

reference values selected scenariotype: RM-5 rad	target year 2030		target year 2050		emissions 2019 in Mill. t	per capita emissions 2019 in t	
	vs. reference year	1990	2010	1990			2010
Afghanistan		300%	83%	271%	70%	11.00	0.29
Albania		-50%	-27%	-88%	-82%	5.66	1.96
Algeria		49%	-13%	-80%	-88%	180.57	4.19
Angola		55%	-27%	-27%	-65%	25.82	0.81
Anguilla		133%	-41%	-34%	-83%	0.02	1.58
Antigua and Barbuda		27%	-21%	-85%	-91%	0.51	5.25
Argentina		3%	-42%	-87%	-93%	199.41	4.45
Armenia		-83%	-22%	-96%	-81%	5.92	2.00
Aruba		45%	-14%	-87%	-92%	0.78	7.37
Australia		-16%	-43%	-95%	-97%	433.38	17.20
Austria		-37%	-47%	-95%	-95%	72.36	8.08
Azerbaijan		-63%	-18%	-94%	-88%	35.98	3.58
Bahamas		-11%	-23%	-91%	-92%	2.45	6.29
Bahrain		59%	-34%	-92%	-97%	35.44	21.59
Bangladesh		441%	31%	193%	-29%	110.16	0.68
Barbados		167%	-11%	-83%	-94%	3.83	13.33
Belarus		-67%	-46%	-97%	-95%	66.34	7.02
Belgium		-51%	-51%	-96%	-96%	104.41	9.05
Belize		30%	-3%	-45%	-59%	0.37	0.95
Benin		1279%	12%	635%	-40%	8.15	0.69
Bermuda		-42%	-46%	-94%	-94%	0.35	5.60
Bhutan		486%	-8%	7%	-83%	2.12	2.78
Bolivia		120%	-3%	-50%	-78%	24.51	2.13
Bosnia and Herzegovina		-26%	-18%	-94%	-94%	33.50	10.15
Botswana		43%	15%	-76%	-80%	7.04	3.06
Brazil		22%	-37%	-74%	-87%	478.15	2.27
British Virgin Islands		159%	-4%	-64%	-87%	0.12	4.05
Brunei		13%	-48%	-93%	-97%	7.02	16.20
Bulgaria		-71%	-51%	-97%	-95%	43.31	6.19
Burkina Faso		1041%	131%	1240%	171%	3.64	0.18
Burundi		631%	577%	1260%	1160%	0.34	0.03
Cabo Verde		1148%	83%	213%	-54%	1.02	1.86
Cambodia		2532%	114%	968%	-13%	16.49	1.00
Cameroon		75%	10%	37%	-15%	10.10	0.39
Canada		-30%	-44%	-96%	-97%	584.85	15.63
Cayman Islands		50%	-22%	-85%	-92%	0.40	6.20
Central African Republic		418%	133%	645%	236%	0.49	0.10
Chad		776%	464%	1375%	849%	0.89	0.06
Chile		52%	-31%	-81%	-91%	89.89	4.74
China		162%	-31%	-77%	-94%	11,535.20	8.05
Colombia		-1%	-22%	-74%	-79%	86.55	1.72
Comoros		335%	59%	335%	59%	0.21	0.25
Congo		55%	-30%	-41%	-73%	5.80	1.08
Cook Islands		-41%	-57%	-88%	-91%	0.04	2.50
Costa Rica		84%	-26%	-52%	-81%	8.98	1.78
Côte d'Ivoire		238%	35%	117%	-13%	13.56	0.53
Croatia		-58%	-50%	-95%	-94%	19.12	4.63
Cuba		-54%	-47%	-91%	-90%	31.04	2.74
Curaçao		-42%	-49%	-97%	-98%	5.91	36.19
Cyprus		-10%	-49%	-91%	-95%	7.41	6.19
Czechia		-65%	-52%	-97%	-96%	105.69	9.89
Democratic Republic of the Congo		243%	286%	525%	604%	2.98	0.03
Denmark		-68%	-65%	-96%	-96%	31.12	5.39
Djibouti		-39%	-40%	-77%	-77%	1.05	1.08
Dominica		95%	-22%	-40%	-76%	0.10	1.44
Dominican Republic		96%	-26%	-61%	-85%	27.28	2.54
Ecuador		35%	-37%	-72%	-87%	40.70	2.34
Egypt		62%	-30%	-68%	-86%	255.37	2.54
El Salvador		73%	-32%	-35%	-75%	7.15	1.11
Equatorial Guinea		1962%	-54%	303%	-91%	3.47	2.56
Eritrea		279%	72%	311%	86%	0.75	0.21

reference values selected scenariotype: RM-5 rad	target year 2030		target year 2050		emissions 2019 in Mill. t	per capita emissions 2019 in t	
	vs. reference year	1990	2010	1990			2010
Estonia		-74%	-55%	-98%	-97%	18.50	13.96
Eswatini		24%	-64%	-50%	-85%	1.14	1.00
Ethiopia		854%	231%	1067%	305%	18.25	0.16
Falkland Islands		33%	-26%	-90%	-94%	0.03	9.40
Faroese		353%	258%	709%	540%	0.00	0.04
Fiji		-20%	-31%	-76%	-80%	1.36	1.53
Finland		-59%	-64%	-96%	-97%	43.41	7.85
France and Monaco		-55%	-54%	-94%	-94%	314.74	4.83
French Guiana		-3%	-32%	-78%	-85%	0.61	2.10
French Polynesia		-58%	-60%	-91%	-91%	0.60	2.15
Gabon		-66%	-65%	-90%	-90%	3.48	1.60
Georgia		-78%	23%	-97%	-81%	13.47	3.37
