



Global Justice Index Report 2021

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Abstract

The Global Justice Index is a multiyear research project based at Fudan Institute for Advanced Study in Social Sciences that assesses the contributions made by each country to achieving greater global justice. In 2019, we completed the first-year measures, using the rankings of nation-states at the global level based on data from 2010 to 2017. This was published under the title of the Global Justice Index Report in Chinese Political Science Review (Vol. 5, No. 3, 2020). The Global Justice Index Report 2020 is the second annual report based on our work, analyzing data from 2010 to 2018, which was concluded in 2020, and published in Chinese Political Science Review (Vol. 6, No. 3, 2021). This is the third annual report in our series, and here, we provide the results with the rankings of promoting global justice by nation-states at the global level based on data in the year of 2019. The report broadly consists of four sections: introduction, findings, main results, and conclusion. In the introduction, we discuss the development of the conceptual framework and evaluative principles to justify our selection of the dimensions and indicators for measurement. Next, in the findings section, we report the data, indicators, and our results for each country for each of the 10 issues we identify, and provide regional comparisons for Asia, Europe, North America, Latin America, Africa, and Oceania. In the following section, we present the main results for the global justice indices, and report the ranking of each country's contribution to achieving greater global justice. In the final section, we discuss the applications and limitations of the index and potential further research trajectories.

Keywords Global Justice Index · Indicators · Measurements · Methods · Country · Global rankings

This is a group project of Fudan IAS. All members of the group named as authors contributed equally to the study and ranked alphabetically. This project is initiated and led by Sujian Guo.

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1 Introduction

The Global Justice Index is a multiyear research project conducted at Fudan Institute for Advanced Study in Social Sciences (Fudan-IAS) to conceptualize and measure the contributions of each country to achieving greater global justice. Over the past two years, we have published a book in Chinese and several academic papers in English to present the justice rankings of nation-states at the global level from 2010 to 2017 developed according to the Global Justice Index (2019) and nation-states' rankings at the global level from 2010 to 2018 on the index (2020). Building on the success of this earlier work, here we provide our third-year results, including the rankings to promote global justice by nation-states at the global level as assessed in their 2019 data. This year's report on Global Justice Index (2021) consists of the following five main sections: introduction, methodology, results, analysis, and conclusion.

In the introduction, we reiterate our theoretical innovation in the creation of our index by discussing the development of the conceptual framework to support and justify our selection of issues, dimensions, and indicators for measurement. Although much of this content is discussed introduced in previous years' reports, we strongly believe that it is necessary to present it again this year. Doing so has the merit of maintaining the integrity of this year's report. In addition, we have made some major changes in this year's report compared with the reports published in 2020 and 2021. In the results section, we include the rankings of nation-states' contribution to global justice across 10 issue areas for 2019. Following the results section, we provide regional comparisons accompanied by detailed policy analysis presented with the assistance of various visualization tools. In the conclusion section, we report the key findings, elaborate possible applications and certain limitations of the index, and describe the potential for further research in global justice and the policy implications for using our materials or approach in advancing global justice in the future.

Many agree that global justice is a broad concept incorporating multilevel and multidimensional aspects rooted in both normative and empirical realities. A coherent, integrated theoretical framework that covers this normative basis and various empirical dimensions is, therefore, necessary to address some of the basic and important research questions that fall under this area of study. Our Global Justice Index research begins with a conceptualization of global justice reported in the theoretical paper "Conceptualizing and Measuring Global Justice: Theories, Concepts, Principles and Indicators", coauthored by the project leaders Sujian Guo *et al.* and published in *Fudan Journal of the Humanities and Social Sciences* (Vol. 12, No. 4, 2019), which discusses the theories, concepts, evaluative principles, and methodologies involved in the study of global justice. We recommend that readers read it along with this year's report.

In our theoretical paper (Guo *et al.* 2019), we clarify how to global justice should be conceptualized, how operationalized measurement dimensions and indicators can be selected and theoretically justified, and how these measurements can be made conceptually consistent with the concept of global justice. These are

challenging questions. By synthesizing multiple theories and intellectual traditions drawn from a range of social, cultural, and political contexts, we have come to conceptualize global justice centering on three main foundational elements—rights, goods, and virtue—to develop a coherent theoretical framework on a normative basis for the following measurements. Our rights-based conceptualization focuses on the basic principles, rules, and sources of legitimacy of justice (Universal Declaration of Human Rights 1948; Rawls 1971, 1999). Our goods-based conceptualization concentrates on the material and institutional supports that the governments or institutions are obliged to provide (Arneson 1989; Freeman 2006; Nussbaum 2006, 2011; Richardson 2006). Finally, our virtue-based conceptualization understands justice to be a virtue that an individual seeks to pursue rather than a regulation imposed from the outside that an individual must comply with (Mo 2003). The relationship among the three conceptual approaches are necessarily interdependent rather than separate, and the must be components of a holistic whole. The three approaches must also be seen as complementary instead of competing, such that the rights-based conceptualization forms the basic structure as its bones, the goods-based conceptualization provides substantial material support as the muscles, and the virtue-based conceptualization, which emphasizes personal motivation and internalized willingness, is the heart in this body of justice (Guo et al. 2019).

Using this framework, we propose two evaluative principles to bridge the gap between theory and practice to determine and justify our selection of issue areas for evaluation. We call these two principles Common but Differentiated and Respective Capabilities (CBDR-RC) and Cosmopolitan but Due-diligence Responsibilities (CDDR). CBDR-RC incorporates those issues “for which no single nation-state can be held directly accountable or responsible, matters that can only be tackled through the globally concerted efforts of all stakeholders” (Guo et al. 2019). For example, it is the responsibility of all to protect the climate system and ecological balance, and environmental protection cannot be handled by any country on its own. The principle of CBDR-RC, first adopted by the United Nations (UN) Framework Convention on Climate Change (UNFCCC) and reaffirmed in the Rio Declaration on Environment and Development, combines normative legitimacy with historical rationality. Although the principle was first developed to establish the responsibilities of different countries for climate change, it has been expanded and applied to other questions of global justice, such as combating transnational crime and global peacekeeping.

The CDDR principle asserts that “all-nation-states are morally obligated to provide cosmopolitan aid, in which context the least advantaged will have a due-diligent responsibility” (Guo et al. 2019). This principle is based on the concept of mutual accountability proposed in the Paris Declaration on Aid Effectiveness, adopted in 2005 at the Second High-Level Forum on Aid Effectiveness to improve cooperation among actors in aid and development. This principle considers aid obligations to be part of domestic affairs, such as anti-poverty and education policy, in the context of which nation-states are expected to provide material and institutional assistance to the citizenry within their territories.

Using CBDR-RC and CDDR, we have selected two clusters of global justice issue areas for practical measurement. The issue areas that relate to CBDR-RC are

(1) climate change (global warming), (2) peacekeeping, (3) humanitarian aid, (4) terrorism and armed conflicts, (5) cross-national criminal police cooperation, and (6) refugee. The issue areas relating to CDDR are (7) anti-poverty, (8) education, (9) public health, and (10) the protection of women and children.

This year's Global Justice Index study is not merely a continuation of previous work. While we have retained our issue areas, indicator systems, data sources, and method of constructing the Global Justice Index as these appeared in the Global Justice Report (2020),¹ we have made a few major changes. The most important change this year is that we now report results per single year results instead of over multiple years. We have also strengthened our analysis of the ranking results by engaging with the literature to a greater extent, noting policy implications, and entering further into discussions of the specifics of some key countries.

2 Findings

2.1 Issue 1: Climate Change

2.1.1 Introduction

The increasing occurrence of extreme weather events and natural disasters makes global warming an overwhelming global concern.² Climate change is beginning to have a profound impact on the consciousness of humanity, affecting every country on every continent, disturbing the national economy and affecting people's lives. It is also significant affecting the natural ecological environment, resulting in extreme weather, natural disaster, and ecological imbalances. It ultimately poses a major threat to human economic and social development, accompanied by economic degradation, health loss, and disease transmission. By the end of 2019, the global average temperature was 1.1 °C higher than it had been before the beginning of industrialization, and sea levels were at their highest recorded values.

Climate change has begun to take center stage in the political world, prompting a major policy response in various international organizations, including the UN,³ whose UNFCCC, announced at the Earth Summit held in Rio de Janeiro in June 1992, engages with 196 parties, including all UN member states and European Union (EU) countries.⁴ Climate change mitigation is a core target of the Paris Agreement and the UN's Sustainable Development Goals,⁵ which agree to a certain level of greenhouse gas emissions in the atmosphere that could reduce anthropogenic interference with climatic systems. The main goal of the Paris Agreement is,

¹ Because the global justice index in this report was constructed in exactly the same way as the 2020 report, we do not describe it again. Interested readers may refer to the 2020 report (Guo et al. 2019).

² Helmer and Hilhorst (2006).

³ United Nations (2016).

⁴ UNFCCC (2014).

⁵ United Nations (2018).

within this century, to restrict the global temperature well below 2 °C above pre-industrial levels and to pursue efforts to limit temperature even further to within 1.5 °C.² As part of climate change mitigation, total forest accumulation should be 3% larger by 2030, an increase of 120 million hectares.⁶

Climate change is a typical global justice issue. Due to resource endowments, social environments, historical opportunities, and other factors, countries have benefited differently from industrialization, resulting in different economic development cycles. Consequently, there are gaps in energy consumption, energy structure, carbon emissions levels, and environmental governance capacity. Climate change governance is a unified action under a global goal, that countries devote themselves to at the cost of economic growth dividends. UNFCCC stipulates common but differentiated principles of responsibility, fairness, and respective capabilities, elaborating different responsibilities among countries. A trend of change in a country's greenhouse gas emissions is a significant indicator, and a more important factor is that of the impact of its contribution to and promotion of global climate change mitigation.

Global climate governance is widely promoted. In February 2021, the United States formally returned to the Paris Agreement. In November 2021, the 26th Conference of the Parties (COP26) of the UNFCCC, held in Glasgow, officially announced that the 197 member countries agreed to strengthen the Glasgow Climate Convention, in which China and the United States reached a joint declaration of climate action and formed a climate action to strengthen the working group, imposing a vital and profound impact on global climate change cooperation. The Intended Nationally Determined Contributions (INDCs) for carbon emissions reduction vary among countries. Our Global Justice Index is developed to identify the efforts and outcomes for each country in tackling climate change using data analysis and providing perspectives on global justice in terms of climate change.

2.1.2 Dimensions and Indicators

The causes of climate change and global warming are rooted in nature and humankind in general. The major cause of environmental deterioration is to be found in humanity's production and consumption in industrial society.⁷ To survive and develop, human beings inevitably consume energy, especially primary energy, and must produce sufficient electricity to support basic industrial operations and residential life. Energy production and consumption and deforestation to create agricultural land are responsible increased greenhouse gas emissions. The warmest year ever recorded was 2019, and it was at the end of the warmest decade (2010–2019).⁸ The concentrations of CO₂ and other greenhouse gases in the atmosphere reached their height in 2019.

This report elaborates on the performance of climate change mitigation and ranks the climate change justice index of 75 major countries for 2019. Four major

⁶ United Nations (2021).

⁷ United Nations (1992).

⁸ See <https://www.un.org/sustainabledevelopment/climate-change/>.

Table 1 Data on climate change

Category	Dimension	Indicator	Data source	Coverage
Performance	Energy consumption	Primary energy consumption in total	BP Statistical Review of World Energy	75 countries
		Primary energy consumption per capita		
		Oil consumption		
		Natural gas consumption		
		Coal consumption		
	Electricity production	Electricity production in total		
		Electricity production from nuclear sources		
		Electricity production from hydroelectric sources		
		Electricity production from renewable sources excluding hydroelectric		
	CO ₂	CO ₂ emissions	Global Carbon Project	
		CO ₂ emissions per GDP		
		CO ₂ emissions per capita		
	Forest	Forest area in total	UNEP	
		Forest area change rate		
		Forest area per capita		
		Forest coverage		
		Planted forest area		

dimensions are employed in the assessment framework of countries' contributions and performance in tackling climate change: energy consumption, electricity production, CO₂, and forest coverage (Table 1). The quantitative analysis used in this study confirms the connection between action and achievement. To this end, the scores were analyzed through raw data conversion, indicator weighting, score evaluation, and index calculation.

Energy consumption has an inevitable connection to the economic level and to climate change. The main source of global carbon dioxide emissions is to be found in primary fossil fuel combustion, mainly coal, oil, and gas, with coal and oil taking the largest share. Five alternative proxies (total, primary energy consumption per capita, oil consumption, natural gas consumption and coal consumption) are also used to determine the dimensions of energy consumption. For this report, the energy consumption data are drawn from the BP Statistical Review of World Energy 2019.

Electricity production accounts for around 20% of final energy consumption worldwide today.⁹ The electricity sector is among the most sensitive sectors to changing climate patterns. Electricity production from the direct use of renewables (including biofuels, biogas, and solar thermal heating) and hydrogen are expected to have a rising share of final energy use, and electricity will overtake oil around 2040 to become the largest component of final consumption,¹⁰ marking a substantial important shift in energy transition to renewable energy. Therefore, it is significant to include the dimensions of electricity production to gauge performance in fighting global climate change. In this dimension, our indicators include electricity production overall, electricity production from nuclear sources, electricity production from hydroelectric sources, and electricity production from renewable sources excluding hydroelectric. Electricity production data for this report are drawn from BP Statistical Review of World Energy 2019.

Carbon dioxide (CO₂) emissions account for approximately 75% of greenhouse gas emissions,¹¹ which are a key driving factor in the greenhouse effect and global warming and are the largest contributor to long-term climate change.¹² Mitigation of CO₂ has become an urgent measure in tackling climate change, especially given the continuing trend of increasing carbon emissions. CO₂ is widely used to quantify and compare the contribution to global heating caused by human activities.¹³ In our analysis, CO₂ dimension indicators include CO₂ emissions, CO₂ emissions per unit GDP, and CO₂ emissions per capita. Many research institutions have measured global carbon dioxide emissions. To maintain data consistency, we collected CO₂ emission data from the Global Carbon Project, an authoritative research project that was established in 2001 and works with the international community to lead and promote a coordinated research effort and provide complete datasets on all dimensions.

⁹ IEA (2020).

¹⁰ IEA (2020).

¹¹ Abbasi and Riaz (2016).

¹² Peters et al. (2013).

¹³ López et al. (2019).

Forest ecosystems are among the largest terrestrial carbon sinks, absorbing roughly 2 billion tons of CO₂ each year, thus playing an irreplaceable role in the carbon cycle. The forest carbon sink is a prominent part of the process of promoting carbon emission reduction and carbon neutrality. Afforestation forms part of many countries' climate change endeavors, so it is an indicator in measuring the offset-side carbon mitigation measures. Using collected data from the open-source in the UN Environment Program (UNEP), we select five indicators for the forest dimension: forested area in total, forested area change rate, forested area per capita, forest coverage, and planted forest area. Because updated data for forest area change rate and planted forest area are only available until 2018, we developed an estimation for 2019 based on forested area and forested area coverage data to supply the missing data.

The Global Justice Index for last year focused on 75 countries' rankings regarding climate change in relation to the promotion of global justice from 2010–2018, applying a systematic and comprehensive indicator system. In this report, we elaborate on 75 countries' performance in climate change mitigation in 2019, providing vital policy insights for the sake of better understanding global justice in relation to climate change.

2.1.3 Results

In this section, we present the ranking results for the selected 75 countries' contributions to global justice from a climate change perspective. Table 2 shows the 2019 results for 75 countries.

The list of the top 15 countries is relatively stable. Brazil, Canada, Sweden, Russia, China, France, Finland, Peru, Colombia, Japan, Latvia, Spain, Germany, Bhutan, the United States, and Indonesia consistently exhibited outstanding performance in combating climate change. Among these countries, Brazil, Russia, China, Peru, Colombia, Latvia, Bhutan, and Indonesia are counted as developing countries, while Canada, Sweden, France, Finland, Japan, Spain, Germany, and the United States are developed countries. The United States and the EU take the lead in having achieved a carbon peak. Developed countries are increasingly at the forefront of efforts to address climate change mitigation, with many joining frameworks for reducing GHG emissions. Turkmenistan, Kuwait, Trinidad and Tobago, Oman, and Qatar are ranked at the bottom, similar to their rankings in previous years. Estonia and Venezuela experienced some volatility.

Brazil continues its impressive performance in tackling climate change, stably maintaining its position in first place. Brazil ranked top five in terms of electricity consumption and forest top 10 in the dimension of CO₂ emissions. Although it suffered from forest fire and deforestation, Brazil's abundant forest endowment puts it far ahead in the forest dimension. Brazil has reported quantified goals for zero global deforestation by 2030. Brazil is committed to continuing its support for renewable energy projects. Its electricity matrix is among the cleanest in the world, 84% of which is renewable resources (mainly hydropower), while thermal energy sources (coal, gas, oil, and nuclear) constitute 16% of the Brazilian electricity matrix.

Table 2 Country rankings in the climate change aspect of promoting global justice in 2019

Country	Ranking	Country	Ranking
Brazil	1	Bulgaria	39
Canada	2	Belarus	40
Sweden	3	Bangladesh	41
Russian Federation	4	Venezuela	42
China	5	Azerbaijan	43
France	6	Hungary	44
Finland	7	Denmark	45
Peru	8	Greece	46
Colombia	9	Poland	47
Japan	10	Australia	48
Latvia	11	Morocco	49
Spain	12	Czech Republic	50
Germany	13	Ireland	51
US	14	Argentina	52
Indonesia	15	Cyprus	53
Ecuador	16	Belgium	54
Slovenia	17	Luxembourg	55
Norway	18	Egypt	56
Vietnam	19	Algeria	57
Sri Lanka	20	Netherlands	58
Turkey	21	Pakistan	59
India	22	Uzbekistan	60
Switzerland	23	Israel	61
Italy	24	Ukraine	62
Chile	25	Iraq	63
Philippines	26	Iceland	64
Austria	27	Singapore	65
Lithuania	28	South Africa	66
New Zealand	29	Iran	67
Portugal	30	Kazakhstan	68
Romania	31	United Arab Emirates	69
Mexico	32	Saudi Arabia	70
Malaysia	33	Turkmenistan	71
Slovakia	34	Kuwait	72
Estonia	35	Trinidad and Tobago	73
South Korea	36	Oman	74
United Kingdom	37	Qatar	75
Thailand	38		

Canada is ranked second in tackling climate change, with its main strengths coming in the dimensions of power production matrix and forest, ranking fourth and second in these, respectively. Its electricity matrix is among the least carbon intensive in the world, including 66% renewable resources (almost all hydro and marine power) and 34% non-renewables. With over 347 million ha forest, Canada has 9% of the world's forested territory, covering 38% of its land area. The forest area of Canada is stable, experiencing less than half of 1% deforestation since 1990.

Sweden received the highest ranking in Europe. Sweden performed well in forest coverage, electricity production, and CO₂ emissions. It has a rich supply of moving water and biomass, which contribute to its high share of renewable energy, and its hydropower is mostly used for electricity production and bioenergy for heating. The reason for this low emission rate is that about 75% of electricity production in Sweden comes from hydroelectric (45%) and nuclear (30%) power. Sweden currently has three nuclear plants and six nuclear reactors in commercial operation.

Russia remains in fourth place in fighting against climate change. It receives high marks in dimensions forest and power generation. Russia has 19% of the world's forest reserves by surface area, and its forests sequester an estimated 300 and 600 million tons of carbon dioxide annually. However, recent record-size wildfires threaten critical biodiversity and global carbon sequestration potential. In 2018, the Russian Federation's Preservation of Forests project established strategic policies for forestry development and provided measures to achieve major targets in relation to restoration and forest protection. The budget of this federal project was approximately US\$2.2 billion. In 2019, 6 million volunteers planted over 100 million trees in reforestation campaigns. Over 60% of Russia's electric power generation came from fossil fuel-derived sources, with the remainder coming mostly from nuclear (18.5%) and hydroelectric sources (18.2%). In 2019, the Russian government approved a \$29 billion modernization plan for domestic power plants. This plan, expected to be implemented between 2022 and 2031, will allow investors to bid on upgrading the infrastructure of domestic power plants. If these goals are achieved, Russia will see large growth in the performance of climate change mitigation.

China generally ranks within the top five. It excels in the dimensions of power generation and forest, ranking first and first in these, respectively. In 2019, China's newly installed capacities of renewable energy (including wind and solar power) and hydropower generation reached very high levels, far beyond those of other countries. Since 2010, China has surpassed the United States to become the world's largest energy consumer, and it is also the world's largest CO₂ emitter, accounting for 23% and 29% of global energy consumption and CO₂ emissions in 2019, respectively.¹⁴ A reduction in China's CO₂ emissions would constitute an incomparable contribution to climate change mitigation. In September 2020, China updated its climate goal to strive to achieve peak CO₂ emissions by 2030 and work toward carbon neutrality by 2060. Non-fossil energy is expected to account for about 25% of primary energy consumption, the forest stock will

¹⁴ International Energy Agency (2020).

increase by 6 billion cubic meters over 2005, and the total installed capacity of wind power and solar power will reach more than 1.2 billion kilowatts.

France had the fifth rank in climate change performance for 2019, with excellent performance in the dimensions of electricity generation and CO₂ emissions. France has a very low-carbon electricity mix, owing to its many nuclear power plants, the second-largest number in the world after the United States. As an early leader in seeking energy transition, France legislated a net zero emissions target for 2050 in its 2019 Energy and Climate Act. A national low-carbon strategy with 5-year carbon budgets and a multiannual plan for energy investments complement this long-term target. Finland was ranked next after France, having a higher score for forest items. With a land coverage of 73%, the highest percentage of any European country, Finland has about 22.8 million hectares of forest coverage, about 10% of the total forest area of Europe. Despite of the consistently increasing investments in the forest industry and an increased sustained felling potential, Finland is experiencing natural forest growth that is higher than the rate of deforestation.

Peru and Columbia took the ninth and tenth spots for 2019, respectively. They are Latin American countries and both perform well in energy consumption and CO₂ emissions reduction. Being among the most vulnerable countries to the adverse effects of climate change due to the different characteristics of their territory, Peru and Colombia submitted their NDC targets under the Paris Agreement, pledging an unconditional reduction of greenhouse gas (GHG) emissions by 20% below business-as-usual by 2030, and a conditional target on international support a 30% reduction. In 2019, per capita energy consumption and CO₂ emissions in Peru were 0.78 and 1.67 tons of CO₂ equivalent (tCO₂e), respectively, far below the global average. Likewise, Colombia is committed to reducing its greenhouse gas emissions and transitioning to a low-carbon economy. Colombia has also committed to reducing black carbon by 40% compared to 2014 levels, becoming the third country to set a specific emissions reduction commitment for this pollutant in their NDC. Colombia's NDC is considered one of the most ambitious in Latin America as a whole and is much more closely aligned with the country's objective of achieving carbon neutrality by 2050.

Japan was once a leader in terms of fighting global climate change but fell out of the top 10 after the disaster at the Fukushima nuclear power plant in 2011. The use of nuclear power plants was reduced, and an absolute advantage in the electricity generation dimension was lost. In July 2019, Japan released a new draft energy policy, intended to increase the proportion of renewable energy to 36–38% in the power structure by 2030 and minimizing the reliance on nuclear energy. In the forest dimension, Japan's performance was in the top 10. Japan addressed the target of maintaining 25 million ha of forest by undertaking administrative and legal measures, including establishing the Forestry Policy Council to hold together various stakeholders to support and stimulate forest productivity and introduce the Forest Environment Tax and the Forest Environment Transfer Tax to improve forest law enforcement and governance. It should be noted that Japan's scores in the dimensions of energy consumption and CO₂ emission are relatively poor. To reduce its carbon emissions and meet the commitments of international climate change

agreements, Japan issued a declaration of its intention to achieve carbon neutrality by 2050.

Latvia was ranked twelfth in 2019, with a scores that just missed the top 10 for energy consumption, CO₂ emissions, and forest turning in a low score in electricity consumption. Latvia's renewable energy accounts for 41% of its energy sources in 2019 and aims to reach to 50% by 2030. In 2019, Latvia's emissions per capita were 2.1 tCO₂e below the EU-27 average, and it reduced its carbon intensity per unit of GDP by 21% relative to 2005. In Latvia's national energy and climate plan, submitted to the EU in September 2019, 56% of Latvians expected their national government to tackle climate change. Latvia currently accounts for 0.3% of total EU greenhouse gas emissions, but its emissions increased between 2005 and 2019, in contrast to the EU trend. Latvia increased its share of renewable energy in total energy consumption by 8.7 percentage points to 41% during the 2005–2019 period, achieving a 50% share by 2030. To attain cleaner power generation, Latvia intends to obtain more than 60% of its electricity consumption from renewable sources by 2030.

Spain performed relatively well in 2019, ranking twelfth among the 75 countries selected. Its electricity generation score is higher than its score for other dimensions. As the global leader in concentrated solar power and the fifth in the world in wind power capacity, Spain exhibits a great deal of ambition for the energy transition, moving from a 2020 target of a 20% share of renewable energy in the energy mix to a 2030 target of 42%. Spain plans to focus primarily on the deployment of solar and wind power. Its coal-fired power plants will all be shut down by 2025. Spain plans to allow only electric vehicles to be sold by 2040. Spain accounts for 9% of the EU's total greenhouse gas (GHG) emissions. Between 2005 and 2019, Spain reduced emissions by 27%, above the EU average. The carbon intensity of the Spanish economy is slightly below the EU average. The Spanish parliament approved a law providing for a climate change response and energy transition in 2021, producing a 23% reduction of emissions in 2030 compared to 1990 levels, with the ultimate goal of carbon neutrality in 2050.

Germany scored slightly higher than Spain in electricity generation. Its power generation from renewables rose from 40.6% in 2018 to 46% (mainly from wind) in 2019 and surpassed the share from fossil fuels (40%) for the first time. A significant decrease in generation from coal and nuclear was seen in 2019, although generation from natural gas increased slightly. Germany's goal is to generate 65% of its electricity from renewables by 2030. As the seventh-largest energy consumer in the world in 2019, Germany has poor scores in energy consumption and CO₂ emissions. Striving transition to a low-carbon, more efficient energy mix in the long-term, Germany has set a goal of greenhouse gas neutrality by 2045 in its National Climate Action Law, which entered into force in December 2019. It also established an independent expert committee on climate change and undertook measures to supervise and punish via the collection and sharing of information of industry emissions. These legal and administrative steps, indicate tis determination to lead the transition toward renewables and the low- to-zero-carbon society.

The performance of the United States in electricity production and forest were outstanding in 2019, but its performance in the dimensions of energy consumption and CO₂ emission were poor, which dragged down its coverall ranking, as did

its action in pulling out of the Paris Agreement in 2017 under the Trump administration. In 2019, the United States was the second-largest energy consumer in the world, the fifth-largest CO₂ emitter, and the largest greenhouse gas emitter per person. US electricity generation in 2019 had the following makeup: natural gas (38%), coal (23%), nuclear (20%), other renewables (11%), and hydro (7%). Coal-fired power stations are gradually being shut down all over the country, and the National Forest Management Act has been passed, which supports actions to improve forest law enforcement and governance. Additionally, the Urban Forest Strike Team Program was founded to undertake measures to promote the certification of public and private forests. There is a good prospect that the US will make progress in climate change mitigation after its return to the Paris Agreement and as it continues on its effective green and clean policies.

Indonesia ranked fifteenth in 2019, with above-average scores for CO₂ emission, electricity generation, and forest over and a low score in energy consumption. As of 2019, Indonesia produced 3.4% of world greenhouse gas emissions from deforestation, peatland fires, and use of fossil fuels (mainly coal). To alleviate the negative climate impact on agriculture and sea levels and meet its 23% rate of renewable energy use by 2025 target as set in the Paris Agreement, Indonesia announced that the People's Consultative Assembly is preparing its first renewable energy bill, and in February 2020, a new Low-Carbon Development Initiative was announced that will be part of the national 2020–2024 national.

Among the bottom-ranked countries are developing countries from Asia and Latin America. Among these, Saudi Arabia and Qatar are Middle Eastern countries that have very limited forest area and traditionally fossil fuel driven energy structures. Consequently, their scores in the dimensions of energy consumption, CO₂ emissions, electricity generation, and forest over are lower than most countries. Turkmenistan, Kuwait, Trinidad and Tobago, and Oman are significantly vulnerable to climate change, and their capability to speed up afforestation and energy transition is insufficient. These countries have no obvious advantages on any dimensions. The long-term fight against climate change in developing countries requires more global concern and support from developed countries.

Estonia's ranking rose from fifty-first in 2018 to thirty-fifth in 2019, with its scores improving across all dimensions. In 2019, Estonia's new government made climate topics its priority. Estonia has joined a group of 24 European countries that seek to cut emissions to net zero by 2050. Venezuela's ranking declined from 2016, falling to forty-second in 2019, mainly due to a drop in scores in carbon emissions. Its carbon intensity increased by 38.3% between 2018 and 2019. Venezuela was one of just a few countries that did not enter into a detailed INDC at COP21 as part of the 2015 Paris Climate Agreement. Between 2018 and 2019, Venezuela experienced a decrease of more than 19% in power generation, primarily as the result of power blackouts throughout the year and subsequent electricity rationing. This year, Venezuela's average temperature was significantly greater than its historical pattern, raising red flags about the progress of climate change, especially in areas that are susceptible to forest fires. It can be expected that if no adequate measures are put forward, Venezuela's backsliding will become normalized.

2.1.4 Regional Analysis

Next, we classify countries by continent, namely, Asia, Europe, North America, Latin America, Africa, and Oceania. The continents' rankings are obtained by calculating the average ranking for the countries on that continent. The results for 2018 show little change. Countries in North America, Latin America, Europe, and Oceania made greater contributions than nations in Africa and Asia (see Fig. 1). North America ranked first in overall performance because it contains the United States and Canada, both of which ranked toward the top of the list. From 2010–2019, increases in the carbon stock of Asia, Europe, and North America compensated for reductions in Africa and Latin America. Almost all continents experienced increases in energy demand, driven by the commercial and industrial sectors.

Within the top 10 countries are 1 North American country, 3 Latin American countries, 4 European countries (including 3 EU members), and 2 Asian countries. Among the 5 bottom-ranked countries, there are 4 Asian countries and 1 Latin American country. Generally, the capability to tackle climate change is closely linked to economic level.

Asia Asia has only a slightly higher ranking than Africa, but it is lower than that of the rest of the world. The rankings of Asian countries in climate change vary widely. The top three Asian countries in 2019 were China, Japan, and Indonesia. As a developed country, Japan completed its industrialization decades ago and is currently committed to increasing the proportion of new energy, especially renewable energy, in its mix and to fulfilling the commitments of the international climate change agreement. China, an emerging economy, joined the World Trade Organization in 2001. With the shift in international trade focus and industrial orientation, China's CO₂ emissions increased rapidly. China became the largest CO₂ emitter in 2006, accounting for 27.92% of global CO₂ emissions in 2019. To achieve the zero-carbon goal, China is upgrading the energy consumption mix by implementing the carbon neutrality framework roadmap. Although it has a relatively high place in the overall rankings, Indonesia has obvious shortcomings with reference to climate change governance, mainly relying on fossil energy (coal in particular) and forest cutting. The frequency of forest fires was higher than the average level over the most recent decade, and forest degradation resulted in more CO₂ emissions. However, Indonesia is gradually undertaking measures to reduce its dependence on coal and promote afforestation.

