

# EPI 2012

## Environmental Performance Index and Pilot Trend Environmental Performance Index



## Summary for Policymakers

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*Report and additional materials available at the EPI website: [www.epi.yale.edu](http://www.epi.yale.edu)*

# Executive Summary

Twenty years after the landmark Rio Earth Summit, governments still struggle to demonstrate improved environmental performance through quantitative metrics across a range of pollution control and natural resource management challenges. With budgetary constraints an issue around the world, governments face increasing pressure to show tangible results from their environmental investments.

The 2000 Environmental Sustainability Index (ESI), the predecessor to the Environmental Performance Index (EPI), first responded to the growing need for rigorous, data-driven environmental performance measurement. The 2012 EPI, the seventh iteration of this environmental measurement project, adds to the foundation of empirical support for sound policymaking and breaks further ground, establishing for the first time a basis for tracking changes in performance over time. The EPI and the Pilot Trend Environmental Performance Index (Trend EPI) rank countries on 22 performance indicators spanning ten policy categories reflecting facets of both environmental public health and ecosystem vitality. The methodology facilitates country comparisons and provides a way to assess the global community's performance over time with respect to established environmental policy goals.

## About the Index

The 2012 EPI ranks 132 countries on 22 performance indicators in the following ten policy categories:

- **Environmental Burden of Disease**
- **Water** (*effects on human health*)
- **Air Pollution** (*effects on human health*)
- **Air Pollution** (*ecosystem effects*)
- **Water Resources** (*ecosystem effects*)
- **Biodiversity and Habitat**
- **Forestry**
- **Fisheries**
- **Agriculture**
- **Climate Change**

These policy categories track performance and progress on two broad policy objectives: Environmental Health and Ecosystem Vitality. Each indicator has an associated environmental public health or ecosystem sustainability target. The full report, including a complete description of the performance indicators, underlying data sets, and methodology is available on the web at [www.epi.yale.edu](http://www.epi.yale.edu).

# Geographic Regional Peer Group Rankings

Americas		
Region EPI Rank	Country	Region Trend EPI Rank
1	Costa Rica	20
2	Colombia	5
3	Brazil	3
4	Ecuador	9
5	Nicaragua	1
6	Canada	7
7	Panama	16
8	Uruguay	22
9	USA	10
10	Argentina	19
10	Cuba	15
12	Venezuela	11
13	Chile	23
14	Bolivia	24
15	Jamaica	8
16	Honduras	12
17	Dominican Republic	13
18	Paraguay	6
19	El Salvador	17
20	Guatemala	4
21	Peru	14
22	Mexico	2
23	Trinidad & Tobago	21
24	Haiti	18

Europe		
Region EPI Rank	Country	Region Trend EPI Rank
1	Switzerland	23
2	Latvia	1
3	Norway	22
4	Luxembourg	27
5	France	9
6	Austria	20
7	Italy	6
8	United Kingdom	10
8	Sweden	18
10	Germany	17
11	Slovakia	3
12	Iceland	19
13	Netherlands	24
14	Lithuania	26
15	Czech Republic	12
16	Finland	16
17	Denmark	14
18	Poland	28
19	Belgium	5
20	Slovenia	15
21	Spain	13
22	Greece	21
23	Ireland	4
24	Portugal	11
25	Cyprus	29
26	Hungary	8
27	Bulgaria	7
28	Estonia	30
29	Malta	25
30	Romania	2