Germany		-62%	-53%	-97%	-96%	702.60	8.41
Ghana		292%	10%	144%	-32%	16.84	0.55
Gibraltar		159%	-21%	-86%	-96%	0.69	20.58
Greece		-54%	-60%	-95%	-96%	65.57	6.26
Greenland		9437%	-56%	646%	-97%	0.54	9.47
Grenada		81%	-5%	-58%	-78%	0.23	2.04
Guadeloupe		19%	-12%	-85%	-89%	1.87	4.68
Guatemala		241%	14%	20%	-60%	21.20	1.21
Guinea		185%	119%	199%	130%	2.92	0.23
Guinea-Bissau		134%	13%	146%	19%	0.44	0.23
Guyana		167%	15%	-35%	-72%	1.52	1.94
Haiti		182%	37%	148%	21%	3.58	0.32
Honduras		181%	-17%	9%	-68%	10.36	1.06
Hong Kong		-29%	-43%	-93%	-94%	44.02	5.92
Hungary		-59%	-43%	-95%	-94%	53.18	5.49
Iceland		-9%	-43%	-94%	-96%	3.93	11.58
India		157%	-12%	-37%	-78%	2,597.36	1.90
Indonesia		122%	-13%	-53%	-82%	625.66	2.31
Iran		87%	-33%	-84%	-94%	701.99	8.47
Iraq		58%	-13%	-81%	-90%	197.61	5.03
Ireland		-39%	-52%	-95%	-96%	36.55	7.49
Israel and Palestine, State of		8%	-47%	-87%	-94%	68.33	5.06
Italy, San Marino and the Holy See		-57%	-57%	-95%	-95%	331.56	5.47
Jamaica		-43%	-42%	-89%	-89%	7.44	2.52
Japan		-45%	-47%	-96%	-96%	1,153.72	9.09
Jordan		59%	-21%	-71%	-86%	28.34	2.81
Kazakhstan		-40%	-38%	-96%	-96%	277.36	14.95
Kenya		158%	27%	106%	1%	19.81	0.38
Kiribati		58%	-38%	47%	-43%	0.03	0.29
Kuwait		63%	-38%	-92%	-97%	98.95	23.52
Kyrgyzstan		-70%	8%	-92%	-73%	11.92	1.86
Laos		1974%	159%	778%	10%	6.78	0.95
Latvia		-77%	-49%	-97%	-93%	8.38	4.39
Lebanon		158%	-25%	-64%	-90%	27.44	4.00
Lesotho		550%	22%	437%	1%	0.75	0.35
Liberia		194%	113%	199%	116%	1.21	0.24
Libya		-23%	-54%	-93%	-96%	52.05	7.68
Lithuania		-78%	-45%	-97%	-93%	13.77	4.99
Luxembourg		-55%	-53%	-97%	-97%	9.74	15.82
Macao		-23%	-36%	-82%	-85%	1.27	1.99
Madagascar		672%	146%	862%	206%	4.20	0.16
Malawi		567%	108%	913%	215%	1.62	0.09
Malaysia		137%	-37%	-79%	-94%	248.83	7.79
Maldives		734%	-38%	123%	-83%	0.91	1.72
Mali		643%	393%	1166%	741%	1.03	0.05
Malta		-74%	-77%	-95%	-95%	1.04	2.37
Martinique		15%	-19%	-87%	-91%	1.95	5.20
Mauritania		574%	124%	82%	-39%	7.66	1.69
Mauritius		106%	-33%	-68%	-90%	4.33	3.41

reference values selected scenario type: RM-5 rad	target year 2030		target year 2050		emissions 2019 in Mill. t	per capita emissions 2019 in t	
	vs. reference year	1990	2010	1990			2010
Mexico		-6%	-43%	-86%	-92%	485.00	3.80
Moldova		-83%	-36%	-96%	-86%	9.23	2.28
Mongolia		48%	36%	-89%	-90%	35.93	11.14
Morocco		94%	-16%	-54%	-80%	73.91	2.03
Mozambique		619%	131%	548%	108%	9.26	0.30
Myanmar/Burma		618%	274%	217%	65%	48.31	0.89
Namibia		71%	-15%	-55%	-78%	4.40	1.76
Nepal		935%	136%	567%	52%	15.02	0.52
Netherlands		-47%	-54%	-96%	-96%	156.41	9.15
New Caledonia		415%	69%	-80%	-93%	15.66	55.37
New Zealand		-12%	-38%	-92%	-95%	38.67	8.08
Nicaragua		97%	-17%	-13%	-63%	5.86	0.90
Niger		340%	179%	539%	305%	2.36	0.10
Nigeria		3%	-15%	-31%	-43%	100.22	0.50
North Korea		-81%	-52%	-95%	-87%	42.17	1.64
North Macedonia		-55%	-46%	-94%	-93%	8.92	4.28
Norway		-30%	-44%	-94%	-95%	47.99	8.92
Oman		221%	-5%	-82%	-95%	92.78	18.65
Pakistan		121%	-5%	-12%	-63%	223.63	1.03
Palau		-67%	-66%	-99%	-99%	1.33	73.84
Panama		145%	-29%	-55%	-87%	11.63	2.74
Papua New Guinea		39%	4%	-3%	-27%	4.07	0.46
Paraguay		136%	3%	-17%	-64%	8.47	1.20
Peru		62%	-25%	-57%	-80%	56.29	1.73
Philippines		111%	6%	-33%	-67%	150.64	1.39
Poland		-53%	-47%	-96%	-96%	317.65	8.38
Portugal		-38%	-50%	-92%	-94%	48.47	4.74
Puerto Rico		18%	5%	-62%	-66%	3.91	1.33
Qatar		235%	-18%	-86%	-96%	106.53	37.61
Réunion		70%	-42%	-73%	-91%	3.02	3.40
Romania		-76%	-47%	-97%	-93%	78.63	4.06
