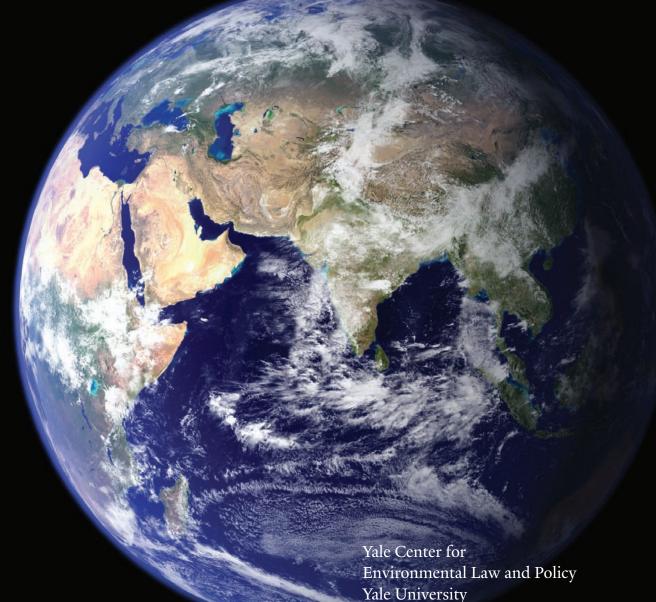
2008 Environmental Performance Index



Summary for Policymakers

Center for International Earth Science Information Network Columbia University

Full report and additional

World Economic Forum Geneva, Switzerland

In Collaboration with:

materials available at:

Joint Research Centre of the **European Commission** Ispra, Italy

http://epi.yale.edu









Executive Summary

Fueled by advances in information technologies, data-driven decisionmaking has transformed every corner of society, from business to sports. In the government domain, quantitative performance metrics have reshaped policymaking in economics, health care, and education. The 2008 Environmental Performance Index (EPI) brings a similar fact-based and empirical approach to environmental protection and global sustainability.

While data and analysis of environmental problems have improved in recent years, serious gaps and a lack of timeseries data still hamper efforts to use quantitative indicators to spot emerging problems, assess policy options, and gauge the effectiveness of government programs. The EPI seeks to fill this gap and to highlight the value of indicator-based environmental decisionmaking.

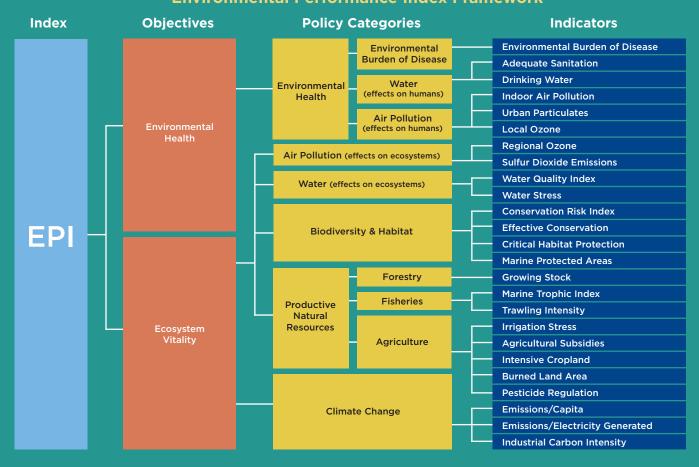
The EPI focuses on two overarching objectives: (1) reducing environmental stresses on human health and (2) promoting ecosystem vitality and sound natural resource management. These broad goals reflect the policy priorities of environmental authorities around the world as well as the environmental dimension of the Millennium Development Goals (MDGs).

Success in meeting these objectives is gauged using 25 indicators of on-the-ground results tracked in six well-established policy categories.

The 2008 EPI deploys a proximity-to-target methodology that quantitatively measures country-scale performance on a core set of environmental policy goals for which every government can be —and should be—held accountable. By identifying specific targets and measuring the distance between the target and current results, the EPI provides an empirical foundation for policy benchmarking and a context for evaluating national performance.

