

## Carbon dioxide emissions and stocks

HDI rank	Carbon dioxide emissions <sup>a</sup>													
	Total (Mt CO <sub>2</sub> )		Annual change (%)	Share of world total <sup>b</sup> (%)		Per capita (t CO <sub>2</sub> )		Carbon intensity of energy CO <sub>2</sub> emissions per unit of energy use (kt of CO <sub>2</sub> per kt of oil equivalent)		Carbon intensity of growth CO <sub>2</sub> emissions per unit of GDP (kt of CO <sub>2</sub> per million 2000 PPP US\$)		Carbon dioxide emissions from forest biomass <sup>c</sup> (Mt CO <sub>2</sub> /year)	Carbon stocks in forest biomass <sup>d</sup> (Mt Carbon)	
	1990	2004	1990–2004	1990	2004	1990	2004	1990	2004	1990	2004	1990–2005	2005	
<b>HIGH HUMAN DEVELOPMENT</b>														
1	Iceland	2.0	2.2	0.7	(.)	(.)	7.9	7.6	0.93	0.64	0.32	0.24	-0.1	1.5
2	Norway	33.2	87.5	11.7	0.1	0.3	7.8	19.1	1.54	3.17	0.31	0.53	-15.6	344.0
3	Australia	278.5	326.6	1.2	1.2	1.1	16.3	16.2	3.18	2.82	0.81	0.58	..	8,339.0
4	Canada	415.8	639.0	3.8	1.8	2.2	15.0	20.0	1.99	2.38	0.66	0.69	..	..
5	Ireland	30.6	42.3	2.7	0.1	0.1	8.8	10.5	2.94	2.78	0.55	0.31	-1.0	19.8
6	Sweden	49.5	53.0	0.5	0.2	0.2	5.8	5.9	1.04	0.98	0.26	0.21	-30.2	1,170.0
7	Switzerland	42.7	40.4	-0.4	0.2	0.1	6.2	5.4	1.71	1.49	0.21	0.17	-6.1	154.0
8	Japan	1,070.7	1,257.2	1.2	4.7	4.3	8.7	9.9	2.40	2.36	0.37	0.36	-118.5	1,892.0
9	Netherlands	141.0	142.0	(.)	0.6	0.5	9.4	8.7	2.11	1.73	0.41	0.30	-1.2	25.0
10	France	363.8	373.5	0.2	1.6	1.3	6.4	6.0	1.60	1.36	0.29	0.23	-44.2	1,165.0
11	Finland	51.2	65.8	2.0	0.2	0.2	10.3	12.6	1.76	1.73	0.46	0.45	-22.5	815.7
12	United States	4,818.3	6,045.8	1.8	21.2	20.9	19.3	20.6	2.50	2.60	0.68	0.56	-499.5	18,964.0
13	Spain	212.1	330.3	4.0	0.9	1.1	5.5	7.6	2.33	2.32	0.31	0.33	-28.3	392.0
14	Denmark	49.8	52.9	0.5	0.2	0.2	9.7	9.8	2.78	2.64	0.42	0.33	-1.0	26.0
15	Austria	57.6	69.8	1.5	0.3	0.2	7.4	8.6	2.30	2.10	0.32	0.29	..	..
16	United Kingdom	579.4	586.9	0.1	2.6	2.0	10.0	9.8	2.73	2.51	0.47	0.34	-4.2	112.0
17	Belgium	100.6	100.7	(.)	0.4	0.3	10.1	9.7	2.05	1.74	0.45	0.34	-3.7	65.3
18	Luxembourg	9.9	11.3	1.0	(.)	(.)	25.9	25.0	2.77	2.37	0.78	0.48	-0.5	9.0
19	New Zealand	22.6	31.6	2.8	0.1	0.1	6.7	7.7	1.65	1.79	0.39	0.35	..	..
20	Italy	389.7	449.7	1.1	1.7	1.6	6.9	7.8	2.63	2.44	0.32	0.30	-51.9	636.0
21	Hong Kong, China (SAR)	26.2	37.4	3.1	0.1	0.1	4.6	5.5	2.46	2.18	0.23	0.19	..	..
22	Germany	980.4 <sup>h</sup>	808.3	-1.3	4.3 <sup>h</sup>	2.8	12.3 <sup>h</sup>	9.8	2.75 <sup>h</sup>	2.32	0.58 <sup>h</sup>	0.38	-74.9	1,303.0
23	Israel	33.1	71.2	8.2	0.1	0.2	6.9	10.4	2.74	3.43	0.39	0.47	..	..
24	Greece	72.4	96.6	2.4	0.3	0.3	7.1	8.8	3.26	3.17	0.49	0.43	-1.7	58.7