Russia		-59%	-44%	-97%	-96%	1,792.02	12.28
Rwanda		300%	165%	498%	297%	1.15	0.09
Saint Helena, Ascension and Tristan da		-4%	-20%	-82%	-85%	0.02	2.61
Saint Kitts and Nevis		217%	-23%	-53%	-89%	0.19	3.67
Saint Lucia		137%	-16%	-34%	-77%	0.30	1.63
Saint Pierre and Miquelon		-77%	-5%	-98%	-93%	0.06	10.64
Saint Vincent and the Grenadines		138%	-16%	-22%	-72%	0.15	1.32
Samoa		-25%	-18%	-61%	-57%	0.14	0.71
São Tomé and Príncipe		135%	-17%	20%	-58%	0.16	0.74
Saudi Arabia		91%	-31%	-89%	-96%	614.61	17.94
Senegal		197%	1%	75%	-41%	9.81	0.60
Serbia and Montenegro		-42%	-35%	-95%	-94%	70.69	7.52
Seychelles		98%	-38%	-86%	-96%	1.05	10.75
Sierra Leone		125%	127%	164%	166%	1.40	0.18
Singapore		-8%	-43%	-93%	-95%	53.37	9.19
Slovakia		-67%	-50%	-97%	-95%	35.99	6.59
Slovenia		-49%	-53%	-95%	-96%	15.37	7.39
Solomon Islands		15%	-17%	26%	-9%	0.14	0.21
Somalia		236%	182%	452%	363%	0.97	0.06
South Africa		-14%	-42%	-93%	-95%	494.86	8.45
South Korea		30%	-41%	-91%	-96%	651.87	12.73
Spain and Andorra		-38%	-50%	-93%	-95%	259.31	5.54
Sri Lanka		304%	24%	35%	-59%	27.57	1.29
Sudan and South Sudan		228%	10%	145%	-18%	22.57	0.42
Suriname		28%	-32%	-80%	-90%	2.06	3.54
Sweden		-57%	-53%	-94%	-94%	44.75	4.46
Switzerland and Liechtenstein		-51%	-53%	-94%	-94%	39.37	4.56
Syria		-47%	-72%	-86%	-92%	29.16	1.71
Taiwan		21%	-45%	-92%	-96%	276.78	11.64
Tajikistan		-52%	87%	-80%	-22%	8.92	0.96

reference values selected scenario type: RM-5 rad	target year 2030		target year 2050		emissions 2019 in Mill. t	per capita emissions 2019 in t	
	vs. reference year	1990	2010	1990			2010
Tanzania		560%	94%	590%	102%	13.34	0.23
Thailand		66%	-37%	-77%	-91%	275.06	3.95
The Gambia		298%	25%	297%	25%	0.59	0.25
Timor-Leste		174%	41%	150%	29%	0.38	0.30
Togo		223%	-3%	167%	-19%	2.85	0.35
Tonga		25%	-54%	-57%	-84%	0.13	1.22
Trinidad and Tobago		39%	-55%	-93%	-98%	32.74	23.47
Tunisia		25%	-34%	-77%	-88%	32.07	2.74
Turkey		54%	-25%	-82%	-91%	415.78	4.98
Turkmenistan		7%	-21%	-94%	-95%	90.52	15.23
Turks and Caicos Islands		992%	-28%	67%	-89%	0.13	3.53
Uganda		1149%	113%	1612%	192%	5.34	0.12
Ukraine		-86%	-64%	-98%	-95%	196.40	4.46
United Arab Emirates		110%	-30%	-89%	-96%	222.61	22.78
United Kingdom		-66%	-60%	-96%	-95%	364.91	5.40
United States		-46%	-50%	-97%	-97%	5,107.26	15.52
Uruguay		0%	-39%	-75%	-85%	6.56	1.90
Uzbekistan		-56%	-49%	-92%	-91%	94.99	2.88
Vanuatu		-38%	-32%	-42%	-37%	0.09	0.29
Venezuela		-40%	-67%	-91%	-95%	110.06	3.86
Vietnam		748%	12%	41%	-81%	305.25	3.16
Western Sahara		57%	-15%	3%	-44%	0.30	0.51
Yemen		34%	-65%	7%	-72%	10.89	0.37
Zambia		104%	166%	52%	98%	7.50	0.42
Zimbabwe		-56%	-25%	-78%	-62%	10.86	0.74
EU27		-58%	-53%	-96%	-95%	2,939.07	6.60
EU28		-59%	-54%	-96%	-95%	3,303.97	6.45
sub sum						42,901.88	
EU27						-2,939.07	
EU28						-3,303.97	
sum						36,658.83	
global 2019*						36,658.83	
difference						0.00	

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

reference values scenario: RM-5 rad sorted by 'emissions 2019'	target year 2030		target year 2050		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	162%	-31%	-77%	-94%	11,535	8.0	31.5%	31%
United States	-46%	-50%	-97%	-97%	5,107	15.5	13.9%	45%
EU28	-59%	-54%	-96%	-95%	3,304	6.4	9.0%	45%
EU27	-58%	-53%	-96%	-95%	2,939	6.6	8.0%	45%
India	157%	-12%	-37%	-78%	2,597	1.9	7.1%	52%
Russia	-59%	-44%	-97%	-96%	1,792	12.3	4.9%	57%
Japan	-45%	-47%	-96%	-96%	1,154	9.1	3.1%	61%
Germany	-62%	-53%	-97%	-96%	703	8.4	1.9%	62%