The lowest-ranking countries in the climate rankings on the Asian continent are Saudi Arabia, Turkmenistan, Kuwait, Oman, and Qatar. These countries have the following in common: they are all oil exporters and dependent on oil production, possessing a traditional energy structure mainly composed by fossil fuels. Consequently, their countries' CO₂ emissions per capita and carbon intensities are higher than other countries. Additionally, the climate in these countries is generally dry; the largest share of their terrain is desert, and they generally lack forest resources.

India, the second-largest emerging economy, saw its ranking decline to twenty-second in 2019. It performed worse in CO₂ emissions, as it is the third-largest CO₂ emitter after China and the United States, and its per capita emissions soared to a high of 1.87 metric tons in 2019. India's energy mix has a 63% share of fossil

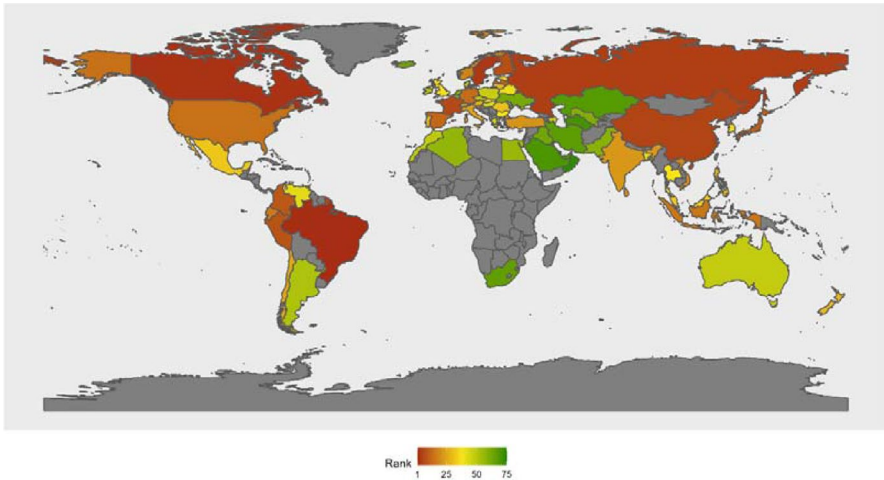


Fig. 1 2019 index ranking of climate change issue on a world map

fuels, and only 9.2% of its electricity was generated from renewables in 2019. At the twenty-sixth Conference of Parties (COP26), Indian Prime Minister Narendra Modi announced a fivefold strategy, including meeting 50% of its energy requirements from renewable energy, reducing the total projected CO₂ emissions by 1 billion tons by 2030, achieving a target of net zero by 2070.

Europe Europe had good performance on climate in 2019. A total of 32 European countries are included in our analysis, 26 of which are EU members, and these form a relatively solid block in the global response to climate change. In 2019, the EU Commission unveiled the European Green Agreement for tackling climate change and promoting sustainable development; it has announced its hope to raise the 2030 CO₂ reduction target (to – 55%) and achieve carbon neutrality across the European continent by 2050. The forested area of Europe increased by 17.5 million hectares over the last 25 years as a result of afforestation and natural forest expansion. CO₂ emissions decreased in 16 EU countries due to renewable energy development.¹⁵

The top ranking European countries were Sweden, Russia, and France. Sweden is a global leader in decarbonization and has set a legal target to cut greenhouse gas emissions by 59% of 2005 levels by 2030 compared with 2005 and to reach a net zero carbon economy by 2045. According to the BP energy outlook, energy consumption in Russia is growing the most slowly in the BRIC (Brazil, Russia, India, and China) countries, which are all expanding much more rapidly. The potential for carbon mitigation from energy consumption is considerable. Russia emitted a total of 2.12 billion tons of CO₂ in 2019, compared to 3.8 billion tons by the EU as a whole. After the adoption of the Paris Agreement by a decree of President Vladimir Putin, Russia officially set a goal to reduce GHG emissions to 70–75% of 1990

¹⁵ Bekun et al. (2019).

emissions by 2030. This strategy was legally formulated and officially presented to the UN by Russia in 2019. France has a positive attitude toward climate change governance and has set passed a law to achieve carbon neutrality by 2050. France produced 437 million tons of CO₂ equivalent in 2019, which represented a drop of only 1% from the previous year.

North America North America is far ahead of the other continents in the 2019 climate rankings. Canada and the United States scored highly in the performance and contribution to climate change mitigation, ranking second and fourteenth in 2019, respectively. Both Canada and the United States performed well in the dimensions of forest and electricity but less well in terms of CO₂ emissions and energy consumption.

As the world's seventh-largest GHG emitter, Canada's energy consumption and CO₂ emissions increased slightly in 2019. There were more than 80% of GHG emissions came from the fossil fuel production and consumption in Canada in earlier years.¹⁶ In 2019, renewable energy technologies provided about 17.3% of Canada's total primary energy supply. Renewables provided 67% of the electricity, with 15% from nuclear and 18% from hydrocarbons. Despite the increasing number of forest fires, Canada retains an outstanding advantage in its forest cover. In 2019, Canada's forest sector contributed \$23.7 billion to Canada's nominal GDP. In 2025, Canada will launch Wild Fire Sat, the world's first satellite built specifically to monitor wildfires. To promote climate change mitigation, the Canadian government has declared a goal of net zero emissions by 2050.

Likewise, the United States, the country with the second-largest GHG emissions in the world, suffered from frequent natural disasters and extreme events in 2019. As the political landscape changed (largely through the presidential election) and the willingness to deal with climate became stronger, it became important to seek effective approaches to utilize the energy consumption mix and control GHG emissions.

Latin America Latin America's average index score in the climate issue puts it into second place, following North America. Brazil, Peru, and Columbia made the largest contributions to global justice in climate change, while Venezuela, Argentina, and Trinidad and Tobago were at the bottom.

Although Brazil maintained its outstanding performance in the overall ranking and performs well in electricity production and forest cover, as noted above, it ranked the forty-eighth in terms of energy consumption performance as Latin America's top oil producer. In 2019, its total annual oil and gas production were increased by 7.78% and 9.46%, respectively, from 2018. Notably, Brazil is the largest electricity market in Latin America and the seventh-largest in electricity generation worldwide. Therefore, to realize its goal of reducing emissions by 37% and 43% from 2005 levels by 2025 and 2030, respectively, the Brazilian Energy Planning Agency's Energy Expansion Plan for 2019–2029 indicates that renewable sources will remain a high priority, targeting 48% of Brazil's energy matrix by 2029. One characteristic of these countries' approach to climate change is that they scored highly in the

¹⁶ See <http://www.climatechange.g.c.ca>.

dimensions of energy consumption and CO₂ emissions and declared their NDC targets under the Paris Agreement with strong determination.

As described above, Venezuela performed worse in 2019 than in previous years on climate, with increasing emissions intensity. Significant effort and adequate support are necessary for it to realize its ambitious goal of 20% GHG reduction. Argentina featured moderate scores in the dimensions of energy consumption, electricity generation, and CO₂ emissions, while they were low in the forest dimension. The decrease in tree cover, abusive deforestation, and wildfires did harm to the country's climate change mitigation scoring. It has been reported that Argentina has set up financing mechanisms, such as trust funds, to support sustainable forest management. Trinidad and Tobago is a small developing island state that is highly vulnerable to the impacts of climate change and has an economy that is highly dependent on oil and gas revenue and subsidies. Due to its lack of capability to deal with climate change, this country had every lowest score in every dimension except for forest cover.

Africa Africa had the worst performance for climate among the continents. Four countries whose economies were among the largest in Africa, namely, Morocco, Egypt, Algeria, and South Africa, were included in our analysis. Morocco ranked forty-ninth overall in 2019, with a high score in the energy consumption dimension, a good score in CO₂ emissions, and a poor one in electricity generation and forest. Morocco has increased its share of renewable energy and new renewable energy capacity and has set up the world's largest solar power plant, not to mention the numerous wind farms that are connected to the electricity grid. Morocco launched the Initiative for the Adaptation of African Agriculture to Climate Change (AAA Initiative) for the twenty-second COP in 2016. Among the countries most affected by and vulnerable to climate change, Egypt has striven to implement resilience and adaptation strategies that address climate change impacts, such as supporting major environmental projects in developing solar, wind, and hydroelectric power, as well as launching a green-roof initiative to increase flora area nationwide. These countries have little forest. Morocco and Algeria have taken legal and institutional measures to identify protected areas and pursue the necessary measures, such as mapping and management plans, to protect them. South Africa's scores were the lowest of these four selected African countries, especially in the CO₂ emissions dimension. The shift from carbon intensive investments such as fossil power plants to green development across all sectors should be put on the agenda.

Oceania Oceania, including the two large countries Australia and New Zealand, performed better than Asia or Africa. As a member country of the UNFCCC, which seeks to reduce GHG emissions domestically and internationally, Australia ranked forty-eighth in its climate response. Over the past three decades, Australia's dedication to climate has seemed incoherent and directionless. Its improvements in GHG emissions over the past two decades are largely due to gains in the transport sector¹⁷. In 2019, Australia experienced extremely long and severe wildfires. It developed a quantified forestry target, seeking to plant 20 million trees by 2020 and a billion by 2030. New Zealand ranked twenty-ninth in terms of climate in 2019. This year, its government introduced the Climate Change Response Amendment Bill and

¹⁷ Jellinek (2012).

thereby became one of the few countries to have a net zero emissions by 2050 goal enshrined in law. New Zealand is increasingly relying on the mitigation potential of its land use and forestry sector to meet its target rather than focusing efforts on reducing emissions from high-emitting sectors, such as agriculture.

2.1.5 Conclusion

Climate change poses a major challenge to global justice. We measured the relationship between the capability to tackle climate change with greenhouse gas emission, energy consumption, energy transition, and afforestation. As shown above analysis, national performances have been widely disparate in multiple aspects of climate change governance among different regions and between developed and developing countries.

Regarding the distribution of CO₂ emissions worldwide, the top 10 countries by CO₂ emissions worldwide in 2019 were China, the United States, India, Russia, Japan, Japan, Germany, Iran, South Korea, Indonesia, and Saudi Arabia, together accounting for more than two-thirds of all emissions. Thus, controlling the CO₂ emissions of a few countries can effectively cut down the total global CO₂ emissions.

The significant growth in emissions, viewed in international negotiations with reference to economic facts, has highlighted the role of emerging countries. These countries are confronted by expanding expectations from international societies regarding their CO₂ emission reduction and investments. However, these countries' economic and social development is facing other challenges and difficulties as well. The carbon emissions intensity of Europe, Japan, and other developed countries and regions are below the world average, while for emerging economies, such as China, India, and Russia, they are higher than the world average. Regarding emissions fairness, a large gap can be seen between emerging economies and developed economies in terms of emissions intensity, as well as historical cumulative carbon emissions per capita. According to the principle of common but differentiated responsibilities, the means of fairly sharing responsibility for climate change is the fundamental factor affecting international climate governance. Taking the governance gap between less-developed and developed countries into consideration, collaborative cooperation and multilateral governance could be an effective global response to climate change.

2.2 Issue 2: Peacekeeping

2.2.1 Introduction

Wars and regional conflicts bring about insecurity and threat, and they also destroy joint development and impede global justice. When countries cannot maintain a peace and stability, the people living in them have a higher risk of physical, mental, and social problems, not to mention achieving justice. Peace is fundamental to development and justice. As the most authoritative and representative intergovernmental international organization, the UN has the responsibility to maintain worldwide peace and promote joint development of all countries. Beginning with its establishment in 1945, the UN

has taken maintaining international peace and security to be one of its main purposes. The UN has no military, and participation in each peacekeeping operation is voluntary for each member states. UN peacekeeping operations are an important means of managing regional conflict and confronting the growing risks and challenges. They have received extensive attention and worldwide support. Increasing numbers of countries send military personnel to participate in UN peacekeeping operations. Some countries provide large amounts of financial support to UN peacekeeping operations.¹⁸

In 2019, international relations were quite turbulent. Several issues that influenced international security and necessitated peacekeeping enforcement and collaborative interventions. On one hand, the international order is impacted by unilateralism, and the game of superpowers has heated up significantly. Relations between the United States and the EU are superficially peaceful, but there are some disputes nevertheless. Relations between the United States and Russia continue to be tense. Uncertainty is growing in many parts. On the other hand, political struggle among several Latin American countries has intensified, and governance difficulties emerged. The tensions between Iran and the West and the Syrian conflict are intertwined, intensifying the unrest in the Middle East and resulting in peace deficit. Intra-state conflicts caused by regional and ethnic conflicts and identity-related disputes regarding religions and other factors have become major factors that pose a threat to global peace and security as well. The UN Security Council continues to focus on several serious unresolved conflicts, particularly in the Middle East, Africa, and Latin America. During the reporting period, the situations in Iraq, Libya, the Syrian Arab Republic, Yemen, and the Palestinian question drew the attention of the council. The impact of those conflicts remained severe. As of 31 December 2019, the UN had conducted 71 peacekeeping operations. Our research indicates the contributions of countries around the world to UN peacekeeping operations to help outline a larger picture of UN peacekeeping operations and to provide a reference for the future reform and development of UN peacekeeping.

An in-depth analysis of UN peacekeeping is conducted to identify changes in peacekeeping performance among countries in 2019 and the driving factors from the perspective of social and economic status and international relations. The results are important for identifying possible peacekeeping trends and to provide new insights and suggestions for peacekeeping development.

2.2.2 Dimensions and Indicators

Peacekeeping is not only a simple public good, as the primary mission of most peacekeeping operations is to diminish armed clashes, not necessarily to improve global stability. Moreover, the outcome of peacekeeping significantly benefits nations adjacent to the conflict area operations or with a certain range of economic activities, not the entire globe.¹⁹ For countries in the Middle East and Africa, where peacekeeping operations take place more often, the marginal benefit brought by peacekeeping operations is confined to their economic health.²⁰ The financial and

¹⁸ United Nations (2008).

¹⁹ Gaibullov et al. (2009).

²⁰ Sandler (2017).

personnel inputs vary across permanent and nonpermanent members of the UN Security Council, as the involved countries formulate different peacekeeping strategies based on their own national conditions and strength. The greater a country's willingness, the higher its contribution to peacekeeping. In 2019, the five permanent members of the UN Security Council contributed more than 57% of the total peacekeeping funds (27.8% by the United States, 15.2% by China, and 14.45% by Britain, France, and Russia combined), which indicates that they take on greater responsibility and contribute far more than other countries. UN peacekeeping contributions are the incomparable and authoritative factor for measuring countries' performance in the peacekeeping aspect of promoting global justice. Financial donations and personnel contributions are major indicators for peacekeeping performance, which may demonstrate a country's effort at global peacekeeping.^{21,22}

Our previous reports outline trends in peacekeeping contributions and produce quantified scores on this issue from 2010 to 2018. Following previous reports, this report year employs open-source data and conducts empirical analysis regarding the dimensions of financial and personnel contributions. Personnel contributions are measured by troop and police indicators, and financial contributions are measured by the donation indicator. Our research is focused on the year of 2019. These data are all available on the UN peacekeeping website and from the International Peace Institute (Table 3).

2.2.3 Results

In this section, we present the ranking of countries' contributions to global justice from a peacekeeping perspective (Table 4). Table 4 displays the results in 2019 of 193 countries.

Our calculations indicate that China, the United States, Ethiopia, Bangladesh, Rwanda, India, Nepal, Pakistan, Egypt, Indonesia, Ghana, Senegal, France, Tanzania, and Germany contributed to peacekeeping to a greater degree. Of these countries, China, the United States, and France are permanent members of the Security Council. Of these 15 countries, 12 are developing, and 3 are developed countries. Therefore, economic level and military power may not be the driving factors in participation in UN peacekeeping. Of the top 15 countries, 1 is in North America, 6 are in Asia, 6 more are in Africa, and none are in Latin America or Oceania. On the continental scale, Asian and African countries have a greater contribution to peacekeeping than those of other continents.

In 2010–2018, the United States ranked first in its contribution to peacekeeping and played a significant and leading role among developed countries in terms of its contribution to UN peacekeeping. Taking into account the large financial and personnel input and unsatisfying outcomes, the United States made a tactical troop

²¹ Gaibullov et al. (2015).

²² Bobrow and Boyer (1997).

Table 3 Data on peacekeeping

Category	Dimension	Indicator	Data source	Coverage
Contribution	Personnel contribution	Troops and police	UN peacekeeping website	193 countries
	Financial contribution	Donation	International Peace Institute	

withdrawal from Syria in 2019. After this, the United States cut down the number of police and military it had posted to Afghanistan and Iraq, and the overall reduction in its military presence has become more and more evident. In 2019, China occupied first place in the contribution to peacekeeping.

China ranks the second in terms of its financial support for UN peacekeeping, and it provides the largest share among all permanent member states of the UN Security Council. As China's rapid economic growth continues, the peacekeeping funds it allocated have also increased significantly in recent years. China regained its legal seat in the UN in 1971 and began to participate in UN peacekeeping operations. Beginning with its first in UN peacekeeping operation in 1990, the Chinese army has sent over 40,000 peacekeeping officers and soldiers and has participated in 25 UN peacekeeping operations through August 2020.²³ In the Fourth Plenary Session of the Nineteenth CPC Central Committee held in October 2019, the Chinese government proposed that the nation should implement an independent foreign policy of peacekeeping and commit to building a Community of Shared Future for Mankind. China has performed well in peacekeeping in recent decades and is ranked first for its contribution to peacekeeping in 2019, which has long been held by the United States.

The second most populous country in Africa and the one with the fastest growth, Ethiopia also had the largest contribution of personnel to UN peacekeeping operations in 2019. By the end of 2019, more than 7000 Ethiopian peacekeepers were active in UN peacekeeping operations. It holds the strategic advantage of being contiguous to the Red Sea and is regarded by the United States as an important peacekeeping partner in Africa; therefore, it is supported on peacekeeping issues in Somalia. By the end of 2019, 85,913 Ethiopian peacekeepers were active in UN peacekeeping operations. The Prime Minister Abi Ahmed of Ethiopia has personally been involved in UN peacekeeping operations and won the Nobel Peace Prize in October 2019 for his work in promoting the reconciliation between Ethiopia and Eritrea.

In 2019, Bangladesh exhibited high-profile participation in UN peacekeeping. The number of its peacekeeping forces increased from 70,596 in 2018 to 77,776 in 2019, and it paid its UN dues on time and in full. In November 2019, the Bangladeshi police received the award for Best Police Force for its contribution to UN peacekeeping operations.

²³ The State Council Information Office of the People's Republic of China (2020). China's Armed Forces: 30 Years of UN Peacekeeping Operations.

Table 4 Country rankings in the peacekeeping aspect of promoting global justice in 2019

Country	Ranking	Country	Ranking
China	1	Bhutan	98
United States of America	2	Bosnia and Herzegovina	99
Ethiopia	3	Slovenia	100
Bangladesh	4	Brunei Darussalam	101
Rwanda	5	Armenia	102
India	6	Paraguay	103
Nepal	7	Bolivia (Plurinational State of)	104
Pakistan	8	Iran (Islamic Republic of)	105
Egypt	9	Madagascar	106
Indonesia	10	Colombia	107
Ghana	11	Oman	108
Senegal	12	Luxembourg	109
France	13	Estonia	110
United Republic of Tanzania	14	Samoa	111
Germany	15	Honduras	112
Japan	16	Ecuador	113
United Kingdom of Great Britain and Northern Ireland	17	Malta	114
Morocco	18	Bahrain	115
Italy	19	Kyrgyzstan	116
Burkina Faso	20	Cyprus	117
Chad	21	Republic of Moldova	118
Togo	22	Latvia	119
Spain	23	Dominican Republic	120
Republic of Korea	24	Algeria	121
South Africa	25	Cuba	122
Cameroon	26	Belarus	123
Uruguay	27	Iceland	124
Zambia	28	Bulgaria	125
Niger	29	Iraq	126
Guinea	30	Trinidad and Tobago	127
Mauritania	31	Tajikistan	128
Malawi	32	Costa Rica	129
Mongolia	33	Azerbaijan	130
Russian Federation	34	Bahamas	131
Malaysia	35	Montenegro	132
Canada	36	Republic of North Macedonia	133
Cambodia	37	Monaco	134
Burundi	38	Lebanon	135
Ireland	39	Liechtenstein	136
Jordan	40	Panama	136
Sri Lanka	41	Albania	138
Australia	42	Turkmenistan	139

Table 4 (continued)

Country	Ranking	Country	Ranking
Uganda	43	Uzbekistan	140
Sweden	44	Myanmar	141
Benin	45	Libya	142
Netherlands	46	Andorra	143
Gabon	47	Solomon Islands	144
Brazil	48	Yemen	145
Fiji	49	Barbados	146
Austria	50	Botswana	146
Nigeria	51	Equatorial Guinea	148
Argentina	52	Mauritius	149
Finland	53	Syrian Arab Republic	149
Switzerland	54	Papua New Guinea	151
Ukraine	55	San Marino	151
Thailand	56	Democratic Republic of the Congo	153
Portugal	57	Georgia	154
Norway	58	Jamaica	154
El Salvador	59	Democratic People's Republic of Korea	156
Cote d'Ivoire	60	Angola	157
Saudi Arabia	61	Nicaragua	157
Slovakia	62	Sudan	157
Belgium	63	Suriname	157
Serbia	64	Maldives	161
Peru	65	Afghanistan	162
Greece	66	Seychelles	163
Turkey	67	South Sudan	163
Tunisia	68	Cabo Verde	165
Gambia	69	Lao People's Democratic Republic	166
Denmark	70	Antigua and Barbuda	167
Djibouti	71	Eswatini	167
Guatemala	72	Guyana	167
Kenya	73	Mozambique	167
Congo	74	Saint Kitts and Nevis	167
United Arab Emirates	75	Haiti	172
Kazakhstan	76	Belize	173
Israel	77	Dominica	173
Liberia	78	Grenada	173
Singapore	79	Marshall Islands	173
Romania	80	Micronesia (Federated States of)	173
Poland	81	Nauru	173
Zimbabwe	82	Palau	173
New Zealand	83	Saint Lucia	173
Mexico	84	Saint Vincent and the Grenadines	173

Table 4 (continued)

Country	Ranking	Country	Ranking
Vietnam	85	Timor-Leste	173
Sierra Leone	86	Tonga	173
Qatar	87	Central African Republic	184
Czechia	88	Comoros	184
Chile	89	Eritrea	184
Kuwait	90	Guinea-Bissau	184
Venezuela (Bolivarian Republic of)	91	Kiribati	184
Namibia	92	Lesotho	184
Mali	93	Sao Tome and Principe	184
Lithuania	94	Somalia	184
Hungary	95	Tuvalu	184
Philippines	96	Vanuatu	184
Croatia	97		

India has long been a major contributor to the UN peacekeeping forces. Since the foundation of the UN in the 1940s, India has participated in 48 UN peacekeeping operations, contributing over 200,000 Indian soldiers and policemen, and in the course of these operations, more than 160 Indian soldiers have been killed, and thousands of soldiers and police have been injured. India is one of the largest contributors of UN peacekeepers. As a regional power, India enhanced peacekeeping military and police input by 11.5% in 2019 and contributed 0.834% to UN peacekeeping dues, paying on time and in full. As the demand for UN peacekeeping personnel has steadily grown, India is always an active supporter of peacekeeping military operations. India has always been expected to play a major role in global affairs and gain recognition from other countries. Despite the growth of India's comprehensive national strength, it still lacks the ability to influence decision-making of international security and makes no substantial progress in obtaining the Permanent Membership of the Security Council.

Beginning with its first participation in the UN in 1955, Nepal has taken an active part in UN peacekeeping operations and is the fourth-largest contributor of peacekeeping personnel. In 2019, Nepal dispatched 68,497 peacekeepers in total, an increase of 12,043 over to 2018. As a non-aligned country with insufficient human capital and material resources, Nepal still actively supports UN peacekeeping operations.

The first peacekeepers from Pakistan were sent to Congo in the late 1940s. From that time, Pakistan has been among the largest contributors of peacekeeping troops. In 2019, the total number of Pakistan's contribution of peacekeeping force was 60,768, making it sixth in the world; likewise, it pays its UN membership dues on time. This puts its ranking in peacekeeping performance at eighth.

Egypt has more than 60 years of peacekeeping history, during which it has expanded the scale of its peacekeeping personnel contributions. Egypt is particularly active in its participation in the security governance of Africa, thus its peacekeeping

forces focus on the African continent. In 2019, as the rotating chairman of the African Union, Egypt increased the total number of peacekeepers from 31,852 in 2018 to 40,242, making it seventh in terms of peacekeeping personnel. In the aspect of financial support, the share of the regular UN budget of Egypt was 0.186%; it was paid on time and in full. Egypt ranks ninth worldwide for its peacekeeping contributions.

Indonesia is the fourth most populous country in the world, has the largest economy in Southeast Asia, and is a member state of the G20. It has developed exceptional peacekeeping strength and has always maintained a positive attitude toward peacekeeping. In 2019, the number of Indonesian peacekeepers increased from 26,911 to 35,251 over the previous year, making their force the eighth-largest in the world. In 2019, Indonesia had 0.543% of its UN dues, which it paid in full and on time. In 2019, Indonesia's global ranking of in peacekeeping contributions rose to 10 from 13 in 2018.

The Republic of Senegal first participated in UN peacekeeping operations in the Democratic Republic of the Congo in 2001. Its number of peacekeeping forces increased from 25,527 in 2018 to 29,859 in 2019, giving it the eleventh place among all countries, equivalent to the scale of China's own contribution. Thus, its ranking in peacekeeping contributions jumped to No. 10. It has made remarkable contributions to peacekeeping operations and sustainable peace development.

Ghana is a relatively developed country in West Africa and has a long history of peacekeeping. In the 1990s, Ghana dispatched the second-largest peacekeeping contingent among the Economic Community of West African States. Ghana's membership fee contribution ratio is 1.5%, which it pays on time and in full. Its total contribution of peacekeepers increased from 26,694 in 2018 to 33,475 in 2019, and the overall ranking of peacekeeping contributions rose from 14 to 11.

France has a relatively positive attitude toward international peacekeeping and plays an important role in operations. In 2019, its peacekeeping contingent increased from 7777 to 8897. As the sixth-largest UN peacekeeping contributor, France pays its membership dues on time and in full. In March 2019, French President Emmanuel Macron invited President Xi Jinping of the People's Republic of China to Paris to reach consensus on major international and regional issues, such as safeguarding Mali's sovereignty, maintaining peace and stability, upholding multilateralism, and committing to increased international and regional security. Nevertheless, France's rank in peacekeeping dropped slightly, from eleventh in 2018 to thirteenth in 2019, overtaken by Senegal and Ghana.

Table 4 indicates that between 2018 and 2019, the bottom countries have small populations, low degrees of economic and social development, and severely inadequate national capabilities, such as Comoros, Eritrea, Guinea-Bissau, Kiribati, Lesotho, Sao Tome and Principe, Somalia, Tuvalu, and Vanuatu. Their rankings are quite stable, and all of them are located in Africa and Oceania.

From 2018 to 2019, we found that the rankings for Thailand, Kazakhstan, and Vietnam increased to an impressive degree. Thailand had a general election for the prime minister and internal political chaos in 2019, as well as large-scale protests, demonstrations and riots took place. During this period, Thailand increased its financial support for UN peacekeeping by 5.5% and also increased its military

and police contingent from 285 in 2018 to 3555 in 2019. This improved its ranking from 93 in 2018 to 56 in 2019. The number of troops for UN peacekeeping sent by Kazakhstan increased from 179 in 2018 to 1538 in 2019, mainly in relation to the peacekeeping operations in Lebanon. Notably, a comprehensive training base was established by the government, including several international joint peacekeeping exercises such as The Eagle of the Grassland were held. Therefore, its ranking rose from 104 in 2018 to 76 in 2019. Vietnam was ranked 85 in 2019 and 112 in 2018. The number of Vietnamese peacekeeping troops increased from 143 in 2018 to 878 in 2019, and its financial contribution to UN peacekeeping increased by 32.8%. Its increasing officers and staff were mainly dispatched to UN peacekeeping missions in South Sudan and Central Africa. Vietnam upgraded its original Peacekeeping Center under the Defense Ministry into the Peacekeeping Ministry in 2018, seeking by these means to campaign for a nonpermanent member seat on the UN Security Council in 2021. These progressive countries are all Asian developing countries, and their attitudes toward peacekeeping are the main driving force for the continuous positive performance.

The rankings of the Russian Federation and Estonia dropped significantly in 2019. As one of the earliest permanent members of the UN Security Council, the Russian Federation attached great importance to the development of its peacekeeping forces. The peacekeeping cause is viewed by some in Russia as helping to revive the Russian army's spirit, ideals, and convictions, as well as carrying out the mission of protecting the Russian Federation's national interests. The Russian Federation has long been at the forefront of fighting against terrorism. In 2019, the Russian Federation paid its UN dues fee on time and in full, and the number of troops in its peacekeeping forces increased from 800 in 2018 to 920, with a focus on Syria and Central Africa. Nevertheless, it ranked twenty-fifth in 2018 and thirty-fourth in 2019. It can be observed that although there were 120 Russian additional peacekeepers in 2019, the Russian Federation nevertheless decreased its financial support for UN peacekeeping by 23.6%. In May 2019, Estonia signed a Defense Cooperation Agreement (2019–2024) with the United States, committing to an enhancement of its national defense power as well as increasing the influence of the US in the Baltic Sea. At the same time, Estonia decreased its number of peacekeeping troops from 450 in 2018 to 86 in 2019. Consequently, its ranking in this regard dropped from 92 in 2018 to 110 in 2019.

2.2.4 Regional Analysis

Following our previous research, we classify countries by continent. The six continents include 192 countries, with many more in Africa and Asia and fewer in Oceania and North America. The ranking of each continent is obtained by calculating the average of the rankings of these countries (see Fig. 2). As can be seen by the average number of scores, the top overall rankings are North American countries, followed by Asian countries and African countries. The lowest overall ranking is held by Oceania countries.

The top 15 countries by performance in peacekeeping for 2019 are: China, United States of America, Ethiopia, Bangladesh, Rwanda, India, Nepal, Pakistan, Egypt,

Indonesia, Ghana, Senegal, France, United Republic of Tanzania, and Germany. This list includes one North American country, six Asian countries, six African countries and two European countries. No European country made the top 10 in 2019, just as in 2018. France ranked thirteenth, and Germany ranked fifteenth. Here clearly, developing countries exhibited more responsibility than developed ones.

The overall trend of rankings for each continent in terms of participating in UN peacekeeping have remained the same from 2010 to 2017: North America, Asia, Africa, Europe, Latin America, and Oceania. In 2018, a trivial change in rankings was seen, in the performance of Oceania surpassed Latin America. North American countries only include the United States and Canada, and their contributions to peacekeeping are at a higher level. Likewise, most Asian countries performed very well in peacekeeping. Many peacekeeping operations have taken place in Africa, and some African countries are committing to enhance their international status and obtain financial assistance through participating in UN peacekeeping.

