

TABLE 7

Planetary pressures–adjusted Human Development Index

HDI RANK	Human Development Index (HDI)	Planetary pressures-adjusted HDI (PHDI)				Adjustment factor for planetary pressures	SDG 9.4 Carbon dioxide emissions per capita (production)	Carbon dioxide emissions (production) index	SDG 8.4, 12.2 Material footprint per capita	Material footprint index
	Value	Value	Difference from HDI value* (%)	Difference from HDI rank ^a	Value	Value	(tonnes)	Value	(tonnes)	Value
	2023	2023	2023	2023	2023	2023	2023	2023	2023	2023
Very high human development										
1	Iceland	0.972	0.735	24.4	-40	0.756	10.0	0.869	32.2	0.643
2	Norway	0.970	0.723	25.5	-49	0.746	7.1	0.907	37.5	0.584
2	Switzerland	0.970	0.732	24.5	-41	0.755	3.7	0.951	39.8	0.559
4	Denmark	0.962	0.792	17.7	-6	0.824	4.6	0.940	26.4	0.708
5	Germany	0.959	0.785	18.1	-9	0.819	7.2	0.907	24.3	0.730
5	Sweden	0.959	0.810	15.5	2	0.845	3.4	0.955	24.0	0.734
7	Australia	0.958	0.700	26.9	-59	0.731	14.5	0.811	31.5	0.651
8	Hong Kong, China (SAR)	0.955	..	..	..	..	4.5	0.941	..	..
8	Netherlands	0.955	0.740	22.5	-27	0.775	6.7	0.912	32.7	0.638
10	Belgium	0.951	0.666	30.0	-76	0.700	7.1	0.907	45.7	0.494
11	Ireland	0.949	0.752	20.8	-20	0.793	6.8	0.911	29.4	0.674
12	Finland	0.948	0.748	21.1	-22	0.789	5.7	0.926	31.4	0.652
13	Singapore	0.946	0.618	34.7	-90	0.653	8.2	0.893	53.0	0.412
13	United Kingdom	0.946	0.827	12.6	11	0.875	4.5	0.941	17.3	0.808
15	United Arab Emirates	0.940	0.585	37.8	-97	0.622	24.1	0.685	39.8	0.559
16	Canada	0.939	0.643	31.5	-79	0.684	14.2	0.815	40.3	0.554
17	Liechtenstein	0.938	..	..	..	..	4.0	0.948	..	..
17	New Zealand	0.938	0.731	22.1	-28	0.779	5.8	0.925	33.1	0.634
17	United States	0.938	0.686	26.9	-57	0.731	14.4	0.811	31.5	0.651
20	Korea (Republic of)	0.937	0.745	20.5	-16	0.795	11.2	0.854	23.9	0.736
21	Slovenia	0.931	0.791	15.0	7	0.850	5.3	0.930	20.8	0.769
22	Austria	0.930	0.757	18.6	-3	0.814	6.5	0.915	25.8	0.714
23	Japan	0.925	0.785	15.1	7	0.849	8.0	0.895	17.9	0.802
24	Malta	0.924	0.799	13.5	14	0.864	3.4	0.956	20.5	0.773
25	Luxembourg	0.922	0.479	48.0	-122	0.519	10.7	0.861	74.2	0.178
26	France	0.920	0.804	12.6	20	0.874	4.2	0.945	17.7	0.804
27	Israel	0.919	0.709	22.9	-34	0.772	6.5	0.915	33.6	0.628
28	Spain	0.918	0.818	10.9	24	0.891	4.7	0.939	14.2	0.843
