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2020 Environmental Performance Index Finds Decarbonization Propels Countries to Top Sustainability Rankings

Denmark rises to #1 in the rankings, while the United States places near the bottom of wealthy democracies

Online release event:

Results from the 2020 Environmental Performance Index will be released online and live from Yale and Columbia universities on Thursday, June 4 at 11:00 a.m. EDT. Panelists from the research team will be joined by ministers from the Danish government. View recording here.

NEW HAVEN, Conn. — Denmark emerges at the top of the 2020 Environmental Performance Index (EPI) according to researchers at Yale and Columbia universities who produce this biennial scorecard of national results on a range of sustainability issues. In commenting on the rankings, Yale professor Dan Esty, who directs the Yale Center for Environmental Law & Policy that co-produces the EPI, observed that “our analysis suggests that countries with broad-based sustainability efforts and particular emphasis on decarbonizing their economies come out at the top of the pack.”

Now in its 22nd year, the EPI report has become the premier metrics framework for global environmental policy analysis – ranking 180 countries on 32 performance indicators across 11 issue categories covering environmental health and ecosystem vitality. The 2020 EPI features new metrics that gauge waste management, carbon dioxide emissions from land cover change, and emissions of fluorinated gases – all important drivers of climate change. Project director Zach Wendling noted that “the expanded issue coverage promises to deepen the global capacity for data-driven environmental policymaking, clarifying sustainability leaders and laggards, and helping to identify best policy practices.”
Denmark’s #1 ranking reflects strong performance across nearly all issues tracked by the EPI. Other nations in the top tier include Luxembourg, Switzerland, the United Kingdom, and France. Beyond providing issue-by-issue and country-by-country results, the 2020 EPI offers new insights into the factors associated with success on environmental sustainability goals. As Alex de Sherbinin of Columbia’s Earth Institute, one of the lead authors of the 2020 EPI, explained, “good governance more than any other factor separates the nations that are moving toward a sustainable future from those which are not.” High-scoring countries generally exhibit long-standing commitments and carefully constructed programs to protect public health, conserve natural resources, and reduce greenhouse gas (GHG) emissions.

India, with notably poor health outcomes from air quality and other environmental risks, comes in near the bottom of the rankings. Air quality also continues to plague China, although its recent pollution control and other environmental investments have helped it climb to 120th place, 48 places ahead of India’s 168th ranking.

The lowest scores of the report go to a series of countries that are struggling broadly with weak governance, including Liberia, Myanmar, and Afghanistan. Low EPI scores suggest a need for national sustainability efforts on a number of fronts, including air and water pollution, biodiversity protection, and the transition to a clean energy future. As the 2020 EPI builds on data published in 2019 and collected earlier, the results do not capture impacts from very recent events, including the burning of the Brazilian Amazon, wildfires in Australia, or the COVID-19 pandemic.

EPI Rankings

Denmark excels in almost every indicator of environmental health, having long made significant commitments to air quality, advanced sanitation, and safe drinking water. The highest-ranked country also stands out in solid waste management, with virtually all of the nation’s waste being recycled, composted, or incinerated. In addition, Denmark leads the world in the breadth and depth of its programs to tackle climate change, including a recently announced target of cutting its greenhouse gas emissions by 70% by 2030.
In contrast, the United States places 24th in the 2020 EPI, with its relatively low ranking reflecting poor performance in protecting water resources and waste management. While the data reveal strong U.S. results with regard to marine protected areas and air quality, the aggregate ranking puts the United States near the back of the pack among industrialized nations, behind the United Kingdom (4th), France (5th), Germany (10th), Japan (12th), Canada (20th), and Italy (22nd).

2020 EPI Global Trends

The 2020 EPI reveals that global progress on climate change has been halting. The Index’s metrics on CO₂ emissions from land cover change and black carbon emission growth rates show that critical aspects of the battle to address climate change are trending in the wrong direction over the past decade. Meeting the goals set out in the 2015 Paris Climate Change Agreement requires sustained cuts in emissions of all greenhouse gases, and the 2020 EPI finds that no country is decarbonizing quickly enough. Some countries do excel on individual greenhouse gas reductions, most notably Denmark with respect to CO₂ emissions, the UK on methane, and Norway on fluorinated gases. To spread best practices around the world, policymakers must pay greater attention to how climate leaders achieve success. Such lessons can also be drawn from countries that have recently made notable improvements in climate change mitigation, such as Seychelles, Bahrain, and Luxembourg.

