



JUST TRANSITION SCORE

**SOCIAL
PROGRESS
IMPERATIVE**

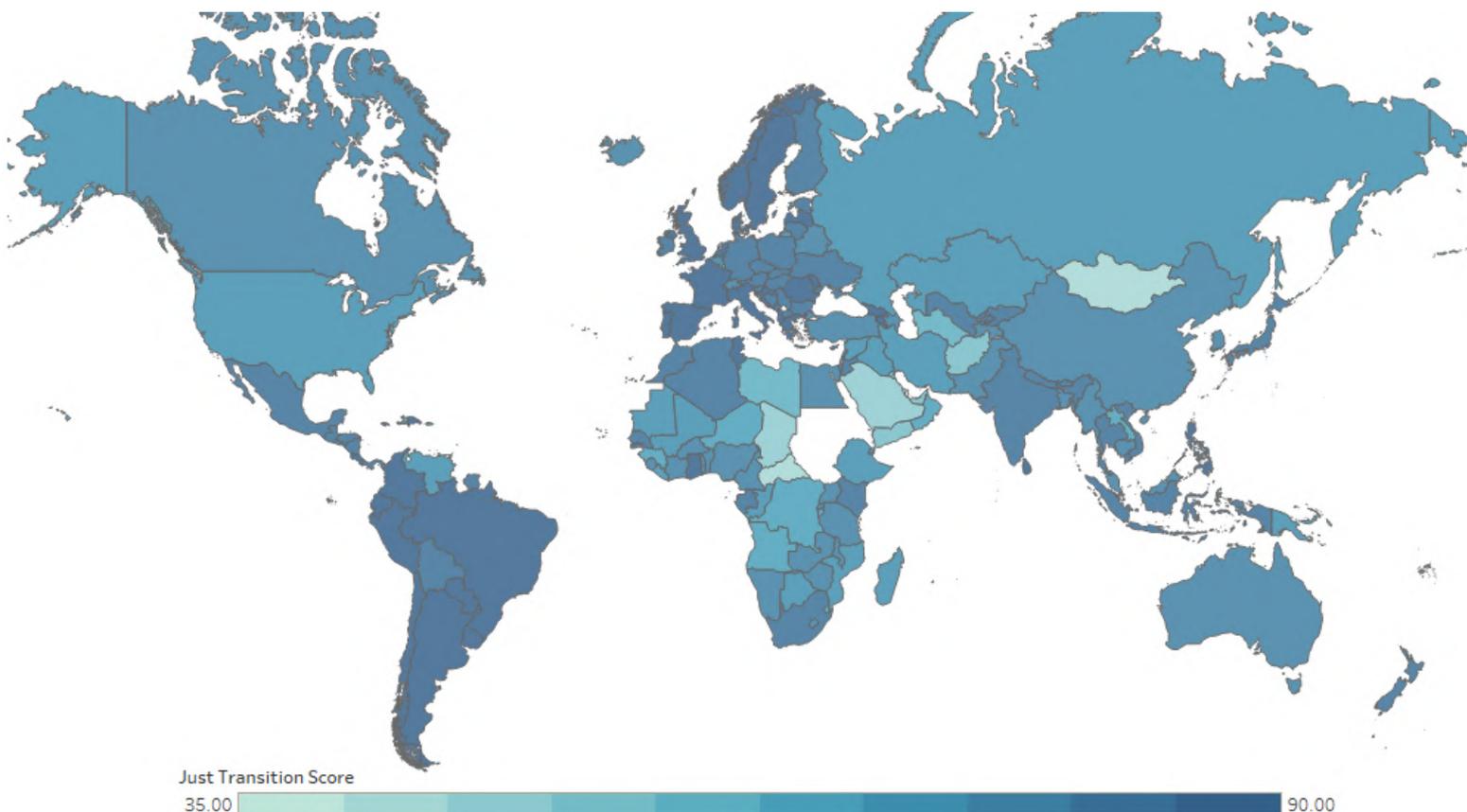
JUST TRANSITION SCORE

World leaders will soon gather for the COP27 Summit, where urgent action is needed to accelerate the decarbonisation of our economies while sustaining improvements in the quality of life for people around the world, particularly the most vulnerable. This is the challenge of a just transition. The new Just Transition Score from the Social Progress Imperative shows which countries have been better at improving their social progress while reducing their carbon emissions and which are lagging.