Asia In 2019, the top five Asian countries in terms of peacekeeping were China, Bangladesh, India, Nepal, and Pakistan, which is basically similar to the rankings in 2018. The lowest-ranked countries were North Korea, Maldives, Afghanistan, Laos, Micronesia (Federated States of), and Timor-Leste. Slight changes were seen in the rankings of the top five: China contributed the most, followed by Bangladesh and India, and then Nepal, Pakistan.

The determination of the Chinese government and the input of troops and financial support were enhanced year by year. Peacekeeping has undeniably been an integral part of China's endeavor to promote global multilateral commitments. This is demonstrated by the fact that it has the largest troop contribution to the UN peacekeeping force among the permanent members of the UN Security Council, with 50,000 peacekeepers at 25 mission sites. The China-UN Peace and Development Fund has provided \$67.7 million for 80 projects related to peacekeeping operations since President Xi Jinping first announced the establishment of the fund in 2015. China is now the second-largest contributor to the UN peacekeeping budget. In the future, we predict that China will play an even larger role in global peacekeeping.

As the third-largest contributor to UN peacekeeping, Ethiopia has significant involvement in UN peacekeeping operations. Its own internal conflict arose silently behind its outstanding performance in peacekeeping elsewhere, and civil war between the central government and the Tigray force broke out in 2020. In 2019, Bangladesh, India, Nepal, and Pakistan filled out the top six countries in terms of personal contribution to UN peacekeeping forces. Due to this, these countries rose to rank in the top 10 in peacekeeping performance.

Japan almost reached the top 10 in peacekeeping from 2010 to 2018 (excluding 2017), but it dropped out of top 15 for the first time in 2019. Japan has been involved in peacekeeping operations for 29 years. In 1992, it passed the UN Peacekeeping Action Cooperation Law and sent out its first peacekeepers (mainly engineering corps), hoping to expand its international influence and accelerate its pace toward becoming a permanent member state of UN Security Council. By the end of 2019, Japan had participated in 13 UN peacekeeping operations. Since August 1992, Japan participated in 45 UN peacekeeping operations, or 28.9%. In 2019, Japan's contribution ratio of UN dues was 8.56%. Compared with other top Asian countries, the

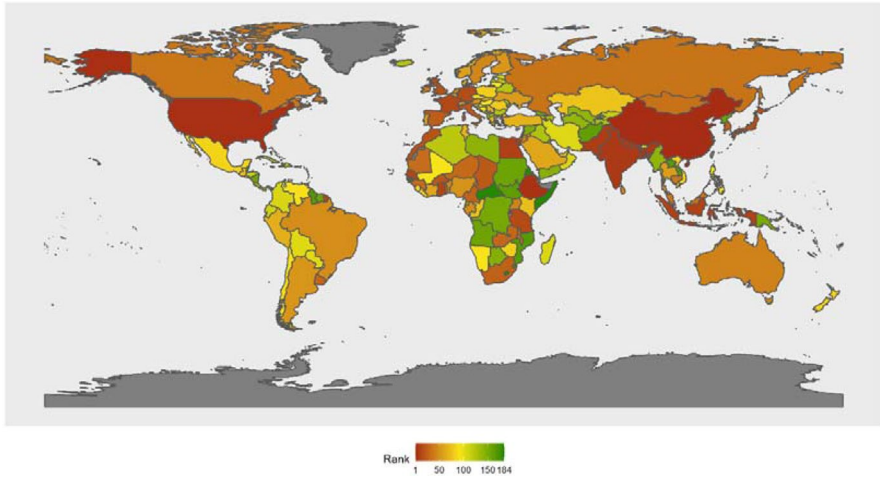


Fig. 2 2019 index ranking of peacekeeping issues on a world map

scale of Japanese peacekeeping personnel is relatively small, and its peacekeepers do not play a major role in the peacekeeping missions. In the foreseeable future, Japan's participation in UN peacekeeping operations will continue to serve its goal of achieving its Great Power Strategy and will continue to focus on Asia and Africa.

Thanks to the improvement of the comprehensive national strength, the peacekeeping operations of the Republic of Korea (South Korea) have become the main form of its military and public diplomacy. Since sending its first peacekeeping forces to Somalia in July 1993, South Korea has continuously created a positive image of its national army, enhancing the policy in the field of foreign aid, striving for a permanent seat on the UN Security Council. South Korea does not have sufficient natural resources to support itself, and its domestic market is small, so it has a strong economic dependence on foreign countries. Therefore, it is vital for it to strengthen cooperation with other countries. Most of the regions and countries where South Korea participates in international peacekeeping operations are concentrated in Africa, Southeast Asia, the Middle East, and other regions with abundant resources or broad market potential. South Korea's participation in peacekeeping operations in these countries may go beyond strengthening security cooperation at the official level but also effectively promote economic exchanges and actively promoting resource diplomacy. In 2019, the number of South Korean peacekeepers increased from 6273 in 2018 to 6795, ranking unchanged at twenty-fourth place in terms of its peacekeeping contributions.

The Democratic People's Republic of Korea (North Korea) had one of the lowest rankings for Asian countries in terms of participating in the UN peacekeeping operations. The UN Security Council consistently tracked the domestic situation under the program of non-proliferation for North Korea. The situation of Afghanistan remained volatile and dangerous in 2019, with high rate of violence incidents and numerous casualties. The UN Security Council called for regional support from international society to address the challenges of Afghanistan. Maldives, Laos,

Micronesia (Federated States of), and Timor-Leste as least developed countries, and their contributions to UN peacekeeping are confined to the relatively limited economic status, national territorial area, and population size.

Europe In 2019, we found that the top 5 European countries were France, Germany, United Kingdom, Italy, and Spain, and the lowest rankings belonged to the Republic of North Macedonia, Monaco, Albania, Andorra, San Marino. As permanent member states of the UN Security Council, France and the United Kingdom play an important role in contributing both sending troops and providing financial support to worldwide peacekeeping. The United Kingdom's rank continued to fall in 2019, which is basically consistent with the changeable state of political opinion in the country and its departure from EU. The UK's rank was 17 in 2019, the same as 2018. It was one of the main original sponsors of the UN and is a permanent member of the UN Security Council; historically, it has attached great importance to its role in peacekeeping. In 2019, As the fifth-largest contributor to UN peacekeeping, UK complied with its duty of full and on time payment for UN peacekeeping membership dues.

The number of peacekeepers dispatched by Germany and its financial support for peacekeeping decreased by 4.7% and 11.9% in 2019, respectively. Due to its reduced participation in UN peacekeeping, its rank dropped from 12 in 2018 to 15 in 2019. This reduction is associated with greater debate over peacekeeping among ruling parties and other parties, following the concern of domestic public opinion regarding casualties among peacekeepers. Despite the withdrawal of troops, Germany remains an influential country in promoting peacekeeping, partly due to its ambition to obtain the position of permanent member state of UN Security Council. The National Defense White Paper of Germany released in 2016 announced that its peacekeeping strategy would shift from a militarily restrictive one to active involvement. The emergence and evolution of Germany's peacekeeping operations are inseparable from the adjustment of its post-Cold War defense policy and the corresponding reform of the military forces. This should ultimately be attributed to the fundamental changes in Germany's external security. The reductions Germany made, detailed above, dropped its ranking from 12 to 15.

As a developed European economy, Italy has been very active in peacekeeping operations, ranking the nineteenth in 2019. In 2019, Italy dispatched 13,226 peacekeepers, an increase of 22.6% from 2018. Italy paid its 3.3% of UN annual dues fee in full, a share that is seventh among the more than 100 member states. Italy's peacekeeping efforts are undertaken as part of its search for a permanent seat on the Security Council.

Republic of North Macedonia, Monaco, Albania, Andorra, and San Marino, whose contributions rank near the bottom, are all small countries with small populations and relatively small land areas. They have long pursued a policy of partial security and are not actively participating in global governance.

North America As one of the largest permanent member states of the UN Security Council, the United States ranked No. 1 from 2010 to 2018, which earned it the status of global peace provider. After its series of withdrawals of overseas occupation forces, the US came to rank second in terms of peacekeeping in 2019 for the first time in 2019, replaced by China. On one hand, the United States is

still the largest donor to the UN, despite that the United States was in default on the membership dues in the UN. Consequently, the United States has a great advantage in financial effectiveness and contribution, and the gap in financial contributions between China and the United States has been narrowed over the years. On the other hand, the number of peacekeepers, including military police, troops and other staff sent by China has been far larger than the United States, giving China a rank far beyond the United States in terms of personnel contribution.

Canada ranked thirty-sixth in 2019 and played an important role in UN peacekeeping. The Canadian military's participation in UN peacekeeping operations began in the 1950s. In recent years, Canada has been seeking a permanent seat in the Security Council. In 2019, Canada contributed its UN peacekeeping dues of 2.734% on time and in full, giving it an overall rank of ninth of the more than 100 member states. The number of Canadian peacekeeping forces increased to 1595 from 968 in 2018.

Latin America In 2019, we found that the top five Latin American countries for peacekeeping were Uruguay, Brazil, Argentina, El Salvador, and Peru, which is consistent with previous rankings. As the most influential and powerful countries in Latin America, Brazil, and Argentina both have performed well and maintained their relatively high ranking in peacekeeping over the last decade. Brazil attaches greater importance to regional and international security governance and multilateral cooperation. By the end of 2019, Brazil had participated in over 50 UN peacekeeping operations and dispatched more than 55,000 peacekeepers. Despite its active participation in peacekeeping operations and increasing number of peacekeepers, Brazil contributed little to the finances of the UN and defaulted on UN dues in 2019. Uruguay actively participated in UN peacekeeping for a long time, with increasing inputs of troops and financial support. In 2019, the size of Uruguayan peacekeeping forces increased to 12,220, more than 3.7 times than that of Brazil. Meanwhile, Uruguay contributed 0.087% to UN peacekeeping dues, paying on time and in full. The global ranking of Uruguay rose from thirty-second in 2018 to twenty-seventh in 2019. Argentina is the second-largest country in Latin America and features a strong comprehensive national strength. In 2019, Argentina ranked fifty-second in peacekeeping contributions, and with a stable number of peacekeeping forces, at 3425. During UN peacekeeping operations, Argentine troops have traveled in the Balkans, North Africa, Central America, and the Middle East.

The lowest-ranking countries were Belize, the Dominican Republic, Grenada, Saint Lucia, Saint Vincent, and the Grenadines. Small populations, relatively low levels of economic development (GDP per capita far below global average level), and small national territories can restrictive facto of participation in peacekeeping.

The frequency of armed conflict in Latin America is relatively high. In 2019, conflict Venezuela intensified as Guaido, the opposition leader, called on the country's soldiers to overthrow the current President Nicolas Maduro. This is a major reason for the backslide in Venezuela's peacekeeping performance.

Africa In 2019, we found that the top five African countries were Ethiopia, Rwanda, Egypt, Ghana, and Senegal, and the bottom five were Central African Republic, Comoros, Eritrea, Guinea-Bissau, Lesotho, Sao Tome and Principe, and

Somalia. Africa remains the focus of the UN Security Council, and it is a key area for the deployment of international peacekeeping forces. The Council held frequent meetings on the Central African Republic, Libya, and South Sudan. An important topic in the council discussions on Africa in 2019 was the importance of close cooperation with the African Union.

Despite of its small territory area and its terrible suffering in the genocide of the 1990s, Rwanda has distinguished itself in participating in UN peacekeeping operations since 2005 and became one of the countries that contributed the most to UN peacekeeping in terms of personnel support. It is a role model of commitment to the security and stability of the land and presents a remarkable result.

There are some characteristics in common among the bottom countries such as Comoros, Eritrea, Guinea-Bissau, Lesotho, Sao Tome and Principe, and Somalia. They are among the least developed economies, and their GDP per capita is less than 1500 US dollars per year, far below the global average level. In Lesotho, most live below international poverty line. Eritrea is among the top five countries with the highest level of debt in the world. Thus, they lack the capacity to pay their UN membership dues although the ratio is only 0.001%. Its number of peacekeeping troops was also 0.

It should be noted that the ranking of Central African Republic dropped from the 137 in 2018 to 184 in 2019. Central African Republic is among the most dangerous countries in terms of humanitarian working environment, as assessed by the UN. Over 2/3 of its land is controlled by various armed organizations, and conflicts over natural resources are rampant. In 2019, there were 306 events that directly affected the safety of humanitarian personnel or properties in Central African Republic, and the rate of people who sustained injuries almost doubled from 2018. Its rank was 188 of 189 countries in total in terms of the Human Development Index in 2019.²⁴ Experiencing years of continual armed clashes, wars and poverty, Central African Republic has faced serious humanitarian crises.

Somalia is located at the border of Asia and Africa, between the Mediterranean Sea and the Indian Ocean, known as the Horn of Africa. The country has long experienced anarchy with continuous tribal wars, warlords, and invasion of pirates. In 1992, US troops entered the territory of Somalia for the sake of offering humanitarian aid, peacekeeping, and social reconstruction under the permission of the No.751 Resolution of the UN Security Council. However, the military operation called Black Hawk launched by the United States in 1993 ended with failure. In 2013, the UN set up the UN Assistance Mission in Somalia, and peacekeeping troops from Pakistan and other major countries successively entered the country. In 2019, the UN Security Council held nine formal meetings to discuss peacekeeping in Somalia. Still, the domestic situation in Somalia is tense, and the road to peacekeeping is long.

Oceania In 2019, we found that the top three countries in Oceania were Australia, Fiji, and New Zealand, results that were consistent with those of 2018. All three countries are active in paying UN peacekeeping fees and voluntarily attach

²⁴ See <https://hdr.undp.org/en/global-reports> <https://hdr.undp.org/en/global-reports>.

important role in UN peacekeeping development. Australia has committed to seeking a permanent seat in the UN Security Council in recent years as a role model in paying its contributions on time. The number of peacekeepers was 2467 in 2019, with an increase of 20% compared to 2018, and its ranking on overall peacekeeping performance was 44. As a developed economy, New Zealand contributed a small proportion of peacekeeping personnel, but it has shown stronger financial support and timeliness of payment of UN dues. As a small country in Oceania, Fiji has been performing its peacekeeping duties for 40 years, and the scale of peacekeepers has far exceeded that of some developed countries and major developing countries.

The lowest-ranking countries are Kiribati, Tuvalu, and Vanuatu. They are small island countries with relatively small territories, small populations, and low levels of economic development. The geographical isolation of these island countries prevents them from playing a greater role in UN peacekeeping. For instance, Tuvalu is a small island country that is only 26 square kilometers large and is seriously threatened by rising sea levels. Due to its limited capacity to pay, Kiribati and Tuvalu did not pay UN membership dues in 2019. The national capabilities of the bottom countries restrict their contribution to UN peacekeeping, and their peacekeeping forces do not exist.

2.2.5 Conclusion

The overall ranking trend of the six continents in the field of peacekeeping remained the same as that of 2018. The basic pattern of representative stakeholders in global peacekeeping presents inconspicuous fluctuation over the short term.

Theoretically speaking, a country's economic well-being, measured by GDP per capita is positively related to peacekeeping participation. Peacekeeping funding generally increases with the growth in GDP per capita. Some developing countries contribute even more to UN peacekeeping than some developed ones. Thus, economic status and social ideology alone do not determine their contribution to the UN peacekeeping. A slower speed of economic growth does not deter determined nations from taking on the role of a dutiful and responsible stakeholders in the international community. It can also be observed that some developing countries regard peacekeeping operations as an opportunity for better training and obtaining subsidies for their defense costs, and thus they use peacekeeping forces as a means of rewarding certain units with pay and prestige.

In addition to technical factors such as financial budgets and economic status, decisions regarding peacekeeping participation depend on the comprehensive trade-offs of foreign and national defense policies. National willingness to maintain peace and internal political stability can also influence peacekeeping commitments. The capacity to pay, including their geographical isolation, small populations, and restrictive national territorial areas are the limiting factors on participating UN peacekeeping operations for small countries in Africa and Latin America. In the less-developed world, economic well-being reigns supreme, as this is the only hope for liberating the population from conflict-induced deprivation.

As the largest developing country, having the leading contribution to UN peacekeeping, China initiates to establish a global community with a shared future and

Table 5 Data on humanitarian aid

Category	Dimension	Indicator	Source	Coverage
Contribution	Humanitarian donation	Food housing Health Water Emergency response Early recovery Coordination Education Protection Agriculture Other	Financial tracking service	176 countries

pursues a policy of peaceful development. The national ranking in the field of peacekeeping is closely linked with the situation pattern of the world. Its commitment to serving the well-being of humanity through UN peacekeeping remains a key initiative, showcasing its soft power.

A significant characteristics regarding responsibilities in terms of peacekeeping operations is that developed countries mainly contribute financial support, while other countries dispatch troops. This amounts to a clarion call for the international community to coordinate and fight the existential challenges that warrant multilateral cooperation and the exercise of collective wisdom. When the international community cooperates effectively, the entire world will be the winner.

2.3 Issue 3: Humanitarian Aid

2.3.1 Introduction

Humanitarian aid refers to assistance provided to assist the response to natural disasters or emergencies. As we discussed in last year's report, the international community has steadily been building consensus on the ethical and practical guidelines regarding humanitarian aid in recent years. Global justice calls for saving lives, reducing suffering, and preserving human dignity. Therefore, we include this issue in our Global Justice Index and evaluate each country's financial contribution to global humanitarian affairs to measure humanitarian efforts overall.

2.3.2 Dimensions and Indicators

We measured each country's humanitarian aid efforts over the previous year based on 11 indicators, namely food, health, water, emergency response, early recovery, coordination, education, protection, agriculture, housing, and others. Others refer to the portion of a contribution without an assigned use. As part of our calculations,

Table 6 Country rankings in humanitarian aid

Country	Ranking	Country	Ranking
United States of America	1	Cambodia	83
Saudi Arabia	2	Micronesia (Federated States of)	83
Germany	3	Honduras	83
United Kingdom of Great Britain and Northern Ireland	4	Saint Kitts and Nevis	83
Mozambique	5	Mexico	83
Burundi	6	Nigeria	83
United Arab Emirates	7	Burkina Faso	83
Canada	8	United Republic of Tanzania	83
Sweden	9	Hungary	83
Japan	10	Dominican Republic	83
Kuwait	11	Gambia	83
Denmark	12	Zimbabwe	83
Norway	13	Brunei Darussalam	83
Australia	14	Bolivia (Plurinational State of)	83
Switzerland	15	Seychelles	83
Pakistan	16	Israel	83
Italy	17	Botswana	83
Netherlands	18	El Salvador	83
France	19	Kyrgyzstan	83
Belgium	20	Timor-Leste	83
Republic of Korea	21	Bahamas	83
Russian Federation	22	Bosnia and Herzegovina	83
China	23	Uganda	83
Congo	24	Grenada	83
Bangladesh	25	Eswatini	83
Haiti	26	Turkmenistan	83
Niger	27	Barbados	83
Finland	28	Benin	83
Afghanistan	29	Lesotho	83
Ireland	30	San Marino	83
Mali	31	Paraguay	83
Spain	32	Guatemala	83
New Zealand	33	Costa Rica	83
Qatar	34	Ecuador	83
Turkey	35	Jamaica	83
Austria	36	Greece	83
Brazil	37	Albania	83
Sudan	38	Papua New Guinea	83
Malawi	39	Georgia	83
Portugal	40	Fiji	83
Czechia	41	Antigua and Barbuda	83
Luxembourg	42	Central African Republic	83

Table 6 (continued)

Country	Ranking	Country	Ranking
Madagascar	43	Senegal	83
Egypt	44	Tonga	83
Poland	45	Angola	83
Estonia	46	Liberia	83
South Africa	47	Belize	83
Colombia	48	Democratic Republic of the Congo	83
Libya	49	Namibia	83
Ukraine	50	Serbia	83
Azerbaijan	51	Mauritius	83
Indonesia	52	Cameroon	83
Iceland	53	Belarus	83
Bulgaria	54	Bahrain	83
Lithuania	55	Sierra Leone	83
Vietnam	56	Togo	83
Thailand	57	Zambia	83
Malaysia	58	Panama	83
Slovakia	59	Dominica	83
Argentina	60	Suriname	83
Iran (Islamic Republic of)	61	Nicaragua	83
Trinidad and Tobago	62	Nauru	83
Slovenia	62	Algeria	83
Myanmar	63	Palau	83
Monaco	64	Uzbekistan	83
Romania	65	Samoa	83
Cyprus	66	Tajikistan	83
Philippines	67	Jordan	83
Croatia	68	Montenegro	83
Oman	69	Kenya	83
Sri Lanka	70	India	83
Mongolia	71	Equatorial Guinea	83
Chile	72	Saint Lucia	83
Andorra	73	Cote d'Ivoire	83
Tunisia	74	Ghana	83
Singapore	75	Iraq	83
Armenia	76	Rwanda	83
Kazakhstan	77	Nepal	83
Republic of Moldova	78	Ethiopia	83
Latvia	79	Lebanon	83
Bhutan	80	Djibouti	83
Peru	81	Morocco	83
Guyana	82	Tuvalu	83
Saint Vincent and the Grenadines	83	Chad	83

Table 6 (continued)

Country	Ranking	Country	Ranking
Cuba	83	Republic of North Macedonia	83
Mauritania	83	Malta	83
Maldives	83	Gabon	83
Uruguay	83	Lao People's Democratic Republic	83

we accounted for the humanitarian donations made by each country to UN departments, nongovernmental organizations, and other relevant organizations, including the World Food Program, the World Health Organization (WHO), and the International Red Cross and Red Crescent Societies. We also count direct donations from one nation to another. Just in last year, these data come from the Financial Tracking Service database, which is managed by the UN Office for the Coordination of Humanitarian Affairs. Below, we provide detailed information on all of the metrics used to measure humanitarian aid (Table 5).

Measurement of donations differs from the measurement of other issues, in that we add up the amounts of the 11 indicators to obtain a total number, and we adapt to GDP per capita to adjust for the impact of economic volume. This is because countries with extensive resources and larger economies are better able to provide humanitarian aid, and it is not reasonable to compare the levels of aid provided by large and small countries equally.

2.3.3 Results

This section reports the ranking results for the countries' contributions to global justice in relation to humanitarian aid. Please see detailed rankings in the following Table 6.

The results indicate that the United States retains the top ranking on the issue of humanitarian aid. As with the result in the previous year, rich countries in Asia and Europe also performed well, including Saudi Arabia, Germany, the United Kingdom, and the United Arab Emirates. Taking into consideration their relatively weak GDP, African countries such as Mozambique and Burundi contribute significant amounts, receiving high rankings for 2019. The top 10 countries on this issue are the United States of America, Saudi Arabia, Germany, the United Kingdom, Mozambique, Burundi, the United Arab Emirates, Canada, Sweden, and Japan. Two of these are in North America, three are in Asia, three are in Europe, and two are in Africa.

2.3.4 Regional Analysis

This section provides a regional analysis of rankings in humanitarian aids. Figure 3 presents the rankings on a world map.

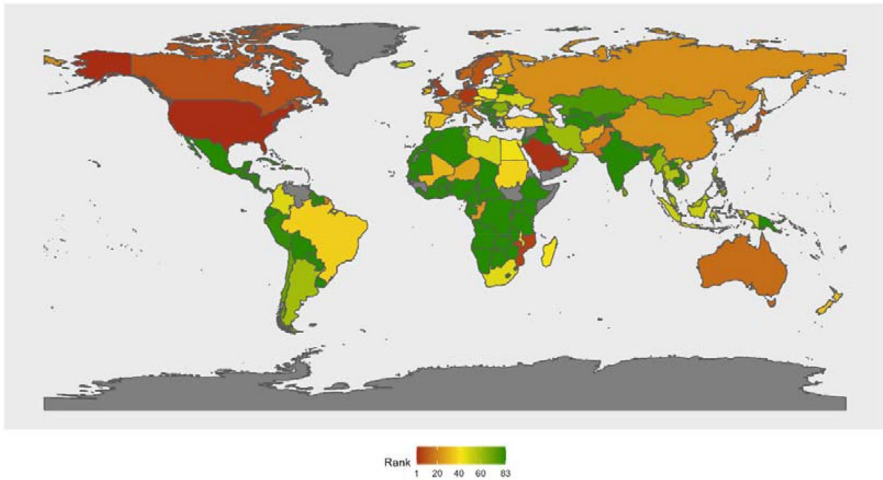


Fig. 3 2019 index ranking of humanitarian aid on a world map

Asia The top 10 Asian countries by size of contribution on this issue are Saudi Arabia, the United Arab Emirates, Japan, Kuwait, Pakistan, Korea, China, Bangladesh, Afghanistan, and Qatar. As indicated earlier, we do not measure the absolute volume of donations for each country but instead in relation to their economic volume (GDP per capita). This explains the high rankings of countries like Pakistan and Afghanistan rank high.

Saudi Arabia ranks highest among all of the Asian countries. Its total reported outgoing contributions are more than US\$1.44 billion. The countries most affected by funding are Yemen, Lebanon, Djibouti, Somalia, and Mauritius. More than 47% of the funding goes to food security. Other affected sectors include coordination and support services, education, health, etc. More than 50% of the funding goes directly to the Yemen government, and 11% of the funding is used to assist the country through the Saudi Development and Reconstruction Program for Yemen. The World Food Program is the largest recipient organization.

For the United Arab Emirates, the total reported outgoing funding is more than US\$612 million. About 80% of this funding is used to assist Yemen. Other affected countries include Occupied Palestinian territory, Jordan, and Lebanon. More than 45% of the funding goes to food security, and more than 15% goes to education. The largest recipient organizations include the World Food Program, the UN Children's Fund, the Red Crescent Society of the United Arab Emirate, and the UN Relief and Works Agency for Palestine Refugees in the Near East.

The total reported funding outgoing from Japan in 2019 is more than US\$474.8 million. The countries most affected by the funding are Syrian Arab Republic, Yemen, Iraq, Bangladesh and Myanmar. More than 29% of the funding goes to food security, and more than 10% of the funding goes to health. The largest recipient organizations include the World Food Program, the UN High Commissioner for

Refugees, the UN Children's Fund, the International Organization for Migration, and the International Committee of the Red Cross.

For Kuwait, the reported outgoing funding in 2019 is more than US\$175.4 million. The most affected countries are Yemen, Syrian Arab Republic, Iraq, and Lebanon. More than 66% of the funding goes to assist Yemen. Most of the funding goes to food security, health, and education. The largest recipient organizations include the World Food Program, WHO, the UN Children's Fund, the UN High Commissioner for Refugees, and the International Committee of the Red Cross.

Pakistan, as the fifth-ranking country in Asia, reported outgoing funding in 2019 of more than US\$3.2 million, with no recipient countries specified. All of the funding goes to food security, through the World Food Program and the Central Emergency Response Fund.

Europe The top 10 European countries by contribution size are Germany, the United Kingdom, Sweden, Denmark, Norway, Switzerland, Italy, Netherlands, France, and Belgium.

The total reported outgoing funding from Germany is about US\$2.88 billion. Recipient countries include Syrian Arab Republic, Yemen, Lebanon, Jordan, and Iraq. More than 33% of the funding goes to the food security sector. The largest recipient organizations are the World Food Program, the UN High Commissioner for Refugees, the Central Emergency Response Fund, and the International Committee of the Red Cross.

The total reported outgoing funding from the United Kingdom is about US\$1.94 billion. The recipient countries include Syrian Arab Republic, Yemen, Congo, Nigeria, and Bangladesh. More than 35% of the funding goes to food security. The largest recipient organizations are the World Food Program, the UN Children's Fund, the International Committee of the Red Cross, and the UN High Commissioner for Refugees.

For Sweden, the total reported outgoing funding is about US\$725 million. Recipient countries include Syrian Arab Republic, Congo, Yemen, Somalia, and Afghanistan. Most of the funding goes to food security sector, early recovery, and health. The largest recipient organizations are the Central Emergency Response Fund, the International Committee of the Red Cross, the UN Children's Fund, the Norwegian Refugee Council and the World Food Program.

Denmark ranks fourth in Europe. The total reported outgoing funding from Denmark is about US\$479 million. Recipient countries include Syrian Arab Republic, Yemen, South Sudan, Uganda, and Afghanistan. The funding goes to various sectors including food security, education, nutrition, and protection. The largest recipient organizations are the UN High Commissioner for Refugees, the World Food Program, the International Committee of the Red Cross and the Danish Refugee Council.

For Norway, reported outgoing funding is about US\$643 million. Recipient countries include Syrian Arab Republic, Lebanon, South Sudan, Yemen, and Jordan. Recipient sectors are varied, including food security, health, education, and others. The largest recipient organizations are the Norwegian Red Cross, the Central Emergency Response Fund, the Norwegian Refugee Council, the UN High Commissioner for Refugees, and the World Food Program.

North America North American countries perform very well on this issue. The United States ranks in the first place worldwide, while Canada ranks eighth.

The United States donated US\$8.36 billion over the course of 2019. Most of this funding is directed to Yemen, Syrian Arab Republic, South Sudan, Congo, and Ethiopia. More than 50% of the funding goes to the food security sector. The largest recipient organizations are the World Food Program, the UN High Commissioner for Refugees, the UN Children's Fund, and the International Organization for Migration.

For Canada, the total reported assistance in 2019 is US\$666 million. Most of this funding is directed to assist Syrian Arab Republic, Iraq, Lebanon, Yemen, and South Sudan. Recipient sectors include food security, health, and nutrition. The largest recipient organizations are the World Food Program, the UN Children's Fund, the UN High Commissioner for Refugees and the UN Population Fund.

Latin America The top nine Latin American countries by size of contribution are Haiti, Brazil, Colombia, Argentina, Trinidad and Tobago, Chile, Peru, and Guyana. These are also the complete list of countries in Latin America who provided humanitarian assistance in 2019, due to the relatively poor economic situation in this area. Generally, the countries in Latin America have relatively minor rankings. Haiti, with the highest ranking in Latin America, ranks twenty-sixth in the all-country rankings.

The reported outgoing funding from Haiti is US\$2.6 million in 2019. Recipient countries are not specified. The funding goes to health and nutrition through the UN Children's Fund.

The total reported outgoing funding from Brazil is US\$1.2 million in 2019. The largest recipient country is Mozambique. Recipient organizations include the UN High Commissioner for Refugees and Serviço Pastoral dos Migrantes.

For Colombia, the total outgoing funding is about US\$698 thousand for 2019. The affected countries include Peru, Ecuador, and Mozambique. Most of the funding goes to coordination and support services. The recipient organizations include the International Organization for Migration, the UN High Commissioner for Refugees, and the Central Emergency Response Fund. For Argentina, the total outgoing funding is about US\$155 thousand for 2019. Most of the funds go to coordination and support services. Recipient organizations include Specially Designated Contributions of the Office for the Coordination of Humanitarian Affairs. For Trinidad and Tobago, the total outgoing funding is about US\$125 thousand in 2019. International Organization for Migration is the largest recipient organization.

