.85	372.5	15	
Ecuador	682.38	641.42	653.84	640.16	664.05	654.19	650.7	14	
Egypt	3,878.27	3,635.76	3,709.15	3,628.21	3,769.64	3,711.37	3,690.8	15	
El Salvador	154.30	130.10	137.26	129.21	143.35	137.69	135.5	17	
Equatorial Guinea	51.07	47.67	48.70	47.57	49.55	48.73	48.4	15	
Eritrea	44.23	27.55	32.44	26.91	36.66	32.79	31.3	36	

sum emissions 2020 - 2100 - national budgets -	RM-1	RM-2	RM-3	RM-4	RM-5	RM-6	average	scope
	const	exp	lin	quadr	rad	abs	budget	average
in Mill. t							RM 2 - 6	budget
Estonia	297.87	317.01	311.65	317.95	306.72	310.93	312.9	13
Eswatini	25.55	21.08	22.40	20.91	23.53	22.48	22.1	18
Ethiopia	1,292.84	746.95	906.84	725.70	1,044.89	918.49	868.6	50
Falkland Islands	0.49	0.52	0.51	0.52	0.51	0.51	0.5	13
Faroes	0.50	0.26	0.33	0.25	0.39	0.33	0.3	160
Fiji	24.11	21.03	21.95	20.92	22.72	22.00	21.7	16
Finland	611.37	634.03	627.87	635.29	621.97	626.79	629.2	13
France and Monaco	4,318.76	4,324.50	4,325.92	4,327.20	4,323.37	4,321.92	4,324.6	13
French Guiana	11.77	11.12	11.32	11.10	11.48	11.32	11.3	14
French Polynesia	9.45	8.65	8.89	8.63	9.09	8.90	8.8	15
Gabon	96.19	92.06	93.33	91.95	94.36	93.34	93.0	14
Georgia	166.63	158.08	160.69	157.83	162.81	160.74	160.0	14
Germany	9,140.99	9,475.05	9,384.31	9,493.72	9,297.30	9,368.29	9,403.7	13
Ghana	532.70	401.02	439.75	396.02	472.99	442.36	430.4	21
Gibraltar	8.12	8.65	8.50	8.68	8.36	8.48	8.5	12
Greece	950.41	974.55	968.20	976.07	961.84	966.79	969.5	13
Greenland	6.60	6.86	6.79	6.88	6.72	6.78	6.8	13
Grenada	4.40	4.14	4.22	4.13	4.29	4.22	4.2	14
Guadeloupe	30.99	31.43	31.32	31.46	31.20	31.28	31.3	13
Guatemala	412.12	345.45	365.16	343.00	381.95	366.35	360.4	17
Guinea	160.06	99.01	116.91	96.65	132.34	118.20	112.6	37
Guinea-Bissau	23.96	14.77	17.47	14.42	19.79	17.66	16.8	37
Guyana	30.03	28.12	28.70	28.06	29.18	28.72	28.6	15
Haiti	152.22	99.38	114.87	97.34	128.23	115.98	111.2	30
Honduras	215.41	177.27	188.53	175.85	198.14	189.23	185.8	18
Hong Kong	587.12	596.32	594.06	597.03	591.58	593.32	594.5	13
Hungary	705.42	712.04	710.62	712.71	708.76	709.83	710.8	13
Iceland	51.08	53.70	52.97	53.83	52.30	52.87	53.1	13
