

Worldwide Environmental Rankings: Will Nations Compete to Be Green?

A CONVERSATION WITH DAN ESTY AND JIM BOYD

At the World Economic Forum in Davos, Switzerland, in early 2006, a new global survey was unveiled that assigns a numerical ranking to individual nations based on their environmental practices and outcomes.

The Environmental Performance Index (EPI), which has prompted both praise and controversy in the international environmental community, draws on available data to measure 133 countries on 16 indicators in six established policy categories: environmental health, air quality, water resources, biodiversity and habitat, productive natural resources, and sustainable energy. A team of experts at Yale and Columbia University's Earth Institute analyzed the data to produce the rankings.

The EPI is the brainchild of Daniel C. Esty, director of the Yale Center for Environmental Law and Policy and Hillhouse Professor of Environmental Law and Policy. Esty, a member of RFF's Board of Directors, believes that it will be a critical tool in bolstering successful pollution control and natural resource management worldwide. *(Full text of the report and a summary for policymakers are available at www.yale.edu/epi.)*

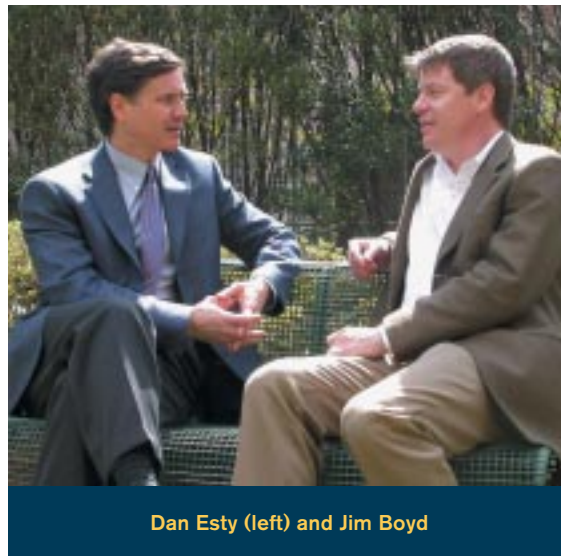
Resources asked Esty to explore the policy aims and outcomes of the EPI with Senior Fellow Jim Boyd. Their conversation follows.

Boyd: Give me the big picture as a place to start. What was your primary motivation for doing this? And how does your ranking system relate to other performance measures, such as national welfare accounting?

Esty: Our goal is to shift environmental decisionmaking onto

firmer analytic foundations. We're trying to make policy-making—across the full spectrum of pollution control and natural resource management issues—more empirical, more fact based, and more durable.

One of our motivations was to provide a counterbalance to the emphasis on GDP growth, which is taken so seriously, not only by economists, but also by decisionmakers in government. We believe the index provides a fairly clean and clear look at current government performance across a spectrum of core environmental challenges.



Dan Esty (left) and Jim Boyd

Boyd: One of the things that will immediately jump out at people is the fact that the United States ranks 28, not far from Cyprus. That's a little surprising to me personally, but how do you view that?

Esty: When I present the EPI in the United States, people are often surprised—even shocked—that the United States ranks as low as

28. When I present the EPI in Europe, people are often surprised—even shocked—that the United States ranks as high as 28. The United States does very well on some issues, like provision of drinking water—it really is unsurpassed in the world in terms of the percentage of the population that has access to safe water. But it does much worse, if not quite poorly, on a range of other issues, like greenhouse gas emissions. So, if you are sitting in America, where the air looks pretty clear and the drinking water looks pretty clean, you might say, gee, why aren't we closer to the top? But in Europe, where people are very much focused on the U.S. failure to step up to the climate change challenge, people think the United States should rank about 130 out of 133 countries.