25	Singapore	45.1	52.2	1.1	0.2	0.2	14.9	12.3	3.37	2.04	0.99	0.48	..	..
26	Korea (Republic of)	241.2	465.4	6.6	1.1	1.6	5.6	9.7	2.60	2.18	0.57	0.51	-32.2	258.0
27	Slovenia	12.3 <sup>i</sup>	16.2	2.6 <sup>i</sup>	0.1 <sup>i</sup>	0.1	6.2 <sup>i</sup>	8.1	2.46	2.26	0.51 <sup>i</sup>	0.43	-8.5	147.1
28	Cyprus	4.6	6.7	3.2	(.)	(.)	6.8	9.2	3.02	2.58	0.52	0.45	-0.1	2.8
29	Portugal	42.3	58.9	2.8	0.2	0.2	4.3	5.6	2.39	2.22	0.30	0.31	-8.9	113.8
30	Brunei Darussalam	5.8	8.8	3.7	(.)	(.)	23.0	24.0	3.20	3.27	..	..	1.2	39.3
31	Barbados	1.1	1.3	1.3	(.)	(.)	4.1	4.7	..	..	..	..	..	..
32	Czech Republic	138.4 <sup>i</sup>	116.9	-1.3 <sup>i</sup>	0.6 <sup>i</sup>	0.4	13.4 <sup>i</sup>	11.4	3.20	2.57	1.03 <sup>i</sup>	0.66	-12.6	326.3
33	Kuwait	43.4	99.3	9.2	0.2	0.3	20.3	37.1	5.13	3.95	..	1.81	..	..
34	Malta	2.2	2.5	0.7	(.)	(.)	6.3	6.1	2.88	2.70	0.53	0.36	0.0	0.1
35	Qatar	12.2	52.9	23.9	0.1	0.2	24.9	79.3	1.76	2.93	..	..	..	..
36	Hungary	60.1	57.1	-0.4	0.3	0.2	5.8	5.6	2.10	2.17	0.50	0.37	-6.2	173.0
37	Poland	347.6	307.1	-0.8	1.5	1.1	9.1	8.0	3.48	3.35	1.24	0.68	-44.1	895.6
38	Argentina	109.7	141.7	2.1	0.5	0.5	3.4	3.7	2.38	2.22	0.38	0.31	121.6	2,411.0
39	United Arab Emirates	54.7	149.1	12.3	0.2	0.5	27.2	34.1	2.43	3.40	1.19	1.57	-0.7	16.6
40	Chile	35.6	62.4	5.4	0.2	0.2	2.7	3.9	2.53	2.23	0.47	0.38	-105.9	1,945.9
41	Bahrain	11.7	16.9	3.2	0.1	0.1	24.2	23.9	2.43	2.26	1.92	1.30	..	..
42	Slovakia	44.3 <sup>i</sup>	36.3	-1.5 <sup>i</sup>	0.2 <sup>i</sup>	0.1	8.4 <sup>i</sup>	6.7	2.45	1.98	0.96 <sup>i</sup>	0.51	-9.8	202.9
43	Lithuania	21.4 <sup>i</sup>	13.3	-3.1 <sup>i</sup>	0.1 <sup>i</sup>	(.)	5.7 <sup>i</sup>	3.8	1.92	1.45	0.67 <sup>i</sup>	0.32	-6.3	128.9
44	Estonia	24.9 <sup>i</sup>	18.9	-2.0 <sup>i</sup>	0.1 <sup>i</sup>	0.1	16.1 <sup>i</sup>	14.0	3.96	3.66	2.46 <sup>i</sup>	1.12	..	167.2
45	Latvia	12.7 <sup>i</sup>	7.1	-3.7 <sup>i</sup>	0.1 <sup>i</sup>	(.)	4.8 <sup>i</sup>	3.0	2.15	1.54	0.85 <sup>i</sup>	0.28	-13.9	230.9
46	Uruguay	3.9	5.5	2.9	(.)	(.)	1.2	1.6	1.74	1.91	0.18	0.19	..	..
47	Croatia	17.4 <sup>i</sup>	23.5	2.9 <sup>i</sup>	0.1 <sup>i</sup>	0.1	3.9 <sup>i</sup>	5.3	2.59	2.66	0.52 <sup>i</sup>	0.48	-10.8	192.4
48	Costa Rica	2.9	6.4	8.5	(.)	(.)	1.0	1.5	1.44	1.73	0.15	0.17	3.4	192.8
49	Bahamas	1.9	2.0	0.2	(.)	(.)	7.6	6.7	..	..	0.46	..	..	..
50	Seychelles	0.1	0.5	27.2	(.)	(.)	1.6	6.7	..	..	0.13	0.44	0.0	3.7
51	Cuba	32.0	25.8	-1.4	0.1	0.1	3.0	2.3	1.91	2.41	..	..	-34.7	347.0
52	Mexico	413.3	437.8	0.4	1.8	1.5	5.0	4.2	3.32	2.65	0.65	0.46	..	..
53	Bulgaria	75.3	42.5	-3.1	0.3	0.1	8.4	5.5	2.61	2.25	1.29	0.72	-18.3	263.0