The Global Goal on Adaptation declared in the Paris Agreement aims to "enhance adaptive capacity, strengthen resilience and reduce vulnerability to climate change, to contribute to sustainable development and ensure an adequate adaptation response in the context of the Agreement's temperature goal of limiting warming to well below 2 or 1.5 °C." (IPCC 2022). If we don't reduce our carbon emissions in time we become increasingly vulnerable, we face economic loss, deterioration of the quality of life and increased loss of life. The Just Transition Score shows where these goals meet - reducing our carbon emissions while adapting to climate change and improving the quality of life of people.

The Just Transition Score combines the comprehensive, human-centered measurement of the Social Progress Index with data on countries' consumption-based per capita CO₂ emissions. The Just Transition Score measures countries' ratio of carbon emissions per capita to the Social Progress Index, it tells us how carbon efficient a country is at creating positive social outcomes. The ratio is scaled from 0 (worst performance) to 100 (best performance). Countries with the highest score are those that are most effectively tackling the climate crisis while delivering social progress for their people. Covering 158 countries, the Just Transition Score tracks progress over time from 2011-2022.

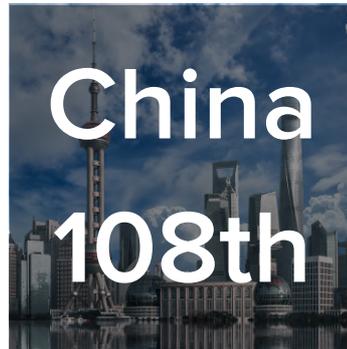
Just Transition Score worldwide distribution in 2022