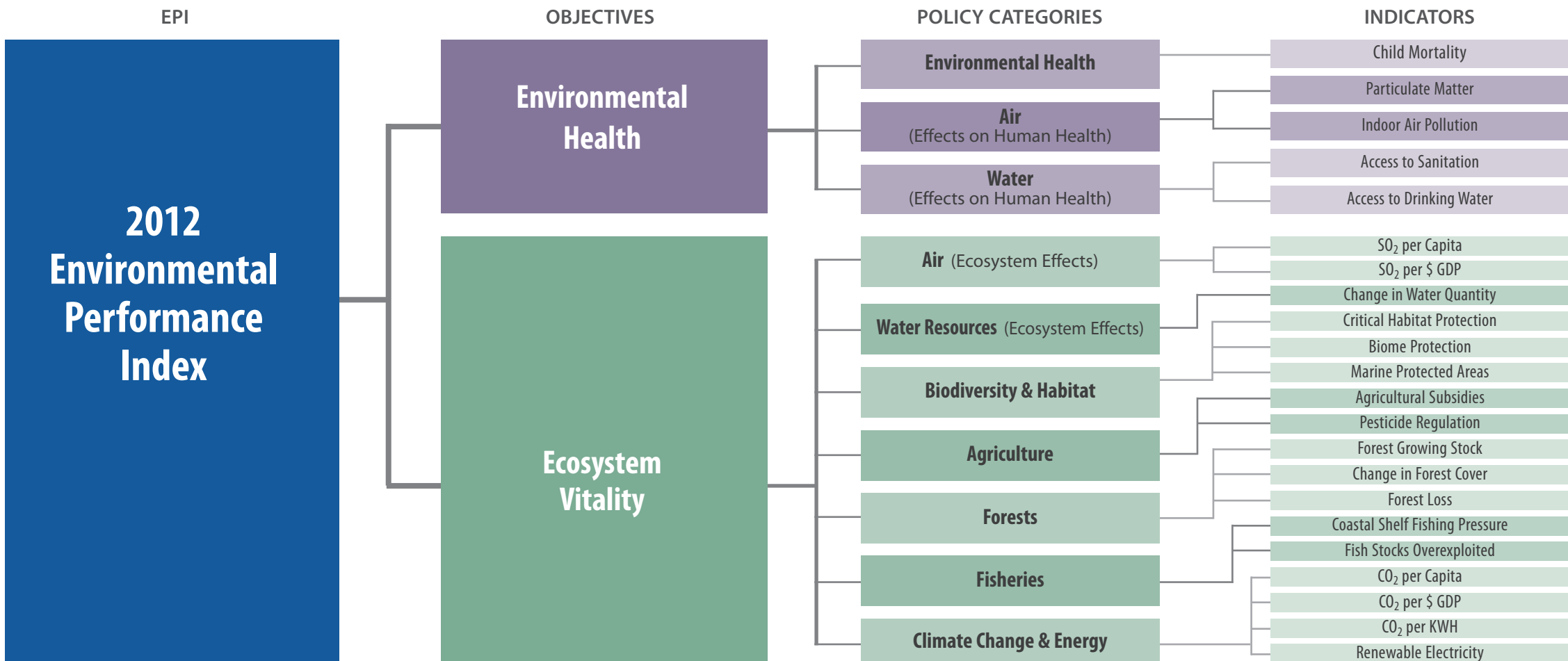
Sub-Saharan Africa		
Region EPI Rank	Country	Region Trend EPI Rank
1	Gabon	8
2	Zambia	7
3	Tanzania	14
4	Botswana	2
5	Ivory Coast	6
6	Zimbabwe	12
7	Ethiopia	10
8	Namibia	15
9	Benin	20
10	Kenya	18
11	Togo	13
12	Mozambique	17
13	Angola	1
14	Ghana	4
15	Dem. Rep. Congo	11
16	Congo	16
17	Senegal	5
18	Cameroon	19
19	Nigeria	9
20	Eritrea	3
21	South Africa	21

Middle East & North Africa		
Region EPI Rank	Country	Region Trend EPI Rank
1	Egypt	1
2	Israel	10
3	United Arab Emirates	2
4	Saudi Arabia	17
5	Algeria	6
6	Lebanon	12
7	Tunisia	5
8	Qatar	15
9	Sudan	13
10	Morocco	4
11	Oman	11
12	Syria	8
13	Iran	14
14	Jordan	9
15	Libya	7
16	Kuwait	18
17	Yemen	3
18	Iraq	16

East Europe & Central Asia		
Region EPI Rank	Country	Region Trend EPI Rank
1	Albania	2
2	Croatia	10
3	Georgia	8
4	Belarus	5
5	Armenia	6
6	Macedonia	11
7	Kyrgyzstan	16
8	Ukraine	12
9	Serbia	13
10	Russia	18
11	Moldova	7
12	Turkey	3
13	Azerbaijan	1
14	Tajikistan	4
15	Bosnia & Herzegovina	17
16	Kazakhstan	15
17	Uzbekistan	9
18	Turkmenistan	14

Asia & Pacific		
Region EPI Rank	Country	Region Trend EPI Rank
1	New Zealand	12
2	Japan	14
3	Malaysia	6
4	Brunei Darussalam	21
5	Taiwan	7
6	Thailand	1
7	Nepal	4
8	Philippines	9
9	South Korea	3
10	Australia	18
11	Singapore	8
12	Sri Lanka	2
13	Cambodia	10
14	Myanmar	11
15	Indonesia	15
16	Viet Nam	17
17	Mongolia	13
18	Bangladesh	5
19	China	20
20	Pakistan	16
21	India	19