Carbon dioxide emissions<sup>a</sup>

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	1990	2004	1990–2004	1990	2004	1990	2004	1990	2004	1990	2004	1990–2005	2005
	54 Saint Kitts and Nevis	0.1	0.1	6.3	(.)	(.)	1.5	3.2	..	..	0.20	0.22	..
55 Tonga	0.1	0.1	3.7	(.)	(.)	0.8	1.1	..	..	0.15	0.16	..	..
56 Libyan Arab Jamahiriya	37.8	59.9	4.2	0.2	0.2	9.1	9.3	3.27	3.29	..	..	0.0	6.4
57 Antigua and Barbuda	0.3	0.4	2.7	(.)	(.)	4.8	6.0	..	..	0.54	0.46	..	..
58 Oman	10.3	30.9	14.3	(.)	0.1	6.3	13.6	2.25	2.61	0.52	0.88	..	..
59 Trinidad and Tobago	16.9	32.5	6.6	0.1	0.1	13.9	24.9	2.80	2.88	1.98	2.05	0.2	23.6
60 Romania	155.1	90.4	-3.0	0.7	0.3	6.7	4.2	2.48	2.34	0.99	0.54	(.)	566.5
61 Saudi Arabia	254.8	308.2	1.5	1.1	1.1	15.9	13.6	3.78	2.19	1.18	1.02	0.0	17.5
62 Panama	3.1	5.7	5.8	(.)	(.)	1.3	1.8	2.10	2.22	0.29	0.28	9.8	620.0
63 Malaysia	55.3	177.5	15.8	0.2	0.6	3.0	7.5	2.44	3.13	0.56	0.76	3.4	3,510.0
64 Belarus	94.6 <sup>i</sup>	64.9	-2.6 <sup>j</sup>	0.4 <sup>i</sup>	0.2	9.2 <sup>i</sup>	6.6	2.43	2.42	1.96 <sup>i</sup>	1.03	-20.0	539.0
65 Mauritius	1.5	3.2	8.5	(.)	(.)	1.4	2.6	..	..	0.21	0.24	(.)	3.9
66 Bosnia and Herzegovina	4.7 <sup>i</sup>	15.6	19.2 <sup>j</sup>	(.) <sup>i</sup>	0.1	1.1 <sup>i</sup>	4.0	1.06	3.31	..	..	-10.9	175.5
67 Russian Federation	1,984.1 <sup>i</sup>	1,524.1	-1.9 <sup>j</sup>	8.8 <sup>i</sup>	5.3	13.4 <sup>i</sup>	10.6	2.56	2.38	1.61 <sup>i</sup>	1.17	71.8	32,210.0
68 Albania	7.3	3.7	-3.5	(.)	(.)	2.2	1.2	2.73	1.55	0.73	0.26	-0.7	52.0
69 Macedonia (TFYR)	10.6 <sup>i</sup>	10.4	-0.2 <sup>j</sup>	(.) <sup>i</sup>	(.)	5.2 <sup>i</sup>	5.1	3.63	3.86	0.91 <sup>i</sup>	0.83	0.0	20.3
70 Brazil	209.5	331.6	4.2	0.9	1.1	1.4	1.8	1.56	1.62	0.22	0.24	1,111.4	49,335.0
<b>MEDIUM HUMAN DEVELOPMENT</b>													
71 Dominica	0.1	0.1	5.8	(.)	(.)	0.8	1.5	..	..	0.17	0.26	..	..
72 Saint Lucia	0.2	0.4	9.1	(.)	(.)	1.2	2.2	..	..	0.24	0.38	..	..
73 Kazakhstan	259.2 <sup>i</sup>	200.2	-1.9 <sup>j</sup>	1.1 <sup>i</sup>	0.7	15.7 <sup>i</sup>	13.3	3.25	3.65	3.30 <sup>i</sup>	2.07	0.2	136.7
74 Venezuela (Bolivarian Republic of)	117.4	172.5	3.4	0.5	0.6	6.0	6.6	2.67	3.07	1.03	1.20	..	..
75 Colombia	58.0	53.6	-0.5	0.3	0.2	1.6	1.2	2.32	1.94	0.30	0.19	23.8	8,062.2
76 Ukraine	600.0 <sup>i</sup>	329.8	-3.8 <sup>j</sup>	2.6 <sup>i</sup>	1.1	11.5 <sup>i</sup>	7.0	2.86	2.35	1.59 <sup>i</sup>	1.18	-60.5	744.5
