

Yale News Release

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2024 ENVIRONMENTAL PERFORMANCE INDEX SHOWCASES AN UNEXPECTED TOP RANKING AND FAILING OF INTERNATIONAL BIODIVERSITY COMMITMENT

In 2022, at COP 15 in Montreal over 190 countries made what has been called “the biggest conservation commitment the world has ever seen.” The Kunming-Montreal Global Biodiversity Framework called for the effective protection and management of 30% of the world’s terrestrial, inland water, and coastal and marine areas by the year 2030 — commonly known as the 30x30 target. While there has been progress toward reaching this ambitious goal of protecting 30% of land and seas on paper, the recently released 2024 Environmental Performance Index (EPI), an analysis by Yale researchers that provides a data-driven summary of the state of sustainability around the world, shows that in many cases such protections have failed to halt ecosystem loss or curtail environmentally destructive practices.

A new metric that assesses how well countries are protecting important ecosystems indicated that while nations have made progress in protecting land and seas, many of these areas are “paper parks” where commercial activities such as mining and trawling continue to occur — sometimes at a higher rate than in non-protected areas. The EPI analyses show that in 23 countries, more than 10 % of the land protected is covered by croplands and buildings, and in 35 countries there is more fishing activity inside marine protected areas than outside.

“Protected areas are failing to achieve their goals in different ways,” said Sebastián Block Munguía, a postdoctoral associate with the Yale Center for Environmental Law and Policy (YCELP) and the lead author of the report. “In Europe, destructive fishing is allowed inside marine protected areas, and a large fraction of the area protected in land is covered by croplands, not natural ecosystems. In many developing countries, even when destructive activities are not allowed in protected areas, shortages of funding and personnel make it difficult to enforce rules.”

The EPI also found that many countries that were leading in sustainability goals have fallen behind or stalled, illustrating the challenges of reducing emissions in hard-to-decarbonize industries and resistant sectors such as agriculture. In several countries, recent drops in agricultural greenhouse emissions have been the result of external circumstances, not policy. For example, in Albania, supply chain disruptions led to more expensive animal feed that resulted in a sharp reduction in cows and, consequentially, nitrous oxide and methane emissions.

Estonia leads this year’s rankings with a 40% drop in greenhouse gas (GHG) emissions over the last decade, largely attributed to replacing dirty oil shale power plants with cleaner energy

sources. The country is drafting a proposal to achieve by 2040 a CO₂ neutral energy sector and a CO₂ neutral public transport network in bigger cities.

“Estonia has decreased its GHG emissions by 59% compared to 1990. The energy sector will be the biggest contributor in reducing emissions in the coming years as we have an aim to produce 100% of our electricity consumption from renewables by 2030,” said Kristi Klaas, Estonia’s vice-minister for Green Transition.

But the country’s increasing reliance on biomass for energy, which impacts forest conservation, makes it unclear whether it will be able to maintain its fast pace of emissions reduction.

Denmark, the top ranked country in the 2022 EPI dropped to tenth place, as the pace of decarbonization slowed, highlighting that those early gains from implementing “low-hanging-fruit policies, such as switching to electricity generation from coal to natural gas and expanding renewable power generation are themselves insufficient,” the index notes. Emissions in the world’s largest economies such as the U.S. (which is ranked 34th) are falling too slowly or still rising — such as in China, Russia, and India, which is ranked 176th.

Over the last decade, only five countries — Estonia, Finland, Greece, Timor-Leste, and the United Kingdom, have cut their GHG emissions at the rate needed to reach net zero by 2050. Vietnam and other developing countries in Southeast and Southern Asia, such as Pakistan, Laos, Myanmar, and Bangladesh are ranked the lowest, indicating the urgency of international cooperation to help provide a path for struggling nations to achieve sustainability.

“The 2024 Environmental Performance Index highlights a range of critical sustainability challenges from climate change to biodiversity loss and beyond — and reveals trends suggesting that countries across the world need to redouble their efforts to protect critical ecosystems and the vitality of our planet,” said Daniel Esty, Hillhouse Professor of Environmental Law and Policy and director of YCELP.

The 2024 EPI, published by the Yale Center for Environmental Law and Policy and Columbia University’s Center for International Earth Science Information Network ranks 180 countries based on 58 performance indicators to track progress on mitigating climate change, promoting environmental health, and safeguarding ecosystem vitality. The data evaluates efforts by the nations to reach U.N. sustainability goals, the 2015 Paris Climate Change Agreement, as well as the Kunming-Montreal Global Biodiversity Framework. The data for the index underlying different indicators come from a variety of academic institutions and international organizations and cover different periods. Protected area coverage indicators are based on data from March 2024, while greenhouse emissions data are from 2022.