

Overshoot Index

The Overshoot Index assesses the extent to which a country can support itself from its own renewable resources, by measuring current per capita consumption against per capita biocapacity. The ecological footprint measures the area of biologically productive land and water required to produce the renewable resources/ecological services for, and absorb the waste of, a given population at a given average level of resource consumption. Biocapacity is the biologically productive capacity of an area - cropland, grazing land, forest, fresh water etc. It does not include non-renewable resources like fossil fuels and other minerals. The true balance between consumption and demand for resources will appear even more unfavourable when the progressive reduction towards zero use of non-renewables is factored into the numbers. A satisfactory way to do this has yet to be devised. It also assumes that 100% of biocapacity is allocated to humans, since there is no agreed figure for the necessary share needed to conserve biodiversity. Ecological footprint and biocapacity are measured in global hectares (hectares with world average biological productivity) per person. Increased productivity would reduce dependency; while increased population or consumption per head would increase it.

The percentage of an area's footprint supported from its renewable resources is its self-sufficient percentage; the remaining percentage is its dependent percentage. Similarly, the percentage of an area's population supported from its renewable resources is its sustainable population at current consumption levels with current technology; the remaining percentage is its overshoot population. A dependency of greater than zero means that a country, region or the world is relying on other countries or non-renewable, unsustainable resources for its current consumption. Countries in overshoot increase their dependency, and the others approach overshoot, as either their population or their per capita consumption grows; and faster if both grow.

All source data is from the 2012 Data Tables, based on 2009 figures, produced by the Global Footprint Network (GFN). Countries with populations of under one million have been omitted. GFN's data are largely from UN sources; their methodology is still admittedly imprecise, but is subject to continuous refinement. Apparent discrepancies in the calculations are due to rounding. For full details of the calculations, go to www.footprintnetwork.org This extrapolation from GFN data was produced by Population Matters. www.populationmatters.org