77 Samoa	0.1	0.2	1.5	(.)	(.)	0.8	0.8	..	..	0.19	0.16	..	..
78 Thailand	95.7	267.9	12.8	0.4	0.9	1.7	4.2	2.18	2.76	0.38	0.56	17.8	716.0
79 Dominican Republic	9.6	19.6	7.5	(.)	0.1	1.3	2.2	2.31	2.56	0.31	0.33	0.0	82.0
80 Belize	0.3	0.8	11.0	(.)	(.)	1.6	2.9	..	..	0.39	0.44	0.0	59.0
81 China	2,398.9	5,007.1	7.8	10.6	17.3	2.1	3.8	2.77	3.11	1.30	0.70	-334.9	6,096.0
82 Grenada	0.1	0.2	5.6	(.)	(.)	1.3	2.7	..	..	0.23	0.29	..	..
83 Armenia	3.7 <sup>i</sup>	3.6	-0.1 <sup>j</sup>	(.) <sup>i</sup>	(.)	1.0 <sup>i</sup>	1.2	0.86	1.71	0.65 <sup>i</sup>	0.31	0.4	18.1
84 Turkey	146.2	226.0	3.9	0.6	0.8	2.6	3.2	2.76	2.76	0.48	0.45	-18.0	816.8
85 Suriname	1.8	2.3	1.9	(.)	(.)	4.5	5.2	..	..	0.81	0.78	0.0	5,692.0
86 Jordan	10.2	16.5	4.4	(.)	0.1	3.1	2.9	2.91	2.52	0.84	0.66	0.0	2.3
87 Peru	21.0	31.5	3.5	0.1	0.1	1.0	1.1	2.11	2.38	0.25	0.22	..	..
88 Lebanon	9.1	16.3	5.6	(.)	0.1	3.3	4.2	3.94	3.01	1.24	0.92	..	1.8
89 Ecuador	16.7	29.3	5.4	0.1	0.1	1.6	2.2	2.73	2.90	0.50	0.60	..	..
90 Philippines	43.9	80.5	5.9	0.2	0.3	0.7	1.0	1.68	1.82	0.19	0.22	111.2	970.7
91 Tunisia	13.3	22.9	5.2	0.1	0.1	1.6	2.3	2.40	2.63	0.35	0.32	-0.9	9.8
92 Fiji	0.8	1.1	2.3	(.)	(.)	1.1	1.2	..	..	0.22 <sup>i</sup>	0.24	..	..
93 Saint Vincent and the Grenadines	0.1	0.2	10.4	(.)	(.)	0.8	1.7	..	..	0.16	0.29	..	..
94 Iran (Islamic Republic of)	218.3	433.3	7.0	1.0	1.5	4.0	6.4	3.17	2.97	0.85	0.93	-1.7	334.0
95 Paraguay	2.3	4.2	6.1	(.)	(.)	0.5	0.7	0.73	1.04	0.12	0.18	..	..
96 Georgia	15.1 <sup>i</sup>	3.9	-6.2 <sup>j</sup>	0.1 <sup>i</sup>	(.)	2.8 <sup>i</sup>	0.8	1.73	1.38	1.39 <sup>i</sup>	0.32	-4.6	210.0
97 Guyana	1.1	1.4	2.0	(.)	(.)	1.5	1.9	..	..	0.63	0.47	..	1,722.0
98 Azerbaijan	49.8 <sup>i</sup>	31.3	-3.1 <sup>j</sup>	0.2 <sup>i</sup>	0.1	6.9 <sup>i</sup>	3.8	2.99	2.42	1.92 <sup>i</sup>	1.06	0.0	57.9
99 Sri Lanka	3.8	11.5	14.8	(.)	(.)	0.2	0.6	0.68	1.22	0.09	0.15	3.2	40.0
100 Maldives	0.2	0.7	26.5	(.)	(.)	0.7	2.5	..	..	..	..	..	..
101 Jamaica	8.0	10.6	2.4	(.)	(.)	3.3	4.0	2.70	2.60	1.04	1.06	0.2	34.0
102 Cape Verde	0.1	0.3	15.2	(.)	(.)	0.3	0.7	..	..	0.08	0.11	-0.6	7.9
103 El Salvador	2.6	6.2	9.7	(.)	(.)	0.5	0.9	1.03	1.37	0.14	0.20	..	..
104 Algeria	77.0	193.9	10.8	0.3	0.7	3.0	5.5	3.23	5.89	0.56	0.99	-6.0	114.0
105 Viet Nam	21.4	98.6	25.8	0.1	0.3	0.3	1.2	0.88	1.96	0.28	0.47	-72.5	1,174.0
106 Occupied Palestinian Territories	..	0.6	..	..	(.)	..	0.2	..	..	..	..	..	..