India	44,070.13	39,979.47	41,202.22	39,839.86	42,227.92	41,258.72	40,901.6	15
Indonesia	9,176.21	8,406.62	8,637.29	8,380.86	8,830.04	8,647.13	8,580.4	15
Iran	9,334.83	9,690.02	9,593.27	9,709.65	9,500.85	9,576.58	9,614.1	13
Iraq	2,587.38	2,589.24	2,590.55	2,590.79	2,589.42	2,588.19	2,589.6	13
Ireland	463.07	476.14	472.66	476.93	469.23	471.94	473.4	13
Israel and Palestine, State of	900.93	902.69	902.82	903.27	902.15	901.97	902.6	13
Italy, San Marino and the Holy See	4,484.14	4,531.98	4,521.25	4,536.46	4,507.99	4,516.12	4,522.8	13
Jamaica	120.29	113.75	115.74	113.55	117.36	115.78	115.2	14
Japan	14,788.99	15,378.32	15,217.29	15,410.50	15,064.14	15,190.23	15,252.1	13
Jordan	395.27	371.32	378.58	370.58	384.55	378.78	376.8	14
Kazakhstan	3,803.36	4,038.18	3,972.52	4,049.81	3,912.03	3,963.61	3,987.2	13
Kenya	759.59	517.40	588.47	508.08	649.67	593.47	571.4	27
Kiribati	1.53	0.97	1.13	0.95	1.27	1.14	1.1	33
Kuwait	1,208.21	1,292.78	1,269.02	1,296.88	1,247.28	1,265.96	1,274.4	12
Kyrgyzstan	181.08	159.53	165.93	158.77	171.35	166.28	164.4	16
Laos	112.42	80.20	89.66	78.96	97.80	90.32	87.4	24
Latvia	107.19	105.62	106.15	105.62	106.53	106.10	106.0	14
Lebanon	358.98	350.94	353.54	350.82	355.48	353.41	352.8	14
Lesotho	29.06	19.12	22.03	18.73	24.54	22.24	21.3	29
Liberia	62.86	39.35	46.24	38.44	52.18	46.74	44.6	35
Libya	727.80	753.64	746.64	755.10	739.90	745.38	748.1	13
Lithuania	195.82	197.23	196.96	197.40	196.55	196.75	197.0	13
Luxembourg	122.60	130.07	127.98	130.44	126.06	127.70	128.4	13
Macao	21.36	19.51	20.07	19.45	20.53	20.09	19.9	15
Madagascar	315.64	184.69	223.05	179.60	256.16	225.84	213.9	47
Malawi	201.73	109.80	136.72	106.22	159.97	138.69	130.3	76
Malaysia	3,320.75	3,432.59	3,402.40	3,438.99	3,373.20	3,396.80	3,408.8	13
Maldives	15.42	13.68	14.20	13.62	14.64	14.22	14.1	16
Mali	205.11	107.41	136.00	103.59	160.72	138.11	129.2	114
Malta	21.54	20.89	21.10	20.88	21.26	21.09	21.0	14
Martinique	31.93	32.60	32.43	32.65	32.25	32.38	32.5	13
Mauritania	82.20	62.87	68.56	62.14	73.44	68.94	67.2	20
Mauritius	63.76	62.02	62.58	61.99	63.00	62.56	62.4	14