It must be stressed that the EPI's real value lies not in the numerical rankings but rather in careful analysis of the underlying data and performance metrics. With results displayed by issue, policy category, peer group, and country, the EPI facilitates the identification of leaders and laggards, highlights best policy practices, and identifies priorities for action. More generally, the EPI provides a powerful tool for steering environmental investments, refining policy choices, and understanding what drives policy outcomes.

Environmental Performance Index Framework









Sub-Saharan Africa				
1	Mauritius	78.1		
2	Gabon	77.3		
3	Ghana	70.8		
4	Namibia	70.6		
5	Congo	69.7		
6	Zimbabwe	69.3		
7	Kenya	69.0		
8	South Africa	69.0		
9	Botswana	68.7		
10	Côte d'Ivoire	65.2		
11	Tanzania	63.9		
12	Cameroon	63.8		
13	Senegal	62.8		
14	Togo	62.3		
15	Uganda	61.6		
16	Swaziland	61.3		
17	Malawi	59.9 59.4		
18	Eritrea			
19	Ethiopia	58.8		
20 21	Nigeria Benin	56.2 56.1		
22	Central Afr. Rep.	56.0		
23	Zambia	55.1		
23	Rwanda	55.1 54.9		
25	Burundi	54.9		
26	Madagascar	54.6		
27	Mozambique	53.9		
28	Guinea	51.3		
29	Diibouti	50.5		
30	Guinea-Bissau	49.7		
31	Dem. Rep. Congo	47.3		
32	Chad	45.9		
33	Burkina Faso	44.3		
34	Mali	44.3		
35	Mauritania	44.2		
36	Sierra Leone	40.0		
37	Angola	39.5		
38	Niger	39.1		

	Mid East & N. Africa		
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19	Israel Cyprus Tunisia Armenia Algeria Iran Jordan Egypt Turkey Saudi Arabia Morocco Lebanon Oman Syria Kuwait United Arab Em. Sudan Iraq Yemen	79.6 79.2 78.1 77.8 77.0 76.5 76.3 75.9 72.8 72.1 70.3 68.2 64.5 64.0 55.5 53.9	
.5	Tomon	43.7	

	Eastern Europe & Central Asia	
1	Croatia	84.6
2	Albania	84.0
3	Russia	83.9
4	Georgia	82.2
5	Belarus	80.5
6	Bosnia & Herzegovina	79.7
7	Macedonia	75.1
8	Ukraine	74.1
9	Tajikistan	72.3
10	Azerbaijan	72.2
11	Turkmenistan	71.3
12	Moldova	70.7
13	Kyrgyzstan	69.6
14	Uzbekistan	65.0
15	Kazakhstan	65.0

	Americas	
1	Costa Rica	90.5
2	Colombia	88.3
3	Canada	86.6
4	Ecuador	84.4
5	Chile	83.4
6	Panama	83.1
7	Dominican Rep.	83.0
8	Brazil	82.7
9	Uruguay	82.3
10	Argentina	81.8
11	United States	81.0
12	Cuba	80.7
13	Venezuela	80.0
14	Mexico	79.8
15	Jamaica	79.1
16	Peru	78.1
17	Paraguay	77.7
18	El Salvador	77.2
19	Guatemala	76.7
20	Honduras	75.4
21	Nicaragua	73.4
22	Belize	71.7
23	Trinidad & Tobago	70.4
24	Guyana	64.8
25	Bolivia	64.7
26	Haiti	60.7