dependency ranking country/ region name	eco footprint global ha pc	biocapacity global ha pc	self sufficiency %	dependency %	actual pop'n (m)	sustainable pop'n (m)	overshoot pop'n (m)	Gross overshoot ha (m)	alphabetical listing
Already in overshoot									
World	2.6	1.8	69.2	30.8	6817.7	4719.9	2097.8	5454	Afghanistan 77
Asia-Pacific**	1.6	0.9	56.3	43.8	3760.7	2115.4	1645.3	2632	Africa**
High-income Countries	5.3	3.2	60.4	39.6	1033.7	624.1	409.6	2171	Albania 87
1 China	2.2	0.9	40.9	59.1	1365.6	558.7	806.9	1775	Algeria 26
2 United States of America	7.0	3.9	55.7	44.3	307.7	171.4	136.3	954	Angola 135
EU**	4.5	2.6	57.8	42.2	498.1	287.8	210.3	946	Argentina 144
Middle-income Countries	1.9	1.7	89.5	10.5	4422.4	3956.9	465.5	884	Armenia 82
North America**	6.9	5.0	72.5	27.5	341.4	247.4	94.0	649	Asia-Pacific**
Middle East/Central Asia**	2.5	1.0	40.0	60.0	383.7	153.5	230.2	576	Australia 145
3 India	0.9	0.5	55.6	44.4	1207.7	670.9	536.8	483	Austria 48
4 Japan	3.8	0.6	15.8	84.2	126.6	20.0	106.6	405	Azerbaijan 55
5 Mexico	3.4	1.4	41.2	58.8	112.0	46.1	65.9	224	Bahrain 62
6 Germany	4.5	2.1	46.7	53.3	82.4	38.5	43.9	198	Bangladesh 25
7 Italy	4.4	1.3	29.5	70.5	60.2	17.8	42.4	187	Belarus 63
8 United Kingdom	4.5	1.5	33.3	66.7	61.9	20.6	41.3	186	Belgium 21
9 Korea, Republic of	4.3	0.7	16.3	83.7	48.0	7.8	40.2	173	Benin 75
10 Iran, Islamic Republic of	2.8	0.9	32.1	67.9	73.1	23.5	49.6	139	Bolivia 143
11 Spain	4.3	1.8	41.9	58.1	45.6	19.1	26.5	114	Bosnia and Herzegovina 81
12 Saudi Arabia	3.9	0.6	15.4	84.6	26.8	4.1	22.7	88	Botswana 102
13 Netherlands	5.9	1.3	22.0	78.0	16.6	3.7	12.9	76	Brazil 149
14 France	4.9	3.7	75.5	24.5	62.4	47.1	15.3	75	Bulgaria 100
15 Egypt	1.6	0.7	43.8	56.3	79.7	34.9	44.8	72	Burkina Faso 88
16 South Africa	2.6	1.2	46.2	53.8	49.8	23.0	26.8	70	Burundi 71
17 United Arab Emirates	9.1	0.6	6.6	93.4	8.2	0.5	7.7	70	Cambodia 91
18 Poland	4.1	2.3	56.1	43.9	38.2	21.4	16.8	69	Cameroon 118
19 Pakistan	0.8	0.4	50.0	50.0	170.5	85.3	85.3	68	Canada 146
20 Thailand	2.1	1.2	57.1	42.9	68.7	39.3	29.4	62	Central African Republic 130
21 Belgium	7.3	1.8	24.7	75.3	10.7	2.6	8.1	59	Chad 121
22 Turkey	2.5	1.7	68.0	32.0	71.8	48.8	23.0	57	Chile 128
23 Philippines	1.2	0.6	50.0	50.0	91.7	45.9	45.9	55	China 1
24 Nigeria	1.3	1.0	76.9	23.1	154.5	118.8	35.7	46	Colombia 141
25 Bangladesh	0.7	0.4	57.1	42.9	147.0	84.0	63.0	44	Congo 137
26 Algeria	1.8	0.6	33.3	66.7	35.0	11.7	23.3	42	Congo, Dem. Republic of 142
27 Ethiopia	1.2	0.7	58.3	41.7	81.2	47.4	33.8	41	Costa Rica 76
28 Iraq	1.5	0.3	20.0	80.0	30.7	6.1	24.6	37	Côte d'Ivoire 123
29 Viet Nam	1.5	1.1	73.3	26.7	86.9	63.7	23.2	35	Croatia 104
30 Singapore	6.3	0.0	0.0	100.0	4.9	0.0	4.9	31	Cuba 45
31 Portugal	4.4	1.6	36.4	63.6	10.7	3.9	6.8	30	Cyprus 70
32 Switzerland	5.0	1.2	24.0	76.0	7.6	1.8	5.8	29	Czech Republic 40
33 Greece	4.7	2.2	46.8	53.2	11.3	5.3	6.0	28	Denmark 49
34 Israel	4.1	0.3	7.3	92.7	7.3	0.5	6.8	28	Dominican Republic 61