29	Czechia	0.915	0.764	16.5	7	0.835	8.2	0.894	20.2	0.776
29	Italy	0.915	0.801	12.5	20	0.876	5.3	0.930	16.2	0.821
29	San Marino	0.915	..	..	..	..	..	..	..	..
32	Andorra	0.913	..	..	..	..	5.3	0.931	..	..
32	Cyprus	0.913	0.754	17.4	2	0.826	5.7	0.926	24.7	0.726
34	Greece	0.908	0.803	11.6	24	0.884	5.3	0.930	14.6	0.838
35	Poland	0.906	0.792	12.6	21	0.874	7.1	0.908	14.5	0.840
36	Estonia	0.905	0.714	21.1	-23	0.789	7.6	0.901	29.1	0.677
37	Saudi Arabia	0.900	0.666	26.0	-52	0.740	19.9	0.740	23.5	0.739
38	Bahrain	0.899	0.632	29.7	-63	0.703	24.6	0.679	24.6	0.728
39	Lithuania	0.895	0.751	16.1	4	0.840	4.6	0.940	23.6	0.739
40	Portugal	0.890	0.797	10.4	27	0.896	3.6	0.953	14.5	0.839
41	Croatia	0.889	0.787	11.5	24	0.886	4.4	0.943	15.5	0.828
41	Latvia	0.889	0.749	15.7	5	0.843	3.6	0.954	24.2	0.732
43	Qatar	0.886	0.276	68.8	-117	0.311	42.6	0.444	74.1	0.179
44	Slovakia	0.880	0.770	12.5	21	0.875	5.3	0.931	16.3	0.819
45	Chile	0.878	0.784	10.7	25	0.893	3.9	0.949	14.6	0.838
46	Hungary	0.870	0.757	13.0	19	0.870	4.0	0.948	18.8	0.792
47	Argentina	0.865	0.763	11.8	22	0.882	4.3	0.944	16.3	0.819
48	Montenegro	0.862	..	..	..	..	3.7	0.951	..	..
48	Uruguay	0.862	0.804	6.7	40	0.933	2.3	0.970	9.5	0.895
50	Oman	0.858	0.581	32.3	-69	0.677	16.9	0.779	38.5	0.574
51	Türkiye	0.853	0.729	14.5	1	0.854	5.0	0.934	20.4	0.774
52	Kuwait	0.852	0.531	37.7	-82	0.624	23.0	0.699	40.8	0.548
53	Antigua and Barbuda	0.851	..	..	..	..	6.8	0.911	..	..
54	Seychelles	0.848	..	..	..	..	5.1	0.933	..	..
55	Bulgaria	0.845	0.740	12.4	13	0.875	5.4	0.930	16.2	0.821
55	Romania	0.845	0.739	12.5	10	0.874	3.4	0.955	18.6	0.794
57	Georgia	0.844	0.772	8.5	32	0.915	3.2	0.959	11.6	0.871
58	Saint Kitts and Nevis	0.840	..	..	..	..	4.9	0.936	..	..
59	Panama	0.839	0.643	23.4	-43	0.766	3.1	0.959	38.5	0.573

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TABLE 7 / PLANETARY PRESSURES–ADJUSTED HUMAN DEVELOPMENT INDEX

TABLE 7

	Human Development Index (HDI)	Planetary pressures-adjusted HDI (PHDI)		Adjustment factor for planetary pressures	SDG 9.4 Carbon dioxide emissions per capita (production)	Carbon dioxide emissions (production) index	SDG 8.4, 12.2 Material footprint per capita	Material footprint index
	Value	Value	Difference from HDI value* (%)	Difference from HDI rank*	Value	(tonnes)	Value	(tonnes)
