

Environmental Performance Index 2024



Policymakers' Summary

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Mounting evidence highlights the degradation of the planet's life-supporting systems on which humanity depends. A world economy that continues to rely heavily on fossil fuels translates into ongoing air and water pollution, acidification of the oceans, and rising concentrations of greenhouse gases in the atmosphere. These changes threaten the survival of species already suffering from widespread habitat loss, pushing them closer to extinction. Recent analyses show that humanity has already transgressed six out of nine critical planetary boundaries that define Earth's safe operating space — and is close to crossing a seventh.

In the face of these compounding crises, an empirical, data-driven approach to environmental policymaking is more important than ever. Carefully constructed metrics allow policymakers and other stakeholders to track trends, identify successful policy interventions, share best practices, and maximize the return on environmental investments.

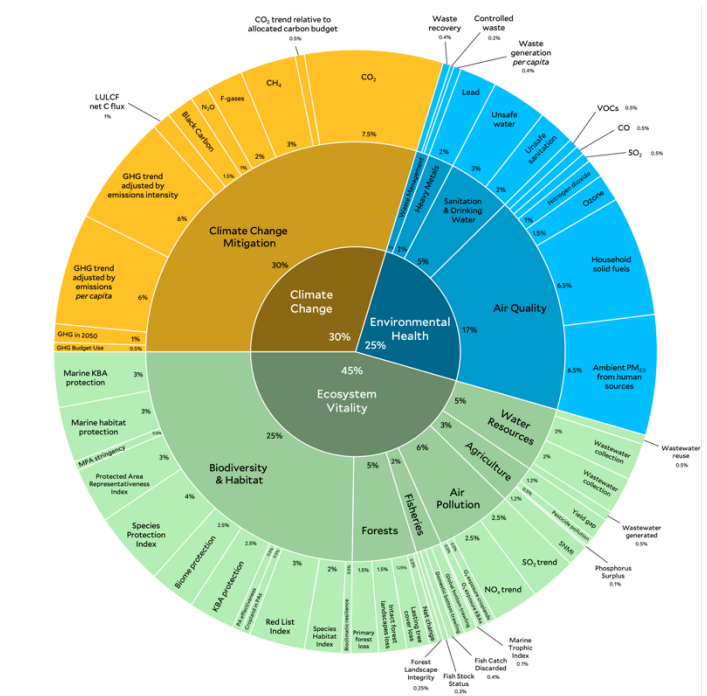
The 2024 Environmental Performance Index (EPI) harnesses the latest data sets, science, and technology to provide the most comprehensive assessment of the state of sustainability around the world. In total, the EPI incorporates 58 indicators to rank 180 countries on their progress at mitigating climate change, safeguarding ecosystem vitality, and promoting environmental health. This broad set of metrics is a powerful tool to track progress towards the UN Sustainable Development Goals, the climate mitigation targets in the 2015 Paris Climate Change Agreement, and the biodiversity protection goals in the Kunming-Montreal Global Biodiversity Framework.

Overall EPI scores help identify which countries have been most successful at addressing a wide variety of global environmental challenges, spotlighting sustainability leaders, and calling out laggards. Delving into the details beyond overall scores—examining individual issue categories, indicators, and peer comparisons—provides a more nuanced understanding of the trends and drivers of environmental performance.

The World is Failing to Address the Climate Crisis

Last year, the first global assessment of progress toward the goals of the Paris Agreement revealed a grim picture: the world is far off track. Despite record deployment of renewable energy, greenhouse gas (GHG) emissions keep rising. As the world enters uncharted climatic territory, there is a heightened risk of crossing irreversible tipping points in the planet's climate system.

In support of more effective climate action, the 2024 EPI introduces refined metrics to track countries' progress at curbing their GHG emissions. The new metrics score countries on their emissions reduction (or growth) rates while also considering their proximity to the net-zero target. In addition, new pilot indicators score countries on their climate mitigation efforts in relation to their allocated shares of the remaining global carbon budget — the amount of carbon that



The 2024 EPI Framework. The framework organizes 58 indicators into 11 issue categories and three policy objectives, with weights shown at each level as a percentage of the total score.

society globally can still emit before crossing dangerous warming limits — and thus better reflect the principle of common but differentiated responsibilities.

While GHG emissions are falling in more countries than ever before, the 2024 EPI analysis of emission trends over the last decade shows that only five countries — Estonia, Finland, Greece, Timor-Leste, and the United Kingdom — cut their GHG emissions at the rate needed to reach zero by 2050. And it is unclear whether any of these nations can maintain the pace of reduction that they achieved in recent years.