Africa In Africa, the top 10 countries by contribution size on this issue are Mozambique, Burundi, Congo, Niger, Mali, Sudan, Malawi, Madagascar, Egypt, and South Africa. This group performed very well relative to their economic situation. Mozambique, ranks fifth in the all-country rankings. South Africa, the tenth country in the African ranking, is forty-seventh on the all-country list. Some countries are both large donors to and large recipients of humanitarian aid.

Mozambique ranks first among all African countries. The total reported outgoing funding from Mozambique in 2019 is US\$500 thousand. This is not a large amount of money compared to the outgoing funds sent by donors in Asia, Europe or

America, but considering its low GDP per capita of Mozambique, the contribution is significant. The funding goes to the health sector through the UN Children's Fund.

For Burundi, the total reported outgoing funding in 2019 is US\$4.8 million. All of this funding goes to food security through the World Food Program. For Congo, the total reported outgoing funding is US\$5.1 million. All of this funding goes to the World Food Program. For Niger, the total reported outgoing funding is US\$1.1 million. The World Food Program is the largest recipient organization. For Mali, the total reported outgoing funding is US\$1.3 million, and the World Food Program is also the largest recipient organization.

Oceania A large gap appears between the Australian and New Zealand contribution and those of other countries in Oceania. Australia ranks fourteenth in all-country rankings, and New Zealand ranks the thirty-third. They are the only two countries who provide humanitarian assistance in Oceania for this study period.

The total reported outgoing funding from Australia is US\$254 million. The recipient countries include Lebanon, Bangladesh, Iraq, Myanmar, and Syrian Arab Republic. More than 34% of the funding goes to food security sector, and more than 18% goes to protection. Recipient organizations include the World Food Program, the International Committee of the Red Cross, the UN High Commissioner for Refugees, and the UN Children's Fund.

For New Zealand, the total outgoing funding in 2019 is US\$52.7 million. The recipient countries are Bangladesh, Syrian Arab Republic, Yemen, Ethiopia, South Sudan, and others. Most of the funding goes to coordination and support services. Other recipient sectors include early recovery, food security, health, and protection. The largest recipient organizations are the International Committee of the Red Cross, the Office for the Coordination of Humanitarian Affairs, the Central Emergency Response Fund, and the UN High Commissioner for Refugees.

2.3.5 Conclusion

Humanitarian assistance has long been an important part of global justice due to its contribution to saving lives, reducing suffering and maintaining human dignity. In this section, we use 11 indicators to measure the contribution of each country to this issue. These indicators measure donations to different sectors, including food, health, water, emergency response, early recovery, coordination, education, protection, agriculture, housing, and others (this includes donations without a designated use). We find that the top 10 countries by size of contribution to humanitarian assistance in 2019 are the United States of America, Saudi Arabia, Germany, the United Kingdom, Mozambique, Burundi, the United Arab Emirates, Canada, Sweden, and Japan. In all, 82 countries provide humanitarian assistance in 2019 among all the 177 countries under our measurement. Countries from Europe, Asia, and North America tend to contribute more. Our analysis of the flow of the donations, we find that countries in a given area exhibit similarity. For example, Yemen is the largest recipient country for most of the Asian donors under our discussion, while for European donors the largest recipient country is Syrian Arab Republic. The World Food Program is one of the most important recipient organizations.

2.4 Issue 4: Anti-terrorism and Conflicts

2.4.1 Introduction

International terrorism endangers international peace and security and therefore the independence and sovereignty of countries that are directly or indirectly affected by it. Terrorism has impacts on developed countries and on developing ones. It is not easy to define terrorism. There is no single internationally accepted definition of what constitutes terrorism. It is generally recognized to be the threat or use of illegal force and violence by a non-state actor to attain a political, economic, religious, or social goal through fear, coercion, or intimidation.²⁵ Terrorism is commonly associated with extremism, ideology, regionalism, radicalism, and national hatred. In addition to terrorist activities, armed conflicts can result in citizens' casualties as well, reducing the positive benefits that stability has on the macroeconomic performance of countries, imposing substantial economic costs on individuals, communities, and nations,²⁶ thus impeding the process of global justice.

There are four major terrorist groups in the world, namely, the Taliban, Boko Haram, the Islamic State (ISIL), and Al-Shabaab. The Taliban has been the deadliest terrorist group since 2018. Far-right terrorism has grown substantially in the West, with recorded terrorist attacks increasing from 1 in 2010 to 49 in 2019. In the West, ISIL directed or inspired at least 78 terror attacks between 2014 and 2019, resulting in 471 fatalities.²⁷ Countries have undertaken counterterrorism actions and implemented legal policies, formed multilateral alliances or international cooperative agreements, and allocated funds, financial investment, and personnel input to defeat and degrade international terrorist organizations and eventually eliminate terrorism. From the efforts from all stakeholders and behavioral agents, the achievements of anti-terrorism have gradually become clear. According to the 2020 Global Terrorism Index, deaths from terrorism had fallen for the fifth consecutive year from a peak in 2014. The number of deaths in 2019 decreased by 15.5% compared with 2018, falling from 15,952 to 13,826. This fall in deaths was not uniform: it improved in 103 countries and worsened in 35.²⁸

Adopting an analytical quantitative approach in a series of methods including raw data conversion, indicator weighting, score evaluation, and index calculation, this study attempts to shed some light on the disparities of counterterrorism and anti-conflict among the countries worldwide and understand the trends in performance in combating terrorism and conflicts.

²⁵ See <https://www.start.umd.edu/research-projects/global-terrorism-database-gtd>.

²⁶ Institute for Economics & Peace (2021).

²⁷ Geneva Center for Security Policy (2020).

²⁸ Geneva Center for Security Policy (2020).

Table 7 Data on anti-terrorism and armed conflicts

Category	Dimension	Indicator	Data source	Coverage
Performance	Conflicts	Number of conflicts Number of wars	UCDP armed conflict dataset	192 countries
Contribution	Conflict agreements	Number of conflict deaths Number of agreements		
Performance	Terrorism	Achievements of agreements	Global terrorism dataset	
		Number of terrorism attacks Number of deaths from terrorism attacks		

2.4.2 Dimensions and Indicators

The Global Justice Index last year produced ranking for 192 countries in relation to the anti-terrorism and conflicts aspect of promoting global justice from 2010–2018. This report elaborates on the contributions of 192 major countries in response to terrorism and armed conflict and global justice rankings in terms of anti-terrorism and conflicts in 2019, providing a brief overview of changing trends of terrorism and a better understanding of global justice in relation to counterterrorism and conflicts.

The quantification of anti-terrorism and conflicts was extracted and represented in three major dimensions to assess countries' contributions and performance in tackling terrorism and armed conflicts: conflicts, conflict agreements, and terrorism. Following previous reports, each dimension was segregated into two or three explanatory indicators (Table 7).

Three indicators are included for these dimensions: number of conflicts, number of wars, and number of conflict deaths. A conflict here is understood to mean a lack of agreement or harmony. Armed conflicts impose substantial economic costs on individuals, communities, and nations, and their consequences can involve considerable damage, impeding justice, hindering economic development, increasing instability and producing inequality.²⁹ War, an extreme form of conflict, is initiated by relatively powerful actors in the context of international relations, such as a country or a union of countries, and it can have terrifying consequences. In 2019, the number of conflicts was 10.5% lower than in 2018, falling from 181,827 to 162,722,³⁰ which indicated improved ability to mitigate conflicts. The data for these three indicators are drawn from the Uppsala Conflict Data Program (UCDP), which has been recording violent conflicts since the 1970s with considerable accuracy and practicality. Their data are calculated with the use of cumulative measurements in accordance with prior reports.

The number of conflict agreements represents the long-term endeavors of various states to terminate armed conflicts. Each peace accord is based on relentless negotiation and dialogue. Conflict agreements include two indicators: number of agreements and execution of agreements. As in previous reports, we adopted a retrospective integral method to assign the index score for each peace agreement. The source of the data is UCDP. The peace agreement data have not been updated, so we used the 2018 data to create an imputation to replace the 2019 data.

Overall, 2019 saw over 8300 terrorist attacks worldwide and around 25,000 fatalities from terrorism.³¹ The size and networks of terror groups have changed, moving from groups working in one state to international groups, with increased scope of operations and wider range of actors involved in attacks. It is plausible approach to use the number of activities and deaths to measure the scope and degree of damage caused by terrorism and conflict. Thus, terrorism, as understood in our research, includes two indicators: number of terrorist attacks and number of deaths from terrorist attacks. These data are calculated using cumulative measurement. The data

²⁹ Institute for Economics & Peace (2021).

³⁰ Data source: <https://ucdp.uu.se>.

³¹ Geneva Center for Security Policy (2020).

come from the Global Terrorism Database (GTB),³² an open-source database providing information on domestic and international terrorist attacks around the world since 1970. This source now includes more than 200,000 attacks, making it easier to study for the sake of better understanding terrorist violence.

To safeguard their citizens' welfare, countries of all population sizes seek to restrict terrorism and armed conflict. With respect to these factors, we weight all relevant indicators in relation to the population size to control for the comparability across years. These weighted indicators include: number of conflicts, number of wars, number of deaths caused by the conflict, number of terrorist incidents, and number of deaths caused by terrorist attacks.

2.4.3 Results

In this section, we adopted a systematic and comprehensive indicator system constructed by this project and presented in prior reports. This sub-index ranks 192 countries in 2019 based on their level of contribution to global justice in the issue area of anti-terrorism and armed conflict. Table 8 shows the results for 192 countries in 2019.

Thus, in 2019, Eritrea, Ethiopia, South Sudan, China, Vietnam, Brazil, Japan, Algeria, Republic of Korea, Poland, Morocco, Uzbekistan, Argentina, Democratic People's Republic of Korea, and Peru made outstanding contributions to combating terrorism and conflict. The bottom countries are San Marino, Palau, Afghanistan, Tuvalu, and Nauru.

Eritrea is ranked at the forefront with respect to anti-terrorism and conflict in 2019. In July 2018, it signed a peace agreement to end two decades of a frozen war with Ethiopia.³³ After this peace agreement was resolved, Eritrea began to focus on its development. The Ethiopia-Eritrea thaw enabled progress in Eritrea's other regional disputes, namely those with Djibouti and Somalia. After a bitter war that lasted 20 years (from 1998 to 2018), during which as many as 100,000 people were killed, this agreement enabled air travel to resume, phone lines to reopen, military hostilities to cease, and families to reunite.³⁴ The state of war between the two countries ended, and a new era of peace, friendship, and comprehensive cooperation began.

Ethiopia ranked second, just after Eritrea. Its high score was mainly attributed to the same peace agreement of 2018. This led to more easing of political tensions than to sustainable progress on the economic front. Ethiopia has been and remains a champion of The Intergovernmental Authority on Development, a leader within the African Union, and an active participant in global bodies such as the UN.³⁵

South Sudan ranked third. No conflicts or wars took place in South Sudan in 2019. Although 67 people were killed in 13 terrorist attacks in 2019, the absence of war and conflict as well as the peace agreement signed with Sudan in 2019 enabled

³² See <https://www.start.umd.edu/gtd>.

³³ See <https://www.usip.org/publications/2019/08/year-after-ethiopia-eritrea-peace-deal-what-impact>.

³⁴ See <https://www.un.org/africarenewal/magazine/december-2018-march-2019/after-making-peace-ethiopia-and-eritrea-now-focus-development>.

³⁵ See <https://www.usip.org/publications/2019/08/year-after-ethiopia-eritrea-peace-deal-what-impact>.

Table 8 Country rankings in the anti-terrorism and conflict aspect of promoting global justice in 2019

Country	Ranking	Country	Ranking
Eritrea	1	Cyprus	97
Ethiopia	2	Thailand	98
South Sudan	3	Myanmar	99
China	4	Eswatini	100
Vietnam	5	Sweden	101
Brazil	6	Austria	102
Japan	7	Pakistan	103
Algeria	8	Trinidad and Tobago	104
Republic of Korea	9	Tajikistan	105
Poland	10	Switzerland	106
Morocco	11	Jordan	107
Uzbekistan	12	Togo	108
Argentina	13	Ghana	109
Democratic People's Republic of Korea	14	Saudi Arabia	110
Peru	15	Fiji	111
Malaysia	16	Iran (Islamic Republic of)	112
Angola	17	Greece	113
Australia	18	Kenya	114
Kazakhstan	19	United States of America	115
Indonesia	20	El Salvador	116
Germany	21	Zambia	117
Cuba	22	Tunisia	118
Dominican Republic	23	Sudan	119
United Republic of Tanzania	24	Solomon Islands	120
Azerbaijan	25	Denmark	121
Belarus	26	Comoros	122
Papua New Guinea	27	Montenegro	123
Zimbabwe	28	Luxembourg	124
Bolivia (Plurinational State of)	29	Suriname	125
Bangladesh	30	Finland	126
Ecuador	31	Guyana	127
Hungary	32	Liberia	128
Lao People's Democratic Republic	33	Norway	129
Paraguay	34	Cabo Verde	130
Bulgaria	35	Mauritania	131
Serbia	36	New Zealand	132
Kyrgyzstan	37	Malta	133
Venezuela (Bolivarian Republic of)	38	Colombia	134
Turkmenistan	39	Philippines	135
Singapore	40	Democratic Republic of the Congo	136
Mexico	41	Brunei Darussalam	137
Slovakia	42	Nigeria	138

Table 8 (continued)

Country	Ranking	Country	Ranking
Congo	43	Sri Lanka	139
Italy	44	Bosnia and Herzegovina	140
India	45	Ireland	141
Oman	46	Maldives	142
Spain	47	Belize	143
Panama	48	Bahamas	144
Kuwait	49	Iceland	145
South Africa	50	Armenia	146
Haiti	51	Nepal	147
Croatia	52	Israel	148
Canada	53	Lithuania	149
Georgia	54	Burundi	150
Uruguay	55	Mozambique	151
Madagascar	56	Vanuatu	152
Mongolia	57	Barbados	153
Nicaragua	58	Gambia	154
Malawi	59	Chad	155
Cote d'Ivoire	60	Sierra Leone	156
Jamaica	61	United Arab Emirates	157
Costa Rica	62	Niger	158
Honduras	63	Latvia	159
Qatar	64	Sao Tome and Principe	160
Republic of Moldova	65	Cameroon	161
Namibia	66	Samoa	162
Romania	67	Central African Republic	163
Botswana	68	Saint Lucia	164
France	69	Estonia	165
Lesotho	70	Kiribati	166
Albania	71	Libya	167
Slovenia	72	Micronesia (Federated States of)	168
Republic of North Macedonia	73	Grenada	169
Guatemala	74	Saint Vincent and the Grenadines	170
Cambodia	75	Iraq	171
Ukraine	76	Mali	172
Guinea-Bissau	77	Tonga	173
Egypt	78	Burkina Faso	174
Senegal	79	Seychelles	175
Chile	80	Antigua and Barbuda	176
Rwanda	81	Bhutan	177
Turkey	82	Bahrain	178
Netherlands	83	Andorra	179
Uganda	84	Dominica	180

Table 8 (continued)

Country	Ranking	Country	Ranking
Russian Federation	85	Marshall Islands	181
Guinea	86	Yemen	182
United Kingdom of Great Britain and Northern Ireland	87	Somalia	183
Lebanon	88	Saint Kitts and Nevis	184
Equatorial Guinea	89	Syrian Arab Republic	185
Benin	90	Djibouti	186
Belgium	91	Monaco	187
Gabon	92	San Marino	188
Timor-Leste	93	Palau	189
Czechia	94	Afghanistan	190
Mauritius	95	Tuvalu	191
Portugal	96	Nauru	192

it to improve its performance in the field of anti-terrorism and conflicts. The August 2019 Draft Constitutional Declaration, signed by military and civilian representatives during the 2018–19 Sudanese Revolution, reached a peace agreement to cover the 39-month transition period to a democratic civilian government.³⁶ Following this, official agreements were signed on October 18, 2019, between the government and the Sudan People's Liberation Movement.

China performed well on this issue due to the stable governance of its government and its active engagement in social governance. China ranked first in 2019 for anti-terrorism, with no fatalities in 13 terrorist attacks. In the anti-conflict dimension, China ranked sixth. Regarding peace agreements, China ranked thirty-ninth. The terrorism-related incidents registered were mainly initiated by extremism, influenced by ethnic separatist forces, religious extremist forces, and violent terrorist forces. Chinese citizens abroad were targeted in terrorism-related incidents in 2019.³⁷ The PRC engaged in a range of multilateral, regional, and bilateral fora, seeking to present itself as a global leader on counterterrorism. In 2019, efforts continued within these frameworks included joint border operations, exercises on preventing terrorist use of the internet, and a joint counterterrorism drill held in Russia.

Vietnam ranked fifth in 2019, with zero conflicts, wars, or terrorist attacks. It also ranked second in anti-terrorism. Vietnam has striven to support the international community in counterterrorism through compliance with international law, including with the UN Charter, promoting peace, stability, and security in the world.

The largest economy and the strongest performer in anti-terrorism and conflict in Latin America, Brazil ranked the sixth in 2019 without having any conflict or war. For peace agreements, Brazil ranked twenty-seventh. For anti-terrorism, Brazil

³⁶ See <https://bti-project.org/en/reports/country-report/SDN>.

³⁷ Geneva Center for Security Policy (2020).

ranked the third. Two people were killed in three terrorist attacks. Brazil passed a Countering Financing of Terrorism bill, which President Bolsonaro signed into law in June.³⁸ This law enables Brazilian authorities to designate terrorists and terrorism financiers domestically and allows for the immediate freezing of the assets of terrorism financiers designated domestically, as well as under UN Security Council resolutions. Brazil has participated in regional counterterrorism fora, including those of the OAS Inter-American Committee against Terrorism, and the BRICS (Brazil, Russia, India, China, and South Africa) Joint Working Group on Counterterrorism. Argentina, Brazil, and Paraguay coordinated law enforcement efforts in the TBA by means of their Trilateral Tri-Border Area Command.³⁹ It has been shown that the Brazilian government consistently supports counterterrorism, including pursuing multinational counterterrorism cooperation, legal enforcement, third country technical assistance for controlling sensitive technologies, and investigating fraudulent travel documents.

Japan's ranking has been stably within the top 10. Regarding conflict and anti-terrorism, Japan ranked the third and fourth, respectively, with no conflicts, wars, or fatalities in terrorist incidents in 2019. In December 2019, the Fourth Japan-UK Counter Terrorism Dialogue was held at the Ministry of Foreign Affairs in Japan, exchanging views on the current state of international terrorism, domestic measures being put into place to counter it, and on current counterterrorism capacity-building cooperation, particularly in Third World countries.

Algeria ranked eighth. In 2019, Algeria recorded no terrorism deaths for the first time since 2011. It also scored high in the dimensions of anti-terrorism and peace agreements, in fifth and sixth places, respectively, with no conflicts or wars or terrorism incidents. According to the Global Terrorism Index Report 2020, developed by the Institute for Economics and Peace,⁴⁰ the terrorism index in Algeria stood at 2.7 points, representing low levels of terrorism threat.⁴¹

The ranking of the Republic of Korea (South Korea) ranking in this field has risen sharply. In 2019, South Korea ranked the ninth, with no conflicts or wars or fatalities. Though performing well in terms of anti-terrorism and armed conflict, in terms of peace agreement, its rank was 139. South Korea has joined global efforts to address novel threats in various fora including the Review of the UN GCTS and the Financial Action Task Force (FATF).⁴² South Korea has also extended anti-money laundering and counterterrorism financing requirements to virtual assets by amending its laws, in particular, the Act on Reporting and Using Specific Financial Transaction Information. South Korea will continue to explore approaches and adopt rules to block impunity gaps.

³⁸ Bureau of Counterterrorism, Department of State, United States (2020).

³⁹ Bureau of Counterterrorism, Department of State, United States. (2020).

⁴⁰ The Global Terrorism Index measures the direct and indirect impact of terrorism, including its effects on lives lost, injuries, property damage and the psychological aftereffects. It is a composite score that ranks countries according to the impact of terrorism from 0 (no impact) to 10 (highest impact).

⁴¹ Source from: <https://www.statista.com/statistics/1222607/terrorism-index-in-algeria/>.

⁴² Source from: https://www.un.org/en/ga/sixth/75/pdfs/statements/int_terrorism/03mtg_repopkorea.pdf.

Poland was among the top 10 countries in the issue of anti-terrorism and armed conflicts. It ranked fourteenth in terms of conflicts, with no record of conflict at all. In terms of anti-terrorism, Poland ranked sixth, with zero terrorism incidents. This praiseworthy performance can be attributed to the capability of domestic governance and series of policy measures in counterterrorism.

In 2019, Morocco performed well in the anti-conflict and counterterrorism dimensions, ranking fifteenth and seventh, respectively. The government of Morocco adhered to a set of comprehensive CT strategies that include vigilant security measures, regional and international cooperation, and counter-radicalization policies. In 2019, Morocco's CT efforts largely mitigated its risk of terrorism, doubling the number of arrests relative to 2018. No terrorist incidents were reported in Morocco in 2019. The country continued to face sporadic threats, largely from small, independent terrorist cells, the majority of which were inspired by or affiliated with ISIS. Morocco is an active participant in the Global Coalition to Defeat ISIS. Additionally, it is also a member of the Global Counterterrorism Forum (GCTF) and is currently the co-chair of the GCTF with Canada.⁴³

The ranking of Uzbekistan has steadily risen in recent years. In 2019, it ranked twelfth, with no conflicts or wars or attacks. Uzbekistan performed excellently in counterterrorism, cracking down the proliferation of weapons of mass destruction and their spread to terrorist organizations, as well as developing a national action plan to counterterrorism. It has also made efforts to strengthen travel document security by upgrading the security features of passports and issuance systems to prevent cross-border movement of terrorists and other criminals.

Argentina, among of the most competitive Latin American countries in terms of national strength, also performed well on this issue. In 2019, it had no conflicts, no wars, and two people were killed in one terrorist attack in the country. In July 2019, Argentina hosted the Second Western Hemisphere Counterterrorism Ministerial in Buenos Aires. Argentina approved a bill on National Terrorist Financing and Financing of Proliferation of Weapons of Mass Destruction Risk Assessment. Although it had formerly been designated a state sponsor of terrorism by the United States and emerged as a nuclear-armed enigma under Kim Jong-un, the Democratic People's Republic of Korea (North Korea) ranked fourteenth with respect to anti-terrorism and armed conflicts. No conflicts or wars or terrorism incidents were observed in North Korea in 2019. Peru's performance in combating terrorism and armed conflicts is also praiseworthy, as it has maintained its relatively low levels of terrorist activity since 2002. No incidents or deaths from terrorism were seen in Peru in 2019, down from four deaths and four incidents in 2018.

The excellent performances of the top 15 countries in the anti-terrorism and armed conflicts can be attributed, directly or indirectly, to their legal instruments and the administrative implementation of these, their commitment to collaborative cooperation, and upgrades to their security systems to control risks from border movements.

⁴³ See <https://www.state.gov/reports/country-reports-on-terrorism-2020/morocco>.

The lowest-ranking countries for 2019 are San Marino, Palau, Afghanistan, Tuvalu, and Nauru. Except from Afghanistan, these are sparsely populated countries, each of which recorded no conflict, war, or terrorist attack in 2019, indicating their remoteness from terrorist attacks or related groups or entities affiliated or involved in any manner with terrorism. The main reason for their poor results is the population weighting algorithm.

Afghanistan was the site of 21% of all terrorist attacks worldwide in 2019, and 41% of casualties in terrorist attacks (including assailants)⁴⁴. Additionally, 29,903 people lost their lives in two ongoing wars in Afghanistan in 2019.⁴⁵ The scores in the dimensions of anti-terrorism and conflict were lower than in the rest of the world. While the Taliban was engaged in peace talks with the United States, Afghanistan still ranked fourth in terms of peace agreements. Throughout 2019, the United States strove to negotiate with the Taliban in a way that would address actions against international terrorist groups, including not allowing those groups to recruit, train, or raise funds on Afghan territory, and to commit to not hosting those groups. After multiple rounds of serious negotiations, talks were restarted in December 2019 along with a series of goodwill gestures by the Taliban and Afghan government, including the release of several hostages and prisoners.

2.4.4 Regional Analysis

Comparing the 2019 results with those for 2018 from our last annual report, a few changes become evident. In 2019, three African countries ranked in the top three (mainly attributed to the formal conclusion of peace agreements). Among the top 10 countries are four African countries, four Asian countries, one European country, and one Latin American country. Furthermore, only two developed countries appear in this upper echelon (Japan and South Korea). Amid the five bottom-ranked countries, San Marino, Palau, Tuvalu, and Nauru are the least populous countries in the world, although the other, Afghanistan, is one of most populous countries.

The ranking within each continent with respect to counterterrorism and conflict is obtained by calculating the average of the scores for these countries. The geographic breakdown of regions with the ranking of anti-terrorism aspect for promoting global justice, ranging from the best to worst, include Africa, North America, Europe, Latin America, Asia, and Oceania. As shown in Fig. 4, this section offers an analytical review of the distribution of each continent's performance in this globally concerned issue.

Asia In 2019, Asia had a higher ranking than Oceania, but it was lower than all of the other continents. The top five Asian countries in the field of counterterrorism are China, Vietnam, Japan, South Korea, Uzbekistan, and North Korea. The top ranking countries played key roles in regional counterterrorism governance, as discussed in the above section. The bottom-ranking countries are Bhutan, Bahrain, Yemen, Syrian Arab Republic, and Afghanistan.

⁴⁴ Maizland (2020).

⁴⁵ Data source: <https://ucdp.uu.se>.

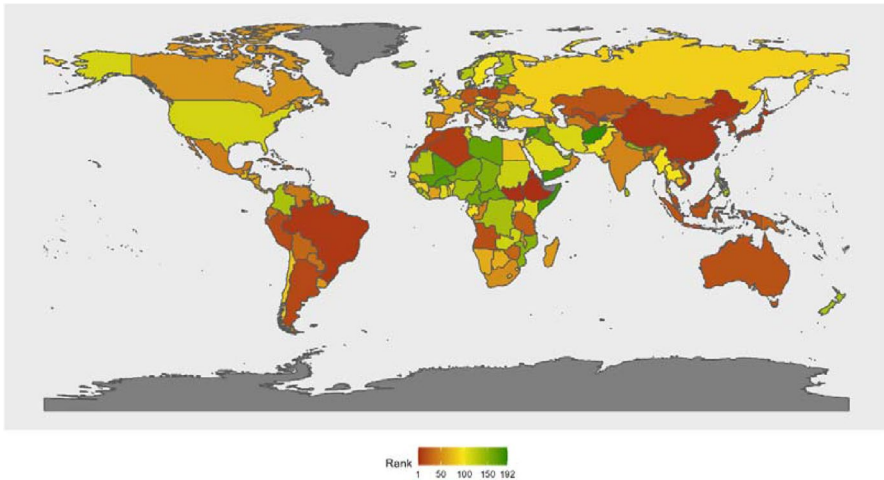


Fig. 4 2019 index ranking of anti-terrorism and conflicts

In 2019, Bhutan had a rank of 177 in the field of counterterrorism and conflicts. In two conflicts, 603 people lost their lives in 2019, although there were no wars or terrorist attacks. The most serious threat to Bhutan's security is terrorism from different terrorist groups from neighboring countries that are in the nation illegally.⁴⁶ Consequently, Bhutan's government has undertaken several legal and military measures to combat terrorism. Bahrain followed Bhutan. There were no successful terrorist attacks in Bahrain in 2019, which is closely linked to numerous operations to preempt and disrupt attack planning conducted by national security forces. However, political relations between the government and the major opposition remained tense, exacerbated by incidents such as the execution of two Bahraini Shia convicted on terrorism charges, resulting in periodic low-level violence.⁴⁷ Bahrain consistently experienced tensions between its two major religious denominations and anxious neighborhood diplomacy relationships, and thus domestic situation remained turbulent. Yemen's rank was 182 in 2019, when it saw hundreds of terrorist attacks by Al-Qaeda in the Arabian Peninsula and ISIS-Yemen. Yemen experienced a 67% increase in total terrorist attacks, causing approximately 23,000 deaths as the result of conflicts. The UN has called the Yemeni conflict "the world's worst humanitarian tragedy."⁴⁸ As one of the most impacted countries under terrorism, Saudi Arabia suffered from numerous terrorist incidents in 2019. To combat this, the Saudi Arabian government used its 2017 counterterrorism law to prosecute terrorism cases

⁴⁶ Das and Palmiotto (2006).

⁴⁷ Bureau of Counterterrorism, Department of State, United States (2020).

⁴⁸ Source from: <https://news.un.org/en/story/2019/06/1040651>.

and work closely with international communities.⁴⁹ Terrorism deaths in Afghanistan declined in 2019 for the first time in three years, at a recorded 1563 fewer deaths from terrorism in 2018, or a 15.9% decrease from the previous year.

Europe Europe performed well in counterterrorism. In 2019, the number of terrorist attacks in the EU fell to 119, the lowest number in years. Furthermore, the number of terrorist fatalities in Europe fell to 10 in 2019, the lowest number of deaths caused by terrorism since 2014. No country in Europe that had outstanding performance in counterterrorism or conflict. The counterterrorism rankings of European countries vary widely. The top five European countries in 2019 were Poland, Germany, Belarus Hungary, and Bulgaria, while the lowest-ranking countries were Latvia, Estonia, Andorra, Monaco, and San Marino.

As noted above, Poland has achieved an advanced level of implementation of several measures introduced by the UN Security Council's counterterrorism resolutions. In 2019, Germany ranked twenty-first on this issue, with excellent anti-conflict performance. Germany has had substantial experience with terrorism in its history, particularly during the Weimar Republic and the Cold War, conducted by far-left and far-right domestic groups as well as by foreign terrorist organizations. In recent years, far-left, far-right, and Islamist extremist violence have resurged. Belarus ranked twenty-sixth in 2019, a rank that has risen steadily since 2010. Belarus participated anti-terrorism training in collaboration with countries that actively fight against terrorism and scored well in all the dimensions in our study. Hungary ranked thirty-second in 2019, participating in international stabilization efforts, including numerous military missions, for instance, with the UN, EU, and North Atlantic Treaty Organization (NATO). Hungary is also an active member of the Global Coalition to Defeat ISIS and has spent more than 43 million USD in direct humanitarian and development assistance to more than 70,000 people in the Middle East and Africa.⁵⁰ Bulgaria ranked thirty-fifth in 2019, and no terrorist attacks were reported. Bulgaria has strong migration controls, and terrorism is prosecuted under several general provisions of the penal code.

In 2019, 603 fatalities in totally two conflicts were recorded in Estonia, and its ranking fell from 138 in 2018 to 165 in 2019. Andorra, Monaco, and San Marino had ranks of 179, 187, and 188, respectively, mainly due to their smaller population size, thanks to the population weighting algorithm. There were no incidents of terrorism in Andorra, and the risk is likely to remain low. Due to the high volume of foreign visitors that usually travel to Andorra and Monaco, any potential attack would most likely occur in places frequented by tourists and would probably involve attacks using vehicles and stabbings.