Iran	87%	-33%	-84%	-94%	702	8.5	1.9%	64%
South Korea	30%	-41%	-91%	-96%	652	12.7	1.8%	66%
Indonesia	122%	-13%	-53%	-82%	626	2.3	1.7%	68%
Saudi Arabia	91%	-31%	-89%	-96%	615	17.9	1.7%	70%
Canada	-30%	-44%	-96%	-97%	585	15.6	1.6%	71%
South Africa	-14%	-42%	-93%	-95%	495	8.5	1.3%	72%
Mexico	-6%	-43%	-86%	-92%	485	3.8	1.3%	74%
Brazil	22%	-37%	-74%	-87%	478	2.3	1.3%	75%
Australia	-16%	-43%	-95%	-97%	433	17.2	1.2%	76%
Turkey	54%	-25%	-82%	-91%	416	5.0	1.1%	77%
United Kingdom	-66%	-60%	-96%	-95%	365	5.4	1.0%	78%
Italy, San Marino and the Holy S	-57%	-57%	-95%	-95%	332	5.5	0.9%	79%
Poland	-53%	-47%	-96%	-96%	318	8.4	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	
Afghanistan	452.58	294.09	333.07	291.21	347.81	342.99	321.8	29	
Albania	78.33	70.77	72.60	70.63	73.37	73.11	72.1	13	
Algeria	2,046.99	2,022.40	2,027.34	2,021.68	2,031.80	2,030.04	2,026.7	11	
Angola	530.33	413.04	441.77	410.88	452.89	449.23	433.6	17	
Anguilla	0.35	0.31	0.32	0.31	0.32	0.32	0.3	13	
Antigua and Barbuda	5.55	5.59	5.58	5.59	5.58	5.58	5.6	11	
Argentina	2,235.01	2,220.11	2,222.54	2,219.54	2,226.34	2,224.76	2,222.7	11	
Armenia	81.44	73.79	75.64	73.64	76.41	76.15	75.1	13	
Aruba	8.14	8.39	8.32	8.39	8.31	8.31	8.3	11	
Australia	4,189.64	4,476.91	4,403.45	4,481.44	4,382.24	4,388.40	4,426.5	10	
Austria	743.51	770.43	763.35	770.81	761.75	762.15	765.7	11	
Azerbaijan	421.51	410.11	412.69	409.84	414.18	413.63	412.1	11	
Bahamas	25.97	26.49	26.35	26.50	26.33	26.33	26.4	11	
Bahrain	338.71	364.06	357.60	364.47	355.69	356.25	359.6	10	
Bangladesh	2,515.10	1,893.84	2,046.20	1,882.44	2,104.79	2,085.54	2,002.6	18	
Barbados	37.60	39.85	39.27	39.88	39.11	39.16	39.5	10	
Belarus	693.08	712.26	707.12	712.50	706.16	706.36	708.9	11	
Belgium	1,060.03	1,105.01	1,093.28	1,105.67	1,090.41	1,091.16	1,097.1	11	
Belize	7.00	5.61	5.95	5.59	6.08	6.04	5.9	16	
Benin	183.68	138.87	149.86	138.05	154.09	152.70	146.7	18	
Bermuda	3.77	3.82	3.81	3.82	3.81	3.81	3.8	11	
Bhutan	26.46	25.03	25.37	25.00	25.52	25.47	25.3	12	
Bolivia	330.35	301.89	308.75	301.34	311.67	310.68	306.9	13	
Bosnia and Herzegovina	336.34	352.55	348.35	352.79	347.26	347.56	349.7	10	
Botswana	85.59	81.86	82.73	81.78	83.16	83.01	82.5	12	
Brazil	6,318.81	5,823.56	5,942.59	5,813.88	5,994.05	5,976.48	5,910.1	12	
British Virgin Islands	1.39	1.37	1.37	1.37	1.37	1.37	1.4	11	
Brunei	68.10	72.64	71.48	72.71	71.15	71.24	71.8	10	
Bulgaria	460.22	469.07	466.62	469.16	466.33	466.35	467.5	11	
Burkina Faso	221.39	134.67	156.01	133.09	164.04	161.42	149.8	41	
Burundi	109.83	59.03	71.55	58.11	76.23	74.71	67.9	201	
Cabo Verde	14.43	12.94	13.30	12.91	13.45	13.40	13.2	13	
Cambodia	303.14	245.25	259.41	244.18	264.94	263.11	255.4	15	
Cameroon	331.78	226.38	252.28	224.46	262.12	258.90	244.8	24	
Canada	5,685.40	6,058.00	5,962.57	6,063.85	5,935.35	5,943.20	5,992.6	10	
Cayman Islands	4.28	4.36	4.34	4.36	4.34	4.34	4.3	11	
Central African Republic	48.44	27.86	32.93	27.49	34.83	34.21	31.5	64	
Chad	155.79	85.93	103.13	84.66	109.58	107.48	98.2	110	
Chile	996.04	994.80	994.54	994.64	995.75	995.21	995.0	11	
China	118,578.28	122,842.89	121,720.50	122,902.40	121,467.82	121,530.24	122,092.8	11	
Colombia	1,256.13	1,112.69	1,147.49	1,109.96	1,161.76	1,156.97	1,137.8	13	
Comoros	9.83	6.25	7.13	6.19	7.47	7.36	6.9	32	
Congo	102.79	84.29	88.81	83.94	90.58	90.00	87.5	15	
Cook Islands	0.56	0.53	0.53	0.52	0.54	0.54	0.5	12	
Costa Rica	128.70	114.59	118.01	114.32	119.42	118.95	117.1	13	