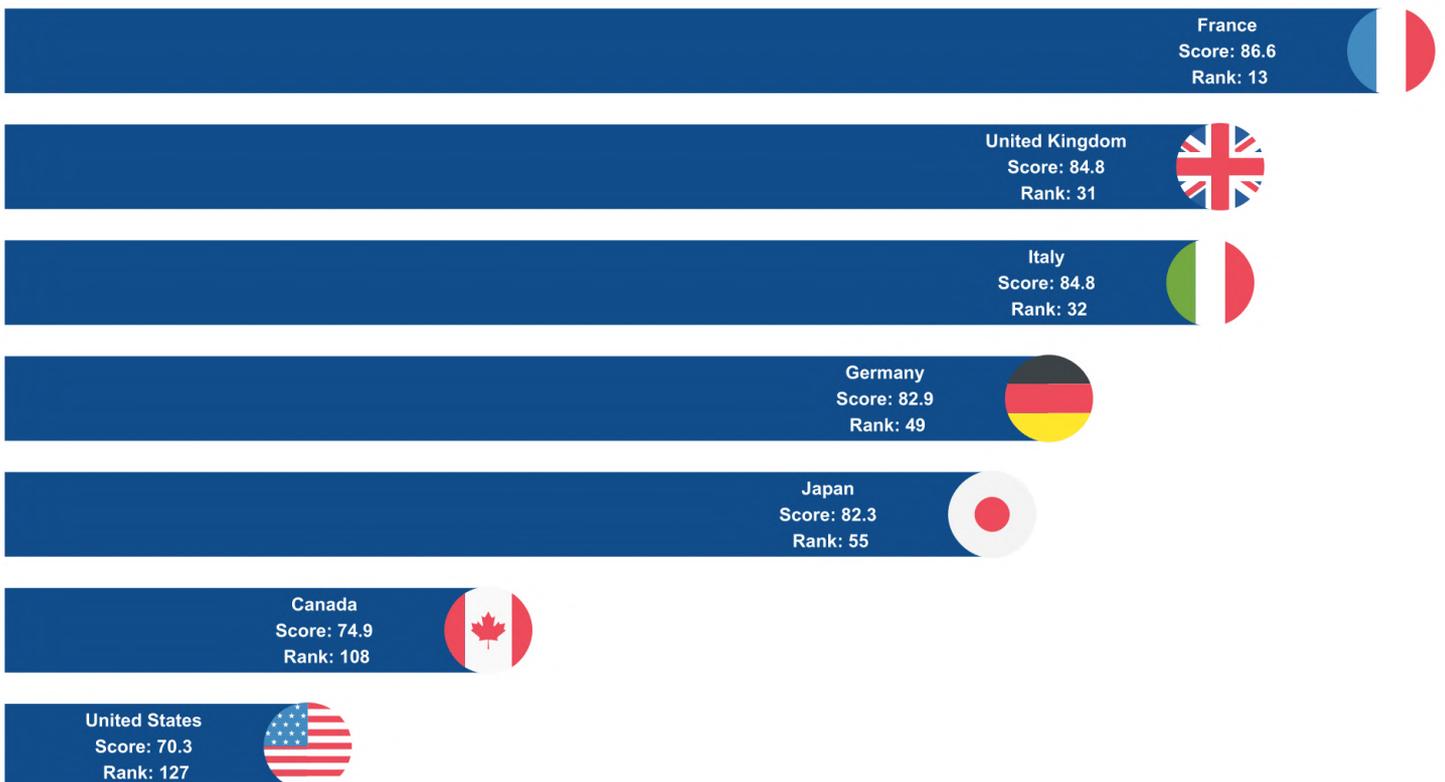
The US is at the back of the pack, behind its peers and competitors, in achieving a just transition to the climate emergency.

When we look at the world's largest economies, we find that the United States ranks 127th globally on the Just Transition Score and far worse than any of the others, including China (108th), Russia (119th), India (77th) Japan (55th), Germany (49th), United Kingdom (31st) and France (13th).

The US is the worst performing country in the G7. It performs badly not because it is rich, but because it has a toxic combination of high carbon emissions and relatively low social progress. The US will only achieve a just transition by tackling both problems.



Just Transition Score and ranking G7 countries





BEST-PERFORMING AND WORST-PERFORMING COUNTRIES

There are substantial differences in the way countries achieve their social progress which occur mainly due to disparities in availability of resources and heterogeneity in consumption patterns. The Just Transition Score can therefore be useful not only to provide a general picture based on the social and environmental context, but also to allow comparisons between different regions and countries, and identify those that are the most or the least sustainable.

The Just Transition Score signals to countries ahead of COP27 a new benchmark for success in the push to improve quality of life and lower emissions. It is a helpful tool for accountability and climate justice that responds to the urgency of the climate crisis to show developing economies that alternative, environmentally positive paths to development exist.

The world as a whole has made progress on the Just Transition Score, increasing in 4 points since 2011. i.e. a score of 79 out of 100 in 2022 against 75 in 2011.

Out of 158 countries:

HIGHEST-RANKED COUNTRIES

The highest ranked countries include:

#1

- 1. Costa Rica
- 2. Portugal
- 3. Sweden
- 4. Argentina
- 5. Spain



LOWEST-RANKED COUNTRIES

The lowest ranked countries include:

- 1. Qatar
- 2. Luxembourg
- 3. CAR
- 4. Mongolia
- 5. Saudi Arabia



Countries with declining Just Transition Scores are largely extractive economies:

1. Mongolia
2. Trinidad and Tobago
3. Libya
4. Venezuela



The COP27 host country, Egypt, ranks 92nd.

Some of the worst performers have seen some of the greatest improvements.