North America The overall ranking of North America is only slightly lower than that of Africa, but it is higher than that of the rest of the world. It recorded an increase in deaths from terrorism, with 39 deaths recorded in 2019, up from 27 in

⁴⁹ Bureau of Counterterrorism, Department of State, United States (2020).

⁵⁰ Source from: https://www.un.org/counterterrorism/sites/www.un.org.counterterrorism/files/210730_session_v_sztaray_statement.pdf.

2018, owing largely to an increase in far-right terrorism. However, the total number of terrorist attacks fell from 71 to 58, an 18% decrease.⁵¹

Canada performed better than the United States in counterterrorism and conflict. Ranking fifty-third on this issue, Canada remains competent in the global fight against terrorism. Canada became co-chair (with Morocco) of the GCTF in September 2019, for a 2-year term. Canada plays a major role in the Global Coalition to Defeat ISIS in 2019 and has been a leading contributor to the coalition's military support and humanitarian assistance. Canadian Special Forces in Iraq work with local counterparts to defeat ISIS. Canada also leads the non-combat NATO Mission in Iraq. Claiming that the safety and security of Canadians is its priority, the government of Canada pays significant attention to its counterterrorism efforts.

The US's rank fell to 115 from 36 the previous year, with 33,373 fatalities in 11 conflicts, 31,815 fatalities in 3 wars, and 53 deaths in 68 terrorist attacks. Following the 9/11 attacks, the US government declared a War on Terror and sent American troops to fight Al-Qaeda. This phrase has now become synonymous with American foreign policy in the Middle East. The United States made major strides in defeating and degrading international terrorist organizations. Along with the Global Coalition to Defeat ISIS and al-Sham ISIS, in March, the United States completed the destruction of the so-called caliphate in Iraq and Syria. In September, President Trump issued an Executive Order enabling the Departments of State and the Treasury to sanction the leaders of terrorist organizations more effectively as well as those who participate in terrorist training. In October, the United States launched a military operation that resulted in the death of Abu Bakr al-Baghdadi, the self-proclaimed caliph of ISIS. As we look to 2020 and beyond, the US remains deeply committed to the global counterterrorism fight.

Latin America The ranking of Latin America is only slightly higher than that of Asia and Oceania, but lower than that of the rest of the world. The top five countries in the region are Brazil, Argentina, Peru, Cuba, and the Dominican Republic, approximately the same as it was in 2018. The countries ranking at the bottom are the small Caribbean countries of Grenada, Saint Kitts and Nevis, Antigua and Barbuda, and the Dominican Republic.

As noted, Brazil, Argentina, and Peru did well in guaranteeing Latin America's security and stability. Cuba ranked twenty-second, followed by the Dominican Republic. Cuba remained safe and at peace with zero conflict, terrorist attacks, or war. Even in the worst-performing Latin American countries, there were very few conflicts, wars, or terrorist attacks. The determinant factor that drags down their rankings is the adopted population weighting.

Africa Africa was generally at the forefront in 2019, consistently performing well due to its lower frequency of terrorist attacks and its increasing number of formal conclusions of peace treaties. The five best performing countries in Africa are Eritrea, Ethiopia, South Sudan, Algeria, and Morocco, all discussed above, and these countries were at the forefront worldwide. The poorest-performing countries are Mali, Burkina Faso, Seychelles, Somalia, and Djibouti.

⁵¹ Geneva Center for Security Policy (2020).

In Africa, ISIS formally established several new branches and networks in 2019, and ISIS-affiliated groups are active across the continent, including in the Sahel, the Lake Chad region, and East Africa. Although terrorism has fallen in most regions, it has become more widespread in others. Of the 10 countries with the largest growth in terrorism, 7 were in sub-Saharan Africa (Burkina Faso, Djibouti, Mali, Niger, Nigeria, Senegal, and Somalia), mainly driven by religious, resource, territorial, ethnic, and cultural factors.

Terrorism increased in quantity and lethality in Mali in 2019, with 603 fatalities in 2 conflicts and 826 deaths in 137 terrorist attacks, with continued targeting of civilians, Mali's Armed Forces, international peacekeepers, and international military forces. Terrorist groups active in Mali include ISIS in the Greater Sahara (ISIS-GS) and Jama'at Nusrat al-Islam wal-Muslimin (JNIM) (the umbrella group formed by the Sahara Branch of AI-Qaida in the Islamic Maghreb) and others. To reduce the negative influence of terrorism, Mali's government is receptive to international counterterrorism assistance from the United States and other countries. The Malian military participated in multinational border security operations. In Burkina Faso, the government has failed to stem the tide of violence. The number of deaths in domestic terrorist attacks increased significantly to 952 in 2019 from 601 as of 2018. Burkina Faso had the largest fatality increase in terrorism in 2019, where deaths rose from 116 to 804, a 593% increase. The rise was mainly driven by three groups: the Islamic State in Greater Sahara, JNIM and the Burkina Faso branch of Ansar al-Islam.⁵² As one of the most impacted countries from terrorism, Somalia experienced fewer terrorist attacks and fatalities in 2019, yet it remained heavily reliant on regional and international partners to support almost all major security functions throughout the country, making trivial progress on improving interagency coordination to limit terrorist transit through the country.

Oceania The average score of Oceania was lower than that of the rest of the world with respect to counterterrorism and conflict. In 2019, the top 3 countries ranked in Oceania are Australia, Papua New Guinea, and Fiji. All other Oceanian countries obtain relatively low scores. At the bottom of the rankings are the small island countries such as Palau, Tuvalu, and Nauru, largely due to their small population.

Australia ranked eighteenth, experiencing no conflicts or terrorist-related attacks in 2019. It has strengthened its counterterrorism laws to address the threat posed by returning terrorist fighters, it has investigated and disrupted suspected terrorist plots, and it has maintained high levels of cooperation with international partners. As a member of the GCTF and the Global Initiative to Combat Nuclear Terrorism, Australia has pledged to cooperate with the United States and Japan to enhance border management practices and strengthen information sharing at the Ninth Trilateral Strategic Dialogue, held in April 2019.⁵³ Australia also played a major role in the Global Coalition to Defeat ISIS. Known for its acceptance policy of refugees, Australia has strengthened border security by introducing its Counterterrorism Bill

⁵² Bureau of Counterterrorism, Department of State, United States (2020).

⁵³ See <https://dod.defense.gov/Portals/1/Documents/pubs/2016-Australia-Japan-U-S-Trilateral-Information-Sharing-Arrangement-Signing.pdf>.

2019 (Temporary Exclusion Orders) to prevent Australian citizens with previous suspected terrorist activity from supporting terrorist organization overseas.⁵⁴ An underdeveloped remote island, Papua New Guinea also recorded zero conflicts and terrorist incidents and ranked the twenty-seventh in 2019. Its domestic stability and peace can be attributed by avoiding terrorist radicalization or participation in terror-related activities.

2.4.5 Conclusion

As a global challenge and a worldwide problem, global terrorism has brought about deaths and injury, property destruction, GDP losses, and global injustice in the current era, defined by geopolitical complexity. There was an overall fall in the impact of terrorism across the world, especially in Europe and in the Middle East and North Africa (MENA). Still, terrorism remains a significant and serious problem in many countries. There were 63 countries in 2019 that recorded at least one death from a terrorist attack and 17 that recorded over 100. South Asia and sub-Saharan Africa are the most impacted by the spread of ISIL affiliate groups. In North America, Western Europe, and Oceania, far-right attacks have increased by 250% since 2014, with deaths increasing by 709% over the same period.

Because terrorism cannot be contained within borders or specific boundaries, collaborative and multilateral efforts are required, particularly for prevention and countering violent extremism and radicalization, which today are a menace affecting both the developed and developing countries. To effectively eliminate terrorism in the long run, further measures should be taken to address its root causes, including political, economic, and social inequality. Disputes should be resolved by peaceful means, complying with international law, respecting diplomatic and legal processes, including the procedures hosted at international judicial institutions. Accordingly, peaceful dispute settlement efforts and the endeavor to clarify legal issues that help the concerned parties to achieve equitable solutions should be supported by all means.

Conflict remains the primary driver of terrorism, with over 95% of deaths from terrorism occurring in countries with ongoing conflict.⁵⁵ In 2019, the number of armed conflicts globally has fallen from the previous year, with conflicts concentrated in Africa, the Americas, and MENA. The main causes of armed conflict are drug trafficking, religious disputes, and contests for power, and the participants in armed conflict include sovereign states, extremist groups, rebels, and ethnic groups. In short term, the global armed conflict situation will continue, and fierce and escalating conflicts will still exist in certain regions, such as the Middle East.

⁵⁴ Bureau of Counterterrorism, Department of State, United States (2020).

⁵⁵ Geneva Center for Security Policy (2020).

Table 9 Data on cross-national criminal police cooperation

Category	Dimension	Indicator	Data Source	Coverage
Performance	General	UN Convention against Transnational Organized Crime	UN treaties	186 countries
		Protocol to Prevent, Suppress and Punish Trafficking in Persons, Especially Women and Children, supplementing the UN Convention against Transnational Organized Crime		
		Protocol against the Smuggling of Migrants by Land, Sea and Air, supplementing the UN Convention against Transnational Organized Crime		
		Protocol against the Illicit Manufacturing of and Trafficking in Firearms, Their Parts and Components and Ammunition, supplementing the UN Convention against Transnational Organized Crime		
		Single Convention on Narcotic Drugs of 1961 as amended by the 1972 Protocol		
Contribution	Drugs and Psychotropic Substances	Convention on Psychotropic Substances of 1971	Interpol UNODC	
		UN Convention against Illicit Traffic in Narcotic Drugs and Psychotropic Substances of 1988		
		UN Convention against Corruption		
		International Convention against the Taking of Hostages 1979.12.17		
		Donation to Interpol/GDP per capita		
FATF membership	FATF membership	General purpose fund/GDP per capita	FATF	
		Special purpose fund/GDP per capita		
		Pledges/GDP per capita		
		The Financial Action Task Force Membership		

2.5 Issue 5: Cross-National Criminal Police Cooperation

2.5.1 Introduction

Increasingly, national governments and international organizations are working to combat transnational crime in response to its explosive growth, leading to the rise of the legal field of global criminal control. National governments, however, react differently to international criminal activities. Due to the alleged cross-national harm transnational crime has on citizens, global justice is seriously challenged, and governments owe it to their citizens to facilitate international cooperation to fight crime. The growth in global justice requires global cooperation in fighting transnational crimes. We incorporated this issue into our Global Justice Index and evaluated each country's contributions to combating transnational crimes.

2.5.2 Dimensions and Indicators

We used the same evaluation system as previously and the same 14 indicators. As last year, we measure the ratification status of each country to the UN treaties for the category of performance. These treaties are general treaties against Transnational Organized Crime (UN Convention against Transnational Organized Crime, Protocol to Prevent, Suppress and Punish Trafficking in Persons, Especially Women and Children, supplementing the UN Convention against Transnational Organized Crime, Protocol against the Smuggling of Migrants by Land, Sea and Air, supplementing the UN Convention against Transnational Organized Crime, Protocol against the Illicit Manufacturing of and Trafficking in Firearms, Their Parts and Components and Ammunition, supplementing the UN Convention against Transnational Organized Crime), treaties against drugs and psychotropic substances (Single Convention on Narcotic Drugs of 1961 as amended by the 1972 Protocol, Convention on Psychotropic Substances of 1971, UN Convention against Illicit Traffic in Narcotic Drugs and Psychotropic Substances of 1988), a treaty against Corruption (UN Convention against Corruption), and a treaty against taking of hostages (International Convention against the Taking of Hostages). Regarding contributions, we measure donations to Interpol, donations to UNODC, and FATF membership.

The indicators are determined as follows. First, for the treaties, national states are requested to take a series of measures to combat Transnational Organized Crime through cooperative measures, such as information sharing, developing legal frameworks to aid law enforcement cooperation, and developing police force and expert training plans. Therefore, ratification of the treaties signifies compliance with the related requirements and the promise to offer assistance. The ratification status for each country also indicates their contribution to cross-national criminal cooperation. Second, for the donations, it is necessary to have international organizations with established communication systems to keep all of the countries connected to combat transnational crime, since transnational crime involves more than one country. These are the functions of Interpol and UNODC, and financial donations to them reflect the determination and

contribution of a transnational criminal cooperation between countries. Third, we include the FATF membership into our measurement, which plays a major role in the worldwide effort to tackle money laundering.

Please see below the details of all the indicators in the measurement of global cooperation against transnational crime (Table 9).

As discussed in past year's report, data regarding the indicators of donation to UNODC and FATF membership are limited, accessible only from 2018; for the remaining indicators, data from 2010 are obtainable. As a result, in our time series rankings from 2010 to 2018 in last year's report, a gap was seen between the results for 2017 and 2018, as there were two new indicators (donation to UNODC and FATF membership) included. To resolve this issue, we generated two versions of the rankings last year. The first includes all 14 indicators to provide a more precise result of each country's performance and contribution in this issue, but this produces a gap between the results for 2017 and 2018. The second version involves 13 indicators without the donation to UNODC and FATF membership, leaving no gap between 2017 and 2018, providing a more accurate picture of each country's ranking over time. In this year's report, we continue this framework and generate two versions of rankings, so that it is more convenient for audience to compare the results of 2019 with the results of 2010 to 2018 in our last year's report.

2.5.3 Results

This section reports the country rankings for contributions to global justice from the perspective of cross-national criminal police cooperation. Please see the tables below for detailed ranking (Tables 10, 11).

The United States continues to have the highest ranking, as in last year, in both performance and contribution to cross-national criminal police cooperation. European countries performed very well as well, such as Germany, the United Kingdom, and Sweden. The Asian countries of Japan and China rank in the top 20. Brazil performs the best among the Latin America countries.

The top 10 countries in 2019 (according to the first calculation method) are the United States, Germany, the United Kingdom, Sweden, Japan, Italy, Belgium, Finland, New Zealand, and Brazil. Six are European countries. The other four countries come from North America, Asia, Oceania, and Latin America. Fiji, the Dominican Republic, Nauru, Saint Lucia, Andorra, Micronesia, Vanuatu, Solomon Islands, Congo, and Tuvalu have the lowest 10 places in the ranking. Six of these are Oceanian countries, two are Latin American countries, and the other two are located in Europe and Africa. Following the second calculation method, the top 10 countries are the United States, Japan, Germany, China, the United Kingdom, Brazil, Italy, France, Russia, and Mexico. The lowest-ranking countries are Fiji, the Dominican Republic, Nauru, Saint Lucia, Andorra, Micronesia, Vanuatu, Solomon Islands, Congo, and Tuvalu. Slight changes can be seen in the top 10 countries, but no change appears in the ranking of the lowest 10.

Table 10 Country rankings in cross-national criminal police cooperation (version 1)

Country	Ranking	Country	Ranking
United States of America	1	Benin	94
Germany	2	Kyrgyzstan	95
United Kingdom of Great Britain and Northern Ireland	3	Timor-Leste	96
Sweden	4	Kenya	97
Japan	5	Libya	98
Italy	6	Sao Tome and Principe	99
Belgium	7	Slovakia	100
Finland	8	Lao People's Democratic Republic	101
New Zealand	9	Djibouti	102
Brazil	10	Romania	103
Norway	11	Iraq	104
Canada	12	Cabo Verde	105
China	13	Azerbaijan	106
France	14	Mongolia	107
Netherlands	15	Republic of Moldova	108
Austria	16	Armenia	109
Portugal	17	Namibia	110
Switzerland	18	Croatia	111
Greece	19	Albania	112
Turkey	20	Republic of North Macedonia	113
Russian Federation	21	Bosnia and Herzegovina	114
Luxembourg	22	Afghanistan	115
Israel	23	Serbia	116
Argentina	24	Sierra Leone	117
Australia	25	Lithuania	118
Spain	26	Latvia	119
Mexico	27	Seychelles	120
Denmark	28	Malta	121
Indonesia	29	Monaco	122
India	30	Niger	123
Egypt	31	Sudan	124
Togo	32	Iceland	125
Chile	33	Cuba	126
South Africa	34	Lebanon	127
Philippines	35	Brunei Darussalam	128
Senegal	36	United Arab Emirates	129
Guatemala	37	Qatar	130
Panama	38	Cambodia	131
Gabon	39	Mauritania	132
Saudi Arabia	40	Ethiopia	133
Honduras	41	Thailand	134
Jamaica	42	Zimbabwe	135

Table 10 (continued)

Country	Ranking	Country	Ranking
Malaysia	43	Nepal	136
Republic of Korea	44	Guyana	137
Mauritius	45	Comoros	138
Ireland	46	Czechia	139
Lesotho	47	Bahamas	140
Bolivia (Plurinational State of)	48	Vietnam	141
El Salvador	49	Angola	142
Paraguay	50	Sri Lanka	143
Dominican Republic	51	Eswatini	144
Costa Rica	52	Barbados	145
Poland	53	Gambia	146
Liberia	54	Tajikistan	147
Haiti	55	Bangladesh	148
Ukraine	56	Kazakhstan	149
Nicaragua	57	Papua New Guinea	150
Hungary	58	Bhutan	151
Peru	59	Georgia	152
Tunisia	60	Belize	153
Ecuador	61	Oman	154
Belarus	62	Saint Vincent and the Grenadines	155
Trinidad and Tobago	63	Turkmenistan	156
Cyprus	64	Botswana	157
Colombia	65	Slovenia	158
Madagascar	66	Montenegro	159
Singapore	67	Grenada	160
Democratic Republic of the Congo	68	Estonia	161
Rwanda	69	Antigua and Barbuda	162
United Republic of Tanzania	70	Saint Kitts and Nevis	163
Algeria	71	San Marino	164
Zambia	72	Kiribati	165
Cameroon	73	Burundi	166
Uganda	74	Palau	167
Nigeria	75	Chad	168
Kuwait	76	Guinea-Bissau	169
Suriname	77	Maldives	170
Bulgaria	78	Uzbekistan	171
Uruguay	79	Equatorial Guinea	172
Bahrain	80	Somalia	173
Iran (Islamic Republic of)	81	Marshall Islands	174
Ghana	82	Samoa	175
Pakistan	83	Tonga	176
Jordan	84	Fiji	177

Table 10 (continued)

Country	Ranking	Country	Ranking
Central African Republic	85	Dominica	178
Mozambique	86	Nauru	179
Malawi	87	Saint Lucia	180
Burkina Faso	88	Andorra	181
Mali	89	Micronesia (Federated States of)	182
Guinea	90	Vanuatu	182
Morocco	91	Solomon Islands	183
Myanmar	92	Congo	184
Cote d'Ivoire	93	Tuvalu	185

2.5.4 Regional Analysis

This section provides a regional analysis of the rankings of cross-national criminal police cooperation (Fig. 5).

Asia Generally, Asian countries perform well in combating transnational crime. The top 10 Asian countries (according to the first version) are Japan, China, Turkey, Israel, Indonesia, India, the Philippines, Saudi Arabia, Malaysia, and the Republic of Korea. All of these countries are among the top 50 countries in the general ranking on this issue.

Japan has the highest ranking due to its high scores in both performance and contributions. It donated for about €7 million to Interpol for combating transnational crime. Additionally, it donated about €35 million to the UNODC to support its work. It is a member of the FATF and has signed almost all of the treaties that we use to assess this feature, with the exception of the three protocols to the UN Convention against Transnational Organized Crime.

China ranks second in Asia. It donated about €2 million to Interpol and about €2 million to the UNODC. It is a member of the FATF. It has signed the UN Convention against Illicit Traffic in Narcotic Drugs and Psychotropic Substances of 1988, the UN Convention against Corruption, the UN Convention against Transnational Organized Crime and its first Protocol.

Turkey, as the third-ranking Asian country in combating transnational crime, donated about €530 thousand to Interpol and about €550 thousand to the UNODC. It is a member of FATF and has signed nearly all of the treaties that we track, excepting only the International Convention against the Taking of Hostages. Unlike Japan and China, Turkey has signed all three protocols to the UN Convention against Transnational Organized Crime.

Israel donated about €240 thousand to the Interpol. It is a member of FATF, and it has signed nearly all treaties, excepting only the Convention on Psychotropic Substances of 1971, the Protocol against the Smuggling of Migrants by Land, Sea and Air, and the Protocol against the Illicit Manufacturing of and Trafficking in Firearms, Their Parts and Components, and Ammunition, supplementing the UN Convention against Transnational Organized Crime.

Table 11 Country rankings in cross-national criminal police cooperation (version 2)

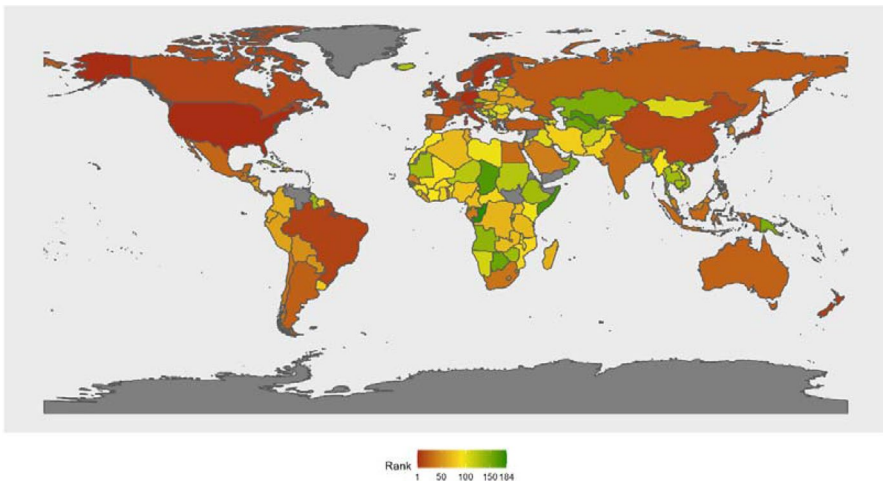
Country	Ranking	Country	Ranking
United States of America	1	Malaysia	94
Japan	2	Myanmar	95
Germany	3	Morocco	96
China	4	Timor-Leste	97
United Kingdom of Great Britain and Northern Ireland	5	Cote d'Ivoire	98
Brazil	6	Kenya	99
Italy	7	Libya	100
France	8	Sao Tome and Principe	101
Russian Federation	9	Lao People's Democratic Republic	102
Mexico	10	Slovakia	103
Egypt	11	Djibouti	104
Togo	12	Romania	105
India	13	Iraq	106
Turkey	14	Cabo Verde	107
Sweden	15	Azerbaijan	108
Canada	16	Mongolia	109
Chile	17	Republic of Moldova	110
Philippines	18	Armenia	111
Finland	19	Namibia	112
New Zealand	20	Croatia	113
Spain	21	Albania	114
Senegal	22	Ireland	115
Netherlands	23	Republic of North Macedonia	116
Norway	24	Bosnia and Herzegovina	117
Greece	25	Serbia	118
Guatemala	26	Lithuania	119
Argentina	27	Latvia	120
Panama	28	Seychelles	121
Belgium	29	Malta	122
Austria	30	Monaco	123
Portugal	31	Burundi	124
Switzerland	32	Ethiopia	125
Gabon	33	Cuba	126
Indonesia	34	Lebanon	127
Honduras	35	Brunei Darussalam	128
Australia	36	United Arab Emirates	129
Poland	37	Thailand	130
Jamaica	38	Zimbabwe	131
Israel	39	Nepal	132
Mauritius	40	Cambodia	133
Liberia	41	Mauritania	134
Lesotho	42	Comoros	135

Table 11 (continued)

Country	Ranking	Country	Ranking
Luxembourg	43	Czechia	136
Madagascar	44	Qatar	137
South Africa	45	Gambia	138
Denmark	46	Vietnam	139
Iran (Islamic Republic of)	47	Tajikistan	140
Democratic Republic of the Congo	48	Angola	141
Bolivia (Plurinational State of)	49	Guyana	142
El Salvador	50	Sri Lanka	143
Haiti	51	Eswatini	144
Paraguay	52	Bahamas	145
Dominican Republic	53	Singapore	146
Costa Rica	54	Barbados	147
Ukraine	55	Somalia	148
Niger	56	Bangladesh	149
Nicaragua	57	Chad	150
Hungary	58	Guinea-Bissau	151
Rwanda	59	Papua New Guinea	152
Peru	60	Bhutan	153
Central African Republic	61	Georgia	154
Tunisia	62	Belize	155
Uganda	63	Oman	156
Mozambique	64	Kazakhstan	157
Pakistan	65	Saint Vincent and the Grenadines	158
United Republic of Tanzania	66	Turkmenistan	159
Ecuador	67	Botswana	160
Algeria	68	Slovenia	161
Belarus	69	Montenegro	162
Trinidad and Tobago	70	Grenada	163
Zambia	71	Antigua and Barbuda	164
Cyprus	72	Saint Kitts and Nevis	165
Malawi	73	Estonia	166
Cameroon	74	San Marino	167
Nigeria	75	Kiribati	168
Republic of Korea	76	Uzbekistan	169
Afghanistan	77	Palau	170
Burkina Faso	78	Maldives	171
Sierra Leone	79	Equatorial Guinea	172
Ghana	80	Iceland	173
Saudi Arabia	81	Marshall Islands	174
Kuwait	82	Samoa	175
Mali	83	Tonga	176
Suriname	84	Fiji	177

Table 11 (continued)

Country	Ranking	Country	Ranking
Bulgaria	85	Dominica	178
Uruguay	86	Nauru	179
Colombia	87	Saint Lucia	180
Bahrain	88	Andorra	181
Guinea	89	Micronesia (Federated States of)	182
Jordan	90	Vanuatu	182
Benin	91	Solomon Islands	183
Kyrgyzstan	92	Congo	184
Sudan	93	Tuvalu	185

**Fig. 5** 2019 index ranking of cross-national criminal police cooperation on a world map

India donated €100 thousand to Interpol. It is a member of the FATF, and it has signed the UN Convention against Corruption and the UN Convention against Transnational Organized Crime.

The 10 lowest-ranking Asian countries are Tajikistan, Bangladesh, Kazakhstan, Bhutan, Georgia, Oman, Turkmenistan, Maldives, Uzbekistan, and Yemen.

Europe European countries perform very well on this issue. The top 10 European countries (according to the first calculation method) are Germany, the United Kingdom, Sweden, Italy, Belgium, Finland, Norway, France, the Netherlands, and Austria. Austria, the tenth country in Europe, ranks sixteenth overall, which shows the domination of European countries over the top rankings.

Germany has donated about €4 million to Interpol. Additionally, it has donated about €12 million to UNODC for combating transnational crime, with 90% of the

donation going to the special purpose fund. It is a member of FATF, and it has signed all of the treaties that we track.

The United Kingdom donated about €3 million to Interpol and about €24 million to UNODC, all of which went to the special purpose fund. It is a member of FATF and it has signed all of the treaties we listed.

Sweden has donated about €802 thousand to Interpol and about €8 million to UNODC, with about 75% of the donation goes to special purpose fund. It is a member of FATF and has signed all of the treaties we track.

Italy has donated about €2 million to Interpol and about €60 thousand to UNODC. It is a member of the FATF, and it has signed nearly all of the treaties we track except the Convention on Psychotropic Substances of 1971.

Belgium has donated €24 thousand to Interpol and about €2 million to UNODC. It is a member of FATF. Like Italy, it has signed all of the treaties we track except the Convention on Psychotropic Substances of 1971.

It is easy to see that the European countries are inclined to spend more on UNODC, especially for the special purpose fund. Unlike Asian countries, they have signed additional treaties due to the impact of the EU. A large number of European countries have signed all of the treaties we included. The 10 European countries ranking last are Latvia, Malta, Monaco, Iceland, Czechia, Slovenia, Montenegro, Estonia, San Marino, and Andorra.

North America Both the US and Canada performed well. The US maintains its top ranking from last year. Canada ranked twelfth in 2019, a slight improvement compared with its fourteenth place in 2018.

The US made a donation of €11 million to Interpol. Additionally, it donated about €74 million to UNODC, with more than 90% going to the special purpose fund. It is a member of FATF. It has signed all of the treaties we track.

Canada donated €1.7 million to Interpol and about €8.6 million to UNODC, all of which went to the special purpose fund. It is a member of FATF. It has signed all of the treaties we track except for the Single Convention on Narcotic Drugs of 1961 as amended by the 1972 Protocol and the Convention on Psychotropic Substances of 1971.

Latin America The top 10 Latin American countries on this issue are Brazil, Argentina, Mexico, Chile, Guatemala, Panama, Honduras, Jamaica, Bolivia, and El Salvador.

Brazil made a donation of €1 million to Interpol. It is a member of FATF. It has signed all of the treaties we track except for the International Convention against the Taking of Hostages.

Argentina donated €300 thousand to Interpol and €30 thousand to UNODC. It is a member of FATF. Like Brazil, it has signed all of the treaties we track except for the International Convention against the Taking of Hostages.

Mexico donated €965 thousand to Interpol and €2.7 million to UNODC. It is a member of FATF. It has signed the UN Convention against Illicit Traffic in Narcotic Drugs and Psychotropic Substances of 1988, the UN Convention against Corruption, and the UN Convention against Transnational Organized Crime and its protocols.

Chile has donated €147 thousand to Interpol and €5 thousand to UNODC. It is not a member of FATF, alone among all of the countries that we have mentioned so far. However, it has signed all of the treaties we included.

Guatemala has donated €17 thousand to Interpol. It is not a member of FATF. It has signed all of the treaties we track except for the Convention on Psychotropic Substances of 1971.

Latin American countries, due to their relatively limited economic development, generally contribute less than European and North American countries. The treaties signed vary largely from country to country. The lowest-ranking 10 Latin American countries are Guyana, Bahamas, Barbados, Belize, Saint Vincent, and the Grenadines, Grenada, Antigua and Barbuda, Saint Kitts and Nevis, the Dominican Republic, and Saint Lucia.

Africa The top ten African countries on this issue are Egypt, Togo, South Africa, Senegal, Gabon, Mauritius, Lesotho, Liberia, Tunisia, and Madagascar.

Egypt donated €67 thousand to Interpol. It is not a member of FATF. However, it has signed all of the treaties we track.

Togo donated €17 thousand to Interpol. It is not a member of FATF. Like Egypt, it has signed all of the treaties that we included.

South Africa donated €187 thousand to Interpol. It is a member of FATF. It has signed all treaties we track except for Convention on Psychotropic Substances of 1971, the UN Convention against Illicit Traffic in Narcotic Drugs and Psychotropic Substances of 1988, and the International Convention against the Taking of Hostages.

Senegal donated €17 thousand to Interpol. It is not a member of FATF. It has signed all of the treaties we track apart from the Convention on Psychotropic Substances of 1971.

Gabon donated €17 thousand to Interpol. It is not a member of FATF. It has signed all of the treaties we track except for the Convention on Psychotropic Substances of 1971 and the Protocol against the Illicit Manufacturing of and Trafficking in Firearms, Their Parts and Components and Ammunition, supplementing the UN Convention against Transnational Organized Crime.

African countries have many similarities with each other. For example, they provide lower donation amounts due to their economic situation, and their donations to UNODC are quite small. FATF has comparatively small coverage in Africa. The 10 lowest-ranking African countries are Angola, Eswatini, Gambia, Botswana, Burundi, Chad, Guinea-Bissau, Equatorial Guinea, Somalia, and Congo.