Environmental Performance Index Framework

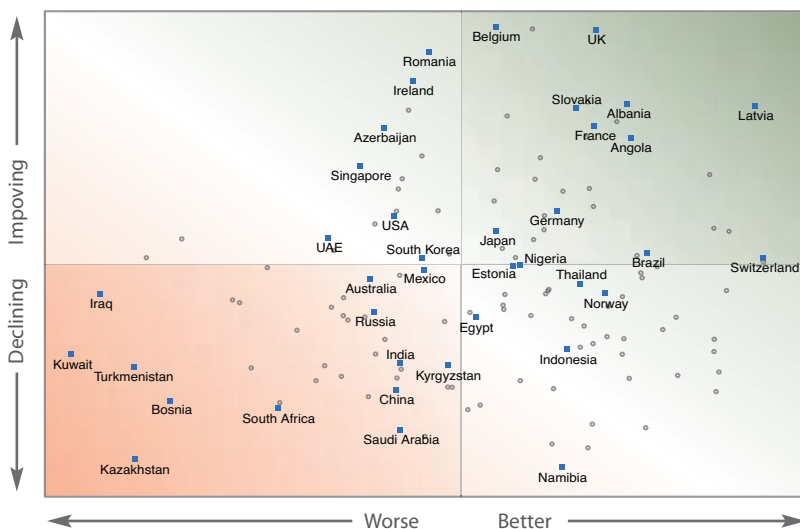


# Pilot Trend EPI

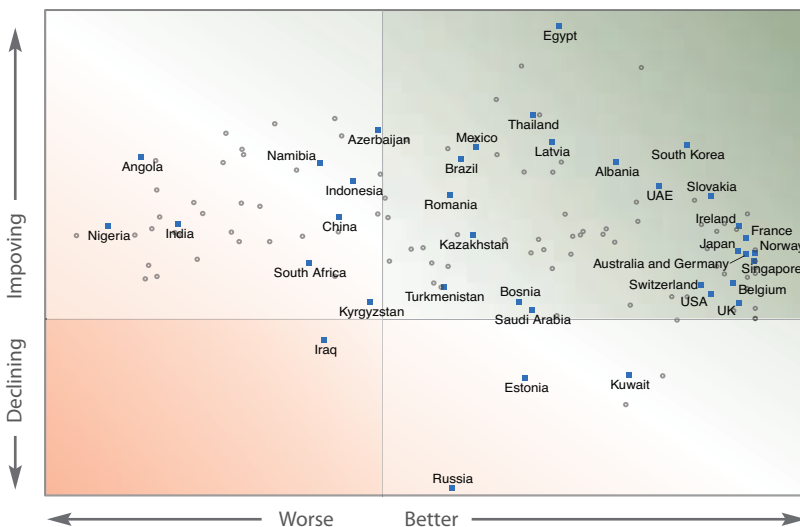
The Pilot Trend Environmental Performance Index (Trend EPI) ranks countries on the change in their environmental performance over the last decade. As a complement to the EPI, the Trend EPI shows who is improving and who is declining over time. The table to the right presents a list of the top 10 trend performers, the bottom 10, and a selection of other countries.

The figures below show the relationship between country scores in the 2012 EPI and the Trend EPI for both policy objectives – Environmental Health and Ecosystem Vitality, highlighting the same countries presented in the Trend EPI table. The distribution of scores for each objective is revealing. With regard to Ecosystem Vitality, some countries are performing well and improving – but a number of others are performing poorly and doing worse over time. The results for Environmental Health paint a more optimistic picture as most countries show improvement.

### Ecosystem Vitality



### Environmental Health



## Trend Rank and Order

Trend EPI Rank	Country	EPI Rank
1	Latvia	2
2	Azerbaijan	111
3	Romania	88
4	Albania	15
5	Egypt	60
6	Angola	90
7	Slovakia	12
8	Ireland	36
9	Belgium	24
10	Thailand	34
...	...	...
13	South Korea	43
...	...	...
19	France	6
20	United Kingdom	9
...	...	...
22	Mexico	84
23	Brazil	30
...	...	...
27	United Arab Emirates	77
...	...	...
36	Singapore	52
...	...	...
56	Germany	11
...	...	...
59	Nigeria	119
60	Japan	23
...	...	...
66	Indonesia	74
...	...	...
77	United States of America	49
...	...	...
79	Australia	48
...	...	...
84	Norway	3
...	...	...
89	Switzerland	1
...	...	...
95	India	125
...	...	...
98	Namibia	78
...	...	...
100	China	116
...	...	...
123	Turkmenistan	131
124	South Africa	128
125	Iraq	132
126	Kazakhstan	129
127	Kyrgyzstan	101
128	Estonia	54
129	Bosnia & Herzegovina	124
130	Saudi Arabia	82
131	Kuwait	126
132	Russia	106