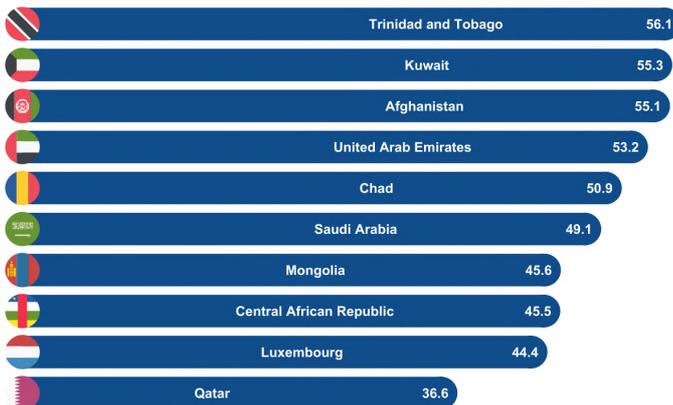
There is a huge opportunity to learn from the top Just Transition Score countries as they outperform the wealthiest nations in the world with just a fraction of their resources. Luxembourg, the world's richest country with GDP per capita of USD 134,753 in 2021 (World Bank national accounts data), is one of the worst performers on the Just Transition Score at 44.42/100 and ranks on 157th out of 158 countries. Norway which ranks 6th in GDP per capita globally and 1st on the Social Progress Index comes in at 28th on the Just Transition Score.

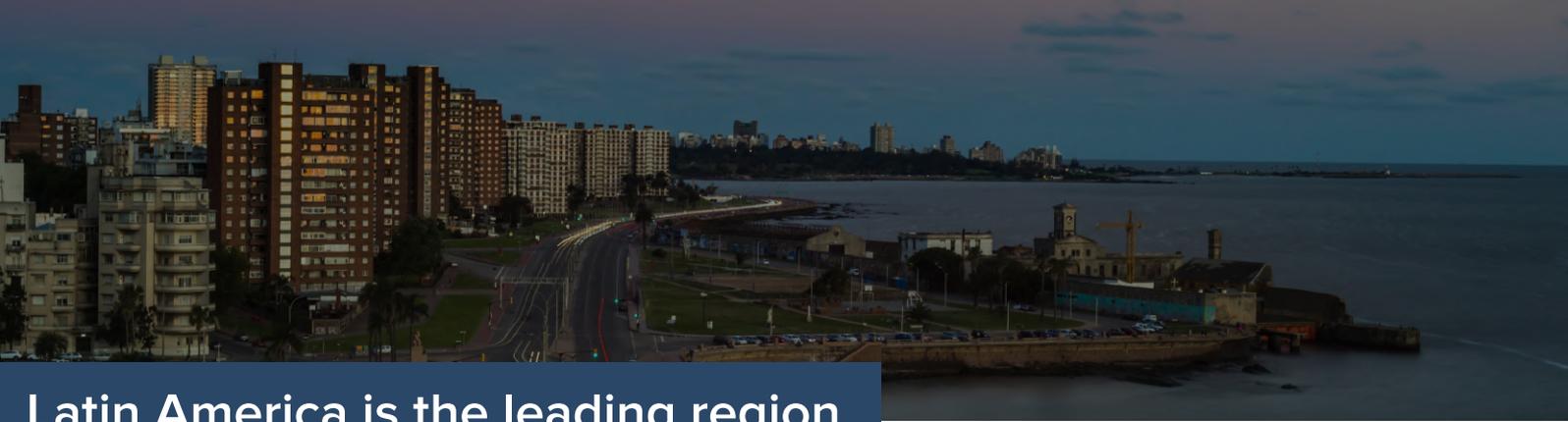
Just Transition Score top and bottom 10 performers

Best 10 performing countries



Worst 10 performing countries





Latin America is the leading region

Led globally by Costa Rica and Uruguay, Latin America is the best performing region on the Just Transition Score but it's also the one improving at the slowest rate of the past 12 years (+1.74).