dependency ranking country/ region name	eco footprint global ha pc	biocapacity global ha pc	self sufficiency %	dependency %	actual pop'n (m)	sustainable pop'n (m)	overshoot pop'n (m)	Gross overshoot ha (m)	alphabetical listing		
35	Uzbekistan	1.9	0.9	47.4	52.6	27.1	12.8	14.3	27	Ecuador	109
36	Kuwait	9.9	0.4	4.0	96.0	2.6	0.1	2.5	25	Egypt	15
37	Libyan Arab Jamahiriya	4.4	0.6	13.6	86.4	6.3	0.9	5.4	24	El Salvador	59
38	Morocco	1.5	0.8	53.3	46.7	31.6	16.9	14.7	22	Eritrea	111
39	Syrian Arab Republic	1.7	0.7	41.2	58.8	20.1	8.3	11.8	20	Estonia	113
40	Czech Republic	4.7	2.8	59.6	40.4	10.4	6.2	4.2	20	Ethiopia	27
41	Kenya	1.0	0.5	50.0	50.0	39.5	19.8	19.8	20	EU**	
42	Uganda	1.5	0.9	60.0	40.0	32.4	19.4	13.0	19	Finland	136
43	Malaysia	3.0	2.4	80.0	20.0	27.9	22.3	5.6	17	France	14
44	Sri Lanka	1.2	0.5	41.7	58.3	20.7	8.6	12.1	14	Gambia	96
45	Cuba	1.9	0.7	36.8	63.2	11.3	4.2	7.1	14	Germany	6
46	Lebanon	3.5	0.4	11.4	88.6	4.2	0.5	3.7	13	Ghana	52
47	Qatar	9.8	1.8	18.4	81.6	1.6	0.3	1.3	13	Greece	33
48	Austria	5.2	3.8	73.1	26.9	8.4	6.1	2.3	12	Guatemala	50
49	Denmark	7.6	5.5	72.4	27.6	5.5	4.0	1.5	12	Guinea	119
50	Guatemala	1.8	1.0	55.6	44.4	14.0	7.8	6.2	11	Guinea-Bissau	108
51	Jordan	2.1	0.3	14.3	85.7	6.0	0.9	5.1	11	Haiti	79
52	Ghana	1.7	1.3	76.5	23.5	23.8	18.2	5.6	10	High-income Countries	
53	Kazakhstan	4.3	3.7	86.0	14.0	15.8	13.6	2.2	9	Honduras	99
54	Ukraine	2.3	2.1	91.3	8.7	45.7	41.7	4.0	9	Hungary	73
55	Azerbaijan	1.7	0.7	41.2	58.8	9.1	3.7	5.4	9	India	3
56	Serbia	2.3	1.4	60.9	39.1	9.9	6.0	3.9	9	Indonesia	127
57	Nepal	0.8	0.5	62.5	37.5	29.4	18.4	11.0	9	Iran, Islamic Republic of	10
58	Tanzania, United Republic of	1.2	1.0	83.3	16.7	43.5	36.3	7.2	9	Iraq	28
59	El Salvador	2.0	0.6	30.0	70.0	6.2	1.9	4.3	9	Ireland	65
60	Trinidad and Tobago	8.0	1.6	20.0	80.0	1.3	0.3	1.0	8	Israel	34
61	Dominican Republic	1.3	0.5	38.5	61.5	9.8	3.8	6.0	8	Italy	7
62	Bahrain	7.1	0.6	8.5	91.5	1.2	0.1	1.1	8	Jamaica	72
63	Belarus	4.1	3.3	80.5	19.5	9.6	7.7	1.9	8	Japan	4
64	Tunisia	1.7	1.0	58.8	41.2	10.4	6.1	4.3	7	Jordan	51
65	Ireland	5.7	4.1	71.9	28.1	4.4	3.2	1.2	7	Kazakhstan	53
66	Yemen	0.9	0.6	66.7	33.3	23.3	15.5	7.8	7	Kenya	41
67	Zimbabwe	1.3	0.8	61.5	38.5	12.5	7.7	4.8	6	Korea, Democratic People's	105
68	Mauritius	4.8	0.6	12.5	87.5	1.3	0.2	1.1	5	Korea, Republic of	9
69	Macedonia TFYR	3.5	1.5	42.9	57.1	2.1	0.9	1.2	4	Kuwait	36
70	Cyprus	4.4	0.6	13.6	86.4	1.1	0.2	1.0	4	Kyrgyzstan	95
71	Burundi	0.9	0.4	44.4	55.6	8.2	3.6	4.6	4	Lao People's Democratic	106