HDI RANK	2023	2023	2023	2023	2023	2023	2023	2023
60 Brunei Darussalam	0.837	0.600	28.3	-55	0.717	26.0	0.661	20.4
60 Kazakhstan	0.837	0.687	17.9	-20	0.820	13.0	0.830	17.1
62 Costa Rica	0.833	0.774	7.1	37	0.929	1.6	0.979	11.0
62 Serbia	0.833	0.724	13.1	4	0.869	5.9	0.923	16.7
64 Russian Federation	0.832	0.710	14.7	-2	0.853	12.6	0.836	11.7
65 Belarus	0.824	..	..	..	..	5.9	0.922	..
66 Bahamas	0.820	0.712	13.2	0	0.868	6.1	0.921	16.7
67 Malaysia	0.819	0.677	17.3	-21	0.827	8.4	0.890	21.4
68 North Macedonia	0.815	0.754	7.5	32	0.925	3.6	0.953	9.3
69 Armenia	0.811	0.761	6.2	38	0.938	2.7	0.964	8.0
69 Barbados	0.811	..	..	..	..	4.2	0.945	..
71 Albania	0.810	0.755	6.8	35	0.933	1.8	0.976	10.0
72 Trinidad and Tobago	0.807	..	..	..	..	22.4	0.708	..
73 Mauritius	0.806	..	..	..	..	3.2	0.958	..
74 Bosnia and Herzegovina	0.804	0.701	12.8	-3	0.872	6.3	0.918	15.7
High human development								
75 Iran (Islamic Republic of)	0.799	0.725	9.3	14	0.907	9.2	0.880	5.9
76 Saint Vincent and the Grenadines	0.798	..	..	..	..	2.3	0.970	..
76 Thailand	0.798	0.726	9.0	18	0.910	3.7	0.952	11.9
78 China	0.797	0.644	19.2	-27	0.808	8.3	0.891	24.9
79 Peru	0.794	0.757	4.7	43	0.953	1.6	0.979	6.6
80 Grenada	0.791	..	..	..	..	2.7	0.965	..
81 Azerbaijan	0.789	0.737	6.6	27	0.934	4.2	0.945	6.9
81 Mexico	0.789	0.721	8.6	14	0.914	3.8	0.951	11.2
83 Colombia	0.788	0.740	6.1	34	0.939	2.0	0.974	8.6
84 Brazil	0.786	0.702	10.7	7	0.893	2.2	0.971	16.6
84 Palau	0.786	..	..	..	..	12.3	0.839	..
86 Moldova (Republic of)	0.785	0.738	6.0	32	0.940	1.7	0.977	8.8
87 Ukraine	0.779	0.717	8.0	18	0.920	3.7	0.952	10.0
88 Ecuador	0.777	0.735	5.4	32	0.946	2.4	0.969	6.9
89 Dominican Republic	0.776	0.726	6.4	28	0.936	2.8	0.963	8.3
89 Guyana	0.776	..	..	..	..	4.4	0.943	..
89 Sri Lanka	0.776	0.754	2.8	47	0.971	0.9	0.988	4.1
92 Tonga	0.769	..	..	..	..	1.8	0.976	..
93 Maldives	0.766	..	..	..	..	4.0	0.948	..
93 Viet Nam	0.766	0.699	8.7	9	0.913	3.4	0.956	11.7
95 Turkmenistan	0.764	0.667	12.7	-7	0.874	9.7	0.873	11.4
96 Algeria	0.763	0.706	7.5	18	0.926	3.9	0.949	8.8
97 Cuba	0.762	0.723	5.1	28	0.949	2.1	0.973	6.8
98 Dominica	0.761	..	..	..	..	2.2	0.971	..
99 Paraguay	0.756	0.689	8.9	9	0.912	1.2	0.985	14.6
100 Egypt	0.754	0.726	3.7	35	0.963	2.4	0.969	3.9
100 Jordan	0.754	0.714	5.3	26	0.947	1.9	0.976	7.4
102 Lebanon	0.752	0.691	8.1	13	0.919	3.6	0.953	10.3
103 Saint Lucia	0.748	..	..	..	..	2.8	0.963	..
104 Mongolia	0.747	0.577	22.8	-31	0.773	13.6	0.823	25.0
105 Tunisia	0.746	0.703	5.8	23	0.942	2.6	0.966	7.3
106 South Africa	0.741	0.685	7.6	11	0.924	6.7	0.913	5.8
107 Uzbekistan	0.740	0.702	5.1	24	0.949	3.5	0.954	5.1
108 Bolivia (Plurinational State of)	0.733	0.675	7.9	8	0.921	1.9	0.975	12.1
108 Gabon	0.733	0.704	4.0	27	0.961	2.2	0.971	4.4
108 Marshall Islands	0.733	..	..	..	..	3.7	0.952	..
111 Botswana	0.731	0.698	4.5	21	0.954	2.5	0.967	5.3
111 Fiji	0.731	..	..	..	..	1.2	0.984	..
113 Indonesia	0.728	0.684	6.0	15	0.940	2.6	0.966	7.7
114 Suriname	0.722	..	..	..	..	4.2	0.945	..
115 Belize	0.721	0.670	7.1	10	0.929	1.6	0.979	10.9
115 Libya	0.721	0.629	12.8	-7	0.872	8.9	0.884	12.7
117 Jamaica	0.720	0.686	4.7	21	0.953	2.7	0.965	5.2
117 Kyrgyzstan	0.720	0.699	2.9	27	0.971	1.5	0.980	3.4

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TABLE 7

HDI RANK		Human Development Index (HDI)	Planetary pressures-adjusted HDI (PHDI)		Adjustment factor for planetary pressures	SDG 9.4	Carbon dioxide emissions (production) index	SDG 8.4, 12.2		
						Carbon dioxide emissions per capita (production)		Material footprint per capita	Material footprint index	
			Value	Value		Difference from HDI value* (%)		Difference from HDI rank*	Value	(tonnes)