## Carbon dioxide emissions and stocks

### Carbon dioxide emissions<sup>a</sup>

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	1990	2004	1990–2004	1990	2004	1990	2004	1990	2004	1990	2004	1990–2005	2005
107 Indonesia	213.8	378.0	5.5	0.9	1.3	1.2	1.7	2.19	2.17	0.54	0.53	2,271.5	5,897.0
108 Syrian Arab Republic	35.9	68.4	6.5	0.2	0.2	3.0	3.8	3.08	3.71	1.11	1.11	..	..
109 Turkmenistan	28.0 <sup>i</sup>	41.7	4.1 <sup>j</sup>	0.1 <sup>i</sup>	0.1	7.0 <sup>i</sup>	8.8	2.48	2.68	1.54 <sup>i</sup>	..	-0.2	17.4
110 Nicaragua	2.6	4.0	3.7	(.)	(.)	0.7	0.7	1.25	1.22	0.24	0.24	45.4	716.0
111 Moldova	20.9 <sup>i</sup>	7.7	-5.3 <sup>j</sup>	0.1 <sup>i</sup>	(.)	4.8 <sup>i</sup>	1.8	3.03	2.27	2.23 <sup>i</sup>	1.05	-0.7	13.2
112 Egypt	75.4	158.1	7.8	0.3	0.5	1.5	2.3	2.37	2.78	0.48	0.58	-0.6	7.1
113 Uzbekistan	118.1 <sup>i</sup>	137.8	1.4 <sup>j</sup>	0.5 <sup>i</sup>	0.5	5.5 <sup>i</sup>	5.3	2.62	2.55	3.55 <sup>i</sup>	3.07	-1.7	12.4
114 Mongolia	10.0	8.5	-1.0	(.)	(.)	4.7	3.1	..	..	2.71	1.90	16.9	573.9
115 Honduras	2.6	7.6	13.8	(.)	(.)	0.5	1.1	1.07	1.97	0.19	0.36	..	..
116 Kyrgyzstan	11.0 <sup>i</sup>	5.7	-4.0 <sup>j</sup>	(.) <sup>i</sup>	(.)	2.4 <sup>i</sup>	1.1	2.18	2.06	1.26 <sup>i</sup>	0.65	-0.8	12.6
117 Bolivia	5.5	7.0	1.9	(.)	(.)	0.9	0.8	1.98	1.40	0.40	0.31	89.4	5,296.0
118 Guatemala	5.1	12.2	10.0	(.)	(.)	0.6	1.0	1.14	1.61	0.17	0.25	25.0	498.0
119 Gabon	6.0	1.4	-5.5	(.)	(.)	6.4	1.0	4.82	0.81	0.96	0.16	5.9	3,643.0
120 Vanuatu	0.1	0.1	2.4	(.)	(.)	0.5	0.4	..	..	0.16	0.15	..	..
121 South Africa	331.8	436.8	2.3	1.5	1.5	9.1	9.8	3.64	3.33	1.03	0.99	0.0	823.9
122 Tajikistan	20.6 <sup>i</sup>	5.0	-6.3 <sup>j</sup>	0.1 <sup>i</sup>	(.)	3.7 <sup>i</sup>	0.8	2.26	1.50	2.38 <sup>i</sup>	0.68	0.1	2.8
123 Sao Tome and Principe	0.1	0.1	2.8	(.)	(.)	0.6	0.5	..	..	0.32	0.31	0.0	4.6
124 Botswana	2.2	4.3	7.0	(.)	(.)	1.7	2.4	1.71	2.30	0.27	0.23	5.1	141.5
125 Namibia	(.)	2.5	..	(.)	(.)	0.0	1.2	0.02	1.85	(.)	0.19	8.1	230.9
126 Morocco	23.5	41.1	5.4	0.1	0.1	1.0	1.4	3.49	3.59	0.29	0.34	-9.5	240.0
127 Equatorial Guinea	0.1	5.4	..	(.)	(.)	0.3	10.5	..	..	0.28	1.57	3.9	115.0
128 India	681.7	1,342.1	6.9	3.0	4.6	0.8	1.2	1.89	2.34	0.48	0.44	-40.8	2,343.0
129 Solomon Islands	0.2	0.2	0.6	(.)	(.)	0.5	0.3	..	..	0.23	0.21	..	..