Côte d'Ivoire	361.82	260.31	285.23	258.46	294.75	291.63	278.1	21	
Croatia	212.78	212.07	212.13	212.03	212.42	212.29	212.2	11	
Cuba	388.32	366.66	371.80	366.22	374.18	373.35	370.4	12	
Curaçao	55.50	60.22	59.02	60.30	58.66	58.77	59.4	10	
Cyprus	78.77	80.28	79.87	80.30	79.82	79.82	80.0	11	
Czechia	1,063.83	1,113.76	1,100.80	1,114.50	1,097.48	1,098.38	1,105.0	10	
Democratic Republic of the Congo	830.71	448.77	542.84	441.86	578.08	566.61	515.6	173	
Denmark	337.52	340.58	339.63	340.59	339.73	339.64	340.0	11	
Djibouti	18.59	15.24	16.06	15.18	16.38	16.27	15.8	15	
Dominica	1.61	1.38	1.44	1.38	1.46	1.45	1.4	14	
Dominican Republic	348.42	325.93	331.30	325.48	333.71	332.88	329.9	12	
Ecuador	532.39	492.85	502.34	492.07	506.48	505.06	499.8	12	
Egypt	3,260.61	3,050.75	3,100.86	3,046.57	3,123.31	3,115.57	3,087.4	12	
El Salvador	124.98	102.96	108.34	102.55	110.46	109.75	106.8	15	
Equatorial Guinea	44.27	41.46	42.13	41.40	42.43	42.33	42.0	12	
Eritrea	39.19	24.38	28.02	24.11	29.40	28.95	27.0	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	181.19	192.34	189.48	192.52	188.68	188.91	190.4	10
Eswatini	21.07	17.03	18.02	16.95	18.40	18.27	17.7	16
Ethiopia	1,204.20	724.23	842.36	715.53	886.81	872.32	808.3	44
Falkland Islands	0.32	0.34	0.33	0.34	0.33	0.33	0.3	10
Faroes	0.47	0.25	0.31	0.25	0.33	0.32	0.3	151
Fiji	20.66	17.97	18.62	17.92	18.89	18.80	18.4	14
Finland	447.55	463.00	458.92	463.21	458.03	458.24	460.3	11
France and Monaco	3,476.53	3,477.43	3,475.25	3,476.97	3,479.00	3,477.24	3,477.2	11
French Guiana	8.27	7.54	7.71	7.52	7.79	7.76	7.7	13
French Polynesia	8.06	7.37	7.54	7.36	7.61	7.58	7.5	12
Gabon	51.93	45.51	47.07	45.38	47.70	47.49	46.6	13
Georgia	160.00	154.69	155.92	154.57	156.57	156.33	155.6	12
Germany	7,187.21	7,463.86	7,391.33	7,467.79	7,374.39	7,378.70	7,415.2	11
Ghana	435.30	315.98	345.27	313.80	356.47	352.80	336.9	20
Gibraltar	6.64	7.13	7.01	7.14	6.97	6.98	7.0	10
Greece	695.53	709.48	705.63	709.63	705.15	705.19	707.0	11
Greenland	5.42	5.67	5.60	5.67	5.59	5.59	5.6	10
Grenada	3.12	2.84	2.91	2.83	2.94	2.93	2.9	13
Guadeloupe	20.80	20.75	20.75	20.75	20.78	20.77	20.8	11
Guatemala	356.26	297.85	312.10	296.76	317.75	315.87	308.1	15
Guinea	144.90	90.98	104.24	90.00	109.25	107.61	100.4	34
Guinea-Bissau	21.77	13.66	15.66	13.52	16.41	16.17	15.1	34
Guyana	21.14	19.08	19.58	19.04	19.79	19.72	19.4	13
Haiti	136.92	90.29	101.76	89.44	106.10	104.68	98.5	28
Honduras	184.77	151.11	159.33	150.48	162.56	161.49	157.0	15
Hong Kong	470.66	478.23	476.09	478.30	475.93	475.91	476.9	11
Hungary	575.16	581.20	579.38	581.22	579.47	579.35	580.1	11
Iceland	38.97	41.08	40.54	41.12	40.39	40.43	40.7	10
India	36,361.04	32,695.77	33,582.53	32,625.54	33,951.91	33,827.27	33,336.6	13
Indonesia	8,217.02	7,593.51	7,743.21	7,581.28	7,808.29	7,786.04	7,702.5	12
Iran	7,176.02	7,454.78	7,381.74	7,458.75	7,364.59	7,368.96	7,405.8	11
Iraq	2,167.92	2,175.61	2,172.48	2,175.45	2,174.18	2,173.29	2,174.2	11
Ireland	378.85	390.85	387.67	391.01	387.01	387.16	388.7	11
Israel and Palestine, State of	748.76	751.83	750.65	751.78	751.19	750.90	751.3	11
Italy, San Marino and the Holy See	3,587.71	3,624.42	3,613.31	3,624.58	3,613.96	3,613.18	3,617.9	11
Jamaica	95.23	89.01	90.50	88.89	91.16	90.93	90.1	12
Japan	11,706.71	12,206.57	12,076.25	12,213.84	12,044.21	12,052.66	12,118.7	11
Jordan	352.23	333.55	337.98	333.17	340.04	339.32	336.8	12
Kazakhstan	2,703.81	2,876.93	2,832.55	2,879.64	2,819.97	2,823.59	2,846.5	10