Environmental Performance Index - Rankings & Scores

Rank	Country	Score	Rank	Country	Score	Rank	Country	Score
1	New Zealand	88.0	46	Gabon	73.2	91	Malawi	56.5
2	Sweden	87.8	47	United Arab Em.	73.2	92	Namibia	56.5
3	Finland	87.0	48	Suriname	72.9	93	Kenya	56.4
4	Czech Rep.	86.0	49	Turkey	72.8	94	China	56.2
5	United Kingdom	85.6	50	Bulgaria	72.0	95	Azerbaijan	55.7
6	Austria	85.2	51	Ukraine	71.2	96	Papua New Guinea	55.5
7	Denmark	84.2	52	Honduras	70.8	97	Syria	55.3
8	Canada	84.0	53	Iran	70.0	98	Zambia	54.4
9	Malaysia	83.3	54	Dominican Rep.	69.5	99	Viet Nam	54.3
10	Ireland	83.3	55	Philippines	69.4	100	Cameroon	54.1
11	Portugal	82.9	56	Nicaragua	69.2	101	Swaziland	53.9
12	France	82.5	57	Albania	68.9	102	Laos	52.9
13	Iceland	82.1	58	Guatemala	68.9	103	Togo	52.8
14	Japan	81.9	59	Saudi Arabia	68.3	104	Turkmenistan	52.3
15	Costa Rica	81.6	60	Oman	67.9	105	Uzbekistan	52.3
16	Switzerland	81.4	61	Thailand	66.8	106	Gambia	52.3
17	Colombia	80.4	62	Paraguay	66.4	107	Senegal	52.1
18	Norway	80.2	63	Algeria	66.2	108	Burundi	51.6
19	Greece	80.2	64	Jordan	66.0	109	Liberia	51.0
20	Australia	80.1	65	Peru	65.4	110	Cambodia	49.7
21	Italy	79.8	66	Mexico	64.8	111	Sierra Leone	49.5
22	Germany	79.4	67	Sri Lanka	64.6	112	Congo	49.4
23	Spain	79.2	68	Morocco	64.1	113	Guinea	49.2
24	Taiwan	79.1	69	Armenia	63.8	114	Haiti	48.9
25	Slovakia	79.1	70	Kazakhstan	63.5	115	Mongolia	48.8
26	Chile	78.9	71	Bolivia	63.4	116	Madagascar	48.5
27	Netherlands	78.7	72	Ghana	63.1	117	Tajikistan	48.2
28	United States	78.5	73	El Salvador	63.0	118	India	47.7
29	Cyprus	78.4	74	Zimbabwe	63.0	119	Dem. Rep. Congo	46.3
30	Argentina	77.7	75	Moldova	62.9	120	Guinea-Bissau	46.1
31	Slovenia	77.5	76	South Africa	62.0	121	Mozambique	45.7
32	Russia	77.5	77	Georgia	61.4	122	Yemen	45.2
33	Hungary	77.0	78	Uganda	60.8	123	Nigeria	44.5
34	Brazil	77.0	79	Indonesia	60.7	124	Sudan	44.0
35	Trinidad & Tobago	76.9	80	Kyrgyzstan	60.5	125	Bangladesh	43.5
36	Lebanon	76.7	81	Nepal	60.2	126	Burkina Faso	43.2
37	Panama	76.5	82	Tunisia	60.0	127	Pakistan	41.1
38	Poland	76.2	83	Tanzania	59.0	128	Angola	39.3
39	Belgium	75.9	84	Benin	58.4	129	Ethiopia	36.7
40	Ecuador	75.5	85	Egypt	57.9	130	Mali	33.9
41	Cuba	75.3	86	Côte d'Ivoire	57.5	131	Mauritania	32.0
42	South Korea	75.2	87	Central Afr. Rep.	57.3	132	Chad	30.5
43	Jamaica	74.7	88	Myanmar	57.0	133	Niger	25.7
44	Venezuela	74.1	89	Rwanda	57.0			
45	Israel	73.7	90	Romania	56.9			

Source: Pilot 2006 Environmental Index, www.yale.edu/epi.

Boyd: Certain things that you are measuring are more amenable to control by government or society, while others seem more like a country's natural resource inheritance, such as its geography or climate. Are areas for improvement things that all countries can act on—or are some countries stuck with their bad environmental luck?

Esty: All six of the core policy areas that we are looking at represent important challenges that governments can be held accountable for: the quality of their air, water, land-use, and biodiversity, how they manage productive natural resources, habitat protection, and energy and climate change.

Clearly, some governments are better positioned to hit the established targets because of their underlying natural resource endowments or, for example, because of their relatively low population density so they don't strain the resources of their land—a good example would be Sweden. But are these things that governments should be looking at? Absolutely. Are governments being held accountable for these things? All across the board.

Boyd: When you come up with a ranking like this, there's a power in boiling it all down to that one number. Talk to me about your philosophy of doing that versus disaggregating what you have done and going deeper on the specific issues.

Esty: What we found is that there is enormous power in presenting a single, overarching score and a ranking related to that. This is what attracts top-tier government officials, presidents, ministers, and the media. Everyone loves rankings, and everyone wants to know who is up and who is down. From a policy point of view, however, that's just a hook to draw people into a dialogue.

What we are really excited about—and where I think we are succeeding—is what comes after people look at that top-line number, when they get a chance to drill down to the underlying rankings that relate to the core policy categories and even below that, to the issue-by-issue analyses that are the foundation of the index. The rankings lure people into a policy dialogue that can surface best practices that put some nations nearer the top of the ladder.

