

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 popn (m)	sustainable popn (m)	overshoot popn (m)	alphabetical listing	
Already in overshoot										
1	Singapore	6.3	0.0	0.0	100.0	4.9	0.0	4.9	Afghanistan	85
2	Kuwait	9.9	0.4	4.0	96.0	2.6	0.1	2.5	Africa**	
3	United Arab Emirates	9.1	0.6	6.6	93.4	8.2	0.5	7.7	Albania	67
4	Israel	4.1	0.3	7.3	92.7	7.3	0.5	6.8	Algeria	25
5	Bahrain	7.1	0.6	8.5	91.5	1.2	0.1	1.1	Angola	138
6	Lebanon	3.5	0.4	11.4	88.6	4.2	0.5	3.7	Argentina	139
7	Mauritius	4.8	0.6	12.5	87.5	1.3	0.2	1.1	Armenia	41
8	Libyan Arab Jamahiriya	4.4	0.6	13.6	86.4	6.3	0.9	5.4	Asia-Pacific**	
9	Cyprus	4.4	0.6	13.6	86.4	1.1	0.2	1.0	Australia	136
10	Jordan	2.1	0.3	14.3	85.7	6.0	0.9	5.1	Austria	72
11	Saudi Arabia	3.9	0.6	15.4	84.6	26.8	4.1	22.7	Azerbaijan	32
12	Japan	3.8	0.6	15.8	84.2	126.6	20.0	106.6	Bahrain	5
13	Korea, Republic of	4.3	0.7	16.3	83.7	48.0	7.8	40.2	Bangladesh	54
14	Jamaica	1.8	0.3	16.7	83.3	2.7	0.5	2.3	Belarus	82
15	Qatar	9.8	1.8	18.4	81.6	1.6	0.3	1.3	Belgium	21
16	Trinidad and Tobago	8.0	1.6	20.0	80.0	1.3	0.3	1.0	Benin	68
17	Iraq	1.5	0.3	20.0	80.0	30.7	6.1	24.6	Bolivia	145
18	Occupied Palestinian Territory	0.5	0.1	20.0	80.0	3.9	0.8	3.1	Bosnia and Herzegovina	73
19	Netherlands	5.9	1.3	22.0	78.0	16.6	3.7	12.9	Botswana	111
20	Switzerland	5.0	1.2	24.0	76.0	7.6	1.8	5.8	Brazil	139
21	Belgium	7.3	1.8	24.7	75.3	10.7	2.6	8.1	Bulgaria	99
22	Italy	4.4	1.3	29.5	70.5	60.2	17.8	42.4	Burkina Faso	95
23	El Salvador	2.0	0.6	30.0	70.0	6.2	1.9	4.3	Burundi	38
24	Iran, Islamic Republic of	2.8	0.9	32.1	67.9	73.1	23.5	49.6	Cambodia	92
25	Algeria	1.8	0.6	33.3	66.7	35.0	11.7	23.3	Cameroon	115
26	United Kingdom	4.5	1.5	33.3	66.7	61.9	20.6	41.3	Canada	130
27	Portugal	4.4	1.6	36.4	63.6	10.7	3.9	6.8	Central African Republic	144
28	Cuba	1.9	0.7	36.8	63.2	11.3	4.2	7.1	Chad	119
29	Dominican Republic	1.3	0.5	38.5	61.5	9.8	3.8	6.0	Chile	117
Middle East/Central Asia**										
30	China	2.2	0.9	40.9	59.1	1365.6	558.7	806.9	Colombia	124
31	Mexico	3.4	1.4	41.2	58.8	112.0	46.1	65.9	Congo	146
32	Azerbaijan	1.7	0.7	41.2	58.8	9.1	3.7	5.4	Congo, Dem. Republic of	142
33	Syrian Arab Republic	1.7	0.7	41.2	58.8	20.1	8.3	11.8	Costa Rica	65
34	Sri Lanka	1.2	0.5	41.7	58.3	20.7	8.6	12.1	Côte d'Ivoire	123
35	Spain	4.3	1.8	41.9	58.1	45.6	19.1	26.5	Croatia	102
36	Macedonia TFYR	3.5	1.5	42.9	57.1	2.1	0.9	1.2	Cuba	28

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)	alphabetical listing
37 Egypt	1.6	0.7	43.8	56.3	79.7	34.9	44.8	Cyprus
