



Carbon

57 Carbon dioxide emissions

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Carbon dioxide emissions

Million tonnes of carbon dioxide	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	Growth rate per annum		Share 2018
											2018	2018	
Canada	547.9	504.8	530.1	543.7	528.1	547.1	556.8	549.7	540.9	554.6	555.3	0.1%	• 1.6%
Mexico	431.6	433.0	442.4	465.4	473.7	472.5	459.2	463.0	468.5	476.8	462.5	-3.0%	1.1% 1.4%
US	5621.0	5202.1	5403.3	5253.7	4997.0	5147.4	5152.9	5036.1	4928.9	4889.1	5017.9	2.6%	-1.7% 14.9%
Total North America	6600.4	6139.9	6375.8	6262.8	5998.9	6167.0	6168.9	6048.7	5938.3	5920.5	6035.6	1.9%	-1.4% 17.9%
Argentina	160.3	154.5	164.2	166.4	172.4	179.4	179.4	182.4	182.0	180.3	176.5	-2.1%	1.4% 0.5%
Brazil	362.3	338.8	383.4	406.1	426.5	464.0	482.9	464.6	428.0	435.5	420.2	-3.5%	2.5% 1.2%
Chile	77.4	74.3	76.1	87.0	89.4	91.1	88.4	88.9	94.1	93.1	95.8	2.9%	2.0% 0.3%
Colombia	67.4	65.2	72.7	71.4	79.8	83.6	89.3	89.9	98.0	93.3	98.2	5.2%	4.5% 0.3%
Ecuador	27.5	27.9	32.1	32.9	34.3	36.6	38.5	37.6	35.5	34.4	37.1	7.8%	2.5% 0.1%
Peru	34.7	35.1	39.0	44.5	44.8	46.1	47.1	50.8	54.4	50.4	53.6	6.2%	4.9% 0.2%
Trinidad & Tobago	21.6	20.4	22.5	22.5	21.8	23.2	22.6	22.1	21.6	20.7	20.7	-0.1%	-0.4% 0.1%
Venezuela	171.8	172.0	166.4	170.8	181.3	176.0	170.5	163.6	151.4	142.6	123.7	-13.2%	-1.4% 0.4%
Other S. & Cent. America	209.6	204.9	207.9	213.9	211.6	208.9	212.8	221.6	229.7	228.9	235.8	3.0%	0.6% 0.7%
Total S. & Cent. America	1132.6	1093.1	1164.2	1215.5	1262.0	1308.9	1331.3	1321.7	1294.7	1279.2	1261.5	-1.4%	1.6% 3.7%
Austria	70.3	64.6	69.7	61.5	59.4	58.6	55.2	57.5	58.2	60.9	59.6	-2.1%	-1.3% 0.2%
Belgium	142.3	129.4	137.3	124.0	119.8	120.8	112.9	120.5	121.9	124.7	128.3	2.9%	-1.2% 0.4%
Czech Republic	120.4	114.0	117.1	111.9	108.2	104.0	100.8	102.0	103.9	102.1	102.3	0.2%	-2.0% 0.3%
Finland	59.9	57.4	65.5	57.0	50.9	52.2	47.0	43.3	47.6	44.9	46.1	2.7%	-4.0% 0.1%
France	382.2	367.9	373.3	346.8	348.7	348.1	314.4	301.0	305.8	311.8	302.7	-2.9%	-2.0% 0.9%
Germany	817.3	761.0	769.7	750.4	759.4	784.8	738.7	743.4	757.3	753.2	716.7	-4.8%	-0.8% 2.1%
Greece	108.7	103.9	95.6	95.1	89.3	80.8	77.2	74.6	71.4	76.6	75.7	-1.1%	-3.9% 0.2%
Hungary	55.1	48.9	49.9	49.6	45.3	42.8	41.7	44.5	44.9	47.2	47.1	-0.4%	-1.7% 0.1%