130 Lao People's Democratic Republic	0.2	1.3	32.4	(.)	(.)	0.1	0.2	..	..	0.05	0.13	26.4	1,487.0
131 Cambodia	0.5	0.5	1.3	(.)	(.)	(.)	(.)	..	..	..	0.02	80.6	1,266.0
132 Myanmar	4.3	9.8	9.2	(.)	(.)	0.1	0.2	0.40	0.69	..	..	156.6	3,168.0
133 Bhutan	0.1	0.4	15.9	(.)	(.)	0.1	0.2	..	..	..	..	-7.3	345.0
134 Comoros	0.1	0.1	2.4	(.)	(.)	0.1	0.1	..	..	0.08	0.09	0.2	0.8
135 Ghana	3.8	7.2	6.5	(.)	(.)	0.3	0.3	0.71	0.86	0.15	0.16	40.9	496.4
136 Pakistan	68.0	125.6	6.0	0.3	0.4	0.6	0.8	1.57	1.69	0.39	0.41	22.2	259.0
137 Mauritania	2.6	2.6	-0.2	(.)	(.)	1.3	0.8	..	..	0.70	0.44	0.9	6.6
138 Lesotho	..	..	..	..	..	..	..	..	..	..	..	..	..
139 Congo	1.2	3.5	14.4	(.)	(.)	0.5	1.0	1.11	3.33	0.38	0.86	14.2	5,181.0
140 Bangladesh	15.4	37.1	10.1	0.1	0.1	0.1	0.3	1.20	1.63	0.12	0.15	1.2	31.0
141 Swaziland	0.4	1.0	8.9	(.)	(.)	0.5	0.8	..	..	0.13	0.20	0.2	23.4
142 Nepal	0.6	3.0	27.3	(.)	(.)	(.)	0.1	0.11	0.34	0.03	0.08	-26.9	485.0
143 Madagascar	0.9	2.7	13.6	(.)	(.)	0.1	0.1	..	..	0.08	0.19	50.8	3,130.0
144 Cameroon	1.6	3.8	9.9	(.)	(.)	0.1	0.3	0.32	0.55	0.07	0.12	72.1	1,902.0
145 Papua New Guinea	2.4	2.4	0.1	(.)	(.)	0.7	0.4	..	..	0.31	0.19	..	..
146 Haiti	1.0	1.8	5.5	(.)	(.)	0.1	0.2	0.63	0.80	0.07	0.14	0.2	8.3
147 Sudan	5.4	10.4	6.6	(.)	(.)	0.2	0.3	0.51	0.59	0.19	0.17	48.9	1,530.7
148 Kenya	5.8	10.6	5.8	(.)	(.)	0.3	0.3	0.47	0.63	0.22	0.30	5.5	334.7
149 Djibouti	0.4	0.4	0.3	(.)	(.)	1.0	0.5	..	..	0.22	0.25	0.0	0.4
150 Timor-Leste	..	0.2	..	..	(.)	..	0.2	..	..	..	..	..	..
151 Zimbabwe	16.6	10.6	-2.6	0.1	(.)	1.6	0.8	1.77	1.13	0.58	0.42	34.2	535.0
152 Togo	0.8	2.3	14.8	(.)	(.)	0.2	0.4	0.52	0.86	0.13	0.29	..	..
153 Yemen	10.1 <sup>i</sup>	21.1	8.3 <sup>j</sup>	(.) <sup>i</sup>	0.1	0.9 <sup>i,k</sup>	1.0	3.25	3.31	1.15 <sup>i</sup>	1.25	0.0	5.1
154 Uganda	0.8	1.8	8.9	(.)	(.)	(.)	0.1	..	..	0.06	0.05	12.1	138.2
155 Gambia	0.2	0.3	3.6	(.)	(.)	0.2	0.2	..	..	0.12	0.12	-0.5	33.2
<b>LOW HUMAN DEVELOPMENT</b>													
156 Senegal	3.1	5.0	4.2	(.)	(.)	0.4	0.4	1.40	1.81	0.28	0.28	6.8	371.0
157 Eritrea	..	0.8	..	..	(.)	..	0.2	..	..	..	0.17	..	..
158 Nigeria	45.3	114.0	10.8	0.2	0.4	0.5	0.9	0.64	1.15	0.59	0.92	181.6	1,401.5
159 Tanzania (United Republic of)	2.3	4.3	6.2	(.)	(.)	0.1	0.1	0.24	0.23	0.17	0.18	167.3	2,254.0