Emissions in the world's largest economies are either falling too slowly, such as in the United States, or still rising, such as in China, India, and Russia. Moreover, apart from the United Kingdom, all the countries identified in the 2022 EPI report as being on track to reach net zero emissions by 2050 have since fallen off track.

The pace of decarbonization in Denmark, for example, has slowed in recent years, highlighting that early gains from implementing low-hanging-fruit policies, such as switching electricity generation from coal to natural gas and expanding renewable power generation, are by themselves insufficient. Cutting emissions at the pace needed will require significant and ongoing investments in renewable energy, transforming food systems, electrifying buildings and transportation, and redesigning cities.

New and Refined Biodiversity Metrics

After climate change, biodiversity loss has emerged as the most serious and irreversible environmental crisis. Scientists

warn that we may have unleashed the sixth mass extinction in the planet's history. Given that biodiversity is fundamental to ecosystem vitality and the life-supporting services ecosystems provide, this crisis endangers the stability and continuity of human prosperity.

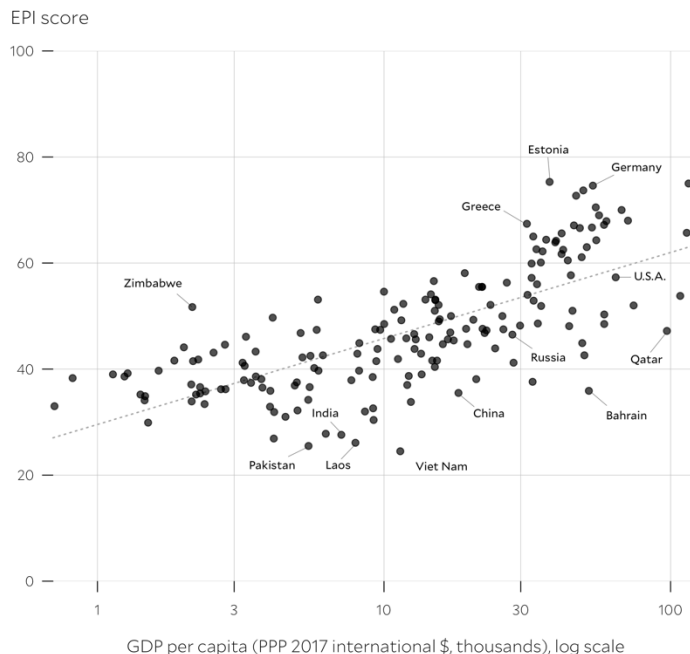
Responding to the urgency of halting biodiversity loss, the 2024 EPI introduces new metrics to assess how well countries protect their most important habitats. The 2024 EPI also introduces pilot indicators to measure the effectiveness and stringency of protected areas. These new metrics track key issues related to the expansion of protected areas to meet the Kunming-Montreal Global Biodiversity Framework's goal of safeguarding 30 percent of lands and seas by 2030. These pilot metrics reveal that, while many countries have reached their area protection goals, many protected areas have failed to halt the loss of natural ecosystems. The 2024 EPI's analyses underscore the necessity of providing protected areas with adequate funding and of developing stricter regulations in partnership with local communities.

Tradeoffs in Environmental Performance

EPI scores are positively correlated with a country's wealth, although after a point, increasing wealth yields diminishing returns. At every level of economic development, though, some countries outperform their peers while others lag. And indeed, some of the poorest countries in the world outperform some of the richest. In this regard, factors other than wealth, such as investments in human development, rule of law, and regulatory quality, are stronger predictors of environmental performance.

With its broad set of metrics across a wide range of environmental issues, the 2024 EPI reveals fundamental tradeoffs across different aspects of environmental performance, underscoring that no country can claim to be on a fully sustainable trajectory. Wealth allows countries to make investments in the infrastructure required to provide clean drinking water, safely manage waste, and rapidly expand renewable energy. But wealth also leads to higher material consumption and its associated environmental impacts, such as higher rates of waste generation, GHG emissions, and ecosystem degradation. Many countries with high scores in some Ecosystem Vitality metrics — such as those measuring the pollution from pesticides and fertilizers in agriculture, the integrity of forest landscapes, and the use of destructive fishing methods — do so because their economies are stagnant and underdeveloped.