While the countries with the lowest Just Transition scores are making the most rapid improvements.

TOP 5 LATIN AMERICAN COUNTRIES



Improvement by region



North America



The United States and Canada have shown some improvement.

Sub-Saharan Africa

It is the worst performing region, despite relatively low emissions, due to low social progress.



2022 It is, however, the most improved region since 2011 with significant gains by:

- Chad (+17)
- DRC (+15)
- Sierra Leone (+14)
- Ethiopia (+13)
- Angola (+12)
- The Gambia (+11)



Mauritius and Botswana show least progress in this region.

Europe

2ND best performing region and has shown gains since 2011.

Significant improvements for:



**LUXEMBOURG
IRELAND
FINLAND
SPAIN
GREECE
UK
ITALY**

Little improvement for:



Latin America



Best-performing region but has made little progress since 2011.



Brazil and Nicaragua show no improvement.



Venezuela and Panama have gone backwards.



East Asia and the Pacific

Modest improvement:

- China
- Japan

No progress:

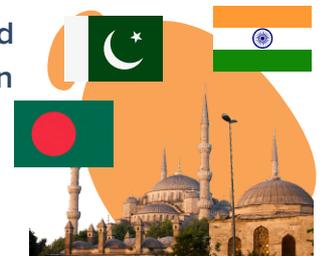
- South Korea
- Malaysia
- Thailand



SINGAPORE is the biggest improver in the region.

South Asia

India, Pakistan and Bangladesh have all seen significant improvement.



Countries scores and ranks 2022

4 categories of country performance since 2011:

- Decliners: decrease since 2011.
- Stagnant: increase of less than 1 point.
- Improvers: increase of 1 up to 5 points.
- Significant improvers: increase of more than 5 points.

COUNTRY	JUST TRANSITION SCORE	RANK	SCORE CHANGE (2011-2022)	EVOLUTION STATUS
Costa Rica	89.98	1	3.25	Improver
Uruguay	88.67	2	1.26	Improver
Armenia	88.52	3	5.40	Significant improver
Albania	87.89	4	3.53	Improver
Portugal	87.87	5	4.38	Improver
Moldova	87.65	6	2.13	Improver
Sweden	87.61	7	4.39	Improver
Argentina	87.33	8	2.70	Improver
Spain	87.20	9	5.35	Significant improver
Georgia	87.00	10	3.59	Improver
Greece	86.93	11	7.68	Significant improver
Croatia	86.79	12	5.64	Significant improver
France	86.57	13	3.82	Improver
Chile	86.44	14	1.75	Improver
Peru	86.26	15	2.47	Improver
Sri Lanka	86.20	16	4.04	Improver
Jamaica	86.18	17	5.83	Significant improver
Romania	86.09	18	4.22	Improver
Denmark	85.99	19	6.49	Significant improver
Brazil	85.78	20	0.17	Stagnant
Ecuador	85.76	21	2.68	Improver
Paraguay	85.73	22	2.29	Improver
Colombia	85.68	23	1.31	Improver
Cabo Verde	85.54	24	3.87	Improver
Cyprus	85.22	25	9.86	Significant improver
Philippines	85.19	26	1.88	Improver
Ghana	85.18	27	5.79	Significant improver
Norway	85.15	28	3.57	Improver
Barbados	84.95	29	6.34	Significant improver

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- Significant improvers: increase of more than 5 points.