sum emissions 2020 - 2100 - national budgets -	RM-1	RM-2	RM-3	RM-4	RM-5	RM-6	average	scope	
	const	exp	lin	quadr	rad	abs	budget	average	
in Mill. t							RM 2 - 6	budget	
Mexico	6,898.07	6,768.30	6,811.03	6,767.01	6,842.16	6,807.90	6,799.3	14	
Moldova	140.49	129.30	132.66	128.93	135.46	132.80	131.8	15	
Mongolia	260.32	264.82	263.70	265.15	262.49	263.36	263.9	13	
Morocco	1,156.69	1,045.72	1,078.86	1,041.91	1,106.70	1,080.43	1,070.7	15	
Mozambique	412.72	270.48	312.19	264.98	348.15	315.16	302.2	30	
Myanmar/Burma	910.97	673.79	743.51	664.76	803.40	748.26	726.7	22	
Namibia	76.45	68.62	70.95	68.34	72.92	71.07	70.4	15	
Nepal	400.52	267.56	306.57	262.44	340.17	309.33	297.2	28	
Netherlands	1,973.49	2,051.14	2,029.94	2,055.39	2,009.76	2,026.35	2,034.5	13	
New Caledonia	88.70	95.06	93.27	95.37	91.63	93.04	93.7	12	
New Zealand	469.39	483.62	479.81	484.46	476.09	479.06	480.6	13	
Nicaragua	135.91	109.50	117.29	108.51	123.95	117.78	115.4	18	
Niger	254.50	139.67	173.29	135.19	202.33	175.75	165.2	71	
Nigeria	3,261.63	2,368.30	2,630.78	2,334.18	2,856.39	2,648.81	2,567.7	23	
North Korea	620.98	525.41	553.69	521.92	577.76	555.37	546.8	17	
North Macedonia	114.47	112.52	113.17	112.50	113.63	113.11	113.0	14	
Norway	643.64	670.13	662.88	671.57	656.00	661.68	664.5	13	
Oman	1,046.62	1,112.00	1,093.71	1,115.23	1,076.87	1,091.24	1,097.8	13	
Pakistan	4,415.50	3,534.41	3,794.15	3,501.44	4,016.37	3,810.86	3,731.4	19	
Palau	15.08	16.34	15.98	16.40	15.66	15.94	16.1	12	
Panama	178.65	169.72	172.45	169.46	174.67	172.50	171.8	14	
Papua New Guinea	131.28	91.26	103.00	89.72	113.12	103.83	100.2	25	
Paraguay	156.67	129.19	137.30	128.17	144.23	137.81	135.3	18	
Peru	969.99	865.55	896.66	861.90	922.88	898.24	889.0	16	
Philippines	2,788.97	2,402.06	2,516.73	2,388.07	2,614.09	2,523.31	2,488.9	16	
Poland	4,276.90	4,440.23	4,395.73	4,449.25	4,353.24	4,388.07	4,405.3	13	
Portugal	706.37	709.87	709.36	710.42	708.29	708.65	709.3	13	
Puerto Rico	65.88	54.50	57.86	54.08	60.73	58.07	57.0	17	
Qatar	1,220.34	1,314.14	1,287.70	1,318.62	1,263.61	1,284.41	1,293.7	12	
Réunion	43.60	42.29	42.70	42.26	43.02	42.69	42.6	14	
Romania	1,117.14	1,103.79	1,108.48	1,103.89	1,111.58	1,107.79	1,107.1	14	
Russia	21,721.61	22,826.52	22,520.32	22,883.43	22,234.70	22,474.96	22,588.0	13	
Rwanda	136.45	74.12	92.37	71.69	108.14	93.71	88.0	77	
Saint Helena, Ascension and Tristan da Cunha	0.27	0.26	0.26	0.26	0.26	0.26	0.3	14	
Saint Kitts and Nevis	3.32	3.31	3.32	3.31	3.32	3.31	3.3	13	
Saint Lucia	6.08	5.55	5.71	5.54	5.85	5.72	5.7	15	
Saint Pierre and Miquelon	0.98	1.03	1.02	1.04	1.00	1.02	1.0	13	
Saint Vincent and the Grenadines	3.19	2.83	2.94	2.82	3.03	2.94	2.9	16	
Samoa	3.49	2.64	2.89	2.60	3.10	2.90	2.8	21	
São Tomé and Príncipe	3.84	2.91	3.18	2.88	3.42	3.20	3.1	21	
Saudi Arabia	7,504.91	7,982.08	7,848.50	8,005.59	7,725.63	7,830.59	7,878.5	13	
Senegal	284.69	214.08	234.84	211.39	252.67	236.24	229.8	21	
Serbia and Montenegro	767.43	781.35	777.85	782.35	774.12	776.83	778.5	13	
Seychelles	12.43	12.98	12.83	13.01	12.69	12.81	12.9	13	
Sierra Leone	93.37	55.60	66.67	54.14	76.22	67.47	64.0	43	
Singapore	711.59	741.72	733.46	743.34	725.64	732.11	735.3	13	
Slovakia	499.45	512.41	508.99	513.22	505.58	508.24	509.7	13	
Slovenia	198.58	204.28	202.76	204.62	201.27	202.45	203.1	13	
Solomon Islands	8.11	4.88	5.82	4.75	6.64	5.89	5.6	41	
Somalia	162.07	85.40	107.84	82.40	127.24	109.50	102.5	106	
South Africa	5,982.98	6,178.59	6,125.91	6,189.89	6,074.80	6,115.97	6,137.0	13	
South Korea	8,644.85	9,124.98	8,991.35	9,149.26	8,867.44	8,972.36	9,021.1	13	
Spain and Andorra	3,682.46	3,739.14	3,725.27	3,743.53	3,709.97	3,720.65	3,727.7	13	
Sri Lanka	483.74	401.42	425.74	398.38	446.48	427.24	419.9	17	
Sudan and South Sudan	773.90	525.31	598.25	515.74	661.07	603.39	580.8	27	
Suriname	31.88	31.33	31.51	31.33	31.64	31.50	31.5	14	
Sweden	604.50	599.90	601.67	600.06	602.69	601.24	601.1	14	
Switzerland and Liechtenstein	548.94	547.62	548.40	547.88	548.59	547.94	548.1	13	
Syria	498.69	442.89	459.50	440.93	473.51	460.36	455.4	16	
Taiwan	3,541.42	3,721.61	3,671.67	3,730.89	3,625.09	3,664.27	3,682.7	13	
Tajikistan	160.56	119.97	131.91	118.43	142.16	132.71	129.0	21	