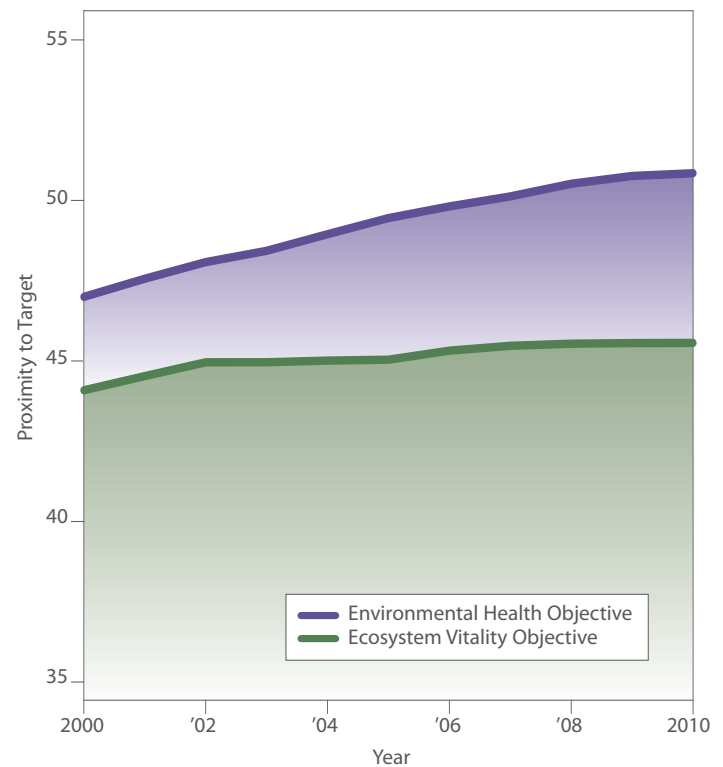
To see full Trend EPI analysis, visit [www.epi.yale.edu](http://www.epi.yale.edu).

# Results and Policy Implications of the 2012 EPI and Trend EPI

We believe that a number of interesting conclusions can be drawn from the results of the 2012 EPI, the Trend EPI, and the underlying indicators:

- ▶ The latest EPI rankings reveal a wide range of environmental sustainability results. Many countries are making progress on at least some of the challenges they face. At the indicator level, our analysis suggests that some issues are being successfully addressed at a worldwide scale, although performance on some other challenges, notably climate change, has declined globally.
- ▶ Wealth matters. The Environmental Health scores, in particular, reveal a significant relationship with GDP per capita. EPI scores more generally also correlate with wealth, although there is a diversity of performance within every level of economic development.
- ▶ The pattern of results make clear that environmental challenges come in several forms and vary with country-specific circumstances as well as the level of development. Some issues arise from the resource and pollution impacts of industrialization, such as air pollution and rising levels of waste. These impacts largely affect developed countries. Other challenges are commonly associated with poverty and underinvestment in basic environmental amenities, such as access to safe drinking water and basic sanitation. These problems primarily affect developing nations.
- ▶ A number of countries that lag on the overall EPI have impressive results on the Trend EPI. For countries that have been at the high end of the EPI ranking over the last decade, the trend results are less meaningful. We note that the overall EPI and Trend EPI rankings by themselves should be understood only as indicative. More insight will often be obtained by looking at the individual indicator level and policy category results.
- ▶ The Trend EPI reveals improvements for many countries on a significant number of issues. In the Environmental Health objective, global trends show decreasing child mortality as well as increasing access to sanitation and drinking water. However, persistent challenges remain in the Ecosystem Vitality objective. In particular, with respect to climate change, greenhouse gas emissions continue to rise globally with few countries on a sustainable emissions trajectory.
- ▶ A comparison of the 2012 EPI and Trend EPI exposes persistent gaps in environmental governance and management over time. In general, countries show gains on the Environmental Health objective across all levels of performance measured by the EPI. With regard to Ecosystem Vitality, however, the results are much more varied. Some countries are making gains, but many are not. And a worrisome number of countries are both low-ranked and declining.