COUNTRY	JUST TRANSITION SCORE	RANK	SCORE CHANGE (2011-2022)	EVOLUTION STATUS
 Tunisia	84.89	30	4.47	Improver
 United Kingdom	84.81	31	5.25	Significant improver
 Italy	84.79	32	6.74	Significant improver
 Netherlands	84.77	33	4.15	Improver
 Latvia	84.70	34	3.96	Improver
 Mauritius	84.52	35	1.57	Improver
 Dominican Republic	84.50	36	3.50	Improver
 Ireland	84.48	37	10.13	Significant improver
 New Zealand	84.37	38	2.47	Improver
 Bolivia	84.05	39	2.50	Improver
 Vietnam	83.96	40	2.77	Improver
 Republic of North Macedonia	83.77	41	4.48	Improver
 El Salvador	83.67	42	1.90	Improver
 Bulgaria	83.57	43	4.34	Improver
 Lithuania	83.47	44	1.12	Improver
 Mexico	83.47	45	4.85	Improver
 Bhutan	83.13	46	3.91	Improver
 Ukraine	83.13	47	4.92	Improver
 Kyrgyzstan	83.03	48	1.05	Improver
 Germany	82.94	49	4.24	Improver
 Indonesia	82.90	50	3.33	Improver
 Fiji	82.79	51	4.75	Improver
 Suriname	82.69	52	2.14	Improver
 Morocco	82.36	53	6.31	Significant improver
 Japan	82.29	55	3.43	Improver
 Sao Tome and Principe	82.29	54	5.13	Significant improver
 Hungary	82.28	56	2.24	Improver
 Poland	82.20	57	1.99	Improver
 Austria	82.11	58	4.14	Improver
 Slovenia	82.09	59	3.69	Improver
 Thailand	82.01	60	0.60	Stagnant
 Finland	81.79	61	8.12	Significant improver

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- Significant improvers: increase of more than 5 points.

COUNTRY	JUST TRANSITION SCORE	RANK	SCORE CHANGE (2011-2022)	EVOLUTION STATUS
 Uzbekistan	81.77	62	10.59	Significant improver
 Jordan	81.66	63	3.32	Improver
 Panama	81.57	64	-5.46	Decliner
 Honduras	81.52	65	3.14	Improver
 Nicaragua	81.51	66	0.08	Stagnant
 Czechia	81.48	67	5.78	Significant improver
 Montenegro	81.38	68	2.20	Improver
 Nepal	81.36	69	5.97	Significant improver
 Slovakia	81.32	70	3.81	Improver
 Israel	80.93	71	6.05	Significant improver
 Maldives	80.85	72	4.96	Improver
 Kenya	80.80	73	7.01	Significant improver
 Guatemala	80.47	74	2.88	Improver
 Serbia	80.32	75	3.57	Improver
 Senegal	80.27	76	5.78	Significant improver
 India	79.88	77	5.88	Significant improver
 Algeria	79.77	78	-0.57	Decliner
 Lebanon	79.70	79	3.74	Improver
 Estonia	79.69	80	5.47	Significant improver
 Gabon	79.53	81	6.10	Significant improver
 Bosnia and Herzegovina	79.07	82	1.25	Improver
 South Africa	79.05	83	7.51	Significant improver
 Bangladesh	78.92	84	7.11	Significant improver
 Tanzania	78.72	85	8.00	Significant improver
 Malawi	78.63	86	7.57	Significant improver
 Switzerland	78.62	87	4.77	Improver
 Turkey	78.55	88	1.63	Improver
 Belarus	78.34	90	4.13	Improver
 Benin	78.34	89	4.84	Improver
 Tajikistan	78.00	91	2.92	Improver
 Malta	77.79	92	7.52	Significant improver
 Egypt	77.71	93	4.44	Improver