Kenya	667.58	452.79	505.58	448.88	525.62	519.07	490.4	25
Kiribati	1.40	0.91	1.03	0.90	1.07	1.06	1.0	29
Kuwait	942.29	1,014.74	996.27	1,015.90	990.80	992.41	1,002.0	10
Kyrgyzstan	168.23	150.76	154.99	150.43	156.75	156.15	153.8	13
Laos	128.30	102.76	109.01	102.29	111.45	110.64	107.2	16
Latvia	94.15	93.41	93.54	93.38	93.71	93.64	93.5	11
Lebanon	313.94	308.81	309.91	308.68	310.71	310.40	309.7	11
Lesotho	26.56	17.84	19.98	17.68	20.79	20.53	19.4	26
Liberia	56.73	35.96	41.07	35.58	43.00	42.37	39.6	33
Libya	537.87	555.75	551.02	555.99	550.01	550.25	552.6	11
Lithuania	151.27	151.72	151.52	151.71	151.65	151.58	151.6	11
Luxembourg	94.62	100.85	99.26	100.95	98.80	98.93	99.8	10
Macao	17.54	15.87	16.27	15.84	16.44	16.38	16.2	13
Madagascar	288.00	172.33	200.80	170.23	211.51	208.02	192.6	46
Malawi	187.21	106.13	126.09	104.66	133.59	131.14	120.3	74
Malaysia	2,567.37	2,654.84	2,631.75	2,656.04	2,626.71	2,627.92	2,639.5	11
Maldives	13.25	11.74	12.10	11.71	12.25	12.20	12.0	13
Mali	191.40	105.22	126.44	103.66	134.40	131.81	120.3	117
Malta	13.60	12.61	12.85	12.59	12.95	12.92	12.8	12
Martinique	21.31	21.45	21.40	21.45	21.41	21.41	21.4	11
Mauritania	111.82	98.81	101.97	98.57	103.26	102.83	101.1	13
Mauritius	51.30	49.66	50.04	49.62	50.24	50.17	49.9	12

sum emissions 2020 - 2100 - national budgets - in Mill. t	RM-1	RM-2	RM-3	RM-4	RM-5	RM-6	average	scope
	const	exp	lin	quadr	rad	abs	budget	average
							RM 2 - 6	budget
Mexico	5,608.64	5,489.69	5,515.97	5,486.80	5,532.84	5,526.52	5,510.4	11
Moldova	121.68	112.26	114.52	112.07	115.50	115.17	113.9	12
Mongolia	357.86	376.64	371.79	376.93	370.50	370.86	373.3	10
Morocco	1,012.40	918.79	941.39	916.99	950.92	947.69	935.2	13
Mozambique	365.65	239.58	270.58	237.28	282.31	278.47	261.6	28
Myanmar/Burma	941.36	746.28	794.04	742.68	812.61	806.48	780.4	16
Namibia	63.26	56.26	57.95	56.12	58.65	58.42	57.5	13
Nepal	401.96	288.98	316.72	286.91	327.31	323.84	308.8	21
Netherlands	1,586.19	1,654.41	1,636.63	1,655.40	1,632.25	1,633.40	1,642.4	11
New Caledonia	145.55	158.71	155.37	158.92	154.35	154.65	156.4	10
New Zealand	397.29	411.69	407.90	411.89	407.04	407.25	409.2	11
Nicaragua	114.08	90.46	96.24	90.03	98.49	97.75	94.6	16
Niger	237.34	136.19	161.10	134.36	170.45	167.40	153.9	65
Nigeria	2,775.37	1,976.90	2,172.98	1,962.31	2,247.78	2,223.27	2,116.6	21
North Korea	622.60	547.67	565.87	546.25	573.28	570.80	560.8	13
North Macedonia	100.75	99.73	99.93	99.70	100.13	100.05	99.9	11
Norway	487.90	508.24	502.93	508.54	501.64	501.98	504.7	11
Oman	893.05	956.42	940.23	957.42	935.52	936.89	945.3	10
Pakistan	4,046.35	3,292.33	3,476.69	3,278.36	3,548.90	3,525.02	3,424.3	15
Palau	12.31	13.45	13.16	13.47	13.07	13.10	13.2	10
Panama	145.51	137.40	139.33	137.24	140.22	139.91	138.8	12
Papua New Guinea	118.44	83.30	91.93	82.65	95.22	94.14	89.4	22
Paraguay	142.50	119.07	124.79	118.64	127.05	126.30	123.2	15
Peru	814.80	722.52	744.91	720.77	754.10	751.01	738.7	13
Philippines	2,376.09	2,035.56	2,118.51	2,029.18	2,151.73	2,140.66	2,095.1	14
Poland	3,250.62	3,375.13	3,342.48	3,376.89	3,334.87	3,336.80	3,353.2	11
Portugal	537.17	536.47	536.34	536.38	537.00	536.70	536.6	11
Puerto Rico	62.85	53.45	55.74	53.27	56.65	56.35	55.1	14
Qatar	998.71	1,084.23	1,062.50	1,085.61	1,055.91	1,057.87	1,069.2	10
Réunion	35.82	34.66	34.92	34.63	35.07	35.02	34.9	12
Romania	897.09	883.65	886.48	883.29	888.67	887.82	886.0	11
Russia	17,709.74	18,712.97	18,454.67	18,728.37	18,384.02	18,403.93	18,536.8	10