Italy	452.5	410.6	418.4	408.7	380.0	348.1	325.0	339.0	340.0	342.6	332.8	-2.9%	-3.0% 1.0%
Netherlands	230.5	221.5	231.8	223.4	216.3	210.8	199.6	208.3	212.0	205.2	201.9	-1.6%	-1.3% 0.6%
Norway	35.8	35.8	36.9	37.1	36.9	36.3	36.3	36.3	35.8	36.1	36.6	1.4%	♦ 0.1%
Poland	320.7	307.1	324.6	324.6	309.1	311.5	294.5	294.2	306.1	316.0	323.1	2.3%	♦ 1.0%
Portugal	57.3	56.3	50.6	50.5	49.9	48.5	48.5	52.7	52.2	57.0	53.7	-5.8%	-0.2% 0.2%
Romania	93.7	80.3	77.1	82.7	79.5	68.6	69.2	70.0	68.5	71.8	71.2	-0.9%	-2.8% 0.2%
Spain	350.8	312.0	295.6	304.8	300.7	273.1	270.6	286.1	278.9	296.3	291.6	-1.6%	-2.4% 0.9%
Sweden	55.2	52.3	55.6	50.8	47.6	46.1	43.9	43.7	43.8	43.2	41.8	-3.3%	-2.9% 0.1%
Switzerland	43.1	43.6	41.3	39.4	40.7	42.9	38.0	38.7	37.2	38.0	36.4	-4.0%	-0.6% 0.1%
Turkey	277.3	276.4	279.3	302.2	317.4	306.8	338.1	346.5	366.4	388.9	390.2	0.3%	3.6% 1.2%
Ukraine	317.6	272.4	287.3	303.1	297.0	285.8	245.0	192.6	213.8	185.1	186.6	0.8%	-5.2% 0.6%
United Kingdom	560.2	512.9	528.9	491.6	509.1	495.3	453.7	435.4	411.7	400.2	391.2	-2.3%	-3.4% 1.2%
Other Europe	414.7	388.0	400.3	399.9	376.4	370.4	351.7	361.3	370.0	377.1	373.7	-0.9%	-1.1% 1.1%
Total Europe	4965.7	4616.4	4705.8	4615.2	4541.5	4436.9	4202.0	4191.6	4247.3	4278.7	4209.3	-1.6%	-1.6% 12.5%
Azerbaijan	29.6	25.9	24.9	28.5	29.6	30.2	31.0	33.8	33.2	32.2	31.8	-1.3%	0.7% 0.1%
Belarus	59.4	57.2	60.3	57.1	58.6	58.2	57.3	53.1	53.5	54.0	56.7	4.9%	-0.5% 0.2%
Kazakhstan	189.4	170.6	183.9	202.5	209.7	211.0	212.5	207.5	208.5	219.7	248.1	12.9%	2.3% 0.7%
Russian Federation	1554.3	1445.3	1492.2	1555.9	1569.1	1527.7	1530.8	1489.5	1501.5	1488.4	1550.8	4.2%	-0.3% 4.6%
Turkmenistan	32.3	50.3	54.3	59.9	65.2	58.3	60.5	71.5	68.8	71.8	78.5	9.3%	6.4% 0.2%
Uzbekistan	103.3	102.9	100.7	107.1	104.0	103.5	108.1	103.1	103.2	107.2	104.3	-2.7%	-0.4% 0.3%
Other CIS	24.7	23.4	22.9	24.2	27.0	25.7	27.4	28.3	28.6	28.0	30.3	8.5%	2.0% 0.1%
Total CIS	1993.0	1875.7	1939.1	2035.2	2063.2	2014.7	2027.6	1986.8	1997.4	2001.3	2100.5	5.0%	0.2% 6.2%
Iran	503.6	516.5	518.0	538.0	539.7	572.9	588.9	585.7	593.9	622.1	656.4	5.5%	2.6% 1.9%
Iraq	82.4	93.2	99.1	104.0	111.1	119.5	115.6	115.6	132.1	133.7	151.4	13.3%	5.4% 0.4%
Israel	71.6	68.4	71.6	73.1	78.9	69.4	66.8	69.8	69.1	70.0	69.6	-0.6%	-0.1% 0.2%