Carbon dioxide emissions<sup>a</sup>

HDI rank	Total (Mt CO <sub>2</sub> )		Annual change (%)	Share of world total <sup>b</sup> (%)		Per capita (t CO <sub>2</sub> )		Carbon intensity of energy CO <sub>2</sub> emissions per unit of energy use (kt of CO <sub>2</sub> per kt of oil equivalent)		Carbon intensity of growth CO <sub>2</sub> emissions per unit of GDP (kt of CO <sub>2</sub> per million 2000 PPP US\$)		Carbon dioxide emissions from forest biomass <sup>c</sup> (Mt CO <sub>2</sub> /year)	Carbon stocks in forest biomass <sup>d</sup> (Mt Carbon)
	1990	2004	1990–2004	1990	2004	1990	2004	1990	2004	1990	2004	1990–2005	2005
160 Guinea	1.0	1.3	2.3	(.)	(.)	0.2	0.1	..	..	0.09	0.07	15.9	636.0
161 Rwanda	0.5	0.6	0.6	(.)	(.)	0.1	0.1	..	..	0.07	0.06	-2.1	44.1
162 Angola	4.6	7.9	5.0	(.)	(.)	0.5	0.7	0.74	0.83	0.25	0.29	37.6	4,829.3
163 Benin	0.7	2.4	16.7	(.)	(.)	0.1	0.3	0.43	0.96	0.16	0.29	..	..
164 Malawi	0.6	1.0	5.3	(.)	(.)	0.1	0.1	..	..	0.13	0.14	5.6	161.0
165 Zambia	2.4	2.3	-0.5	(.)	(.)	0.3	0.2	0.45	0.33	0.31	0.23	44.4	1,156.1
166 Côte d'Ivoire	5.4	5.2	-0.3	(.)	(.)	0.5	0.3	1.22	0.74	0.26	0.20	-9.0	1,864.0
167 Burundi	0.2	0.2	0.9	(.)	(.)	(.)	(.)	..	..	0.04	0.05	..	..
168 Congo (Democratic Republic of the)	4.0	2.1	-3.4	(.)	(.)	0.1	(.)	0.33	0.13	0.07	0.06	293.1	23,173.0
169 Ethiopia	3.0	8.0	12.1	(.)	(.)	0.1	0.1	0.20	0.38	0.07	0.13	13.4	252.0
170 Chad	0.1	0.1	-0.9	(.)	(.)	(.)	0.0	..	..	0.03	0.01	5.6	236.0
171 Central African Republic	0.2	0.3	2.0	(.)	(.)	0.1	0.1	..	..	0.05	0.06	13.7	2,801.0
172 Mozambique	1.0	2.2	8.4	(.)	(.)	0.1	0.1	0.14	0.25	0.12	0.11	5.7	606.3
173 Mali	0.4	0.6	2.4	(.)	(.)	(.)	(.)	..	..	0.07	0.05	7.1	241.9
174 Niger	1.0	1.2	1.1	(.)	(.)	0.1	0.1	..	..	0.16	0.13	1.7	12.5
175 Guinea-Bissau	0.2	0.3	2.1	(.)	(.)	0.2	0.2	..	..	0.21	0.24	0.5	61.0
176 Burkina Faso	1.0	1.1	0.7	(.)	(.)	0.1	0.1	..	..	0.13	0.08	19.1	298.0
177 Sierra Leone	0.3	1.0	14.1	(.)	(.)	0.1	0.2	..	..	0.10	0.27	..	..
Developing countries	6,831.1 T	12,303.3 T	5.7	30.1	42.5	1.7	2.4	2.34	2.59	0.64	0.56	5,091.5	190,359.7
Least developed countries	74.1 T	146.3 T	7.0	0.3	0.5	0.2	0.2	..	..	0.14	0.17	1,097.8	50,811.2
Arab States	733.6 T	1,348.4 T	6.0	3.2	4.7	3.4	4.5	3.02	2.94	0.75	0.86	44.4	2,393.3
East Asia and the Pacific	3,413.5 T	6,682.0 T	6.8	15.0	23.1	2.1	3.5	..	..	0.90	0.63	2,293.8	27,222.9
Latin America and the Caribbean	1,087.7 T	1,422.6 T	2.2	4.8	4.9	2.5	2.6	2.25	2.19	0.40	0.36	1,667.0	97,557.2
South Asia	990.7 T	1,954.6 T	7.0	4.4	6.7	0.8	1.3	1.94	2.34	0.49	0.46	-49.3	3,843.5
Sub-Saharan Africa	454.8 T	663.1 T	3.3	2.0	2.3	1.0	1.0	..	..	0.55	0.57	1,153.6	58,523.2
Central and Eastern Europe and the CIS	4,182.0 T	3,168.0 T	-2.0	18.4	10.9	10.3	7.9	2.71	2.51	1.49	0.97	-165.9	37,592.0
OECD	11,205.2 T	13,318.6 T	1.3	49.4	46.0	10.8	11.5	2.47	2.42	0.54	0.45	-999.7	59,956.6
High-income OECD	10,055.4 T	12,137.5 T	1.5	44.3	41.9	12.0	13.2	2.42	2.39	0.52	0.45	-979.6	45,488.9
High human development	14,495.5 T	16,615.8 T	1.0	63.9	57.3	9.8	10.1	2.45	2.40	0.60	0.48	89.8	152,467.3
Medium human development	5,944.4 T	10,215.2 T	5.1	26.2	35.2	1.8	2.5	2.39	2.76	0.83	0.61	3,026.5	86,534.2
Low human development	77.6 T	161.7 T	7.7	0.3	0.6	0.3	0.3	..	..	0.24	0.36	858.0	41,254.0
High income	10,572.1 T	12,975.1 T	1.6	46.6	44.8	12.1	13.3	2.44	2.40	0.53	0.46	-937.4	54,215.3
Middle income	8,971.5 T	12,162.9 T	2.5	39.5	42.0	3.4	4.0	2.57	2.76	0.95	0.65	3,693.1	170,735.6
Low income	1,323.4 T	2,083.9 T	4.1	5.8	7.2	0.8	0.9	..	..	0.47	0.43	1,275.1	56,686.1
World	22,702.5 T <sup>b</sup>	28,982.7 T <sup>b</sup>	2.0	100.0	100.0	4.3	4.5	2.64	2.63	0.68	0.55	4,038.1	282,650.1