72	Jamaica	1.8	0.3	16.7	83.3	2.7	0.5	2.3	4	Latin America**	
73	Hungary	3.0	2.6	86.7	13.3	10.0	8.7	1.3	4	Latvia	117
74	Turkmenistan	3.9	3.2	82.1	17.9	5.0	4.1	0.9	4	Lebanon	46
75	Benin	1.4	1.0	71.4	28.6	8.6	6.1	2.5	3	Lesotho	94
76	Costa Rica	2.3	1.6	69.6	30.4	4.6	3.2	1.4	3	Liberia	112
77	Afghanistan	0.6	0.5	83.3	16.7	30.6	25.5	5.1	3	Libyan Arab Jamahiriya	37
78	Niger	2.3	2.1	91.3	8.7	15.0	13.7	1.3	3	Lithuania	107
79	Haiti	0.6	0.3	50.0	50.0	9.9	5.0	5.0	3	Low-income Countries	
80	Slovakia	3.5	3.0	85.7	14.3	5.5	4.7	0.8	3	Macedonia TFYR	69
81	Bosnia and Herzegovina	2.6	1.9	73.1	26.9	3.8	2.8	1.0	3	Madagascar	133
82	Armenia	1.5	0.7	46.7	53.3	3.1	1.4	1.7	2	Malawi	90
83	Senegal	1.6	1.4	87.5	12.5	12.1	10.6	1.5	2	Malaysia	43
84	Rwanda	0.8	0.6	75.0	25.0	10.3	7.7	2.6	2	Mali	115
85	Tajikistan	0.9	0.6	66.7	33.3	6.8	4.5	2.3	2	Mauritania	116
86	Togo	1.0	0.7	70.0	30.0	5.9	4.1	1.8	2	Mauritius	68
87	Albania	1.7	1.2	70.6	29.4	3.2	2.3	0.9	2	Mexico	5
88	Burkina Faso	1.4	1.3	92.9	7.1	16.0	14.9	1.1	2	Middle East/Central Asia**	
89	Occupied Palestinian Territory	0.5	0.1	20.0	80.0	3.9	0.8	3.1	2	Middle-income Countries	
90	Malawi	0.8	0.7	87.5	12.5	14.4	12.6	1.8	1	Moldova	92
91	Cambodia	1.1	1.0	90.9	9.1	14.0	12.7	1.3	1	Mongolia	129
92	Moldova	1.4	1.1	78.6	21.4	3.6	2.8	0.8	1	Morocco	38
93	Slovenia	4.1	3.6	87.8	12.2	2.0	1.8	0.2	1	Mozambique	134
94	Lesotho	1.1	0.8	72.7	27.3	2.1	1.5	0.6	1	Myanmar	122
95	Kyrgyzstan	1.5	1.4	93.3	6.7	5.3	4.9	0.4	1	Namibia	120
96	Gambia	1.5	1.2	80.0	20.0	1.7	1.4	0.3	1	Nepal	57
	Not yet in overshoot									Netherlands	13
	Low-income Countries	1.1	1.1	100.0	0.0	1313.7	1313.7	0.0	0	New Zealand*	132
97	Venezuela, Bolivarian Republic	2.9	2.9	100.0	0.0	28.5	28.5	0.0	0	Nicaragua	110
98	Panama	2.2	2.6	118.2	-18.2	3.5	4.1	-0.6	-1	Niger	78
99	Honduras	1.7	1.9	111.8	-11.8	7.5	8.4	-0.9	-2	Nigeria	24
100	Bulgaria	2.9	3.1	106.9	-6.9	7.5	8.0	-0.5	-2	North America**	
101	Sierra Leone	1.1	1.4	127.3	-27.3	5.7	7.3	-1.6	-2	Norway	125
102	Botswana	2.8	3.7	132.1	-32.1	2.0	2.6	-0.6	-2	Not yet in overshoot	
103	Romania	2.4	2.5	104.2	-4.2	21.5	22.4	-0.9	-2	Occupied Palestinian Territory	89
104	Croatia	3.8	4.3	113.2	-13.2	4.4	5.0	-0.6	-2	Other Europe**	147
105	Korea, Democratic People's	0.5	0.6	120.0	-20.0	24.2	29.0	-4.8	-2	Pakistan	19
106	Lao People's Democratic	1.3	1.7	130.8	-30.8	6.1	8.0	-1.9	-2	Panama	98
107	Lithuania	4.1	5.1	124.4	-24.4	3.3	4.1	-0.8	-3	Papua New Guinea	114