Oceania We included 14 Oceanian countries in our ranking. From top to bottom, they are New Zealand, Australia, Papua New Guinea, Kiribati, Palau, Marshall Islands, Samoa, Tonga, Fiji, Nauru, Micronesia, Vanuatu, Solomon Islands, and Tuvalu.

New Zealand contributed €146 thousand to Interpol. Additionally, it donated €65 thousand to UNODC. It is a member of FATF. It has signed all of the treaties we track.

Australia donated €1 million to Interpol and €1 million to UNODC. It is a member of FATF. It has signed all of the treaties we track except for the International Convention against the Taking of Hostages.

Papua New Guinea donated €17 thousand to Interpol. It is not a member of FATF. It signed only one among all of the treaties we track, the UN Convention against Corruption.

Kiribati made no donation to either Interpol or UNODC. It is not a member of FATF. It has signed the UN Convention against Corruption and its three protocols.

Palau made no donation to either Interpol or UNODC. It is not a member of the FATF. It has signed the three protocols to the UN Convention against Corruption, but it did not sign the Convention itself.

There is a large gap between New Zealand and Australia and the rest of the Oceanian countries. New Zealand ranks ninth, and Australia ranks twenty-fifth in the all-country list. However, Papua New Guinea occupies rank number 3 in Oceania but number 150 in the worldwide ranking.

2.5.5 Conclusion

In this section, we use 14 indicators to measure the performance and contributions of each country for combating transnational crime. These indicators include the ratification status of each country for a range of treaties, their donations to Interpol and UNODC, as well as FATF membership. Our results show that European and North American countries generally rank high, followed by Asia, Latin America, Africa, and Oceania. The US remained kept top spot in our measures. The top 10 countries in 2019 (according to the first method) are the United States, Germany, the United Kingdom, Sweden, Japan, Italy, Belgium, Finland, New Zealand, and Brazil. Six of these are European countries. Countries show similarities within their continents. For example, European countries make a relatively high donation to UNODC, which is not the case for African and Oceanian countries. FATF has a large coverage in Europe, North America, and Asia but relatively less coverage in Africa and Oceania.

2.6 Issue 6: Refugees

2.6.1 Introduction

Refugee governance is a complex global issue. The refugee crisis is a common concern for all mankind and poses a huge challenge to the achievement of global justice. In recent decades, tens of millions of people have been forcibly removed from their homes due to war, terrorism, poverty, persecution, human rights violations, environmental crises, and other challenges. This problem is quite serious, and nation-states are expected to fulfill a responsibility to provide protection and assistance, and the international community must work together to find more effective solutions.

The terms refugee and immigrant are used interchangeably in some politicians' rhetoric, media coverage, and public discourse. However, the difference between the two is very significant and must be clearly defined, as if this conceptual confusion remains, it will prevent clear-sighted international refugee governance and nation-state refugee policies. Article 14 of the International Human Rights Law states that everyone has the right to seek asylum and protection. International law

and international conventions indicate that refugee status entails a range of refugee rights. However, not all forms of human mobility entail refugee status. A refugee must be outside his or her country of origin for reasons of fear that forced them to cross an international frontier to find safety in another country. As indicated by the UN refugee agency, a refugee is someone who, “owing to well-founded fear of being persecuted for reasons of race, religion, nationality, membership of a particular social group or political opinion, is outside the country of his nationality and is unable or, owing to such fear, is unwilling to avail himself of the protection of that country; or who, not having a nationality and being outside the country of his former habitual residence, is unable or, owing to such fear, is unwilling to return to it.”⁵⁶ This definition provides a point of reference for the determination of refugee status and comparison of state actions across the globe.⁵⁷

The proportion of the world’s population registered as refugees continues to rise. The UN estimates that refugee numbers hit a record high in 2019, and around 79.5 million men, women, and children were forcibly displaced from their homes internally and internationally by 2019, for various reasons, approximately 1% of the world population and double in absolute numbers from the amount a decade ago. Of these, refugees are estimated to be 26.0 million, a number that is 9 million higher than it was in 2018. It is notable that the vast majority of these refugees (about 73%) sought safety in a neighboring country.⁵⁸ Recent years have also witnessed major refugee events that caused significant tragedy and trauma, as well as a loss of life around the world. Moreover, the international community failed to address the escalating conflicts, persecutions, and disasters across countries and regions, which have pushed an increasing number of people to leave their homes; five countries in particular—Syria, Venezuela, Afghanistan, South Sudan, and Myanmar—were the source of most people displaced abroad in 2019.

Global justice in refugee governance requires a global sharing of responsibility and more concerted efforts by nation-states, international organizations, non-government organizations, private sectors, and various other actors. Earlier decades have seen historic progress in refugee governance at the global level, with the international refugee regime adjusting its strategy and coordinating its actions (e.g., the Global Compact on Refugees). However, as the refugee crisis grows geographically and numerically, some host countries and their political elites have begun to manipulate refugee policies for political purposes. For instance, the conflict in Syrian produced a large flow of refugees to the EU, and far-right parties in some European countries exploited this to seek power and reshape refugee policies by drawing attention to the possible destabilizing effects of sizable refugee populations within countries’ borders. Mainstream international media and many powerful politicians

⁵⁶ See <https://www.un.org/en/global-issues/refugees> (accessed December 22, 2021); see also FitzGerald and Arar (2018).

⁵⁷ The definition has been generally incorporated into regional and national legal frameworks for managing refugees. But in an operational context, the definitions provided by national laws and policies are often decisive, which complicate the practices on the ground.

⁵⁸ See <https://www.unhcr.org/flagship-reports/globaltrends/globaltrends2019/> (accessed December 22, 2021).

Table 12 Refugee data

Category	Dimension	Indicators	Data source	Coverage
Performance	Refugee population	Exported refugee population to per 1000 inhabitants	World Bank; UNHCR Statistical Yearbook	192 countries
Contribution	Refugee population	Imported refugees to per log (GDP)	World Bank; UNHCR Statistical Yearbook	211 economics
	Implement refugee status determination	Number of decisions made proportion of positive decisions	UNHCR Statistical Yearbook	169 countries
	Participation in international refugee governance	Membership of UNHCR Signing international agreements	UNHCR-Annex of Global Appeal	192 countries
Standard of living	National policies on refugee issues	System for receiving, processing and identifying refugees; planning for displaced populations; specific measures to provide assistance; disaster risk reduction strategy; grant permission for temporary stay or temporary protection	World population policies	92–102 countries
		Type of refugee accommodation	UNHCR Statistical Yearbook	122 countries

Table 13 Country rankings in refugee aspect of promoting global justice

Country	Ranking	Country	Ranking
Spain	1	Namibia	97
France	2	Bolivia (Plurinational State of)	98
United Kingdom of Great Britain and Northern Ireland	3	Tuvalu	99
Sweden	4	Indonesia	100
Finland	5	Saudi Arabia	101
Germany	6	Chad	102
Canada	7	Togo	103
Belgium	8	Ethiopia	104
Ireland	9	Republic of North Macedonia	105
Brazil	10	Slovakia	106
Argentina	11	Kyrgyzstan	107
Philippines	12	Cote d'Ivoire	108
Italy	13	Kuwait	109
Zambia	14	Sierra Leone	110
Mozambique	15	San Marino	111
Switzerland	16	Republic of Moldova	112
Austria	17	Liberia	113
Paraguay	18	Mauritius	114
Norway	19	Armenia	115
Thailand	20	Azerbaijan	116
Uruguay	21	Belize	117
Japan	22	Georgia	118
United States of America	23	Guinea-Bissau	119
Denmark	24	Zimbabwe	120
Samoa	25	Montenegro	121
Malawi	26	Kiribati	122
Luxembourg	27	Cambodia	123
Lesotho	28	Pakistan	124
United Republic of Tanzania	29	Congo	125
Malta	30	Guatemala	126
Greece	31	Uzbekistan	127
Lithuania	32	Hungary	128
Republic of Korea	33	Monaco	129
Slovenia	34	Nicaragua	130
Peru	35	Cameroon	131
South Africa	36	Djibouti	132
Qatar	37	Jamaica	133
Palau	38	Ukraine	134
Portugal	39	Lebanon	135
Romania	40	Dominican Republic	136
Czechia	41	Marshall Islands	137
Chile	42	Guinea	138

Table 13 (continued)

Country	Ranking	Country	Ranking
Australia	43	Grenada	139
Uganda	44	Nauru	140
Kenya	45	Cabo Verde	141
New Zealand	46	Mauritania	142
Latvia	47	Brunei Darussalam	143
Bangladesh	48	Gambia	144
Netherlands	49	Somalia	145
India	50	Iran (Islamic Republic of)	146
Panama	51	Colombia	147
Benin	52	Bahrain	148
Costa Rica	53	Mongolia	149
Madagascar	54	Democratic People's Republic of Korea	150
Israel	55	Andorra	151
Jordan	56	Equatorial Guinea	152
Mexico	57	Guyana	153
Botswana	58	Albania	154
Poland	59	El Salvador	155
Papua New Guinea	60	Sao Tome and Principe	156
Cyprus	61	Honduras	157
Estonia	62	Serbia	158
Malaysia	63	Tonga	159
Russian Federation	64	Dominica	160
Belarus	65	Democratic Republic of the Congo	161
Vanuatu	66	Mali	162
Iceland	67	Saint Kitts and Nevis	163
Fiji	68	Seychelles	164
Niger	69	Antigua and Barbuda	165
Tajikistan	70	Cuba	166
Tunisia	71	Croatia	167
Algeria	72	Yemen	168
Burkina Faso	73	Bosnia and Herzegovina	169
Ghana	74	Libya	170
China	75	Maldives	171
Bulgaria	76	Rwanda	172
Turkmenistan	77	Bahamas	173
Ecuador	78	Iraq	174
Senegal	79	Vietnam	175
Kazakhstan	80	Barbados	176
Angola	81	Burundi	177
Morocco	82	Sudan	178
Egypt	83	Central African Republic	179
Solomon Islands	84	Sri Lanka	180

Table 13 (continued)

Country	Ranking	Country	Ranking
Micronesia (Federated States of)	85	Afghanistan	181
United Arab Emirates	86	Venezuela (Bolivarian Republic of)	182
Gabon	87	Lao People's Democratic Republic	183
Oman	88	Comoros	184
Eswatini	89	South Sudan	185
Nigeria	90	Saint Lucia	186
Trinidad and Tobago	91	Haiti	187
Suriname	92	Saint Vincent and the Grenadines	188
Turkey	93	Syrian Arab Republic	189
Timor-Leste	94	Eritrea	190
Nepal	95	Bhutan	191
Singapore	96	Myanmar	192

have presented the image that wealthy countries in the West are doing much more than their fair share to host and help refugees. In reality, roughly 85% of refugees are being hosted in low-and-middle-income countries (especially in the developing countries that neighbor the refugees' homelands), and many high-income countries are failing to create a fair and predictable system for protecting refugees.

Today, as numbers of refugees show no sign of decline but continue to grow year by year, the need for nation-states to demonstrate their commitment to refugee protection and to take more comprehensive action to protect refugee rights and well-being is greater than ever before. Efforts by individual countries to combat refugee crisis constitute a significant aspect of the global justice agenda, including, but not limited to, the provision of material assistance—food, shelter, and medical care—to refugees. Therefore, as in last year's annual report, we include refugee governance as a key issue area in the Global Justice Index. More specifically, this sub-index is created to rank nation-states according to their level of performance of and contribution to global justice in the domain of refugee governance. The CBDR-RC principle proposed by our project⁵⁹ can be applied to the issue area of refugee protection, which is truly an affair that involves the entirety of the international community.

2.6.2 Dimensions and Indicators

Consistent with the methods adopted in the Annual Report 2020, we introduce the two categories of performance and contribution to evaluate countries' influence on global justice in refugee protection. These two measurement categories are also used in other issue areas of the Global Justice Index in this project. Regarding performance, we use the number of exported refugees per 1000 population to measure a country's performance in reducing and preventing the export of refugees.⁶⁰ For

⁵⁹ Guo et al. (2019).

⁶⁰ It is assumed that the number of exported refugees is associated with a country's population.

contribution, five dimensions are used to measure countries' inputs and efforts to protect its imported refugees and enhance global refugee governance. These five dimensions are measured as follows: (1) number of imported refugees to per log (GDP);⁶¹ (2) implementation of refugee status determination (RSD), operationalized by the number of decisions made and proportion of positive decisions made; (3) participation in international refugee governance, measured by the membership of UNHCR and the signing of international agreements, including the 1951 Convention relating to the Status of Refugees and its 1967 Protocol; (4) national policies on refugee governance, including indicators such as the system for receiving, processing, and identifying refugees, planning for displaced populations, specific measures to provide assistance, disaster risk reduction strategies, and permission granting for temporary stays or temporary protection; and (5) living conditions for refugees, measured by the quality of refugee accommodation provided.

The main data sources for these indicators are the World Bank, the UNHCR Statistical Yearbook, UNHCR-Annex of Global Appeal, and the UN Report of World Population Policies (see Table 12). It is worth noting that the data for some indicators (e.g., national policies on refugee governance) are not yet available for 2019, but considering that these data do not change very much from year to year, we used records from the previous years to impute and estimate 2019 data. Based on the measurement strategies and multidimensional data, this sub-index provides a more comprehensive picture of promoting global justice through refugee governance by nation-states. Admittedly, there are some shortcomings in the measurement approach. With the improvement of refugee governance data, it is hoped that we will be able to develop this sub-index.

2.6.3 Results

Adopting the index construction method developed by this project, this sub-index ranks 192 countries according to their level of performance of and contribution to global justice in the issue area of refugee governance in 2019 (see Table 13). The ranking results are one of 10 sub-indices that make up the final Global Justice Index.

Global refugee governance faced increasingly complex and novel challenges in 2019. By the end of 2019, the total number of refugees in the world reached an estimated 26 million, a record high that more than doubled the number in 2010. Nearly every continent showed a significant increase in refugee numbers, with Venezuela alone seeing the massive forced displacement of 3.6 million residents. Several major risks around the world have contributed to the refugee crisis in 2019, including the decade-long conflicts in Syria, which still shows no signs of ending, the successive refugee flows caused by the conflicts in eastern Ukraine that began in 2014, the political instability and ethnic tensions in Myanmar that led to a growing flow of refugees to Bangladesh, the armed conflict in South Sudan that began with its independence and sparked massive displacement, the economic collapse and

⁶¹ It is assumed that a country's capacity in accommodating and protecting imported refugees is largely determined by its economy.

political chaos in Venezuela that displaced millions of vulnerable people, renewed conflict and violence in Libya, Somalia, Yemen, the Democratic Republic of Congo, and the Central African Republic, which uprooted people from their homes, and the lingering wars in Afghanistan and Iraq that continued to produce large displaced populations, as well as blocked refugee routes through the Mediterranean Sea, the Caribbean Sea, and Southeast Asia, which have worsened the humanitarian crisis. More profoundly, the novel coronavirus crisis, which emerged at the end of 2019, is expected to further escalate the displacement crisis for a large population worldwide, as well as creating a threat to the health and livelihood of the existing refugee population.

The 2019 rankings for the promotion of global justice in the domain of refugee governance generally remained steady with respect to the 2018 data, in spite of slight changes in the specific ranking orders in some places. Of the top 10 countries in the 2019 index, 8 are in Europe, 1 in North America (Canada), and 1 in Latin America (Brazil). Among the bottom 10 countries in the 2019 ranking result, 4 are in Asia, 3 are in Africa, and the remaining 3 are in Latin America. The top 10 countries exporters of refugees are Syria (6.61 million), Venezuela (3.67 million), Afghanistan (2.72 million), South Sudan (2.23 million), Myanmar (1.07 million), Somalia (900,000), Democratic Congo (800,000), Sudan (730,000), Central African Republic (610,000), and Eritrea (500,000). These countries were all hit hard by prolonged wars, protracted conflicts, ongoing insecurity, and widespread violations of human rights. As a consequence of this, people cannot receive education, health care, physical security, financial support, or other forms of social support that are needed to live decently, who then were compelled to flee into other countries and became refugees. Then, the prolonged devastation continued to prevent the refugees from returning home safely. Of the 10 countries listed above, 7 had with the largest refugee populations in 2010. That is to say, the refugee crisis in these places persisted for almost a decade. The largest numbers of refugees in the world are in West Asia, East Africa, and Southeast Asia. The top 10 nation-states that hosted the most refugees in 2019 were Turkey (3.57 million), Colombia (1.77 million), Pakistan (1.41 million), Uganda (1.36 million), Germany (1.14 million), Sudan (1.05 million), Iran (970,000), Lebanon (910,000), Bangladesh (850,000), and Ethiopia (730,000). It is obvious that, with the exception of Germany, developing countries in conflict-affected areas shouldered a disproportionately large responsibility for displaced populations. Only a few refugees were granted asylum in advanced Western countries, and the flow of refugees across continents was rather limited. The UN estimated that China accepted roughly 300,000 refugees in 2019, representing an increase from the previous year.

The 1951 Refugee Convention and its 1967 Protocol created the key international legal foundation for the protection of refugee rights and the provision of safety and assistance to refugees by the UN and countries around the world. The vast majority of the world's nations, that is, 149 countries, are parties to either or both of the two conventions. They agreed to accept a common definition for the term "refugee," formulated state-level legal and administrative frameworks for refugee protection,

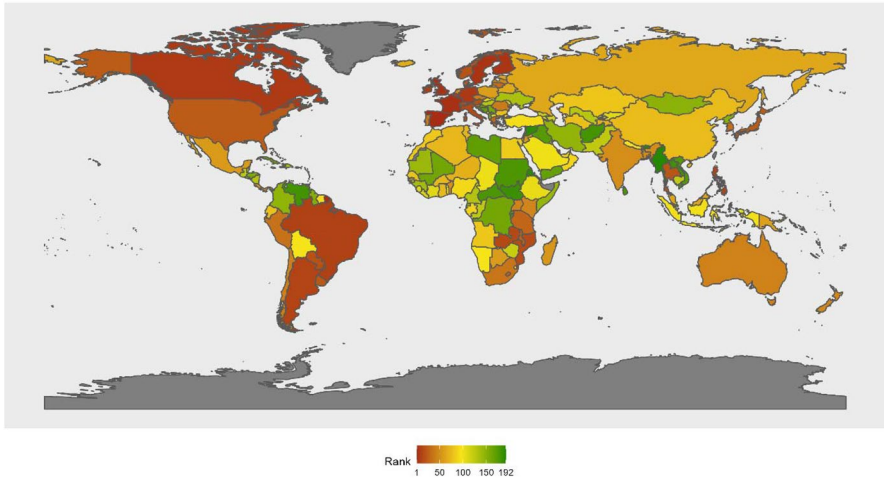


Fig. 6 2019 index ranking of refugee governance on a world map

and pledged to provide refugees with access to fair and efficient asylum procedures. However, 44 UN member states have not acceded to the international refugee conventions, most of whom are Asian countries (especially in the Middle East, South Asia, and Southeast Asia). However, not participating in an international agreement does not imply that a country is not engaging with the international refugee regime and refuses to take part in refugee assistance or protection activities. Indeed, some non-signatory countries have actually been among the world's top refugee-hosting countries (such as Pakistan, Bangladesh, and Lebanon) and work very closely with the UN on various refugee protection projects (including the introduction of refugee assistance policies and the provision of refugee living situations). Therefore, the international refugee conventions still exert a certain influence on non-signatory nations.⁶²

2.6.4 Regional Analysis

Our index ranking shows that North America and Europe lead the world in promoting global justice in the issue area of refugee governance. They are followed successively by Oceania, Latin America, Asia, and Africa, with the last four showing a small gap in their 2019 index score. However, varying performance between sub-regions can be identified within each continent. In some cases, the within-continent difference is even greater than the difference between continents, which further indicates that the refugee crisis and its governance performance are often geographically clustered (see Fig. 6).

⁶² Janmyr (2021).

Asia The refugee problem in Asia is extremely challenging and remains largely unresolved, especially in Southeast Asia, South Asia, and West Asia. Asia hosts the largest refugee population in the world and therefore scores high on this dimension. However, few countries in Asia have acceded to the 1951 Refugee Convention or its 1967 protocol. Most have not even formulated any specialized domestic policies for refugee governance, not to mention any legal or administrative framework for addressing refugee protection issues. Therefore, Asia as a whole scored lower on the two indicators of participation in international refugee agreements and RSD numbers. Moreover, very few Asian countries are able or willing to proactively provide protection or assistance to refugees, and in many cases, refugees (even if registered with UNHCR) are often treated in the same way as illegal immigrants, being subject to detention or deportation. Countries that have no choice but to host refugees from neighboring countries for geographical reasons are also unable to provide refugees with legal asylum status or basic material support that they require to live decently.

Asia is a large continent that has tremendous political, economic, social, and natural diversity. The refugee crisis and its governance performance also varied substantially among the subregions and countries within Asia. In 2019, only 5 Asian countries ranked among the top 50 in the index of promoting global justice through refugee governance, namely, the Philippines, Thailand, Japan, South Korea, and India (see Fig. 6). The Philippines ranked first in Asia and twelfth globally in 2019, up three places from last year. It is one of the few countries in Southeast Asia to have signed the 1951 Refugee Convention and the 1967 Protocol, and it has also enacted robust refugee asylum procedures, so it scores high on indicators of International Agreement Participation, Refugee Policy, and RSD Positive Ratio. As Yasser Saad, UNHCR Philippines' Head of Office, said, "at a time when expressions of solidarity are becoming rare, at a time when inward-looking, security-focused policies become dominant, Filipinos remains a beacon of hope and humanitarian spirit."⁶³ Although Thailand has not signed international refugee conventions, it performed well in terms of hosting imported refugees and improving refugee protection policies in 2019. Thailand has long been a major destination country for refugees from Myanmar. The refugee camps on the Thai-Myanmar border currently accommodate about 100,000 Myanmar refugees. Japan's global ranking in 2019 remains at 22nd. Japan is a member of the 1951 Refugee Convention, and its refugee protection policies have been further developed and improved in recent years. Due to the domestic political polarization in the country, only 44 refugees were accepted from out of the 10,375 asylum applications in 2019. South Korea is also a party to the 1951 UN Refugee Convention. Over the last decade, it has received more and more asylum applications, reaching over 15,400 in 2019. Compared with other Asian countries, South Korea's legal framework for handling refugee flows is rather advanced. However, its ratio of accepted refugees has been fairly low.

In addition, some parts of West Asia (e.g., Syria) have been stuck in perpetual conflicts and turmoil, leading to a large influx of refugees into neighboring countries. Turkey, Jordan, and Lebanon received the largest number of refugees in the

⁶³ See <https://www.unhcr.org/ph/11886-9wavesrefugees.html> (accessed on December 25, 2021).

world, and they are also the largest destination countries for most displaced Syrians. These developing countries provided a lower level of protection and assistance for imported refugees. Nevertheless, they have shouldered the greatest economic and social burden for the resettlement of Syrian refugees. Jordan, for example, has been a gracious host and has taken in and sheltered more than 1.3 million Syrian refugees (both registered and unregistered), although many still live in hunger and poverty. Afghanistan, Syria, and Myanmar, the three largest refugee-exporting countries in Asia, are in the lowest ranks of the 2019 index, which also have accelerated the refugee crisis in Central Asia, West Asia, and Southeast Asia. Refugees who migrated to neighboring countries are largely restricted from being able to return home due to regime instability and armed conflicts, such as refugees from Afghanistan, who have been stranded in Iran and Pakistan for prolonged periods. Continuing from last year, Myanmar remains at the bottom of the rankings in Asia and globally in 2019. Its Rohingya refugee crisis has been slow to resolve. At least one million Myanmar refugees have been displaced due to persecution and armed conflicts, and some are even living hand-to-mouth.

Europe Europe's refugee crisis made international headlines over a long period. Refugees from Africa and the Middle East poured into Europe from their home countries through the Mediterranean Sea or Turkey, fleeing repression, conflict, and war and aiming to reach different destination countries. Europe as a whole performed well in the 2019 rankings for advancing global justice in the issue area of refugee governance (see Fig. 6), and it also significantly outperformed other continents across most dimensions and indicators. In particular, it scored high on the two indicators of participation in international refugee conventions and the number of RSDs, in spite of the fact that the number of refugees hosted in Europe declined slightly in 2019. Most European countries are signatories to the 1951 Refugee Convention and its 1967 protocol, but their specific refugee policies, refugee application procedures, and refugee resettlement conditions vary widely, especially between Western Europe and Southeastern Europe. Moreover, the burden is not equally shared across countries. To deal with the refugee crisis in a more unified and orderly manner and implement sharing of responsibility, a series of regulations and norms have been introduced or revised at the EU level to guide and coordinate the actions of the member states.⁶⁴

Within the region, Western and Northern Europe account for 8 of the top 10 countries in the 2019 index. Although there has been a slight change in the ranking order relative to that of 2018, the Western and Northern European countries of Spain, France, Germany, the United Kingdom, Sweden, and Finland remain firmly in the global top 10. These countries score high on the indicators of engagement in international refugee conventions, the number of RSDs, and the provision of refugee protection and support. For example, Germany is the largest host country for refugees in Europe. As of the end of 2019, there were approximately 1.15 million refugees hosted across Germany, half of whom were Syrian refugees who arrived after 2014. The German government has strived to provide fair, efficient, and effective

⁶⁴ Biondi (2016).

protection for refugees, not only for humanitarian reasons but also to supplement the labor shortage for an aging Germany. Other Western, Northern, and Southern European countries also performed relatively well. Italy, for example, ranks 13th globally in 2019, largely because it hosts and resettles large numbers of African refugees, who come to Europe via the Mediterranean Sea. However, the recent flows of asylum seekers and refugees into Europe have also caused domestic political divisions within these countries, with voices against refugees and migrants re-emerging in social media, politicians' discourse and daily interactions. In Eastern Europe, Hungary, Croatia, and other countries still rank relatively low in the 2019 index. These Eastern European countries actually bear the brunt of the refugee crisis, but have very limited institutions and resources to host frequent arrivals of displaced populations. A large number of refugees attempt to enter Europe through the Western Balkan corridor. Some Eastern European countries (such as Hungary and Poland) have adopted very tough border control policies and have deported refugees who have already entered, not to mention providing inadequate aid and benefits for refugees.

North America North America as a whole is the leader in promoting global justice in the issue area of refugee governance and has slightly increased its overall index score in 2019. Canada ranks 7th in the world, remaining in the top 10 countries. The ranking of the United States has also risen from 26th in 2018 to 23rd in 2019 (see Fig. 6). Although the performance of the two countries has been relatively stable in recent years, Canada's contribution to global justice in the field of refugee governance is significantly superior to that of the United States. In the 2019 index, Canada has good scores in indicators such as the number of refugees received, the proportion of positive cases for RSDs, national refugee policies, and refugee housing situations, with its score on all these dimensions maintaining in the top 50 in the world. In particular, it performs very well in the number of RSDs and few numbers of refugees exported. Canada is also a party to the 1951 Convention relating to the Status of Refugees. The Canadian government established a comprehensive refugee protection system, including standardized refugee claim procedures and status decision-making processes, programs to provide refugees with living assistance and financial support, and more.⁶⁵ People can apply for refugee protection in Canada through different resettlement programs, such as the Government-Assisted Refugees Program and the Private Sponsorship of Refugees Program. The Immigration and Refugee Board of Canada is responsible for reviewing and deciding if the claimant qualifies for refugee protection.

As an immigrant country, the United States scored higher than most countries in the world on the three indicators of the number of refugees received, number of RSDs, and numbers of exported refugees in 2019, which were all ranked in the top 50 globally. However, the United States ranks lower in participation in international refugee conventions (not among the formal list of state parties to the 1951 Refugee Convention or its 1967 protocol), and shows mediocre performance in the percentage of positive cases for RSDs and the provision of housing conditions for refugees.

⁶⁵ See <https://www.cic.gc.ca/english/helpcentre/results-by-topic.asp?top=11> (accessed on December 29, 2021).

In 1980, the US promulgated the Refugee Act and set up the Office of Refugee Resettlement, which has since accepted a large number of refugees (more than 3.1 million) from all around the globe. It usually takes about two years (an average range of 18–24 months) for US agencies to screen and vet a refugee, with the total processing time varying depending on an applicant's specific circumstances. Numerous US federal agencies (at least eight) are involved in the screening process of refugees, during which refugees are supposed to go through several rounds of background checks and interviews. This process has become increasingly complicated in recent years, and this has increased the length of the wait. The annual refugee admissions ceiling to the US in each fiscal year is determined and issued by the president in consultation with the Congress. The number of refugees admitted to the US in 2019 was 30,000, a decrease of 15,000 compared with that of 2018. This dramatic reduction from the historic average has been mainly driven by a recent wave of polarized anti-immigration politics in the country (increasing after President Trump took office in 2016; he reduced the cap on refugee admissions via executive order and issued a travel ban that prevents individuals from North Korea, Syria, Yemen, Iran, Libya, Somalia, and Sudan from entering the country).

Latin America Latin America as a whole still performed poorly in refugee governance in 2019 (see Fig. 6), with its overall score remaining among the worst of all the continents. The region has been one of the areas hit hardest by refugee crisis. As a whole, it lags far behind Europe and North America in indicators such as refugee protection policies and in the proportion of positive cases for RSDs. Moreover, the unfavorable conditions including military conflicts, economic crises, natural disasters, and organized crimes have led to the displacement of millions of people from Latin America, and the numbers are on the rise in 2019. While most Latin American countries (with the exception of Cuba and Guyana) are parties to the international refugee conventions⁶⁶ and some countries have established open and inclusive refugee resettlement policies, the reception capacity is rather limited and currently faces unprecedented challenges, with over one million refugees in the region still awaiting some form of response in 2019. This highlights the need to reform and improve the legal and administrative frameworks for refugee protection in this region. Some Latin American countries, including Mexico, Costa Rica, Guatemala, Honduras, and Panama have begun to work together to carry out the regional Comprehensive Refugee Response Framework for Central America and Mexico, fostering cooperation between countries of origin, transit and destination for a common strategy and greater responsibility-sharing in governing refugee crisis.