Boyd: Tell me your thoughts on how this work relates to the Millennium Ecosystem Assessment, issued in 2005.

Esty: The Millennium Ecosystem Assessment and the EPI share a common vision of a more data-driven approach to environmental decisionmaking, where we really look at on-the-ground facts and results so that policy priorities can be based on good information and good science. What differentiates the EPI and gives it particular traction is that it is aligned not on an ecosystem basis, like the Millennium Ecosystem Assessment, but rather on a national basis. Nation-state boundaries are the true lines of accountability.

In our index, where countries rank low, there's no ducking, there's no hiding. The political officials find they are called upon to answer for poor performance, and we think that's a very powerful tool. No one wants to be at the bottom of the rankings: every country would like to be higher up. We made particular efforts to group countries with regard to appropriate peers so that they are not ranking themselves against the top of the spectrum, per se, but against others that are similarly situated.

Take Haiti, for example, which ranks really quite low on our scale, at 114 out of the 133 countries we ranked. It's not Haiti's job to figure out why it is not number 2, like Sweden, or number 3, like Finland. But it is interesting, if you are Haiti, to figure out why

you are doing so much worse than the Dominican Republic, at number 54. These are two countries that share an island, that have a lot in common. And obviously, something is going seriously wrong in Haiti with regard to natural resource management and pollution control. But for a poor country, the Dominican Republic is doing quite well. So we think there is some learning there for Haiti, and perhaps for the Dominican Republic as well, because across 16 issues, there are probably some things that Haiti is doing better.

Boyd: Inherently this is a global data exercise. Comment on the increasing availability of spatial data on environmental conditions, but also about where a government, particularly the U.S.

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government, stands on its ability to produce and present information that people like you would find useful.

Esty: We are moving into an era of information-age environmental protection, which is exciting. There is a great deal of data that weren't out there before, which gives us a much better handle on problems, the chance to track trends, and a better basis for evaluating policies and understanding what's working and what's not. Having said that, I think the U.S. government still underinvests in producing relevant data.

Boyd: In that regard, how close a connection is there between the top five countries in the ranking and the quality of the data you are getting about those countries? Or is there no correspondence?

Esty: Much better data sets are available for the top 30 countries—basically the ones that are part of the Organisation for Economic Co-operation and Development, the Paris-based, “developed country” think tank. Beyond that, the data become very thin, and frankly, after about 130 countries, it becomes so thin that we can't include all the countries that we would like. So if this move toward a more data-driven approach to environmental protection is to gain further traction, we are going to have to collect data on many more countries. We are also going to have to go after some issues that aren't tracked at all, not even in the most developed countries. These include exposure to toxic chemicals, waste management practices, releases of SO₂ and acid rain, recycling rates, lead and mercury exposure, and wetlands loss.

Boyd: In principle, a country could do poorly because it is using its resources to produce commodities, like cutting trees for lumber. How do you handle the fact that some of those crops and therefore the benefits of that land use are exported? In effect, you are measuring the negative consequences in one country but countries elsewhere are benefiting from that degradation. Is there any way to factor that into your index?

Esty: We took a hard look at this question in the context of exporting dirty businesses and whether countries benefit because someone else is willing to take up the challenge of

producing things like steel or aluminum. And it turned out to be very difficult to get at that and hard to do consistently with our model, which centers on the government's responsibility for what it can achieve within its borders. For example, the United States imports steel from Korea but the numbers don't exist to allow us to shift some of the public health and environmental burdens that Korea faces back to this country. It's a weakness of the structure and means that in some respects we haven't captured the full picture.

Boyd: When you unveiled the index at the World Economic Forum in Davos, what indications did you get that the environment is present in the minds of these world leaders?

Esty: It's a very exciting place to release a study because you have lots of people producing reports, businesses releasing statements, major world leaders talking about critical questions, and business leaders like Bill Gates speculating on the future of the information world. So the competition for air space is tough. In that regard, we were very pleased, first by the good turnout for the release in Davos itself, and then, by the stories around the world in the weeks that followed that came from more than 100 countries and appeared in more than 500 newspapers. To date, there have more than half a million downloads of the report from our website.

Speaking more broadly, business leaders overseas take environmental protection very, very seriously, incorporating it into their operating strategies—it's one of their top concerns, falling behind only globalization and competitive strength. A dominant theme at Davos was the rise of India and China and the enormous implications this will have, both positive and negative. Obviously, it means that many, many people will be rising out of poverty, and hundreds of millions, if not billions of new consumers will be driving the economy of the world. But it also means a vast consumption of natural resources and potentially significant rates of pollution, locally and at a global scale, threatening to exacerbate problems like climate change. ■

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