Kuwait	79.6	81.2	87.0	85.9	96.0	100.5	90.3	98.3	99.3	98.4	98.2	-0.2%	3.0% 0.3%
Oman	42.3	42.1	49.0	52.3	57.6	65.6	65.2	68.6	69.4	68.7	71.4	3.9%	6.8% 0.2%
Qatar	50.3	51.0	59.8	68.0	76.8	83.7	91.0	100.9	99.9	102.4	101.2	-1.2%	8.5% 0.3%
Saudi Arabia	424.4	443.2	485.1	501.5	525.5	534.3	570.4	587.1	597.6	591.1	571.0	-3.4%	4.2% 1.7%
United Arab Emirates	211.5	205.5	215.3	222.3	233.5	248.9	245.1	267.1	276.4	269.2	277.0	2.9%	3.8% 0.8%
Other Middle East	154.8	155.3	151.4	143.8	134.3	131.5	126.5	123.7	121.3	123.1	122.2	-0.7%	-1.9% 0.4%
Total Middle East	1620.5	1656.5	1736.2	1789.0	1853.3	1926.3	1965.2	2019.5	2061.5	2078.7	2118.3	1.9%	3.2% 6.3%
Algeria	90.8	95.8	94.2	100.6	108.9	115.4	123.6	129.0	127.7	127.8	135.5	6.0%	4.1% 0.4%
Egypt	170.5	177.2	188.8	189.5	200.4	199.0	203.5	208.8	218.3	221.3	224.2	1.3%	3.3% 0.7%
Morocco	48.6	45.2	49.1	52.9	53.9	54.3	56.5	56.7	57.0	60.0	62.8	4.6%	3.2% 0.2%
South Africa	447.5	446.7	448.9	440.2	434.4	435.1	439.1	425.9	428.5	418.5	421.1	0.6%	0.2% 1.3%
Other Africa	270.6	277.1	291.1	290.4	309.4	327.5	344.4	354.1	360.7	379.4	391.9	3.3%	4.0% 1.2%
Total Africa	1028.0	1041.9	1072.1	1073.7	1107.1	1131.4	1167.1	1174.5	1192.1	1207.0	1235.5	2.4%	2.3% 3.7%
Australia	421.0	415.4	409.2	415.3	407.4	402.6	409.6	414.0	418.8	412.8	417.1	1.0%	0.1% 1.2%
Bangladesh	43.0	47.7	50.8	55.0	60.3	61.6	66.0	78.0	79.2	82.7	90.4	9.3%	7.6% 0.3%
China	7373.4	7703.2	8128.8	8799.0	8983.7	9229.4	9215.6	9166.9	9110.2	9220.9	9419.6	2.2%	2.5% 28.0%
China Hong Kong SAR	79.2	86.5	88.3	92.1	88.7	91.6	89.8	90.5	92.7	98.9	99.5	0.6%	1.5% 0.3%
India	1467.3	1595.8	1661.1	1736.3	1849.8	1930.7	2083.9	2148.9	2235.9	2318.7	2481.1	7.0%	5.4% 7.4%
Indonesia	376.0	387.7	426.8	477.9	510.2	523.9	476.8	486.4	485.9	508.6	535.0	5.2%	2.8% 1.6%
Japan	1275.4	1113.3	1185.2	1196.0	1286.8	1274.8	1240.9	1199.2	1180.2	1173.4	1150.1	-2.0%	-0.8% 3.4%
Malaysia	198.7	191.4	213.0	213.6	226.7	233.0	241.1	246.8	242.0	242.8	251.5	3.6%	2.3% 0.7%
New Zealand	36.9	33.9	34.0	33.5	35.3	35.0	35.0	35.5	34.7	36.8	35.9	-2.7%	0.3% 0.1%
Pakistan	146.4	146.0	145.7	144.1	145.5	145.5	152.3	159.9	175.5	188.5	195.7	3.8%	2.9% 0.6%
Philippines	74.2	75.3	80.8	81.5	84.3	93.3	98.9	108.0	118.4	127.3	132.2		