Latin America also shows economic and social diversity. Its three subregions of South America, Central America, and the Caribbean show great differences in the performance with respect to refugee governance. Generally speaking, as in 2018, South American countries (such as Brazil, Argentina, Paraguay, Uruguay, Peru, and Chile) scored significantly higher than Central American countries and Caribbean countries, albeit with a slight change in the ranking order of the countries from the previous year. For instance, Brazil and Argentina were, respectively, ranked tenth

⁶⁶ Chile and Haiti acceded to the 1954 and 1961 Convention in 2018.

and eleventh in the world in 2019 (both a slight increase from 2018), and Mexico had the moderate ranking of fifty-seventh, while Honduras, Nicaragua, Cuba, and Haiti were left far behind. The refugee crisis in Central America and the Caribbean is mainly caused by organized crime, political tensions, natural disasters, and social violence, which, coupled with persistent poverty and fragile state, have forced a vast number of people to flee abroad in search of safety. For example, Nicaragua's political instability and social conflicts have intensified in recent years, leading to a large outflow of refugees to neighboring Costa Rica and Panama. For another example, Haiti has been hit by various natural disasters such as earthquakes, hurricanes, floods and landslides all the year round, resulting in the displacement of thousands of people and a large number of new refugees every year. In 2019, due to the long-term economic recession, rising inflation and prolonged governance chaos, large-scale social protests and anti-government riots broke out in Haiti, which further exacerbated the refugee crisis in the already weak country. This compelled growing numbers of children, women, and men to leave for nearby countries and beyond, as far as to the US-Mexico border. In South America, Venezuela is an exception. Its index score was at the bottom of the subregion and globally (182nd in the world in 2019, down more than 40 places from 2018). Over the past few years, Venezuela has been mired in ongoing political turmoil, international sanctions, and economic collapse. Its people suffer from a lack of food, medicine and essential services.⁶⁷ As of the end of 2019, about 4.6 million Venezuelan refugees and migrants have emigrated overseas, of which 80% are stranded in Latin American countries with no prospect for return in the short term, making the largest displacement crisis in the region (its negative impacts are even more severe than those of the Syrian refugee crisis). For example, the number of Venezuelan refugees that Peru took in has increased more than five-fold, rising to as high as 190,000 reported in 2018, which exacerbated Peru's already serious economic pressures and social inequalities. In response, UNHCR launched a plan to raise \$1.35 billion in 2019 to ease the growing humanitarian crisis and support the refugee-hosting countries.⁶⁸

Africa The refugee problem in Africa is very serious. The overall index score of the continent in the domain of refugee governance is relatively low, compared with other regions (see Fig. 6). In 2019, the average ranking of all African countries was around 100 globally. Africa has among the largest population of refugees. About 30 million people in Africa were forcibly displaced in 2019, continuing an upward trend since 2011. Among those who were displaced, about 30% are refugees crossing borders, representing almost one-third of the world's refugee population. Africa scores high on the number of refugees hosted and the proportion of positive cases in which RSDs are made, but it performs poorly on securing living conditions for refugees. Some developing countries in Africa host a disproportionate number of refugees from their neighboring countries. For example, Ethiopia has taken in approximately

⁶⁷ See <https://www.brookings.edu/blog/up-front/2019/12/09/venezuela-refugee-crisis-to-become-the-largest-and-most-underfunded-in-modern-history/> (accessed on December 29, 2021).

⁶⁸ See: <https://www.unhcr.org/news/press/2019/11/5dcdbd7284/us135-billion-needed-help-venezuelan-refugees-migrants-host-countries.html> (accessed on December 28, 2021).

740,000 refugees, mostly from Somalia, Sudan and South Sudan, representing one of the largest refugee populations in a single African country. Similar to the pattern seen globally, the refugee population in Africa is also on the rise. Some African countries that have long been mired in armed conflicts and social unrest (such as the Democratic Republic of the Congo, South Sudan, the Central African Republic, and Nigeria) continue to produce large numbers of new displacements. At the same time, refugees who already crossed the border are finding it increasingly difficult to return to the land where they were born due to political instability and security concerns.

Within the continent, significant variance in the performance of refugee governance can be observed across subregions in Africa. Generally speaking, countries in North Africa and Southern Africa performed much better, while Central Africa, East Africa, and West Africa have long been confronted with large flows of refugees driven by armed conflicts and regime instability, making refugee governance extremely difficult. First, in North Africa, Tunisia, Morocco, and Egypt ranked relatively high among African countries in 2019, which are all scoring high on the indicators of participation in international refugee conventions, the number of refugees accepted, and asylum policies for refugees. However, Libya is an exception to North Africa, which ranks near the bottom of the 2019 index. Libya is not a state party to the international refugee conventions and has not issued related refugee policies. Moreover, political tensions in Libya have escalated in recent years. In 2019, an armed conflict broke out in the capital Tripoli between the government security forces and the so-called Libyan National Army, which directly led to the displacement of more than 400,000 people. Some migrants were even facing targeted persecution and attacks by armed men. A large number of Libyan refugees tried to venture across the Mediterranean on flimsy boats to flee security threats and survival challenges by seeking protection and safety in Europe, but many either cannot afford the rising costs or are repatriated upon arrival in Europe. Those who are taken back to Libya are placed in official detention centers and suffer a circle of horrific extortion and abuse. Southern Africa is a relatively well-developed and stable region. Zambia, Mozambique and Tanzania are among the countries that perform best in the issue area of refugee governance in this subregion and even in the whole Africa. They have scored high on indicators such as participation in international refugee conventions, providing various refugee policies, and generating fewer numbers of exported refugees, and they are also hosting millions of DRC refugees. For example, Zambia demonstrated extraordinary political will to support the Global Compact on Refugees, by including refugees in the national agriculture input support programs and promoting social-economic integration of refugees.

Second, in Central Africa, East Africa, and West Africa, the refugee governance of most countries has been very poor. As a result, they are ranked much lower in the 2019 index. Armed conflicts in these areas prolong, accompanied by extremely devastating problems such as terrorism, ethnic oppression, and social tensions, which have resulted in the forced displacement of large numbers of vulnerable people. In addition, with unfavorable conditions such as fragile states, stagnant economies, entrenched poverty, perennial climate problems (such as drought), and various public health crises, hundreds of thousands of African women, men and children are forced to leave their place of origin in search of the ability to survival and to find

opportunities. Within the subregions, the situations in South Sudan, Central African Republic, Democratic Congo, Rwanda, Burundi, and Somalia have been extremely alarming, as continued violence and conflicts have caused increasingly serious humanitarian crises for displaced people. The index rankings of these countries in 2019 are at the bottom regionally and even globally. It is no surprise that they scored very low on indicators such as participation in international refugee conventions, refugee policies, and the provision of housing for refugees. For example, the chaos in South Sudan has driven nearly more than 2 million people from their homes, entailing the largest refugee crisis in Africa, which so far still shows no signs of decline over the short term. Somalia has already faced nearly two-and-a-half decades of armed conflicts, compounded by natural hazards such as drought, which has led to the displacement of an estimated 870,000 refugees. Therefore, seeking durable solutions for refugees remains a critical priority for the governance agenda of countries in Central, Eastern, and West Africa.

Oceania The performance of countries in Oceania in advancing global justice through refugee governance has remained relatively steady, ranking slightly higher than Africa and Asia in 2019. Due to the region's special geographical location (countries with few shared land borders, spread across the Pacific Ocean), the scale of refugee flows in Oceania has been relatively low. In the 2019 index, Oceania has a low score for hosting imported refugees, and it also has mediocre performance in indicators such as the number of refugee status granted and the proportion of positive cases of RSDs; on the other hand, the number of refugees it exports was also low 2019. In addition, Oceanian countries demonstrate exhibit a lower degree of interest in participating in international refugee conventions. Most countries scored poorly in providing refugee assistance policies and proper living conditions. In recent years, Oceania has faced an increasing number of refugees from Southeast Asia, which poses a great challenge to the refugee accommodation capacity of most Oceanian countries, and also resulted in growing political tensions in some countries.

Within Oceania, three countries, Australia, New Zealand, and Papua New Guinea, had the top spots in the region and in the upper-middle globally, with positions of 43rd, 46th, and 60th, respectively, in 2019 (a slight decrease from 2018). The three countries are also the top refugee host countries in the region, with Australia hosting around 15,000 refugees and asylum seekers, Papua New Guinea around 9000, and New Zealand more than 3000. Australia and New Zealand are both parties to the international refugee conventions, pledging to offer at least 18,000 places and 1500 places, respectively, to the UN refugee resettlement program each year. Australia established a comprehensive RSD process, but its refugee policies have become increasingly exclusive and punitive in recent years. More specifically, refugees now have to wait up to 4 years to be granted permission by the Australian government to apply for protection. They can no longer apply for permanent residence and they cannot reunite with their immediate family members. Free legal assistance to refugees was also removed. At the same time, negative rhetoric and the stigmatization of imported refugees are rampant in the Australian media and among its politicians. To enhance its blocking of the influx of refugees from Southeast Asia, Australia has even set up offshore refugee processing centers in other Pacific nations, such

as Papua New Guinea and Nauru.⁶⁹ The sixth year of this policy fell in 2019. This approach is supported by both the ruling Liberal-National coalition and the labor opposition. Moreover, the military is put in charge of asylum operations, which routinely patrol Australian waters and send asylum seekers away in lifeboats. As a result, thousands of refugees have been stopped from reaching Australia, and refugees in the offshore detention camps have been subjected to abuses and punishment. These policy changes have had multiple physical and psychological repercussions for the large number of refugees awaiting asylum, drawing sharp criticism from international communities.⁷⁰ The UN has set up a dedicated watchdog in Canberra to urge Australia to make reforms and support those coming to Australia in search of protection.

2.6.5 Conclusion

A world such a large number of refugees cannot be viewed as a just world. Achieving global justice requires us to focus on addressing the increasingly serious global refugee problem and seek fundamental and durable solutions to the refugee crisis. Nation-states can play an indispensable role in this regard. By enhancing the refugee governance system and governance capacity, along with promoting domestic stability and economic development, nation-states can reduce the number of exported refugees, increase the capacity for hosting imported refugees, enact more comprehensive refugee policies, provide refugees with more targeted protection and assistance, and participate more actively and deeply in global refugee governance, thus substantially promoting global justice.

The ranking results and the above analysis show that countries' contribution for the promotion of global justice in the issue area of refugee governance varies significantly. Continuing the situation that prevailed in 2018, a great disparity in state performance can be identified in relation to the multiple aspects of refugee protection among different regions and subregions, between low-, middle-, and high-income countries, between origin countries and host countries, and between neighboring countries and distant countries. Armed conflicts and political tensions are the most critical drivers for the refugee crisis. Furthermore, ethnic oppression, economic collapse, and natural disasters can further exacerbate the displacement of refugees and their life challenges. To date, the vast majority of refugees (nearly 8 in 10) are hosted by countries neighboring crisis areas; these people often are unable to either seek asylum in a Western country or return to their homelands, which poses a serious risk to global justice. Today, with armed conflicts, populism, extreme nationalism, and xenophobic attitudes on the rise, the need for nation-states to provide protection to refugees falling within their competence and help refugees build safe, hopeful and productive new lives appears more urgent than ever before.

⁶⁹ See <https://www.refugeecouncil.org.au/nauru-report/> (accessed on December 30, 2021).

⁷⁰ Minns et al. (2018).

2.7 Issue 7: Anti-poverty

2.7.1 Introduction

A world that had global justice would be one where absolute poverty was substantially eliminated. If such a society still had a large number of people struggling for basic survival needs but without state assistance, it is not a just society. The problem of poverty is long a governance challenge that faces all regime types, especially underdeveloped countries and low-income regions. There are complex and diverse causes that produce poverty, and even if part of it can be attributed to individual-level factors, it seems that the leading cause of poverty is still largely institutional and structural, and it cannot be determined or changed by relatively powerless individuals. Modern states must intervene by taking systematic and lasting measures to eradicate poverty.

Most countries attach great importance to addressing the very worst of the poverty problem, adopting a variety of policy tools and national resources to help disadvantaged people escape the poverty trap. To pursue global justice and enable nation-states to better achieve their poverty reduction goals, the international community (especially the UN) has also incorporated the eradication of various forms of poverty into the 2030 Agenda for Sustainable Development and put it above many other priorities. Nevertheless, the efforts and performance of different countries in the field of poverty alleviation are not moving forward at the same pace. Some developing countries (such as China and India) have placed poverty alleviation at the center of their national strategies, addressing it with targeted policies. Through the continuous input of large amounts of state resources, they have successfully lifted millions of the most vulnerable and improved their living conditions. However, in some other countries (such as Iraq and Syria) which have been trapped in arm conflicts and political turmoil for a very long time, the government's agenda, coupled with the decline of state capacity and the lack of public resources, has been dominated by other more pressing matters. Thus, attempts to solve the poverty problem were left far behind. As a result, big differences can be witnessed in the will, ability, and performance of nation-states to address the issue of absolute poverty. This variance leads people living in different countries to face different survival challenges and enjoy distinct development opportunities, a threat to global justice. In other words, countries across the globe have made different contributions to global justice in the field of poverty governance.

Beginning in the new millennium, the anti-poverty cause has led to remarkable and sustainable progress worldwide, leading to a chance for mankind to completely end extreme poverty by 2030. Nevertheless, according to the latest World Bank estimates, as of 2018, at least 9% of the world's population remained in extreme poverty (defined as living on only US\$1.90 a day or less, based on 2011 purchasing power parity [PPP]). If we set the poverty line more moderately, World Bank data shows that roughly 24% of the world's population lives on less than \$3.20 per day and 43%

on less than \$5.50 per day.⁷¹ Given this, we need to stay vigilant and avoid being overly optimistic about anti-poverty achievements because the task of poverty eradication in various places is still very challenging and arduous, which poses a significant threat to global justice. The pursuit of global justice in the domain of poverty alleviation requires nation-states to scale up their contributions and enhance performance. In the face of various new uncertainties, countries must also maintain and consolidate the hard-won gains of poverty reduction that they had already achieved in previous decades.

Countries in the world are addressing poverty problems in the midst of varying circumstances, but they are also facing some common dilemmas and challenges. First, poverty alleviation has begun to suffer from diminishing marginal returns; that is, the same amount of input and effort does not generate the same poverty relief that it did previously. As a result, nation-states must scale up contributions and upgrade anti-poverty approaches to maintain stable poverty reduction performance. Second, nation-states must balance the different priorities of various policy agendas. Many state emergencies, such as international conflicts, regime turbulence, climate change, and public health crises, may impair a country's original anti-poverty scheme and crowd out poverty on the national agenda. Ensuring the sustainability of poverty alleviation policies and promoting risk prevention are key to safeguarding the continuous positive results of poverty governance. Third, the success of poverty reduction requires a sophisticated set of precise measures and policy-supporting systems, placing higher importance on national governability and state capacity. In addition to highlighting the bottom-up public engagement and social accountability in the way that international donors usually do, a country's policy implementation capabilities and top-down mandate should be observed, as they are particularly critical for fulfilling targeted anti-poverty goals. However, in many developing regions, the issue of state fragility remains an obstacle to the effectiveness of poverty reduction. Fourth, the sudden outbreak of the novel COVID-19 pandemic at the end of 2019 has largely slowed down economic development, causing a decline in business vitality and growth in unemployment, which produced in a lack of living supplies in many countries and regions. This has not only delayed the already-postponed process of global poverty reduction but also produced a great number of new poor, creating new pressures on poverty reduction initiatives in states. In summary, states are now facing new situations and novel tasks in the field of poverty governance. Realizing global justice requires nation-states to take swift, significant, and sustained action in their fight to end poverty. As an integral part of the Global Justice Index, the anti-poverty sub-index delineated in this section assesses the contribution of each country to global justice to address absolute poverty. On the one hand, this demonstrates the status quo of the issue area; On the other hand, it is also should prompt nation-states to contribute more efforts into helping the world's poorest and most vulnerable people.

⁷¹ World Bank (2020).

2.7.2 Dimensions and Indicators

To assess the contribution and performance of individual countries in the promotion of global justice in the issue area of poverty reduction, we must first provide a definition of poverty. Different approaches can be adopted to conceptualize, operationalize, and measure poverty. First, according to the World Bank, “poverty is pronounced deprivation in well-being.” However, the question then arises: what is well-being, and how do we find a reference point against which to measure deprivation?⁷² Traditionally, well-being refers to the possession of goods and materials that secure basic life necessities and meet socially recognized living standards under certain socio-economic situations; it is usually measured by incomes or expenditures at the lowest level. Governments around the world set their own national poverty lines based on their socio-economic conditions and the characteristics of their poverty-stricken population, and then they provide economic relief and physical well-being to the poor who are living below this poverty line. Because nation-states have introduced different poverty lines for domestic governance purposes, PPP should be applied as a benchmark to facilitate cross-country comparison. In 2011, the UN and the World Bank have defined three minimum levels of international poverty threshold based on the PPP. These are the global absolute minimums of \$1.90 per day, \$3.20 a day, and \$5.50 a day.

The above-mentioned approach to conceptualizing and measuring poverty is mainly based on monetary availability. However, since beginning of the twenty-first century, people have come to realize more deeply that poverty is not only the state of lacking a commonly accepted amount of essentials for a minimum standard of living but also a lack of capacity, a lack of rights, and a lack of opportunities. As Amartya Sen put it, poverty should be seen as deprivation of capabilities, which limits the freedom to achieve something and to function in society⁷³. Therefore, more and more people tend to believe that poverty cannot be measured solely in terms of income. Poverty is a complex and multidimensional concept that needs to take into consideration more comprehensive measurement indicators, including not only the lack of income but also low levels of health and education, shortages of clean water and sanitation, lack of voice, and poor access to other productive resources, and opportunities. For example, the Multidimensional Poverty Index issued by the UN has adopted a much more comprehensive operationalization approach to measuring poverty, encompassing three key dimensions: health (including nutrition and child mortality), education (including years of schooling and school attendance), and standard of living (including assets, housing, electricity, drinking-water, sanitation, and fuel).⁷⁴

The above concepts of poverty and measurement approaches can be defined as the thin and thick perspectives on poverty. The former is monetarily valued and focuses on a threshold of incomes or consumption levels below which individuals

⁷² Haughton and Khandker (2009).

⁷³ Sen (1993).

⁷⁴ See <http://hdr.undp.org/en/2021-MPI> (accessed on December 22, 2021).

are considered poor, and the latter is mainly non-monetary and relies on a sophisticated set of indicators. Consistent with the index construction method used last year, we strike a balance between the two perspectives, neither using a single measurement indicator nor incorporating an overly complex set of indicators. We seek a middle ground for the following reason: first, the anti-poverty index in this section is only one of the ten sub-indices aggregated to create the Global Justice Index. Many measurement dimensions and indicators used in the Multidimensional Poverty Index were included in the sub-indices of other issue areas (such as health, education, child protection, etc.) in this project. Secondly, according to the goods-based conception of global justice and the principle of CDDR, as proposed by this project,⁷⁵ we assume that the anti-poverty index should mainly focus on the action of nation-states to advance the quality of life for the least advantaged within their respective jurisdictions, as can be defined in two distinct categories: contribution and performance. Based on these concerns, when evaluating the efforts of individual countries to improve global justice in the field of poverty governance, we measure through the following two dimensions: (1) the reduction in poverty rate, used to measure the category of contribution, and (2) the poverty gap, used to measure the category of performance.

Two points must be elaborated. First, our anti-poverty index only focuses on absolute poverty. This is because it was created to measure the performance of nation-states in meeting the basic needs of the poor. Ending absolute poverty is among the most fundamental and urgent means of improving global justice, an issue area where individual countries are expected to assume CDDR. As noted in last year's Global Justice Index Report, although poverty is closely related to issues of inequality and vulnerability, it also are clear differences in terms of focus, content, measurement methods, and targeting solutions of the three. Inequality highlights the importance of even welfare distribution among the entirety of the population, which is usually measured by the Gini coefficient. Vulnerability focuses on resilience to poverty risks and the capacity to cope with life uncertainties, such as unemployment and disease. It is certainly true that resolving the problem of inequality and vulnerability will also form a contribution to the achievement of global justice, and it also requires nation-states to perform due-diligence responsibilities. However, relatively speaking, the eradication of absolute poverty is much more urgent and belongs among the most fundamental duties of nation-states.

Second, poverty is a worldwide challenge and a global phenomenon. The cosmopolitanism of global justice requires individual countries to fulfill their international obligations to help other underdeveloped countries and regions (especially extremely poor countries) to end absolute poverty. This dimension surely is of great importance, but it is covered earlier in this report, in the issue area of humanitarian aid, so there is no need to recalculate it within the anti-poverty index for this section. In short, given the poverty concept and analytic purposes, our anti-poverty index focuses on the due-diligence responsibility of nation-states in tackling absolute poverty within their own territories.

⁷⁵ Guo et al. (2019).

Table 14 Data on Anti-poverty

Category	Indicator	Data source	Coverage
Contribution	Poverty rate reduction (\$5.5, population-weighted)	World Bank	154 countries
Performance	Poverty gap (\$5.5)	World Bank	154 countries

Based on the above conceptual and theoretical considerations, to maintain consistency with last year's index report, we evaluate and rank countries in the field of poverty governance across two categories. (1) Contribution. This category is measured by the reduction in poverty rate, with population weighting, assessing how much a country's anti-poverty efforts improved over a particular year relative to the year before. The reference point is the world average. To calculate this value, the reduction of the poverty rate of a certain country in a particular year is taken relative to the reduction of the world's average poverty rate in that year. The difference generated by subtracting the two broadly refers to the extent to which the reduction in a country's poverty rate in a particular year exceeds the average level of reduction in poverty rate by all countries in the world. The difference is then weighted by the country's population, converting the excess from ratio to numbers, to measure the country's contribution to the world's poverty reduction goal. (2) Performance. This category directly measures by the poverty gap, which evaluates the achievement of a country in terms of poverty alleviation in a particular year.

The World Bank is the main source of data for our anti-poverty index.⁷⁶ It defines three widely recognized international poverty lines, ranging from extreme to moderate levels based on PPP in 2011, making it possible to gain a comparable sense of poverty governance in nearly all countries. To ensure the country coverage, accessibility, and quality of the poverty data and at the same time to stay consistent with the methods adopted last year, this project uses a higher-valued poverty threshold, the international poverty line at \$5.50 a day (see Table 14). First, the data based on this international poverty line not only cover most developing countries but can also include many upper-middle-income countries and high-income economies as well, which is conducive to demonstrating a more complete global picture of poverty governance. Second, the poverty line at \$5.50 a day is more relevant to today's economic condition. The higher threshold puts forward more requirements on nation-states in pushing them to fight against absolute poverty, a way to enhance global justice. Although the anti-poverty index in this project does not include multidimensional poverty indicators and relative poverty indicators, nation-states should not stop at seeking to meet the lowest standard (consumption expenditure at \$1.9 per day in 2011 PPP).

Unfortunately, the World Bank data suffer from a serious problem of missing values. Further its annual update is relatively late, with 2019 data missing for some countries. To solve these defects, we have introduced some technical approaches

⁷⁶ The R package `povcalnetR` provides an API for the data retrieving.

Table 15 Country rankings in anti-poverty aspect of promoting global justice in 2019

Country	Ranking	Country	Ranking
China	1	Armenia	77
India	2	Bolivia (Plurinational State of)	78
Vietnam	3	Fiji	79
Iceland	4	Colombia	80
Azerbaijan	5	Mexico	81
Slovenia	6	Samoa	82
Slovakia	7	Tuvalu	83
Switzerland	8	Gabon	84
Czechia	9	Bhutan	85
Malta	10	Georgia	86
Cyprus	11	Tajikistan	87
Finland	12	Egypt	88
Croatia	13	Iraq	89
Belarus	14	Maldives	90
Germany	15	Pakistan	91
Belgium	16	Cabo Verde	92
France	17	Guatemala	93
Netherlands	18	Myanmar	94
Norway	19	Indonesia	95
Denmark	20	Kyrgyzstan	96
Poland	21	Philippines	97
Luxembourg	22	Venezuela (Bolivarian Republic of)	98
United Kingdom of Great Britain and Northern Ireland	23	Nicaragua	99
Hungary	24	Ghana	100
Malaysia	25	Mauritania	101
Ireland	26	Botswana	102
Japan	27	Honduras	103
Republic of Korea	28	Sudan	104
Canada	29	Gambia	105
Russian Federation	30	Namibia	106
Australia	31	Nepal	107
Lithuania	32	Kiribati	108
Austria	33	Uzbekistan	109
Lebanon	34	South Africa	110
Latvia	35	Comoros	111
Sweden	36	Zimbabwe	112
Montenegro	37	Lao People's Democratic Republic	113
Bosnia and Herzegovina	38	Micronesia (Federated States of)	114
Uruguay	39	Cameroon	115
Thailand	40	Vanuatu	116
Kazakhstan	41	Bangladesh	117
Seychelles	42	Ethiopia	118

Table 15 (continued)

Country	Ranking	Country	Ranking
Serbia	43	Haiti	119
Ukraine	44	Cote d'Ivoire	120
Portugal	45	Papua New Guinea	121
Israel	46	Guinea	122
Bulgaria	47	Solomon Islands	123
Estonia	48	Sao Tome and Principe	124
Spain	49	Senegal	125
United States of America	50	Eswatini	126
Republic of Moldova	51	Angola	127
Turkey	52	Kenya	128
Mauritius	53	Congo	129
Italy	54	United Republic of Tanzania	130
Greece	55	Chad	131
Republic of North Macedonia	56	Burkina Faso	132
Romania	57	Uganda	133
Chile	58	Togo	134
Costa Rica	59	Rwanda	135
Jordan	60	Timor-Leste	136
Iran (Islamic Republic of)	61	Niger	137
Panama	62	Mali	138
Dominican Republic	63	Sierra Leone	139
Algeria	64	Liberia	140
Paraguay	65	Benin	141
Tonga	66	Nigeria	142
Albania	67	Lesotho	143
Mongolia	68	Yemen	144
Morocco	69	Zambia	145
Tunisia	70	Mozambique	146
Brazil	71	Guinea-Bissau	147
Peru	72	Malawi	148
Ecuador	73	Central African Republic	149
El Salvador	74	Democratic Republic of the Congo	150
Jamaica	75	Madagascar	151
Sri Lanka	76	Burundi	152

for data imputation. More specifically, we use linear functions or trends in GDP (as an auxiliary variable) to impute missing poverty estimates for the World Bank.⁷⁷

⁷⁷ To maintain consistency with last year's report, our imputation methods are kept, as follows: if there are data before and after the year with missing data, we impute the data of the missing year with simple linear function. Suppose l is an income/consumption level (the poverty line), y_{-1} and y_{+2} are years with available data, and y is the year with missing data, where $y_{-1} < y < y_{+2}$. Denote $p(l, y)$ as the rate of people whose income/consumption is less than l in the year y . Our imputation method then is

Although the data availability and quality have largely restricted us from being able to compare and rank all nation-states, we did our best to cover as many countries as possible through data imputation and forecasts, to lay a solid foundation for the construction of the aggregated Global Justice Index in the last step.

2.7.3 Results

Following the index construction processes and methods developed by this project, this anti-poverty sub-index ranks 152 countries according to their level of performance of and contribution to global justice in 2019 in the issue area of anti-poverty (see Table 15).

According to his ranking, China and India made the greatest contributions to global justice in the issue area of poverty reduction in 2019. The other top 10 countries are Vietnam, Iceland, Azerbaijan, Slovenia, Slovakia, Switzerland, Czech Republic, and Malta. These 10 countries have significantly higher scores than the world average in reducing the poverty rate, and they also show good performance in solving the problem of the poverty gap. These results are not much changed from those of 2018, indicating that the index construction method remains relatively robust and reliable.

China leads the ranking mainly because of the large number of poverty-stricken people in the country and the active commitment of its government to its due-diligence obligation in combating absolute poverty. China is the largest and most populous developing country in the world, and its own poverty situation has long been characterized by a high poverty rate, the great size of its poor regions, and a large poverty gap. After the Reform and Opening-up in the late 1970s, the Chinese government has implemented a number of top-level, well-organized large-scale poverty alleviation and development projects across the country to help citizens escape the poverty trap. These include: poverty alleviation implemented during the reform of rural economic systems (1978–1985), development-oriented poverty alleviation implemented during the period of rapid economic and social development (1986–1993); 10 years of poverty governance while implementing the Outline of Poverty Alleviation and Development Plan in Rural China (2001–2010); and in 2010, on the basis of the previous achievements in poverty reduction, a reformulation of the Outline of Poverty Alleviation and Development Plan in Rural China (2010–2020) to further accelerate poverty eradication and regional development. The radical goal here was to build a moderately prosperous society in an all-around way, to be completed by 2020, that is, to achieve the poverty reduction goal of the UN 2030 Agenda for Sustainable Development 10 years ahead of schedule. In 2014,

Footnote 77 (continued)

$p(l, y) = \frac{y-y_1}{y_2-y_1}p(l, y_1) + \frac{y_2-y}{y_2-y_1}p(l, y_2)$. If we have available data only on one side of the missing year, we use the country's GDP as an auxiliary variable in the imputation. More specifically, people's income/consumption is assumed to increase and decrease with GDP. Suppose that a country's GDP rises by 5%. By our assumption, people's income/consumption also increases by 5% in that country. We then impute missing values by calculating poverty estimates from the new income/consumption distribution.

China's leadership in Beijing began to design and promote its Targeted Poverty Alleviation Program. Using top-level designs and innovative mechanisms, efforts were made to ensure targeted poverty identification, measures targeted to poor households, targeted anti-poverty projects, targeted use of public funds, targeted dispatch of party cadres, and accurate evaluation of anti-poverty results. One of the world's most ambitious programs to alleviate rural poverty, targeted poverty alleviation adopts a multidimensional definition of poverty and is intended to help the poor to eliminate two main concerns (i.e., concerns about food and about clothing) and provide three guarantees (i.e., compulsory education, basic health care, and safe housing). The new program distinguished itself from previous poverty reduction efforts by creating the first poverty alleviation model in Chinese history that specifically targets poor households and individuals. Over the past few years, China has considered poverty governance as a basic political responsibility of the party state, and it has used the performance of poverty reduction as an important indicator for evaluating local governments and public officials. A multidimensional and integrated poverty relief framework and a large-scale poverty governance scheme have been constructed, in which multiple measures, such as industrial poverty alleviation, technological poverty alleviation, education poverty alleviation, tourism poverty alleviation, financial poverty alleviation, and social poverty alleviation have all been taken to enhance the performance of poverty governance in China.

For its poverty governance, the Chinese government has established a unique bureaucratic management system that operates under the motto that the center coordinates, provinces take overall responsibilities, and cities and counties implement. Accordingly, the poverty-stricken provinces have taken the targeted poverty alleviation as the first livelihood project for people and prioritized it as a means of promoting the local economic and social development, forming a top-down implementation framework as follows: five-level party secretaries in provinces, cities, counties, townships and villages working together to carry out poverty alleviation policies.⁷⁸ After years of hard work, China's poverty-stricken population has been remarkably reduced, from 98.99 million at the end of 2012 to 5.51 million at the end of 2019. This means more than 10 million people have been lifted out of poverty each year, as the cumulative poverty reduction rate reached 94.4% over the past seven years, and the national poverty rate dropped from 10.2 to 0.6%. According to official data, the per capita net income of registered impoverished households across the country increased from 3416 RMB in 2015 to 9808 RMB in 2019, with an average annual increase of 30.2%. In addition, as of 2019, more than 9.6 million impoverished people have benefited state-sponsored relocation programs.⁷⁹ Overall, the recent Targeted Poverty Alleviation Program has not only brought tens of millions of poor people in China out of the poverty trap, but also presents a Chinese model for addressing global poverty and building a community with a shared future for mankind, making significant contributions to global justice. In recent years, China has also made efforts to promote its

⁷⁸ Zuo et al. (2020).

⁷⁹ See http://www.cpad.gov.cn/art/2020/3/6/art_624_114021.html (accessed on December 26, 2021).

experience in successful poverty alleviation to other developing countries, especially those in the global south.