	European Union +	
1	Switzerland	95.5
2	Sweden	93.1
3	Norway	93.1
4	Finland	91.4
5	Austria	89.4
6	Latvia	88.8
7	France	87.8
8	Iceland	87.6
9	Germany	86.3
10	United Kingdom	86.3
11	Slovenia	86.3
12	Lithuania	86.2
13	Slovakia	86.0
14	Portugal	85.8
15	Estonia	85.2
16	Hungary	84.2
17	Italy	84.2
18	Denmark	84.0
19	Spain	83.1
20	Luxembourg	83.1
21	Ireland	82.7
22	Poland	80.5
23	Greece	80.2
24	Netherlands	78.7
25	Bulgaria	78.5
26	Belgium	78.4
27	Czech Rep.	76.8
28	Romania	71.9

	Asia and Pacific	
1	New Zealand	88.9
2	Japan	84.5
3	Malaysia	84.0
4	Taiwan	80.8
5	Australia	79.8
6	Sri Lanka	79.5
7	South Korea	79.4
8	Thailand	79.2
9	Philippines	77.9
10	Viet Nam	73.9
11	Nepal	72.1
12	Fiji	69.7
13	Mongolia	68.1
14	Laos	66.3
15	Indonesia	66.2
16	Myanmar	65.1
17	China	65.1
18	Papua New Guinea	64.8
19	India	60.3
20	Pakistan	58.7
21	Bangladesh	58.0
22	Cambodia	53.8
23	Solomon Islands	52.3

Geographical Peer Groups by Rank, Country, and EPI Score

The EPI facilitates peer grouping and the identification of leaders, laggards, and best practices on an aggregate and issue-by-issue basis.

Policy Conclusions

Several policy conclusions emerge from the 2008 Environmental Performance Index and analysis of the underlying indicators:

- Environmental decisionmaking can be made more data-driven and rigorous. Notwithstanding serious data gaps and methodological limitations, the EPI demonstrates that environmental results can be tracked quantitatively, facilitating policy analysis.
- Environmental challenges come in many forms. Some issues
 arise from resource consumption and pollution associated with
 economic activity. In this regard, developed countries or nations
 that are industrializing face the most severe harms. Other threats
 derive from a lack of basic environmental amenities. With regard
 to these issues, developed countries have greater capacity to make
 the needed investments while developing nations face significant
 funding constraints.
- Wealth correlates highly with EPI scores. But at every level of development, some countries achieve results that exceed their income-group peers. Statistical analysis suggests that good governance contributes to better environmental outcomes.
- Top-ranked countries have invested in water and air pollution control and other elements of environmental infrastructure and have adopted policy measures to mitigate the harms caused by economic activities. Low-ranked countries generally have not

- made investment in environmental public health and have weak policy regimes.
- The EPI utilizes the best available global datasets on environmental
 performance, but the overall data quality and availability
 is alarmingly poor. The absence of broadly-collected and
 methodologically-consistent indicators for even the most basic
 concerns such as water quality—and the complete lack of timeseries data for most countries—hampers efforts to shift pollution
 control and natural resource management onto more empirical
 foundations.
- To address these gaps, policymakers should (1) invest in environmental data monitoring, indicators, and reporting; (2) set clear policy targets on the full range of important issues; and (3) undergird environmental protection efforts with performance metrics at the global, regional, national, state/provincial, local, and corporate scales.

The 2008 EPI represents a "work in progress" intended to stimulate debate about appropriate metrics and methodologies for evaluating environmental performance. As existing conceptual, methodological, and data challenges are overcome, better metrics will emerge—and a more refined EPI will be possible.