38 Burundi	0.9	0.4	44.4	55.6	8.2	3.6	4.6	Czech Republic
39 South Africa	2.6	1.2	46.2	53.8	49.8	23.0	26.8	Denmark
40 Germany	4.5	2.1	46.7	53.3	82.4	38.5	43.9	Dominican Republic
41 Armenia	1.5	0.7	46.7	53.3	3.1	1.4	1.7	Ecuador
42 Greece	4.7	2.2	46.8	53.2	11.3	5.3	6.0	Egypt
43 Uzbekistan	1.9	0.9	47.4	52.6	27.1	12.8	14.3	El Salvador
44 Kenya	1.0	0.5	50.0	50.0	39.5	19.8	19.8	Eritrea
45 Pakistan	0.8	0.4	50.0	50.0	170.5	85.3	85.3	Estonia
46 Philippines	1.2	0.6	50.0	50.0	91.7	45.9	45.9	Ethiopia
47 Haiti	0.6	0.3	50.0	50.0	9.9	5.0	5.0	EU**
48 Morocco	1.5	0.8	53.3	46.7	31.6	16.9	14.7	Finland
49 India	0.9	0.5	55.6	44.4	1207.7	670.9	536.8	France
50 Guatemala	1.8	1.0	55.6	44.4	14.0	7.8	6.2	Gambia
51 United States of America	7.0	3.9	55.7	44.3	307.7	171.4	136.3	Germany
52 Poland	4.1	2.3	56.1	43.9	38.2	21.4	16.8	Ghana
Asia-Pacific**	1.6	0.9	56.3	43.8	3760.7	2115.4	1645.3	Greece
53 Thailand	2.1	1.2	57.1	42.9	68.7	39.3	29.4	Guatemala
54 Bangladesh	0.7	0.4	57.1	42.9	147.0	84.0	63.0	Guinea
EU**	4.5	2.6	57.8	42.2	498.1	287.8	210.3	Guinea-Bissau
55 Ethiopia	1.2	0.7	58.3	41.7	81.2	47.4	33.8	Haiti
56 Tunisia	1.7	1.0	58.8	41.2	10.4	6.1	4.3	High-income Countries
57 Czech Republic	4.7	2.8	59.6	40.4	10.4	6.2	4.2	Honduras
58 Uganda	1.5	0.9	60.0	40.0	32.4	19.4	13.0	Hungary
High-income Countries	5.3	3.2	60.4	39.6	1033.7	624.1	409.6	India
59 Serbia	2.3	1.4	60.9	39.1	9.9	6.0	3.9	Indonesia
60 Zimbabwe	1.3	0.8	61.5	38.5	12.5	7.7	4.8	Iran, Islamic Republic of
61 Nepal	0.8	0.5	62.5	37.5	29.4	18.4	11.0	Iraq
62 Tajikistan	0.9	0.6	66.7	33.3	6.8	4.5	2.3	Ireland
63 Yemen	0.9	0.6	66.7	33.3	23.3	15.5	7.8	Israel
64 Turkey	2.5	1.7	68.0	32.0	71.8	48.8	23.0	Italy
World	2.6	1.8	69.2	30.8	6817.7	4719.9	2097.8	Jamaica
65 Costa Rica	2.3	1.6	69.6	30.4	4.6	3.2	1.4	Japan
66 Togo	1.0	0.7	70.0	30.0	5.9	4.1	1.8	Jordan
67 Albania	1.7	1.2	70.6	29.4	3.2	2.3	0.9	Kazakhstan
68 Benin	1.4	1.0	71.4	28.6	8.6	6.1	2.5	Kenya
69 Ireland	5.7	4.1	71.9	28.1	4.4	3.2	1.2	Korea, Democratic People's
70 Denmark	7.6	5.5	72.4	27.6	5.5	4.0	1.5	Korea, Republic of
North America**	6.9	5.0	72.5	27.5	341.4	247.4	94.0	Kuwait
71 Lesotho	1.1	0.8	72.7	27.3	2.1	1.5	0.6	Kyrgyzstan
72 Austria	5.2	3.8	73.1	26.9	8.4	6.1	2.3	Lao People's Democratic
73 Bosnia and Herzegovina	2.6	1.9	73.1	26.9	3.8	2.8	1.0	Latin America**
74 Viet Nam	1.5	1.1	73.3	26.7	86.9	63.7	23.2	Latvia
75 Rwanda	0.8	0.6	75.0	25.0	10.3	7.7	2.6	Lebanon
76 France	4.9	3.7	75.5	24.5	62.4	47.1	15.3	Lesotho
77 Ghana	1.7	1.3	76.5	23.5	23.8	18.2	5.6	Liberia