NOTES

- a. Refers to carbon dioxide emissions stemming from consumption of solid, liquid and gaseous fossil fuels as well as from gas flaring and the production of cement. Original values were reported in terms of metric carbon tonnes, in order to convert these values to metric tonnes of carbon dioxide a conversion factor of 3.664 (relative molecular weights 44/12) has been applied.
- b. The world total includes carbon dioxide emissions not included in national totals, such as those from bunker fuels, oxidation of non-fuel hydrocarbon products (e.g., asphalt) and emissions by countries not shown in the main indicator tables. These emissions amount to approximately 5% of the world total. Thus the shares listed for individual countries in this table do not sum to 100%.
- c. Refers to net emissions or sequestration due to changes in carbon stock of forest biomass. A positive number suggests carbon emissions

while a negative number suggests carbon sequestration. It is assumed that all negative carbon stock changes are released as emissions.

- d. Refers only to living biomass - above and below ground. Carbon in deadwood, soil and litter is not included.
- e. Includes Monaco.
- f. Includes American Samoa, Guam, Puerto Rico, Turks and Caicos and the US Virgin Islands.
- g. Includes San Marino.
- h. Data refers to the sum of the emissions from the former Federal Republic of Germany and the former German Democratic Republic in 1990.
- i. In cases where data for 1990 are not available, data for the closest year between 1991 and 1992 have been used.
- j. Refers to the 1992-2004 period.

SOURCES

- Columns 1, 2 and 4–7: calculated based on data from CDIAC 2007.
- Column 3: calculated on the basis of data in columns 1 and 2.
- Columns 8–11: calculated based on data from CDIAC 2007 and World Bank 2007b.
- Column 12: calculated based on data from FAO 2007b; aggregates calculated for HDRO by FAO.
- Column 13: FAO 2007b; aggregates calculated for HDRO by FAO.