Taking into account historic data on environmental performance, the 2020 Index also recognizes countries that have made significant progress over the past decade. Many countries have made substantial improvements in health outcomes related to sanitation, drinking water, and indoor air pollution, demonstrating that investments in public health can translate into rapid improvements in human well-being. Environmental health gains can be traced to successful campaigns to reduce household use of solid fuels in a number of countries, particularly in the Middle East. Such efforts need to be expanded to all countries, especially as the world tackles stubborn problems like poor air quality. The 2020 EPI makes it clear that hundreds of millions
of people still suffer from dangerous levels of air pollution, most notably in Pakistan, India, and Nepal.

Performance on protecting and enhancing the vitality of ecosystems reveals both gains and stubborn challenges. Morocco, UAE, Croatia, and Kuwait substantially improved their EPI scores in 2020 due to greater protection of biodiversity and habitat. On some issues, the world community broadly is doing well, while a small number of countries are trending in the wrong direction. Indonesia, Malaysia, and Cambodia, for example, have experienced significant deforestation over the past five years. Fisheries are also in global decline, with significant trouble noted in a range of countries including Bahrain, Argentina, and Australia.

Explaining EPI Results

Analysis of the factors underlying the 2020 EPI rankings makes it clear that sustainable development requires not only economic prosperity to generate the funds required for investments in public health and environmental infrastructure but also careful management of the pollution threats and natural resource management challenges that emerge from industrialization and urbanization. At every level of development, some countries achieve scores that exceed their peer nations with similar economic circumstances. This fact and the broader EPI analysis of the factors explaining success demonstrate that positive environmental performance requires good governance, including a strong rule of law, vibrant public engagement, an independent media, and well-crafted regulations.

EPI and Global Sustainability Data

The EPI builds on the best available global data from international research entities, such as the Institute for Health Metrics and Evaluation, the World Resources Institute, the Potsdam Institute for Climate Impact Research, CSIRO, the Mullion Group, and the Sea Around Us Project at the University of British Columbia, as well as international organizations, such as the World Bank and the UN Food and Agriculture Organization. Complete methods, data, and results – including those for individual countries – are available online at epi.yale.edu. The EPI
team is dedicated to transparency and constant improvement and invites critique and commentary from the global community.

The push for better data analytics as a foundation for policy choices has gained momentum in recent years, particularly after the adoption of the UN Sustainable Development Goals (SDGs) in 2015. And while more environmental data have become available, the EPI research team decries the lack of methodologically rigorous and globally comprehensive indicators on a number of fundamental issues including wetlands protection, toxic waste management, and groundwater quality and availability.

**About the Yale Center for Environmental Law & Policy**

The Yale Center for Environmental Law & Policy advances fresh thinking and analytically rigorous approaches to environmental decision-making across disciplines, sectors, and boundaries. In addition to its research activities, the Center aims to serve as a locus for connection and collaboration by all members of the Yale University community who are interested in environmental law and policy issues. The Center supports a wide-ranging program of teaching, research, and outreach on local, regional, national, and global pollution control and natural resource management issues. These efforts involve faculty, staff, and student collaboration and are aimed at shaping academic thinking and policymaking in the public, private, and NGO sectors.

**About the Columbia Center for International Earth Science Information Network**

The Center for International Earth Science Information Network (CIESIN) is part of the Earth Institute at Columbia University. CIESIN works at the intersection of the social, natural, and information sciences, and specializes in online data and information management, spatial data integration and training, and interdisciplinary research related to human interactions in the environment. Since 1989, scientists, decision-makers, and the public have relied on the information resources at CIESIN to better understand the changing relationship between human beings and the environment. From its offices at Columbia’s Lamont-Doherty Earth Observatory
campus in Palisades, New York, CIESIN continues to focus on applying state-of-the-art information technology to pressing interdisciplinary data, information, and research problems related to human interactions in the environment.

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