Rwanda	127.42	72.52	86.04	71.52	91.11	89.46	82.1	71
Saint Helena, Ascension and Tristan da Cunha	0.20	0.19	0.19	0.19	0.19	0.19	0.2	12
Saint Kitts and Nevis	2.26	2.20	2.21	2.20	2.22	2.22	2.2	11
Saint Lucia	4.40	3.87	4.00	3.86	4.05	4.03	4.0	13
Saint Pierre and Miquelon	0.62	0.65	0.64	0.65	0.64	0.64	0.6	10
Saint Vincent and the Grenadines	2.36	2.00	2.09	1.99	2.12	2.11	2.1	14
Samoa	3.09	2.35	2.53	2.34	2.60	2.58	2.5	18
São Tomé and Príncipe	3.44	2.64	2.83	2.62	2.91	2.88	2.8	17
Saudi Arabia	5,928.00	6,341.93	6,236.13	6,348.48	6,205.46	6,214.39	6,269.3	10
Senegal	240.41	177.21	192.72	176.05	198.66	196.71	188.3	19
Serbia and Montenegro	732.33	755.74	749.54	756.06	748.24	748.54	751.6	11
Seychelles	10.50	11.03	10.89	11.04	10.85	10.86	10.9	10
Sierra Leone	85.12	51.77	59.98	51.17	63.07	62.06	57.6	41
Singapore	540.91	564.31	558.21	564.65	556.71	557.10	560.2	10
Slovakia	379.03	387.97	385.54	388.07	385.16	385.22	386.4	11
Slovenia	159.51	164.45	163.13	164.51	162.87	162.93	163.6	11
Solomon Islands	7.47	4.63	5.33	4.58	5.59	5.51	5.1	37
Somalia	151.80	84.25	100.88	83.02	107.12	105.09	96.1	99
South Africa	5,059.71	5,255.74	5,204.37	5,258.53	5,192.32	5,195.39	5,221.3	11
South Korea	6,425.15	6,798.23	6,702.27	6,803.98	6,675.81	6,683.30	6,732.7	10
Spain and Andorra	2,800.63	2,831.86	2,822.55	2,832.03	2,822.83	2,822.29	2,826.3	11
Sri Lanka	449.06	379.92	396.78	378.63	403.49	401.26	392.0	14
Sudan and South Sudan	704.82	486.80	540.37	482.83	560.74	554.07	525.0	23
Suriname	24.18	23.49	23.65	23.48	23.74	23.70	23.6	11
Sweden	501.42	498.14	498.67	498.01	499.52	499.16	498.7	11
Switzerland and Liechtenstein	439.30	437.30	437.55	437.21	438.21	437.93	437.6	11
Syria	424.24	375.42	387.27	374.49	392.12	390.49	384.0	13
Taiwan	2,746.86	2,896.30	2,857.76	2,898.58	2,847.36	2,850.27	2,870.1	10
Tajikistan	167.71	134.60	142.70	133.99	145.86	144.82	140.4	16

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	658.80	413.98	474.21	409.53	496.93	489.52	456.8	34
Thailand	3,155.63	3,100.26	3,112.19	3,098.84	3,120.64	3,117.41	3,109.9	11
The Gambia	27.14	17.28	19.71	17.10	20.62	20.32	19.0	32
Timor-Leste	15.48	10.10	11.43	10.01	11.93	11.76	11.0	29
Togo	100.89	67.69	75.85	67.09	78.94	77.93	73.5	26
Tonga	2.14	1.79	1.87	1.78	1.91	1.90	1.9	14
Trinidad and Tobago	311.83	335.79	329.69	336.18	327.88	328.41	331.6	10
Tunisia	401.05	378.74	384.03	378.29	386.48	385.63	382.6	12
Turkey	4,568.04	4,581.03	4,575.24	4,580.63	4,579.11	4,577.14	4,578.6	11
Turkmenistan	881.40	938.40	923.79	939.29	919.64	920.84	928.4	10
Turks and Caicos Islands	1.59	1.54	1.55	1.54	1.56	1.55	1.5	11
Uganda	458.57	267.27	314.36	263.80	332.06	326.29	300.8	56
Ukraine	2,200.22	2,186.04	2,188.31	2,185.48	2,192.01	2,190.47	2,188.5	11
United Arab Emirates	2,122.68	2,284.32	2,243.11	2,286.90	2,230.93	2,234.51	2,256.0	10
United Kingdom	3,956.40	3,993.03	3,981.73	3,993.13	3,982.79	3,981.82	3,986.5	11
United States	49,670.56	52,913.94	52,083.14	52,964.78	51,846.37	51,914.65	52,344.6	10
Uruguay	91.98	82.68	84.93	82.50	85.87	85.55	84.3	13
Uzbekistan	1,172.51	1,113.78	1,127.65	1,112.57	1,134.22	1,131.92	1,124.0	12
Vanuatu	3.56	2.31	2.62	2.29	2.74	2.70	2.5	29
Venezuela	1,268.70	1,243.63	1,249.12	1,243.01	1,252.77	1,251.40	1,248.0	11
Vietnam	3,679.63	3,533.09	3,567.29	3,529.98	3,584.51	3,578.38	3,558.7	12
Western Sahara	8.11	5.80	6.36	5.76	6.58	6.51	6.2	21
Yemen	369.37	250.14	279.44	247.96	290.56	286.93	271.0	25
Zambia	233.84	161.58	179.33	160.26	186.09	183.88	174.2	23