Countries scores and ranks 2022

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COUNTRY	JUST TRANSITION SCORE	RANK	SCORE CHANGE (2011-2022)	EVOLUTION STATUS
 Azerbaijan	77.61	94	4.60	Improver
 Cambodia	77.51	95	6.73	Significant improver
 Gambia, The	77.50	96	11.26	Significant improver
 Côte d'Ivoire	77.43	97	9.06	Significant improver
 Namibia	77.42	98	4.13	Improver
 Malaysia	77.25	99	0.16	Stagnant
 Rwanda	76.97	100	7.64	Significant improver
 Korea, Republic of	76.45	101	0.80	Stagnant
 Nigeria	76.38	102	7.73	Significant improver
 Zambia	75.75	103	6.39	Significant improver
 Cameroon	75.49	104	6.21	Significant improver
 Australia	75.37	105	3.65	Improver
 Zimbabwe	75.15	106	8.58	Significant improver
 Belgium	75.07	107	7.65	Significant improver
 Canada	74.87	108	4.07	Improver
 China	74.52	109	2.92	Improver
 Togo	74.48	110	6.94	Significant improver
 Burkina Faso	74.28	111	7.13	Significant improver
 Iceland	74.09	112	1.96	Improver
 Uganda	73.99	113	4.70	Improver
 Myanmar	73.93	114	8.79	Significant improver
 Sierra Leone	73.83	115	14.82	Significant improver
 Pakistan	73.70	116	6.28	Significant improver
 Lesotho	73.68	117	8.13	Significant improver
 Venezuela	73.43	118	-4.62	Decliner
 Russia	73.28	119	2.74	Improver
 Liberia	72.24	120	7.93	Significant improver
 Botswana	71.95	121	2.06	Improver
 Ethiopia	71.91	122	13.70	Significant improver
 Mozambique	71.89	123	7.18	Significant improver
 Madagascar	71.49	124	8.19	Significant improver
 Syria	70.57	125	0.93	Stagnant

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COUNTRY	JUST TRANSITION SCORE	RANK	SCORE CHANGE (2011-2022)	EVOLUTION STATUS
 Djibouti	70.27	126	7.60	Significant improver
 United States	70.26	127	5.51	Significant improver
 Mali	69.67	128	4.69	Improver
 Congo, Republic of	69.36	129	7.72	Significant improver
 Papua New Guinea	69.18	130	7.02	Significant improver
 Iraq	69.11	131	3.08	Improver
 Iran	68.69	132	1.83	Improver
 Kazakhstan	68.33	133	3.50	Improver
 Mauritania	68.11	134	5.85	Significant improver
 Angola	67.90	135	12.58	Significant improver
 Haiti	67.63	136	5.21	Significant improver
 Singapore	66.68	137	11.54	Significant improver
 Eswatini	66.51	138	14.42	Significant improver
 Laos	66.05	139	1.54	Improver
 Oman	65.95	140	13.24	Significant improver
 Bahrain	65.41	141	8.87	Significant improver
 Guinea	65.35	142	9.90	Significant improver
 Burundi	65.26	143	6.17	Significant improver
 Niger	65.01	144	8.59	Significant improver
 Congo, Democratic Republic of	64.80	145	15.85	Significant improver
 Libya	60.63	146	-8.97	Decliner
 Turkmenistan	57.81	147	-0.40	Decliner
 Yemen	56.42	148	2.12	Improver
 Trinidad and Tobago	56.13	149	-8.89	Decliner
 Kuwait	55.33	150	18.10	Significant improver
 Afghanistan	55.13	151	9.14	Significant improver
 United Arab Emirates	53.21	152	37.09	Significant improver
 Chad	50.92	153	17.30	Significant improver
 Saudi Arabia	49.12	154	5.46	Significant improver
 Mongolia	45.59	155	-29.61	Decliner
 Central African Republic	45.55	156	5.88	Significant improver
 Luxembourg	44.42	157	27.88	Significant improver
 Qatar	36.56	158	6.10	Significant improver

METHODOLOGY

SOCIAL PROGRESS INDEX

The Social Progress Index adopts the following formal definition of social progress: “The capacity of a society to meet the basic human needs of its citizens, establish the building blocks that allow citizens and communities to enhance and sustain the quality of their lives, and create the conditions for all individuals to reach their full potential.” (Social Progress Imperative)

In line with this definition, the 2022 Social Progress Index incorporates 60 distinct indicators in its composition. Each indicator measures an important aspect of quality of life, ranging from infant mortality to the number of internet users or the level of academic freedom.