		2023	2023	2023	2023	2023	2023	2023	2023	
117	Philippines	0.720	0.680	5.6	17	0.944	1.3	0.983	8.6	0.905
120	Morocco	0.710	0.679	4.4	19	0.956	1.8	0.976	5.8	0.935
121	Venezuela (Bolivarian Republic of)	0.709	0.652	8.0	7	0.920	3.5	0.955	10.4	0.885
122	Samoa	0.708	..	..	..	..	1.1	0.985	..	..
123	Nicaragua	0.706	0.668	5.4	16	0.946	0.8	0.990	8.8	0.902
124	Nauru	0.703	..	..	..	..	4.5	0.941	..	..
Medium human development										
125	Bhutan	0.698	0.593	15.0	-8	0.849	2.2	0.972	24.7	0.727
126	Eswatini (Kingdom of)	0.695	..	..	..	..	0.9	0.988	..	..
126	Iraq	0.695	0.665	4.3	13	0.957	3.9	0.949	3.2	0.964
128	Tajikistan	0.691	0.673	2.6	21	0.974	0.9	0.988	3.6	0.960
129	Tuvalu	0.689	..	..	..	..	1.0	0.987	..	..
130	Bangladesh	0.685	0.666	2.8	18	0.972	0.7	0.991	4.3	0.952
130	India	0.685	0.656	4.2	14	0.957	2.1	0.972	5.2	0.942
132	El Salvador	0.678	0.638	5.9	9	0.941	1.3	0.983	9.1	0.899
133	Equatorial Guinea	0.674	0.644	4.5	14	0.955	3.6	0.953	3.9	0.957
133	Palestine, State of	0.674	0.653	3.1	16	0.969	0.7	0.992	4.9	0.946
135	Cabo Verde	0.668	..	..	..	..	0.9	0.988	..	..
136	Namibia	0.665	0.611	8.1	5	0.918	1.6	0.979	12.8	0.858
137	Guatemala	0.662	0.626	5.4	9	0.946	1.1	0.985	8.5	0.906
138	Congo	0.649	0.631	2.8	12	0.973	1.3	0.984	3.5	0.962
139	Honduras	0.645	0.620	3.9	10	0.961	1.0	0.986	5.9	0.935
140	Kiribati	0.644	..	..	..	..	0.5	0.993	..	..
141	Sao Tome and Principe	0.637	..	..	..	..	0.7	0.991	..	..
142	Timor-Leste	0.634	..	..	..	..	0.5	0.994	..	..
143	Ghana	0.628	0.604	3.8	7	0.962	0.6	0.992	6.2	0.932
143	Kenya	0.628	0.610	2.9	8	0.971	0.4	0.995	4.8	0.946
145	Nepal	0.622	0.592	4.8	4	0.952	0.5	0.993	7.9	0.912
146	Vanuatu	0.621	..	..	..	..	0.7	0.991	..	..
147	Lao People's Democratic Republic	0.617	0.570	7.6	-3	0.923	3.2	0.958	10.0	0.889
148	Angola	0.616	0.604	1.9	11	0.980	0.6	0.993	2.9	0.967
149	Micronesia (Federated States of)	0.615	..	..	..	..	1.3	0.983	..	..
150	Myanmar	0.609	0.593	2.6	9	0.973	0.6	0.993	4.2	0.953
151	Cambodia	0.606	0.572	5.6	1	0.944	1.2	0.984	8.7	0.903
152	Comoros	0.603	..	..	..	..	0.5	0.993	..	..
153	Zimbabwe	0.598	0.585	2.2	8	0.978	0.7	0.991	3.1	0.965