78 Nigeria	1.3	1.0	76.9	23.1	154.5	118.8	35.7	Libyan Arab Jamahiriya
79 Moldova	1.4	1.1	78.6	21.4	3.6	2.8	0.8	Lithuania
80 Gambia	1.5	1.2	80.0	20.0	1.7	1.4	0.3	Low-income Countries
81 Malaysia	3.0	2.4	80.0	20.0	27.9	22.3	5.6	Macedonia TFYR
82 Belarus	4.1	3.3	80.5	19.5	9.6	7.7	1.9	Madagascar
83 Turkmenistan	3.9	3.2	82.1	17.9	5.0	4.1	0.9	Malawi
84 Tanzania, United Republic of	1.2	1.0	83.3	16.7	43.5	36.3	7.2	Malaysia
85 Afghanistan	0.6	0.5	83.3	16.7	30.6	25.5	5.1	Mali
86 Slovakia	3.5	3.0	85.7	14.3	5.5	4.7	0.8	Mauritania
87 Kazakhstan	4.3	3.7	86.0	14.0	15.8	13.6	2.2	Mauritius
88 Hungary	3.0	2.6	86.7	13.3	10.0	8.7	1.3	Mexico
89 Malawi	0.8	0.7	87.5	12.5	14.4	12.6	1.8	Middle East/Central Asia**
90 Senegal	1.6	1.4	87.5	12.5	12.1	10.6	1.5	Middle-income Countries
91 Slovenia	4.1	3.6	87.8	12.2	2.0	1.8	0.2	Moldova
Middle-income Countries	1.9	1.7	89.5	10.5	4422.4	3956.9	465.5	Mongolia
92 Cambodia	1.1	1.0	90.9	9.1	14.0	12.7	1.3	Morocco
93 Niger	2.3	2.1	91.3	8.7	15.0	13.7	1.3	Mozambique
94 Ukraine	2.3	2.1	91.3	8.7	45.7	41.7	4.0	Myanmar
95 Burkina Faso	1.4	1.3	92.9	7.1	16.0	14.9	1.1	Namibia
96 Kyrgyzstan	1.5	1.4	93.3	6.7	5.3	4.9	0.4	Nepal

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Not yet in overshoot								
Low-income Countries	1.1	1.1	100.0	0.0	1313.7	1313.7	0.0	Netherlands 19
97 Venezuela, Bolivarian Republic	2.9	2.9	100.0	0.0	28.5	28.5	0.0	New Zealand* 141
98 Romania	2.4	2.5	104.2	-4.2	21.5	22.4	-0.9	Nicaragua 116
99 Bulgaria	2.9	3.1	106.9	-6.9	7.5	8.0	-0.5	Niger 93
Africa**	1.4	1.5	107.1	-7.1	982.7	1052.9	-70.2	Nigeria 78
100 Indonesia	1.3	1.4	107.7	-7.7	237.4	255.7	-18.3	North America**
101 Honduras	1.7	1.9	111.8	-11.8	7.5	8.4	-0.9	Norway 132
102 Croatia	3.8	4.3	113.2	-13.2	4.4	5.0	-0.6	Occupied Palestinian Territory 18
103 Myanmar	1.9	2.2	115.8	-15.8	47.6	55.1	-7.5	Other Europe** 113
104 Ecuador	1.8	2.1	116.7	-16.7	14.3	16.7	-2.4	Pakistan 45
105 Panama	2.2	2.6	118.2	-18.2	3.5	4.1	-0.6	Panama 105
106 Korea, Democratic People's	0.5	0.6	120.0	-20.0	24.2	29.0	-4.8	Papua New Guinea 112
107 Lithuania	4.1	5.1	124.4	-24.4	3.3	4.1	-0.8	Paraguay 138
108 Mali	2.0	2.5	125.0	-25.0	14.9	18.6	-3.7	Peru 128
109 Sierra Leone	1.1	1.4	127.3	-27.3	5.7	7.3	-1.6	Philippines 46
110 Lao People's Democratic	1.3	1.7	130.8	-30.8	6.1	8.0	-1.9	Poland 52
111 Botswana	2.8	3.7	132.1	-32.1	2.0	2.6	-0.6	Portugal 27
112 Papua New Guinea	2.6	3.6	138.5	-38.5	6.7	9.3	-2.6	Qatar 15
113 Other Europe**	3.5	4.9	140.0	-40.0	237.8	332.9	-95.1	Romania 98