sum emissions 2020 - 2100 - national budgets -	RM-1 const	RM-2 exp	RM-3 lin	RM-4 quadr	RM-5 rad	RM-6 abs	average budget RM 2 - 6	scope average budget
in Mill. t								
Tanzania	724.55	447.05	528.38	436.29	598.54	534.24	508.9	37
Thailand	3,938.20	3,883.10	3,901.97	3,883.13	3,914.93	3,899.73	3,896.6	14
The Gambia	29.97	18.80	22.08	18.37	24.90	22.31	21.3	35
Timor-Leste	15.99	9.79	11.60	9.55	13.17	11.74	11.2	38
Togo	113.48	75.95	86.96	74.50	96.45	87.74	84.3	28
Tonga	2.46	2.06	2.18	2.05	2.28	2.18	2.1	17
Trinidad and Tobago	423.59	453.71	445.24	455.16	437.50	444.15	447.2	12
Tunisia	499.99	476.11	483.42	475.43	489.35	483.54	481.6	14
Turkey	5,700.29	5,723.16	5,720.58	5,727.34	5,713.33	5,714.94	5,719.9	13
Turkmenistan	1,043.57	1,102.96	1,086.41	1,105.94	1,071.09	1,084.08	1,090.1	13
Turks and Caicos Islands	2.33	2.31	2.32	2.31	2.32	2.32	2.3	14
Uganda	497.24	280.41	343.91	271.96	398.75	348.55	328.7	58
Ukraine	2,584.79	2,558.71	2,568.16	2,559.14	2,574.11	2,566.46	2,565.3	14
United Arab Emirates	2,565.83	2,740.47	2,691.45	2,748.97	2,646.53	2,685.06	2,702.5	12
United Kingdom	4,800.02	4,835.39	4,828.53	4,839.56	4,818.34	4,823.40	4,829.0	13
United States	64,040.64	67,895.66	66,818.90	68,087.51	65,825.38	66,671.17	67,059.7	13
Uruguay	114.61	104.52	107.54	104.17	110.07	107.67	106.8	15
Uzbekistan	1,485.63	1,425.12	1,443.80	1,423.53	1,458.76	1,443.89	1,439.0	14
Vanuatu	3.90	2.48	2.89	2.42	3.25	2.92	2.8	33
Venezuela	1,594.67	1,570.45	1,578.64	1,570.39	1,584.38	1,577.79	1,576.3	14
Vietnam	4,122.79	3,925.66	3,986.02	3,920.08	4,034.94	3,986.95	3,970.7	14
Western Sahara	9.02	6.39	7.16	6.29	7.83	7.22	7.0	24
Yemen	421.45	287.12	326.54	281.95	360.48	329.31	317.1	27
Zambia	235.18	150.82	175.56	147.56	196.88	177.32	169.6	32
Zimbabwe	296.00	236.18	253.81	233.94	268.90	254.95	249.6	19
EU28	43,643.30	44,565.26	44,328.02	44,627.32	44,083.20	44,267.33	44,374.2	13
EU27	38,826.56	39,711.64	39,481.69	39,769.45	39,247.44	39,426.18	39,527.3	13
sub sum 2020 - 2100	580,498	581,800	581,836	582,184	581,358	581,286	581,693	
EU27	-38,827	-39,712	-39,482	-39,769	-39,247	-39,426	-39,527	
EU28	-43,643	-44,565	-44,328	-44,627	-44,083	-44,267	-44,374	
sum	498,028	497,523	498,027	497,787	498,028	497,593	497,792	
base data: budget 2020 - 2100*	498,000	498,000	498,000	498,000	498,000	498,000	498,000	
rounding differences	28	-477	27	-213	28	-407	-208	
difference in %	0.01%	-0.10%	0.01%	-0.04%	0.01%	-0.08%	-0.04%	
scenario type	RM-1 const	RM-2 exp	RM-3 lin	RM-4 quadr	RM-5 rad	RM-6 abs	average RM 2 - 6	
implicit population weighting vs. emissions**	15.1%	7.4%	9.6%	7.1%	11.6%	9.8%	9.1%	
global (start) change rate 2020	-5.9%	-1.5%	-1.5%	-1.5%	-1.5%	-2.7%		
global change rate 2030 vs. 2010	-44%	-15%	-24%	-14%	-33%	-22%		
global overshoot in Gt	65	177	127	171	86	181		
base data: global CO2 budget 2018 - 2100 incl. FOLU and ISA in Gt:							680	