154	Zambia	0.595	0.585	1.7	9	0.983	0.4	0.995	2.7	0.970
155	Cameroon	0.588	0.574	2.4	5	0.976	0.3	0.995	4.0	0.956
156	Solomon Islands	0.584	..	..	..	..	0.4	0.995	..	..
157	Côte d'Ivoire	0.582	0.537	7.7	-6	0.922	0.5	0.994	13.5	0.850
157	Uganda	0.582	0.569	2.2	3	0.978	0.1	0.998	3.9	0.957
159	Rwanda	0.578	0.567	1.9	4	0.980	0.1	0.999	3.4	0.962
160	Papua New Guinea	0.576	0.566	1.7	4	0.982	0.8	0.989	2.3	0.974
161	Togo	0.571	0.562	1.6	4	0.984	0.3	0.996	2.5	0.972
162	Syrian Arab Republic	0.564	0.553	2.0	4	0.981	1.1	0.986	2.2	0.976
163	Mauritania	0.563	0.542	3.7	2	0.962	0.9	0.988	5.8	0.936
164	Nigeria	0.560	0.548	2.1	5	0.979	0.6	0.993	3.2	0.965
165	Tanzania (United Republic of)	0.555	0.541	2.5	3	0.975	0.3	0.997	4.3	0.953
166	Haiti	0.554	0.545	1.6	6	0.984	0.3	0.996	2.5	0.972
167	Lesotho	0.550	..	..	..	..	1.7	0.978	..	..
Low human development										
168	Pakistan	0.544	0.529	2.8	2	0.973	0.8	0.989	3.9	0.956
169	Senegal	0.530	0.512	3.4	0	0.966	0.7	0.991	5.4	0.940
170	Gambia	0.524	0.514	1.9	2	0.982	0.3	0.997	3.0	0.966
171	Congo (Democratic Republic of the)	0.522	0.517	1.0	4	0.990	0.0	0.999	1.8	0.980
172	Malawi	0.517	0.507	1.9	2	0.980	0.1	0.999	3.5	0.961
173	Benin	0.515	0.504	2.1	1	0.978	0.4	0.995	3.5	0.961
174	Guinea-Bissau	0.514	..	..	..	..	0.1	0.998	..	..
175	Djibouti	0.513	0.480	6.4	-6	0.936	0.4	0.994	11.0	0.878
176	Sudan	0.511	0.498	2.5	2	0.974	0.4	0.995	4.2	0.954

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TABLE 7 / PLANETARY PRESSURES-ADJUSTED HUMAN DEVELOPMENT INDEX

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	Human Development Index (HDI)	Planetary pressures-adjusted HDI (PHDI)			Adjustment factor for planetary pressures	SDG 9.4 Carbon dioxide emissions per capita (production)	Carbon dioxide emissions (production) index	SDG 8.4, 12.2 Material footprint per capita	Material footprint index
	Value	Value	Difference from HDI value* (%)	Difference from HDI rank*	Value	(tonnes)	Value	(tonnes)	Value
HDI RANK	2023	2023	2023	2023	2023	2023	2023	2023	2023
177 Liberia	0.510	0.505	1.0	5	0.990	0.1	0.998	1.7	0.982
178 Eritrea	0.503	0.496	1.4	3	0.986	0.2	0.998	2.4	0.974