Zimbabwe	234.74	179.82	193.28	178.81	198.48	196.77	189.4	17
EU27	30,950.27	31,683.73	31,484.75	31,692.51	31,452.91	31,458.22	31,554.4	11
EU28	34,906.67	35,676.75	35,466.48	35,685.64	35,435.70	35,440.05	35,540.9	11
sub sum 2020 - 2100	471,912	472,982	472,451	472,935	472,874	472,663	472,781	
EU27	-30,950	-31,684	-31,485	-31,693	-31,453	-31,458	-31,554	
EU28	-34,907	-35,677	-35,466	-35,686	-35,436	-35,440	-31,554	
sum	406,055	405,621	405,500	405,557	405,986	405,765	409,672	
base data: budget 2020 - 2100*	406,000	406,000	406,000	406,000	406,000	406,000	406,000	
rounding differences	55	-379	-500	-443	-14	-235	3,672	
difference in %	0.01%	-0.09%	-0.12%	-0.11%	0.00%	-0.06%	0.90%	
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**	20.3%	8.8%	11.4%	10.6%	14.3%	12.5%	11.5%	
global (start) change rate 2020	-7.1%	-1.5%	-1.5%	-1.5%	-1.5%	-3.1%		
global change rate 2030 vs. 2010	-52%	-21%	-31%	-20%	-40%	-29%		
global overshoot in Gt	59	168	129	163	98	174		
base data: global CO2 budget 2018 - 2100 incl. FOLU and ISA in Gt:							570	

* excl. FOLU resp. LUC 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	118,578	122,843	121,721	122,902	121,468	121,530	122,093	11	29.8%
United States	49,671	52,914	52,083	52,965	51,846	51,915	52,345	10	12.8%
EU28	34,907	35,677	35,466	35,686	35,436	35,440	35,541	11	8.7%
India	36,361	32,696	33,583	32,626	33,952	33,827	33,337	13	8.1%
EU27	30,950	31,684	31,485	31,693	31,453	31,458	31,554	11	7.7%
Russia	17,710	18,713	18,455	18,728	18,384	18,404	18,537	10	4.5%
Japan	11,707	12,207	12,076	12,214	12,044	12,053	12,119	11	3.0%
Indonesia	8,217	7,594	7,743	7,581	7,808	7,786	7,702	12	1.9%
Germany	7,187	7,464	7,391	7,468	7,374	7,379	7,415	11	1.8%
Iran	7,176	7,455	7,382	7,459	7,365	7,369	7,406	11	1.8%
South Korea	6,425	6,798	6,702	6,804	6,676	6,683	6,733	10	1.6%
Saudi Arabia	5,928	6,342	6,236	6,348	6,205	6,214	6,269	10	1.5%
Canada	5,685	6,058	5,963	6,064	5,935	5,943	5,993	10	1.5%
Brazil	6,319	5,824	5,943	5,814	5,994	5,976	5,910	12	1.4%
Mexico	5,609	5,490	5,516	5,487	5,533	5,527	5,510	11	1.3%
South Africa	5,060	5,256	5,204	5,259	5,192	5,195	5,221	11	1.3%
Turkey	4,568	4,581	4,575	4,581	4,579	4,577	4,579	11	1.1%
Australia	4,190	4,477	4,403	4,481	4,382	4,388	4,426	10	1.1%
United Kingdom	3,956	3,993	3,982	3,993	3,983	3,982	3,987	11	1.0%
Italy, San Marino and the Holy See	3,588	3,624	3,613	3,625	3,614	3,613	3,618	11	0.9%
Vietnam	3,680	3,533	3,567	3,530	3,585	3,578	3,559	12	0.9%

central premises	
global CO2 budget 2018 - 2100	570 Gt
emissions in 2018 and 2019, FOLU resp. npLUC and ISA	-164 Gt
budget 2020 - 2100 to distribute in this tool	406 Gt
minimum annual global emissions	-3.67 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**	20%	9%	11%	11%	14%	13%
global (start) change rate 2020	-7.1%	-1.5%	-1.5%	-1.5%	-1.5%	-3.1%
global change rate 2030 vs. 2010	-52%	-21%	-31%	-20%	-40%	-29%
global overshoot in Gt	59	168	129	163	98	174

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

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)

content of this document	page
reference values for all countries (alphabetically)	1
reference values for the countries with the highest emissions (sorted by emissions)	5
national budgets for all countries (alphabetically)	6
national budgets for the countries with the highest emissions (sorted by budget)	10
central premises	11
global paths properties	11
what the Regensburg Model means	11