* excl. FOLU resp. npLUC and international shipping and aviation (ISA)

** these figures are only current if their determination was updated before this document was created

national budgets 2020 - 2100 sorted by 'average budget'	RM-1	RM-2	RM-3	RM-4	RM-5	RM-6	average	scope	share in the
	const	exp	lin	quadr	rad	abs	budget RM 2 - 6	average budget	global budget
in Mill. t									
China	144,041	148,608	147,382	148,875	146,187	147,145	147,639	13	29.7%
United States	64,041	67,896	66,819	68,088	65,825	66,671	67,060	13	13.5%
EU28	43,643	44,565	44,328	44,627	44,083	44,267	44,374	13	8.9%
India	44,070	39,979	41,202	39,840	42,228	41,259	40,902	15	8.2%
EU27	38,827	39,712	39,482	39,769	39,247	39,426	39,527	13	7.9%
Russia	21,722	22,827	22,520	22,883	22,235	22,475	22,588	13	4.5%
Japan	14,789	15,378	15,217	15,411	15,064	15,190	15,252	13	3.1%
Iran	9,335	9,690	9,593	9,710	9,501	9,577	9,614	13	1.9%
Germany	9,141	9,475	9,384	9,494	9,297	9,368	9,404	13	1.9%
South Korea	8,645	9,125	8,991	9,149	8,867	8,972	9,021	13	1.8%
Indonesia	9,176	8,407	8,637	8,381	8,830	8,647	8,580	15	1.7%
Saudi Arabia	7,505	7,982	7,848	8,006	7,726	7,831	7,878	13	1.6%
Canada	7,180	7,610	7,490	7,631	7,379	7,473	7,517	13	1.5%
Brazil	7,795	7,253	7,416	7,235	7,552	7,422	7,376	15	1.5%
Mexico	6,898	6,768	6,811	6,767	6,842	6,808	6,799	14	1.4%
South Africa	5,983	6,179	6,126	6,190	6,075	6,116	6,137	13	1.2%
Turkey	5,700	5,723	5,721	5,727	5,713	5,715	5,720	13	1.1%
Australia	4,982	5,284	5,199	5,299	5,121	5,188	5,218	13	1.0%
United Kingdom	4,800	4,835	4,829	4,840	4,818	4,823	4,829	13	1.0%
Italy, San Marino and the Holy See	4,484	4,532	4,521	4,536	4,508	4,516	4,523	13	0.9%
Poland	4,277	4,440	4,396	4,449	4,353	4,388	4,405	13	0.9%

central premises	
global CO2 budget 2018 - 2100	680 Gt
emissions in 2018 and 2019, FOLU resp. npLUC and ISA	-182 Gt
budget 2020 - 2100 to distribute in this tool	498 Gt
minimum annual global emissions	-4.35 Gt
convergence level	0.25 t / capita

gobal path properties	RM-1	RM-2	RM-3	RM-4	RM-5	RM-6
	const	exp	lin	quadr	rad	abs
implicit population weighting vs. emissions**	15%	7%	10%	7%	12%	10%
global (start) change rate 2020	-5.9%	-1.5%	-1.5%	-1.5%	-1.5%	-2.7%
global change rate 2030 vs. 2010	-44%	-15%	-24%	-14%	-33%	-22%
global overshoot in Gt	65	177	127	171	86	181

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the Regensburg Model means:
▶ monotonic national paths that are compatible with a given global budget
▶ converging emissions per capita
▶ implicit population weighting to emissions well below 50% depending on choosen global path (concrete values can be found above under properties)

[Download tool for the Regensburg Model: www.save-the-climate.info](http://www.save-the-climate.info)

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