179 Guinea	0.500	0.488	2.4	2	0.975	0.3	0.996	4.1	0.955
180 Ethiopia	0.497	0.487	2.0	2	0.980	0.1	0.998	3.5	0.962
181 Afghanistan	0.496	0.492	0.8	5	0.991	0.3	0.997	1.2	0.986
182 Mozambique	0.493	0.486	1.4	3	0.986	0.2	0.997	2.3	0.975
183 Madagascar	0.487	0.481	1.2	3	0.988	0.1	0.998	2.0	0.977
184 Yemen	0.470	0.465	1.1	1	0.989	0.3	0.996	1.6	0.982
185 Sierra Leone	0.467	0.459	1.7	1	0.983	0.1	0.998	2.9	0.967
186 Burkina Faso	0.459	0.453	1.3	1	0.987	0.3	0.997	2.0	0.978
187 Burundi	0.439	0.435	0.9	1	0.991	0.1	0.999	1.6	0.982
188 Mali	0.419	0.411	1.9	1	0.981	0.3	0.996	3.2	0.965
188 Niger	0.419	0.410	2.1	0	0.979	0.1	0.999	3.6	0.960
190 Chad	0.416	0.397	4.6	0	0.954	0.2	0.998	8.1	0.910
191 Central African Republic	0.414	0.407	1.7	2	0.983	0.0	0.999	2.9	0.968
192 Somalia	0.404	0.396	2.0	1	0.979	0.0	1.000	3.7	0.959
193 South Sudan	0.388	0.383	1.3	1	0.986	0.1	0.998	2.3	0.974
Other countries or territories									
.. Korea (Democratic People's Rep. of)	..	..	..	..	0.961	2.3	0.970	4.2	0.953
.. Monaco	..	..	..	..	..	..	..	..	..
Human development groups									
Very high human development	0.914	0.741	18.9	–	0.811	9.4	0.877	23.0	0.746
High human development	0.777	0.677	12.9	–	0.871	5.6	0.926	16.6	0.816
Medium human development	0.656	0.631	3.8	–	0.963	1.6	0.980	4.9	0.945
Low human development	0.515	0.505	1.9	–	0.980	0.4	0.995	3.2	0.964
Developing countries	0.712	0.653	8.3	–	0.917	3.6	0.953	10.7	0.881
Regions									
Arab States	0.719	0.665	7.5	–	0.926	4.6	0.940	8.1	0.911
East Asia and the Pacific	0.775	0.658	15.1	–	0.849	6.5	0.916	19.7	0.782
Europe and Central Asia	0.818	0.731	10.6	–	0.893	5.0	0.934	13.3	0.852
Latin America and the Caribbean	0.783	0.715	8.7	–	0.913	2.7	0.965	12.5	0.861
South Asia	0.672	0.644	4.2	–	0.959	2.1	0.973	5.0	0.945
Sub-Saharan Africa	0.568	0.553	2.6	–	0.974	0.7	0.991	3.8	0.958
Least developed countries	0.560	0.548	2.1	–	0.978	0.3	0.996	3.6	0.960
Small island developing states	0.739	..	..	–	..	2.7	0.965	..	..
Organisation for Economic Co-operation and Development	0.916	0.752	17.9	–	0.821	8.2	0.893	22.6	0.750
World	0.756	0.680	10.1	–	0.900	4.5	0.941	12.7	0.859