dependency ranking	country/region name	eco footprint global ha pc	biocapacity global ha pc	self sufficiency %	dependency %	actual pop'n (m)	sustainable pop'n (m)	overshoot pop'n (m)	Gross overshoot ha (m)	alphabetical listing	
108	Guinea-Bissau	0.9	3.3	366.7	-266.7	1.5	5.5	-4.0	-4	Paraguay	138
109	Ecuador	1.8	2.1	116.7	-16.7	14.3	16.7	-2.4	-4	Peru	140
110	Nicaragua	1.5	2.3	153.3	-53.3	5.7	8.7	-3.0	-5	Philippines	23
111	Eritrea	0.6	1.5	250.0	-150.0	5.1	12.8	-7.7	-5	Poland	18
112	Liberia	1.2	2.8	233.3	-133.3	3.8	8.9	-5.1	-6	Portugal	31
113	Estonia	5.0	9.7	194.0	-94.0	1.3	2.5	-1.2	-6	Qatar	47
114	Papua New Guinea	2.6	3.6	138.5	-38.5	6.7	9.3	-2.6	-7	Romania	103
115	Mali	2.0	2.5	125.0	-25.0	14.9	18.6	-3.7	-7	Russian Federation	148
116	Mauritania	2.4	5.1	212.5	-112.5	3.4	7.2	-3.8	-9	Rwanda	84
117	Latvia	3.8	8.0	210.5	-110.5	2.3	4.8	-2.5	-10	Saudi Arabia	12
118	Cameroon	1.2	1.8	150.0	-50.0	19.2	28.8	-9.6	-12	Senegal	83
119	Guinea	1.7	2.9	170.6	-70.6	9.8	16.7	-6.9	-12	Serbia	56
120	Namibia	1.4	7.0	500.0	-400.0	2.2	11.0	-8.8	-12	Sierra Leone	101
121	Chad	1.9	3.2	168.4	-68.4	10.9	18.4	-7.5	-14	Singapore	30
122	Myanmar	1.9	2.2	115.8	-15.8	47.6	55.1	-7.5	-14	Slovakia	80
123	Côte d'Ivoire	0.9	1.8	200.0	-100.0	19.4	38.8	-19.4	-17	Slovenia	93
124	Zambia	0.9	2.3	255.6	-155.6	12.7	32.5	-19.8	-18	South Africa	16
125	Norway	2.7	6.8	251.9	-151.9	4.8	12.1	-7.3	-20	Spain	11
126	Uruguay	3.9	10.2	261.5	-161.5	3.4	8.9	-5.5	-21	Sri Lanka	44
127	Indonesia	1.3	1.4	107.7	-7.7	237.4	255.7	-18.3	-24	Sudan	131
128	Chile	2.3	3.7	160.9	-60.9	17.0	27.3	-10.3	-24	Sweden	139
129	Mongolia	5.6	15.0	267.9	-167.9	2.7	7.2	-4.5	-25	Switzerland	32
130	Central African Republic	1.4	8.2	585.7	-485.7	4.3	25.2	-20.9	-29	Syrian Arab Republic	39
131	Sudan	1.6	2.3	143.8	-43.8	42.5	61.1	-18.6	-30	Tajikistan	85
132	New Zealand*	2.7	10.1	374.1	-274.1	4.3	16.1	-11.8	-32	Tanzania, United Republic of	58
133	Madagascar	1.1	2.8	254.5	-154.5	20.1	51.2	-31.1	-34	Thailand	20
134	Mozambique	0.7	2.2	314.3	-214.3	22.9	72.0	-49.1	-34	Togo	86
135	Angola	1.0	2.9	290.0	-190.0	18.6	53.9	-35.3	-35	Trinidad and Tobago	60
136	Finland	5.6	13.4	239.3	-139.3	5.3	12.7	-7.4	-41	Tunisia	64
137	Congo	0.9	11.9	1322.2	-1222.2	3.9	51.6	-47.7	-43	Turkey	22
138	Paraguay	3.2	10.1	315.6	-215.6	6.3	19.9	-13.6	-43	Turkmenistan	74
139	Sweden	5.4	10.5	194.4	-94.4	9.3	18.1	-8.8	-47	Uganda	42
140	Peru	1.6	3.8	237.5	-137.5	28.8	68.4	-39.6	-63	Ukraine	54
141	Colombia	1.9	3.8	200.0	-100.0	45.7	91.4	-45.7	-87	United Arab Emirates	17
	Africa**	1.4	1.5	107.1	-7.1	982.7	1052.9	-70.2	-98	United Kingdom	8
142	Congo, Dem. Republic of	0.8	3.0	375.0	-275.0	64.2	240.8	-176.6	-141	United States of America	2
143	Bolivia	2.6	18.0	692.3	-592.3	9.8	67.8	-58.0	-151	Uruguay	126
144	Argentina	2.1	6.5	309.5	-209.5	40.1	124.1	-84.0	-176	Uzbekistan	35
145	Australia	5.4	14.3	264.8	-164.8	21.9	58.0	-36.1	-195	Venezuela, Bolivarian Republic	97
146	Canada	5.9	14.7	249.2	-149.2	33.7	84.0	-50.3	-297	Viet Nam	29
147	Other Europe**	3.5	4.9	140.0	-40.0	237.8	332.9	-95.1	-333	World	
148	Russian Federation	4.0	6.6	165.0	-65.0	143.1	236.1	-93.0	-372	Yemen	66
149	Brazil	2.8	9.5	339.3	-239.3	193.2	655.5	-462.3	-1294	Zambia	124
	Latin America**	2.6	5.3	203.8	-103.8	575.4	1172.9	-597.5	-1554	Zimbabwe	67

NOTES:

World population is inclusive of countries not included in the table

* Country Notes: See GFN Data table

** Country grouping results are for stated countries only

Excel version available on request.