These tradeoffs underscore the urgency of international cooperation and cultural changes in the type of development societies value. Developing countries must be careful not to repeat the mistakes of nations that followed a dirty and unsustainable path to industrialization. On the other hand, rich countries need to decouple their consumption from environmental degradation and use their wealth to help developing countries leapfrog to a path of truly sustainable development,



Countries' wealth is a strong predictor of their overall environmental performance, but some countries vastly outperform their economic peers, while others lag.

preserving their biodiversity and other global commons for the benefit of all humankind.

Persistent Gaps in a Data-Rich World

An unprecedented availability of environmental data, including exciting recent developments in machine learning and remote sensing, underpin the innovations introduced in the 2024 EPI. Nonetheless, crucial data gaps persist, creating serious challenges for robust, data-driven policymaking. For years, the EPI team has called attention to the dearth of high-quality, standardized data on solid waste, toxic waste, and wastewater management around the world, especially in developing countries. These data gaps hamper the ability of policymakers to tackle the worsening plastic pollution crisis and to advance the world toward a circular economy. The world also continues to lack robust data on the protection of wetlands, grasslands, and other important ecosystems that remain difficult to characterize with remote sensing technologies.

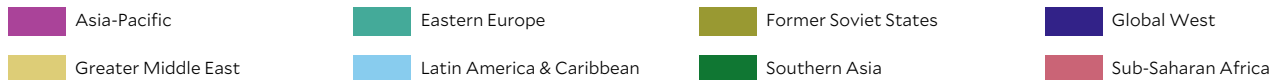
A Comprehensive Environmental Index

In each iteration, the EPI expands the scope of its sustainability scorecard to reflect advances in our scientific understanding of environmental issues. The 2024 EPI distills data on dozens of sustainability issues into a single score. To make the metrics easy to interpret, we transform raw environmental data into indicators that score countries on a 0–100 scale, from worst to best performance.

For a more careful examination of priority topics and their trends, we encourage users to dive into the disaggregated indicators and data underpinning them. All the indicator scores, the underlying data, and further methodological details are available on our website: epi.yale.edu.