Environmental Health & Ecosystem Vitality Trends



- ▶ The 2012 EPI highlights an array of challenges constraining movement toward data-driven and analytically rigorous environmental policymaking. These issues include unreliable data sources, gaps in data coverage, limited time series metrics, persistent methodological weaknesses, and the lack of a systematic process for verifying the environmental data reported by governments. The more rigorous data standards used in the 2012 EPI resulted in the replacement or omission of some indicators used in previous indices. We are particularly distressed by the lack of global, accurate, and comparative data on waste management, recycling, toxic exposures, and several other critical policy concerns. Likewise, the low quality and limited availability of comparative data for issues such as agricultural sustainability and water quality as well as quantity is disappointing. Simply put, the world needs better data collection and monitoring, more consistent reporting and analysis, and mechanisms for independent data verification.

*The 2012 EPI represents a “work in progress.” It aims not only to inform but also to stimulate debate on defining the appropriate metrics and methodologies for evaluating environmental performance. Feedback is welcome at our website, [www.epi.yale.edu](http://www.epi.yale.edu).*

# Environmental Performance Index— Ranking & Scores

EPI Rank	Country	Trend EPI Rank
1	Switzerland	89
2	Latvia	1
3	Norway	84
4	Luxembourg	106
5	Costa Rica	113
6	France	19
7	Austria	71
8	Italy	12
9	United Kingdom	20
9	Sweden	63
11	Germany	56
12	Slovakia	7
13	Iceland	64
14	New Zealand	50
15	Albania	4
16	Netherlands	92
17	Lithuania	104
18	Czech Republic	25
19	Finland	54
20	Croatia	74
21	Denmark	45
22	Poland	107
23	Japan	60
24	Belgium	9
25	Malaysia	33
26	Brunei Darussalam	119
27	Colombia	34
28	Slovenia	51
29	Taiwan	34
30	Brazil	23
31	Ecuador	65
32	Spain	30
33	Greece	81
34	Thailand	10
35	Nicaragua	15
36	Ireland	8
37	Canada	52
38	Nepal	14
39	Panama	103
40	Gabon	57
41	Portugal	24
42	Philippines	43
43	South Korea	13
44	Cyprus	116

EPI Rank	Country	Trend EPI Rank
45	Hungary	18
46	Uruguay	115
47	Georgia	68
48	Australia	79
49	United States of America	77
50	Argentina	112
50	Cuba	101
52	Singapore	36
53	Bulgaria	16
54	Estonia	128
55	Sri Lanka	11
56	Venezuela	85
57	Zambia	48
58	Chile	117
59	Cambodia	44
60	Egypt	5
61	Israel	78
62	Bolivia	122
63	Jamaica	53
64	Tanzania	93
65	Belarus	40
66	Botswana	21
67	Ivory Coast	42
68	Zimbabwe	87
69	Myanmar	47
70	Ethiopia	70
71	Honduras	86
72	Dominican Republic	88
73	Paraguay	46
74	Indonesia	66
75	El Salvador	108
76	Guatemala	31
77	United Arab Emirates	27
78	Namibia	98
79	Viet Nam	73
80	Benin	120
81	Peru	96
82	Saudi Arabia	130
83	Kenya	105
84	Mexico	22
85	Togo	90
86	Algeria	58
87	Malta	97
88	Romania	3

EPI Rank	Country	Trend EPI Rank
89	Mozambique	102
90	Angola	6
91	Ghana	28
92	Dem. Rep. Congo	83
93	Armenia	49
94	Lebanon	91
95	Congo	99
96	Trinidad & Tobago	114
97	Macedonia	75
98	Senegal	39
99	Tunisia	40
100	Qatar	121
101	Kyrgyzstan	127
102	Ukraine	82
103	Serbia	109
104	Sudan	94
105	Morocco	37
106	Russia	132
107	Mongolia	54
108	Moldova	67
109	Turkey	17
110	Oman	80
111	Azerbaijan	2
112	Cameroon	110
113	Syria	62
114	Iran	118
115	Bangladesh	32
116	China	100
117	Jordan	76
118	Haiti	111
119	Nigeria	59
120	Pakistan	72
121	Tajikistan	38
122	Eritrea	26
123	Libya	61
124	Bosnia & Herzegovina	129
125	India	95
126	Kuwait	131
127	Yemen	29
128	South Africa	124
129	Kazakhstan	126
130	Uzbekistan	69
131	Turkmenistan	123
132	Iraq	125

<span style="color: green;">■</span> Top 10 Trend Index Performers
<span style="color: orange;">■</span> Lowest 10 Trend Index Decliners

To see full results and detailed analysis by country, visit [www.epi.yale.edu](http://www.epi.yale.edu).



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