Environmental Performance Index - Rankings & Scores

Rank	Country	Score
1	Switzerland	95.5
2	Sweden	93.1
3	Norway	93.1
4	Finland	91.4
2 3 4 5 6 7 8	Costa Rica	90.5
6	Austria	89.4
7	New Zealand	88.9
8	Latvia	88.8
9	Colombia	88.3
10	France	87.8
11	Iceland	87.6
12	Canada	86.6
13	Germany	86.3
14	United Kingdom	86.3
15	Slovenia	86.3
16	Lithuania	86.2
17	Slovakia	86.0
18	Portugal	85.8
19	Estonia	85.2
20	Croatia	84.6
21	 Japan	84.5
22	Ecuador	84.4
23	Hungary	84.2
24	Italy	84.2
25	Denmark	84.0
26	Malaysia	84.0
27	Albania	84.0
28	Russia	83.9
29	Chile	83.4
30	Spain	83.1
31	Luxembourg	83.1
32	Panama	83.1
33	Dominican Republic	83.0
34	Ireland	82.7
35	Brazil	82.7
36	Uruguay	82.3
37	Georgia	82.2
38	Argentina	81.8
39	United States	81.0
40	Taiwan	80.8
41	Cuba	80.7
42	Poland	80.5
43	Belarus	80.5
44	Greece	80.2
45	Venezuela	80.0
46	Australia	79.8
47	Mexico	79.8
48	Bosnia & Herzegovina	79.7
49	Israel	79.7
49 50	Sri Lanka	79.5
30	JII Lalika	79.3

Rank	Country	Score
51	South Korea	79.4
52	Cyprus	79.2
53	Thailand	79.2
54	Jamaica	79.1
55	Netherlands	78.7
56	Bulgaria	78.5
57	Belgium	78.4
58	Mauritius	78.1
59	Tunisia	78.1
60	Peru	78.1
61	Philippines	77.9
62	Armenia	77.8
63	Paraguay	77.7
64	Gabon	77.3
65	El Salvador	77.2
66	Algeria	77.0
67	Iran	76.9
68	Czech Republic	76.8
69	Guatemala	76.7
70	Jordan	76.5
71	Egypt	76.3
72	Turkey	75.9
73	Honduras	75.4
74	Macedonia	75.1
75	Ukraine	74.1
76	Viet Nam	73.9
77	Nicaragua	73.4
78	Saudi Arabia	72.8
79	Tajikistan	72.3
80	Azerbaijan	72.2
81	Nepal	72.1
82	Morocco	72.1
83	Romania	71.9
84	Belize	71.7
85	Turkmenistan	71.3
86	Ghana	70.8
87	Moldova	70.7
88	Namibia	70.6
89	Trinidad & Tobago	70.4
90	Lebanon	70.3
91	Oman	70.3
92	Fiji	69.7
93	Congo	69.7
94	Kyrgyzstan	69.6
95	Zimbabwe	69.3
96	Kenya	69.0
97	South Africa	69.0
98	Botswana	68.7
99	Syria	68.2
100	Mongolia	68.1

Rank	Country	Score
101	Laos	66.3
102	Indonesia	66.2
103	Côte d'Ivoire	65.2
104	Myanmar	65.1
105	China	65.1
106	Uzbekistan	65.0
107	Kazakhstan	65.0
108	Guyana	64.8
109	Papua New Guinea	64.8
110	Bolivia	64.7
111	Kuwait	64.5
112	United Arab Emirates	64.0
113	Tanzania	63.9
114	Cameroon	63.8
115	Senegal	62.8
116	Togo	62.3
117	Uganda	61.6
118	Swaziland	61.3
119	Haiti	60.7
120	India	60.3
121	Malawi	59.9
122	Eritrea	59.4
123	Ethiopia	58.8
124	Pakistan	58.7
125	Bangladesh	58.0
126	Nigeria	56.2
127	Benin	56.1
128	Central Afr. Rep.	56.0
129	Sudan	55.5
130	Zambia	55.1
131	Rwanda	54.9
132	Burundi	54.7
133	Madagascar	54.6
134	Mozambique	53.9
135	Iraq	53.9
136	Cambodia	53.8
137	Solomon Islands	52.3
138	Guinea	51.3
139	Djibouti	50.5
140	Guinea-Bissau	49.7
141	Yemen	49.7
142	Dem. Rep. Congo	47.3
143	Chad	45.9
144	Burkina Faso	44.3
145	Mali	44.3
146	Mauritania	44.2
147	Sierra Leone	40.0
148	Angola	39.5
149	Niger	39.1