The Social Progress Index Framework defines three major areas of social progress, referred to as dimensions: Basic Human Needs, Foundations of Well-Being, and Opportunity.

The Social Progress Index framework



Each dimension has four components whose underlying concepts are linked and guided by specific questions. Each component is further defined by a set of social and environmental outcome indicators that address the stated conceptual question. These interrelated elements are then combined together to produce the Social Progress Index that measures, on a 0-100 scale, social and environmental outcomes achieved by individual countries.



JUST TRANSITION SCORE

The purpose of the Just Transition Score (JTS) is to measure the carbon efficiency of social progress of each country. Based on the ratio of consumption-based CO₂ emissions per capita to the Social Progress Index (SPI), it measures the per capita carbon content in each unit of SPI. The higher the ratio, the less carbon efficient a country is in generating social progress. This approach allows to account for the performance in social progress (as measured by the SPI) as well as for the extent of environmental damage (as measured by the CO₂ emissions), thereby summarizing countries' environmental sustainability of social progress, and providing trends over time.

This approach, however, requires a prior treatment to prevent the results being disproportionately influenced by the variable with higher dispersion. For instance, CO₂ emissions represent a variable with a significant skew (75% of countries emit less than 8t per capita annually, while the other 25% emit up to 50t) which makes the ratio heavily driven by CO₂ emissions in the numerator. This would yield results showing countries with extremely low CO₂ emissions per capita as the most carbon-efficient regardless of their performance in SPI, or in other words, reward poor countries and penalize the developed ones.

Dietz et al. (2012) and Jorgenson et al. (2014), addressed this complication by simply forcing the coefficient of variation of the numerator and denominator to be equal by adding a constant to one term (the numerator, in our case). This allows a simple linear transformation that shifts the mean without changing the variance, thus equalizing the coefficients of variation:

$$JTS = \frac{CO_2 \text{ p.c.} + const}{SPI}$$

Where the equalizing constant *const* was obtained by the following formula:

$$const = \left(\frac{\sigma_{CO_2} \cdot \mu_{SPI}}{\sigma_{SPI}} \right) - \mu_{CO_2}$$

Where σ_{CO_2} and μ_{CO_2} are the standard deviation and the mean of CO₂ emission and σ_{SPI} and μ_{SPI} are the standard deviation and mean of SPI. The values of the ratio are then inverted and scaled from 0 to 100 so that higher scores show better performance in the Just Transition Score:

$$JTS_{score} = \frac{\max(JTS) - JTS_{it}}{\max(JTS) - \min(JTS)}$$

To calibrate the Just Transition Score the dystopian value $\max(JTS)$ was set to 1, assuming that in the worst case a country would have one unit of per capita CO₂ emissions per each unit of SPI. Similarly, the utopian value $\min(JTS)$ was set to $(const/100)$ so that in the best case scenario, there are no CO₂ emissions per capita (except for the equalizing constant) in the numerator while there is the best possible SPI score (100) in the denominator.



Data treatments and sources

To provide more reliable information on the environmental sustainability of countries, the Just Transition Score is using consumption-based CO₂ emissions, thus adding the emissions caused by the production of imported goods to domestic ones, and removing the emissions caused by exported goods, thereby correcting for spillovers from international trade.

Data for consumption-based CO₂ emissions were obtained from [Our World in Data](#), where it is originally sourced from the Climate Watch. In addition, missing data points were imputed with linear regression predictions using modeled consumption-based CO₂ emissions as a predictor. The latter is provided by Eora Global Supply Chain Database. The last available year for CO₂ emissions data (2019) was shifted forward to 2022 to match the SPI's year alignment.

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CREDITS

Unless otherwise indicated, all data in this publication are sourced by Social Progress Imperative.

MORE INFORMATION

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