RANK	COUNTRY	SCORE	REG	RANK	COUNTRY	SCORE	REG	RANK	COUNTRY	SCORE	REG
1	Estonia	75.3	1	60	North Macedonia	50.0	15	121	Azerbaijan	40.4	11
2	Luxembourg	75.0	1	62	Timor-Leste	49.7	5	122	Honduras	40.2	29
3	Germany	74.6	2	63	Colombia	49.4	15	122	Tonga	40.2	16
4	Finland	73.7	3	64	Serbia	49.3	16	124	Lebanon	40.1	12
5	United Kingdom	72.7	4	65	Dominica	49.2	16	125	Angola	39.7	16
6	Sweden	70.5	5	66	Botswana	49.0	3	125	Morocco	39.7	13
7	Norway	70.0	6	67	Guyana	48.6	17	125	Sierra Leone	39.7	16
8	Austria	69.0	7	68	Brunei Darussalam	48.5	6	128	Niger	39.2	18
9	Switzerland	68.0	8	68	Jamaica	48.5	18	129	Dem. Rep. Congo	39.0	19
10	Denmark	67.9	9	70	Seychelles	48.2	4	129	Paraguay	39.0	30
11	Greece	67.4	2	71	Israel	48.1	3	131	Sri Lanka	38.7	2
12	Netherlands	67.2	10	72	Dominican Republic	47.6	19	132	Mozambique	38.6	20
13	France	67.1	11	72	Montenegro	47.6	17	132	Sudan	38.6	14
14	Belgium	66.7	12	74	Jordan	47.5	4	134	Eswatini	38.5	21
15	Malta	66.6	13	74	Kazakhstan	47.5	3	135	Central African Republic	38.3	22
16	Ireland	65.7	14	76	Belize	47.4	20	136	Cameroon	38.1	23
17	Czech Republic	65.6	3	76	Nicaragua	47.4	20	136	Maldives	38.1	3
18	Slovakia	65.0	4	78	Mauritius	47.3	5	138	Cabo Verde	37.9	24
19	Poland	64.4	5	79	Qatar	47.2	5	138	Comoros	37.9	24
20	Iceland	64.3	15	80	Georgia	46.9	4	140	Türkiye	37.6	19
21	Spain	64.2	16	81	Argentina	46.8	22	141	Nigeria	37.5	26
22	Lithuania	63.9	6	81	Samoa	46.8	7	142	Benin	37.4	27
23	Australia	63.0	17	83	Peru	46.6	23	143	Gambia	37.1	28
24	Croatia	62.6	7	84	Russia	46.5	5	144	Mongolia	37.0	17
25	Slovenia	62.5	8	85	Zambia	46.1	6	145	Kenya	36.9	29
26	Portugal	62.2	18	86	Grenada	46.0	24	146	Ghana	36.6	30
27	Japan	61.7	1	87	Fiji	45.8	8	146	Lesotho	36.6	30
28	Canada	61.1	19	88	Tunisia	45.7	6	148	Papua New Guinea	36.5	18
29	Italy	60.5	20	89	Bosnia and Herzegovina	45.6	18	149	Guinea	36.2	32
30	Hungary	60.1	9	89	Moldova	45.6	6	149	Haiti	36.2	31
31	Latvia	59.9	10	91	Thailand	45.4	9	151	Bahrain	35.9	15
32	Belarus	58.1	1	92	Bolivia	44.9	25	151	São Tomé and Príncipe	35.9	33
33	New Zealand	57.7	21	92	Kuwait	44.9	7	153	Ethiopia	35.8	34
34	United States of America	57.3	22	94	Armenia	44.7	7	154	China	35.5	19
35	Romania	57.2	11	94	Mexico	44.7	26	155	Uganda	35.4	35
36	Suriname	56.6	1	96	Vanuatu	44.6	10	156	Chad	35.2	36
37	Bulgaria	56.3	12	97	Kiribati	44.1	11	156	Togo	35.2	36
38	Bahamas	56.0	2	98	Uruguay	43.9	27	158	Malawi	34.9	38
39	Antigua and Barbuda	55.5	3	99	Egypt	43.8	8	159	Mauritania	34.2	39
39	Costa Rica	55.5	3	99	Namibia	43.8	7	160	Liberia	34.1	40
41	Ukraine*	54.6	2	101	Bhutan	43.3	1	161	Mali	33.9	41
42	St. Vincent and Grenadines	54.1	5	101	Senegal	43.3	8	162	Indonesia	33.8	20
43	Cyprus	54.0	13	103	Tanzania	43.1	9	163	Rwanda	33.4	42
44	Singapore	53.8	2	104	South Africa	42.9	10	164	Burundi	33.0	43
45	Barbados	53.1	6	104	Uzbekistan	42.9	8	165	Nepal	32.9	4
45	Gabon	53.1	1	106	Marshall Islands	42.6	12	166	Guatemala	32.6	32
45	Venezuela	53.1	6	106	Saudi Arabia	42.6	9	167	Djibouti	32.2	44
48	Brazil	53.0	8	108	Côte d'Ivoire	42.5	11	168	Philippines	32.0	21
49	Panama	52.9	9	109	Kyrgyzstan	42.2	9	169	Tajikistan	31.9	12
50	Cuba	52.3	10	110	Algeria	41.9	10	170	Cambodia	31.0	22
51	Albania	52.1	14	111	Solomon Islands	41.8	13	171	Afghanistan	30.7	5
51	Trinidad and Tobago	52.1	11	112	Equatorial Guinea	41.6	12	172	Iraq	30.4	16
53	United Arab Emirates	52.0	1	112	Guinea-Bissau	41.6	13	173	Madagascar	29.9	45
54	Oman	51.9	2	112	Iran	41.6	11	174	Eritrea	28.6	46
55	Zimbabwe	51.7	2	115	Burkina Faso	41.5	14	175	Bangladesh	27.8	6
56	Ecuador	51.2	12	115	El Salvador	41.5	28	176	India	27.6	7
57	Saint Lucia	51.0	13	117	Malaysia	41.2	14	177	Myanmar	26.9	23
57	South Korea	51.0	3	117	Republic of Congo	41.2	15	178	Laos	26.1	24
59	Taiwan	50.3	4	119	Turkmenistan	40.7	10	179	Pakistan	25.5	8
60	Chile	50.0	14	120	Micronesia	40.6	15	180	Viet Nam	24.5	25

* The Russian invasion led to a sharp decline in economic activity, energy use, and associated GHG emissions in the Ukraine in 2022, so this score might not accurately reflect environmental performance.



Block, S., Emerson, J. W., Esty, D. C., de Sherbinin, A., Wendling, Z. A., et al. (2024). *2024 Environmental Performance Index*. New Haven, CT: Yale Center for Environmental Law & Policy. epi.yale.edu

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