114 Sudan	1.6	2.3	143.8	-43.8	42.5	61.1	-18.6	Russian Federation 118
115 Cameroon	1.2	1.8	150.0	-50.0	19.2	28.8	-9.6	Rwanda 75
116 Nicaragua	1.5	2.3	153.3	-53.3	5.7	8.7	-3.0	Saudi Arabia 11
117 Chile	2.3	3.7	160.9	-60.9	17.0	27.3	-10.3	Senegal 90
118 Russian Federation	4.0	6.6	165.0	-65.0	143.1	236.1	-93.0	Serbia 59
119 Chad	1.9	3.2	168.4	-68.4	10.9	18.4	-7.5	Sierra Leone 109
120 Guinea	1.7	2.9	170.6	-70.6	9.8	16.7	-6.9	Singapore 1
121 Estonia	5.0	9.7	194.0	-94.0	1.3	2.5	-1.2	Slovakia 86
122 Sweden	5.4	10.5	194.4	-94.4	9.3	18.1	-8.8	Slovenia 91
123 Côte d'Ivoire	0.9	1.8	200.0	-100.0	19.4	38.8	-19.4	South Africa 39
124 Colombia	1.9	3.8	200.0	-100.0	45.7	91.4	-45.7	Spain 35
Latin America**	2.6	5.3	203.8	-103.8	575.4	1172.9	-597.5	Sri Lanka 34
125 Latvia	3.8	8.0	210.5	-110.5	2.3	4.8	-2.5	Sudan 114
126 Mauritania	2.4	5.1	212.5	-112.5	3.4	7.2	-3.8	Sweden 122
127 Liberia	1.2	2.8	233.3	-133.3	3.8	8.9	-5.1	Switzerland 20
128 Peru	1.6	3.8	237.5	-137.5	28.8	68.4	-39.6	Syrian Arab Republic 33
129 Finland	5.6	13.4	239.3	-139.3	5.3	12.7	-7.4	Tajikistan 62
130 Canada	5.9	14.7	249.2	-149.2	33.7	84.0	-50.3	Tanzania, United Republic of 84
131 Eritrea	0.6	1.5	250.0	-150.0	5.1	12.8	-7.7	Thailand 53
132 Norway	2.7	6.8	251.9	-151.9	4.8	12.1	-7.3	Togo 66
133 Madagascar	1.1	2.8	254.5	-154.5	20.1	51.2	-31.1	Trinidad and Tobago 16
134 Zambia	0.9	2.3	255.6	-155.6	12.7	32.5	-19.8	Tunisia 56
135 Uruguay	3.9	10.2	261.5	-161.5	3.4	8.9	-5.5	Turkey 64
136 Australia	5.4	14.3	264.8	-164.8	21.9	58.0	-36.1	Turkmenistan 83
137 Mongolia	5.6	15.0	267.9	-167.9	2.7	7.2	-4.5	Uganda 58
138 Angola	1.0	2.9	290.0	-190.0	18.6	53.9	-35.3	Ukraine 94
139 Argentina	2.1	6.5	309.5	-209.5	40.1	124.1	-84.0	United Arab Emirates 3
137 Mozambique	0.7	2.2	314.3	-214.3	22.9	72.0	-49.1	United Kingdom 26
138 Paraguay	3.2	10.1	315.6	-215.6	6.3	19.9	-13.6	United States of America 51
139 Brazil	2.8	9.5	339.3	-239.3	193.2	655.5	-462.3	Uruguay 135
140 Guinea-Bissau	0.9	3.3	366.7	-266.7	1.5	5.5	-4.0	Uzbekistan 43
141 New Zealand*	2.7	10.1	374.1	-274.1	4.3	16.1	-11.8	Venezuela, Bolivarian Republic 97
142 Congo, Dem. Republic of	0.8	3.0	375.0	-275.0	64.2	240.8	-176.6	Viet Nam 74
143 Namibia	1.4	7.0	500.0	-400.0	2.2	11.0	-8.8	World
144 Central African Republic	1.4	8.2	585.7	-485.7	4.3	25.2	-20.9	Yemen 63
145 Bolivia	2.6	18.0	692.3	-592.3	9.8	67.8	-58.0	Zambia 134
146 Congo	0.9	11.9	1322.2	-1222.2	3.9	51.6	-47.7	Zimbabwe 60

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.