India has the second-largest population in the world, and its poverty rate was once as high as 50%. Since independence, the government of India has committed to solving the problem of absolute poverty (especially rural poverty) by launching various poverty alleviation schemes and ensuring rural development, which has made outstanding contributions to global justice in the domain of poverty governance. The early poverty alleviation projects in India involved the Community Development Program, aimed at improving infrastructure construction and resource inputs, as well as, anti-poverty efforts through land and tenancy reforms, etc. However, these broad projects only met with limited success, largely because they did not directly target the poor. Since then, the Indian government has adopted reformed anti-poverty approaches and launched its Integrated Rural Development Program and the National Rural Employment Program. These new schemes were designed to target and benefit the marginalized rural population itself by providing income-generated assets to the poorest of the poor and creating sustainable opportunities for self-employment, as well as improving the living conditions of poverty-stricken people. Therefore, they achieved much better performance in poverty reduction than previous projects. After the 1991 economic reforms, tens of millions have escaped extreme poverty and improved their living standards, thanks in part to the country's robust economic growth and progressive globalization.

Since the 2000s, India has made remarkable progress in the fight against absolute poverty. In 2005, India passed the Mahatma Gandhi National Rural Employment Guarantee Act. This scheme guarantees to one person in each rural household a minimum of 100 days of wage employment annually. If the state government fails to provide a paid job within 15 days of application, the household receives an entitlement to a daily unemployment allowance. In 2011, India's Ministry of Rural Development and the World Bank jointly launched the National Rural Livelihood Mission, which provides the rural poor with financial services and comprehensive empowerment through market mechanisms. The mission was to harness the innate capabilities and social capital of the intended beneficiaries and complement them with the capacity and opportunities to participate in the growing economy of the country. At the same time, various social protection programs and other centrally sponsored schemes of the Indian government have also played significant roles in breaking the cycle of poverty. In addition, India has also introduced a range of targeted projects to address particular shortfalls in housing, food, and pensions, as well as other issues for the poor, carrying out a multidimensional anti-poverty approach. Recent estimates by the World Bank indicate that 300 million impoverished people in India have been lifted out of poverty through various government-sponsored programs over the past decade or so. As some critical studies have pointed out, the achievements made by India in poverty reduction do not seem sustainable, and some aspects of its poverty alleviation projects face difficulty in implementation. Some reported cases also indicate serious amounts of wasted funds and wide-ranging rent-seeking practices. Moreover, since the outbreak of the COVID-19 pandemic, there

has been a massive increase in the newly poor as a result of the public health catastrophe, bringing about new challenges to India's efforts in poverty alleviation.⁸⁰

Vietnam is a densely populated developing country. About 10% of its population (that is, more than 9 million people) are living in absolute poverty, and the poverty of ethnic minorities in the mountainous areas is particularly prominent. Vietnam has maintained a medium-high rate of economic growth in recent decades. The Vietnamese government has provided various types of anti-poverty support for impoverished areas and poor people. The problem of absolute poverty is therefore being alleviated, making Vietnam one of the first countries to achieve the UN Millennium Development Goals (halving its rate of extreme poverty). Like China, Vietnam not only launched a comprehensive National Poverty Reduction Plan but also focused on meeting the differentiated needs of the poor by targeting the different causes of poverty, as well as increasing special assistance for specific impoverished subgroups (such as ethnic minorities, children, and women). The main poverty alleviation projects carried out in Vietnam include the National Poverty Reduction Plan for 62 key poverty-stricken areas started in 2008, a skills training program for the rural poor that began in 2009, a financial support plan for ethnic minorities that was begun in 2010, the 2011–2020 National Poverty Alleviation Plan (i.e., Resolution No. 80) that was formulated in 2012, the 2012–2015 Poverty Alleviation Target Plan that was implemented in 2012, the poor household credit support plan and the poor area comprehensive support plan that were launched in 2013, and the 2016–2020 five-year National Poverty Alleviation Plan that was begun in 2016. These poverty alleviation plans together formed a comprehensive and sustainable national anti-poverty strategy, which not only aims to increase the monetary income of the poor but also targets investment in government-sponsored services such as health care, education, housing, finance, and skills training for impoverished population in rural areas, ethnic minority areas, and remote mountainous areas. This work has enabled poverty in Vietnam to continue to fall, particularly among ethnic minority groups, who saw their living standards improve significantly. According to data released by Vietnam's Ministry of Finance, the central government has spent a total of 42.33 trillion VND (about 1.83 billion US dollars) in direct expenditures to achieve the poverty reduction goal of the 2016–2020 Five-Year Poverty Alleviation Plan. The government's anti-poverty plan and continuous efforts, compounded by stable economic growth, have promoted the sustainable development of poverty-stricken areas and the significant reduction of poverty in Vietnam, making great contributions to the realization of global justice.

Among the 152 countries that have available data, the bottom-ranking countries in 2019 include Lesotho, Yemen, Zambia, Mozambique, Guinea-Bissau, Malawi, Central African Republic, the Democratic Republic of the Congo, Madagascar, and Burundi. These 10 countries perform significantly worse than the world average in reducing the poverty rate and addressing the problem of poverty gap. They are all located in underdeveloped areas of Africa, where various unfavorable factors,

⁸⁰ See <https://www.theigc.org/blog/poverty-eradication-in-india-successes-and-shortcomings-of-social-protection/> (accessed on December 26, 2021).

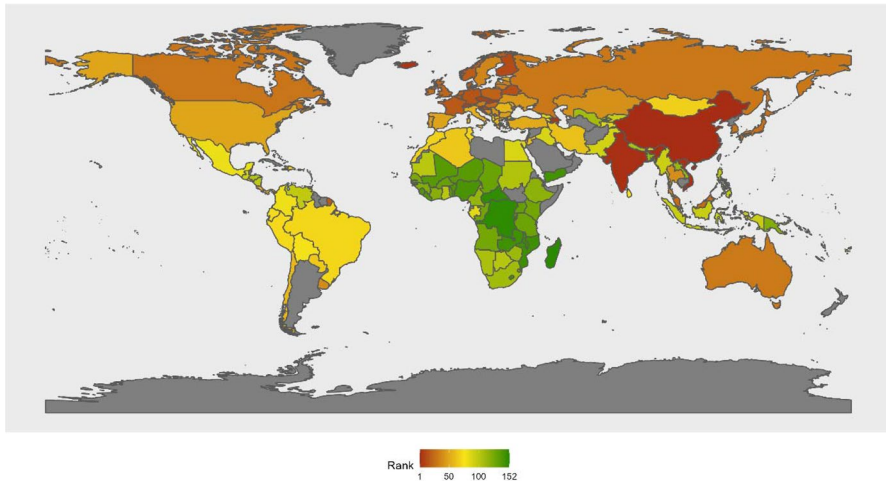


Fig. 7 2019 index ranking of poverty governance on a world map

such as rapid population growth, stalling economic growth, armed conflicts, political instability, poor education, and climate change have greatly hindered their poverty reduction performance. For example, Zambia is among the poorest countries in the world, with more than 80% of the impoverished population living in landlocked rural areas. Over the past two decades, Zambia's population has almost doubled, while the national economy, which had previously been growing at a high rate, has begun to stagnate. Poor healthcare coupled with persistent droughts, food insecurity and infectious disease (and especially a high prevalence of HIV) prevents the country from addressing its absolute poverty and providing its citizens with basic welfare. The Central African Republic consistently ranks among the highest levels of national poverty, despite its abundant natural resources. It has been caught in a cycle of political turmoil and military violence for many years, leading to large numbers of displaced people, both domestically and internationally. National resources and the state economy are largely concentrated in the hands of a small number of elite. As a result, the fragile state and its dysfunctional government are failing to work hard on due-diligence in poverty alleviation. Similarly, Burundi remains one of the poorest countries in the world, with roughly 70% of its population living below the absolute poverty line. It is grappling with numerous poverty challenges, owing to factors such as rapid population growth, serious food insecurity, lack of natural resources, frequent climatic disasters (such as floods), and poor access to education and health care, which have played significant roles in exacerbating poverty. Moreover, the repercussions of civil wars and recent socio-economic crises have adding to the pressure on poverty. To make matters worse, the fallout from the COVID-19 pandemic has amplified challenges for poverty governance in these countries and could lengthen the time in which they can meet their original anti-poverty goals. The pandemic has caused an increasing number of people to fall back into poverty due to illness or unemployment, further worsening the already alarming poverty

problem in these poorest countries. According to some estimates, the number of new poor will for the first time exceed the number of people who escape poverty in these countries in 2020,⁸¹ posing a novel threat to achieving global justice.

2.7.4 Regional Analysis

Poverty is a worldwide challenge. The progress of poverty reduction has been uneven between regions and within regions (see Fig. 7). Some regional factors may also restrict the contribution and performance of nation-states in promoting global justice in the issue area of poverty governance. The geographic breakdown of the regional ranking of poverty governance in 2019, from best to worst, is as follows: North America, Europe, Latin America, Asia, Oceania, and Africa.

Asia Poverty has long been a governance challenge to Asia. Relative to other continents, Asia as a whole has a relatively high poverty rate and poverty gap. Asia has had outstanding achievements in the field of poverty alleviation over the past few decades, with both the poverty rate and the poverty gap decreasing significantly, and tens of millions of poor people being lifted out of the poverty trap. This is partly due to political stability (except in West Asia) and relatively rapid economic growth. More importantly, it is also largely driven by the massive and consistent efforts made by some major Asian countries (such as China, India, Vietnam, and Malaysia) to combat poverty, which have taken up their obligations to promote global justice in the issue area of poverty alleviation. Within the region, it is no surprise that East Asia has the highest ranking in the 2019 index (see Fig. 7). China's recent initiative of targeted poverty alleviation has placed it first in the region and even globally. Japan and South Korea also attached great importance to the redistribution of welfare and state support for the poor. The performance of Southeast Asian countries varies greatly. Vietnam, Malaysia, and Thailand performed as well as they had the previous year, while Myanmar, Indonesia, the Philippines, and Laos fell slightly in 2019 and ranked relatively lower in Asia. Other poorly ranked regions include Central Asia (e.g., Kyrgyzstan, Uzbekistan, and Nepal) and some parts of South Asia (e.g., Bangladesh). Weak state capacity and insufficient governmental inputs have greatly challenged these countries as they seek to make more meaningful contributions to global justice in the issue area of poverty governance.

Europe Europe is second among all the regions in the 2019 anti-poverty index, just after North America (see Fig. 7). The European economy remains relatively stable, keeping both the poverty rate and the poverty gap much lower than they are in other continents. Unlike Asia and Africa, the poor population in Europe is mainly concentrated in urban areas. Solving urban poverty has been a major challenge facing most European countries. In recent years, both the EU and its member states have formulated various anti-poverty programs targeting the urban poor. Furthermore, recent reforms of welfare systems (particularly in the Nordic countries) and fiscal systems (particularly in the Southern European countries) have significantly reduced poverty in Europe. Within the region, countries in Western Europe and

⁸¹ World Bank (2020).

Northern Europe lead in anti-poverty performance, thanks to their advanced welfare systems and stable economies. In particular, Iceland, Finland, Switzerland, the Netherlands, and Norway had high ranks in 2019. Some Eastern European countries, such as Slovenia, Czech Republic, and Croatia, have also achieved good index scores, mainly because of their large poor population and their governments' recent efforts in the fight against poverty. However, some other countries in Eastern Europe, including Bulgaria and Romania, have been trapped in poverty for years. Similarly, most southern European countries (including Spain, Italy, and Greece) had low ranks, largely because these marginalized EU countries have suffered from the debt crisis, economic stagnation, and high unemployment. Even worse, increased political polarization on national welfare policies leaves the problem of poverty unresolved.

North America North America consistently ranks at the top in the anti-poverty index, and 2019 was no exception (see Fig. 7). Based on the \$5.5 international poverty line, the poverty rate in North America is around 1.6%, and its poverty gap is kept as low as roughly 0.01. Similar to Western Europe, both Canada and the United States are advanced economies, where most of the poor population lives in cities. When addressing urban poverty, the governments of the two countries often take targeted measures in policy areas such as employment, education, skills training, and social welfare. Canada's index ranking outperformed that of the US, twenty-ninth and fiftieth in the world, respectively, in 2019. Canada thus made a greater contribution to global justice in the domain of poverty reduction than the US. In 2018, Canada released its government report *Opportunity for All: Canada's First Poverty Reduction Strategy*, which advocates for further increases to public spending on welfare policies based on the investments that the government has already made since 2015. This includes promoting child benefits, workers benefits, financial security of vulnerable seniors, housing guarantees, and other projects. The target is to achieve a 20% reduction in poverty by 2020 and a 50% reduction in poverty by 2030, building a Canada without poverty.⁸² The US federal government and state governments have also taken various measures to address poverty, including social security, unemployment insurance, nutrition assistance, and many other targeted programs. However, its poverty issues are deeply intertwined with its ethnic politics, immigration disputes, political polarization, and partisan conflicts, which are usually politicalized. As a result, welfare policies that are conducive to poverty reduction cannot easily be passed in Congress, as they are often blocked by polarized partisan positions. This prevents the US from being able to make more tangible contributions to global justice in poverty alleviation.

Latin America In 2019, Latin America ranked higher than Asia and Africa in the anti-poverty index (see Fig. 7). Despite some fluctuations, both the poverty rate and the poverty gap in Latin America experienced declines over the past decade. Unlike other parts of the world, the poor in Latin American countries are located in both remote rural areas and in urban slums. The driving factors generating the

⁸² <https://www.canada.ca/en/employment-social-development/programs/poverty-reduction.html> (accessed on December 30, 2021).

two poverty groups are often quite different, which leads to great challenges to governments' poverty alleviation efforts. Within the region, South American countries generally outperformed Central America and the Caribbean, whose anti-poverty achievements were largely constrained by their weak state capacity and the high frequency of natural disasters. Governments in Latin America have been experimenting with innovative approaches to poverty reduction, the most important and influential of which is conditional cash transfers. This program is designed to support poor families with state cash payments upon the condition that the recipients participate in capacity-building activities, such as school attendance, skills training, and health care checkups. This is done with the intention of breaking intergenerational transmission of poverty through enhancing human capital. Most countries in Latin America have joined up with the program, which has attracted a lot of international attention and academic research. Nevertheless, in practice, clientelist allocation of government funds (such as politicians subsidizing voters in exchange for their support in elections) has greatly compromised the desirable effects of this innovative anti-poverty policy.⁸³ In recent years, poverty reduction has slowed in some Latin American countries. This is primarily caused by stagnant economies, rising unemployment rates, and changes in state policies in these countries.

Africa Absolute poverty has grown at an alarming issue for Africa, as the continent ranks last in the index of all the regions in the world. As mentioned above, the bottom 10 countries in the 2019 anti-poverty index are all from Africa (see Fig. 7). Measured either from the poverty rate or the poverty gap, poverty challenges are extremely prominent in Africa. Even though the poverty ratio in Africa has fallen over the past decade, the number of African people living under the international poverty line has actually increased, due to the substantial increase in its population. Africa now accounts for at least half of the world's poor, and this share is only expected to increase further as its population grows.⁸⁴ Subregionally speaking, North African countries rank significantly ahead of sub-Saharan African countries in the 2019 anti-poverty index, with Morocco, Tunisia, and Egypt all ranking high within the continent. For example, in 2019 the Egyptian government launched a groundbreaking anti-poverty plan to develop the 1000 poorest villages, which was then expanded to 4500 targeted villages in 2021, accounting for 58% of the country's population. By contrast, countries in the Central, West, and Southern Africa have been struggling with high poverty rate and big poverty gap. The 2019 index scores of some relevant countries (including Mozambique, Zambia, Central Africa, and Burundi) ranked at the bottom of the world. Various unfavorable conditions, including rapid population growth, prolonged political unrest, fragile state capacity, and harsh natural environment have jointly hindered the regions' contribution to global justice in the field of poverty reduction. Moreover, as a result of the economic shocks brought about by the COVID-19 pandemic, the poverty issue in sub-Saharan Africa is expected to further worsen in coming years.

⁸³ Ana Lorena De La O (2015).

⁸⁴ World Bank (2020).

Table 16 Data on education

Category	Dimension	Indicator	Data source	Coverage
Performance	Primary education	Primary completion rate, total (% of relevant age group)	World Bank; UNESCO	151 countries
		School enrollment, primary (% net)		
		Pupil-teacher ratio, primary		
		Children out of school (% of primary school age)		
	Secondary education	Lower secondary completion rate, total (% of relevant age group)		
Contribution	Government expenditure on education	School enrollment, secondary (% net)		
		Pupil-teacher ratio, secondary		
		Children out of school (% of secondary school age)		
		Government expenditure on education, total (% of GDP)		

Table 17 Country rankings in the education aspect of promoting global justice in 2019

Country	Ranking	Country	Ranking
Norway	1	Paraguay	77
Iceland	2	Peru	78
Denmark	3	Ecuador	79
Switzerland	4	Maldives	80
United States of America	5	Serbia	81
Sweden	6	Republic of Moldova	82
Australia	7	Trinidad and Tobago	83
Finland	8	Samoa	84
Netherlands	9	Eswatini	85
Belgium	10	Bhutan	86
Canada	11	Mongolia	87
Germany	12	Albania	88
Israel	13	Philippines	89
Ireland	14	Uzbekistan	90
New Zealand	15	Sao Tome and Principe	91
Austria	16	Thailand	92
United Kingdom of Great Britain and Northern Ireland	17	Jamaica	93
China	18	Azerbaijan	94
Kuwait	19	Sri Lanka	95
Japan	20	Georgia	96
Singapore	21	Armenia	97
Cyprus	22	Cabo Verde	98
Qatar	23	Jordan	99
Malta	24	Honduras	100
Cuba	25	Tajikistan	101
Italy	26	Timor-Leste	102
Monaco	27	Nepal	103
San Marino	28	Lesotho	104
United Arab Emirates	29	El Salvador	105
Spain	30	Ghana	106
Portugal	31	Central African Republic	107
Slovenia	32	Kyrgyzstan	108
Estonia	33	Guatemala	109
Andorra	34	Sierra Leone	110
Brazil	35	Rwanda	111
Czechia	36	Lao People's Democratic Republic	112
Russian Federation	37	Lebanon	113
Bahamas	38	Tunisia	114
Oman	39	Indonesia	115
Costa Rica	40	Guyana	116
Uruguay	41	Cambodia	117
Chile	42	Vanuatu	118

Table 17 (continued)

Country	Ranking	Country	Ranking
Latvia	43	Mauritania	119
Poland	44	Burundi	120
Hungary	45	Cote d'Ivoire	121
Lithuania	46	Malawi	122
Slovakia	47	Cameroon	123
Marshall Islands	48	Madagascar	124
Argentina	49	Afghanistan	125
Mexico	50	Burkina Faso	126
Croatia	51	Myanmar	127
Panama	52	Gambia	128
Barbados	53	Nicaragua	129
Suriname	54	Senegal	130
Seychelles	55	Mali	131
Bulgaria	56	Chad	132
Tonga	57	Djibouti	133
Mauritius	58	Guinea	134
Malaysia	59	Mozambique	135
Antigua and Barbuda	60	Benin	136
Botswana	61	Algeria	137
Saint Vincent and the Grenadines	62	Niger	138
Dominica	63	Kiribati	139
Belarus	64	Vietnam	140
Romania	65	Congo	141
Colombia	66	Uganda	142
Iran (Islamic Republic of)	67	Togo	143
Saint Lucia	68	Kenya	144
Ukraine	69	Zambia	145
Belize	70	United Republic of Tanzania	146
South Africa	71	Liberia	147
Namibia	72	India	148
Fiji	73	Bangladesh	149
Dominican Republic	74	Ethiopia	150
Kazakhstan	75	Pakistan	151
Egypt	76		

Oceanian Oceania outperforms Africa in the 2019 index ranking thanks to the efforts and contributions of the two major countries in the region, Australia and New Zealand (see Fig. 7). The Australian Council of Social Service is responsible for the country's initiatives to meet the 2030 UN Sustainable Development Goals, being committed to establishing a comprehensive social security system, promoting community service, improving senior care, and protecting the rights of indigenous

peoples. Similarly, New Zealand's Ministry of Social Development also has introduced various welfare policies to help disadvantaged groups (especially children and the elderly) improve their quality of life. However, as the remaining Oceanian countries are mostly small islands dispersed across the South Pacific, their magnitude of poverty is only exacerbated by their geographical isolation, natural disasters, and economic weakness. More importantly, weak state capacity and limited governmental exertions have further complicated the situation, either entrenching the problem of absolute poverty in these countries or even worsening it. In recent years, global warming has led to rising sea levels, which have caused territorial shrinkage of some islands countries (such as Tuvalu), putting more individuals and families at risk of being pushed into poverty.

2.7.5 Conclusion

The achievement of global justice requires the eradication of extreme poverty. To control global poverty, nation-states around the world are expected to undertake their due-diligence obligations by securing basic needs and minimum conditions for their citizens to enable them to function fully in society. The anti-poverty sub-index of this project focuses only on addressing the issue of absolute poverty and seeks to strike a conceptual balance between the thin and thick perspectives on poverty. However, the issue of relative poverty and a multidimensional approach to poverty alleviation should be considered equally important, calling for more targeted state actions in the future.

The 2019 results for promoting global justice in the issue area of poverty governance in general mirrored those of 2018, although the performance of some countries has experienced slight ups or downs. Remarkable progress has been observed in global poverty reduction over the past decade. However, the alarming reality is that the COVID-19 pandemic and its associated economic fallout will inevitably obliterate those hard-won gains and even plunge millions more into further poverty. Moreover, the repercussions of the pandemic will no doubt fall disproportionately on already poor countries, families, and individuals, broadening social injustice.

2.8 Issue 8: Education

2.8.1 Introduction

Education is 1 of the 10 issues chosen for the global justice assessment in this report. Not only is the right to education usually considered among the human rights but education is widely recognized as an indispensable means of realizing other human rights.⁸⁵ First, the expansion of education has made it possible for most people to gain access to it and to improve their literacy and other skills to let them perform better in the labor market. As a result, the expansion of education reduces income

⁸⁵ Andreopoulos et al. (1997) and McCowan (2013).

inequality.⁸⁶ Second, many studies have found that education causally affects health through economic (income), health-behavioral (smoking), and social-psychological pathways, as well as through access to health care.⁸⁷ That is, better education contributes to better health justice. Third, in that gender inequality in education is a widespread phenomenon, improvements in education can help to reduce gender inequality.⁸⁸

Historically, global inequality in education has been declining over time. According to one estimate, the share of people without any formal education at the world level decreased from round 73% in 1870 to 43% in 1950 and then to 15% in 2010. Although the Gini coefficient of educational inequality in less-developed countries declined faster than that in the rest of the world, the less-developed regions, of the MENA, sub-Saharan Africa, and Latin America and the Caribbean, still display the highest levels of inequality in education.⁸⁹ For example, the number of out of school children of primary school age remained stable during 2007–2019, ranging from 60.55 million in 2007 to 58.39 million in 2019.⁹⁰ As many as 33.8 million primary school age children were out of school in sub-Saharan Africa in 2019, accounting for roughly 58% of out of school primary children across the world. This was followed by South Asia, at approximately 22% (12.8 million) in 2019. Another example is global inequality in government expenditures on education, which reflects the countries' efforts to improve education. It is estimated that the average government expenditure on education in the world accounted for approximately 4.53% of GDP in 2017. However, there is a large gap between countries with different levels of development. Government expenditures on education account for about 5% of GDP in high-income countries, about 4.5% of GDP in middle-income countries and only 3.88% of GDP in low-income countries.⁹¹ Furthermore, there is an obvious difference in government expenditures on education, even in low-income countries. For instance, Sierra Leone's government expenditures on education account for roughly 7.7% of GDP in 2019, compared with just approximately 1.3% in Bangladesh.⁹²

National governments have a primary responsibility to provide opportunities for basic education for their citizens. On the one hand, the government can make reasonable rules to distribute educational opportunities equitably among citizens, while on the other hand, it can directly or indirectly influence investment in education, providing citizens with further educational opportunities. Therefore, we follow last year's report to focus on the role of states in protecting the citizens' right of access to education in terms of global justice. In addition, the right to education as a human right usually refers to basic education. Therefore, in this report, we focus on countries' performance on basic education and its contribution to basic education.

⁸⁶ For example, Abdullah et al. (2015) and Sylwester (2002).

⁸⁷ Conti et al. (2010), Zajacova and Lawrence (2018).

⁸⁸ Dorius and Firebaugh (2010).

⁸⁹ van Leeuwen and Li (2021).

⁹⁰ Roser and Ortiz-Ospina (2013).

⁹¹ See <https://www.ourworldindata.org/>.

⁹² Roser and Ortiz-Ospina (2016).

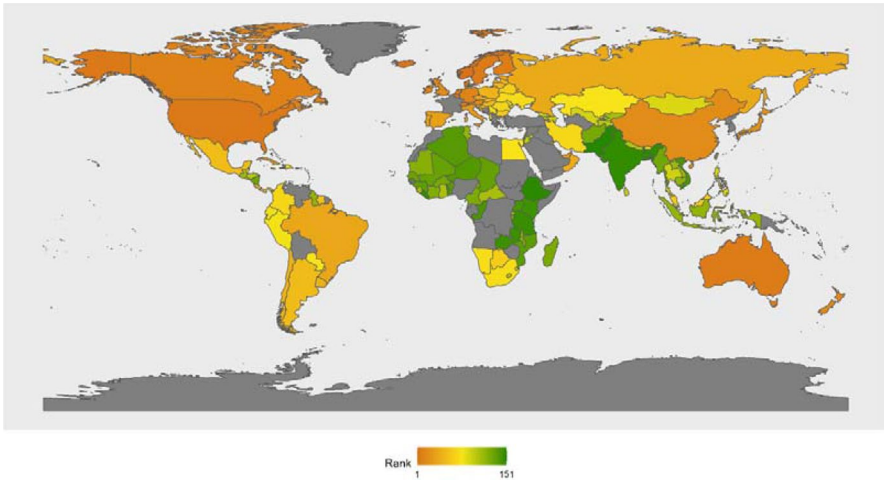


Fig. 8 2019 index ranking of education issue on a world map

2.8.2 Dimensions and Indicators

Consistent with the Global Justice Index Report in 2020,⁹³ we measure educational justice in two perspectives, namely each country's educational performance and its contributions to education. First, from the perspective of global justice, we pay attention to the performance in basic education; thus, using four basic education-related indicators to measure a country's performance in both primary and secondary education, respectively, namely, completion rate, school enrollment rate, pupil-teacher ratio, out-rate of school, and dropout rate. It is worth noting that performance indicators fail to distinguish between state and non-state contributions to basic education. Therefore, to better measure the state's contribution to basic education, it is necessary to introduce indicators for contribution dimension, which directly measure the country's investment in basic education. We thus use government expenditures on education to measure a country's efforts to promote its people's education.

The main data on education in this report come from the World Bank.⁹⁴ However, some education-related indicators from the World Bank are missing values, which may result in bias for the final index. In the past, we resolved the missing value problem by direct imputation. Where the data cannot be obtained from other source, imputation may effectively solve the problem of missing values; however, this inevitably leads to measurement error. We find that education-related indicators in the database from the UN Educational, Scientific and Cultural Organization (UNESCO) are complementary to these indicators in the World Bank database.⁹⁵ Therefore, this year we first use UNESCO data to supplement the missing values in the World Bank

⁹³ Gu et al. (2021).

⁹⁴ See <https://databank.worldbank.org/>.

⁹⁵ See <http://uis.unesco.org/>.

data, and then further use the imputation method to deal with the missing data.⁹⁶ The details are shown in Table 16.

2.8.3 Results

This section presents the ranking results for countries' contributions to global justice in terms of education. Table 17 reports the ranking of countries in education in 2019. The countries with the highest rankings are developed countries. Specifically, the top 10 countries are Norway, Iceland, Denmark, Switzerland, the USA, Sweden, Australia, Finland, Netherlands, and Belgium. This ranking is very similar to the 2018 ranking, with the only change being that Australia has risen from ninth to seventh, while Finland and the Netherlands have fallen from seventh and eighth to eighth and ninth, respectively. Of the 10 top countries, 8 are in northern and Western Europe, and two are in Oceania and North America. Looking past this group to the top 20 countries, we still the pattern that all countries on the list except China are developed countries. Furthermore, among the top 30 countries in terms of education, except China and Cuba, which are upper-middle-income countries, all of the countries are high-income countries.

Likewise, the countries with the lowest rankings on education are developing countries, especially those with the lowest income. Table 17 indicates that the bottom ten counties are Uganda, Togo, Kenya, Zambia, United Republic of Tanzania, Liberia, India, Bangladesh, Ethiopia, and Pakistan. Seven of these are African, and others are in South Asia. Among the lowest 10 countries on education issues, apart from India (\$2100), the remaining nine countries had a GDP per capita of less than \$2000 in 2019. Most of these bottom countries are in Africa and South Asia.

It is worth noting that the ranking is made up of two parts, where one is the score the country's contribution to education, and the other is its score on education performance. We use a country's expenditure on basic education to measure its contribution, and we use a population-weighted model to estimate a country's score on education performance, as we did last year. Therefore, the lowest-ranking countries may not have the worst educational performance but rather reflects that the educational opportunities provided by these countries for a large number of people are lower than the world average. For example, when we use a population-weighted score on the performance dimension to measure the extent to which a country provides education opportunities for its people above the world average from the perspective of global justice, we find that India's ranking was only 149 in the worldwide ranking in the population-weighted performance dimension for 2019. However, when we use unweighted performance scores to measure the level of basic education, India's rank is 126 for this dimension in the same year. This suggests that while basic education in India still lags behind the world average, it is not disastrous. We will discuss this in detail below.

⁹⁶ See <http://uis.unesco.org/>.

2.8.4 Regional Analysis

This section will provide a regional analysis of the ranking. Figure 8 shows the geographic distribution of the ranking for education issue across countries in 2019. The figure clearly indicates that North America, Northern Europe, Australia and New Zealand, Western Europe, and East Asia are ranked high, and that East Africa, South Asia, West Africa, Central Africa, and North Africa were ranked low in term of education from the perspective of global justice. Figure 8 clearly shows that the ranking varied greatly within continents in 2019. In Asia, for example, East Asia has a high ranking, but South Asia is ranked low. Similarly, Northern Europe performs better than southern Europe.

Asia Asia as a whole ranked poorly on education in 2019, just above Africa. It should be noted, however, that there was significant variation on education within Asia. South Asia region is the lowest-ranked subregion in Asia for education issues and one of the lowest in the world, only slightly higher than East Africa, while East Asia performed very well on education issues in the world, second only to the developed regions of North America, Northern Europe, Australia, and New Zealand, and Western Europe. West Asia performs better on education issue than Central or Southeast Asia, but worse than East Asia.

For education, 8 of the 36 Asian countries, namely, Israel (thirteenth), China (eighteenth), Kuwait (nineteenth), Japan (twentieth), Singapore (twenty-first), Cyprus (twenty-second), Qatar (twenty-third), and United Arab Emirates (twenty-ninth) were ranked in the top 20% of the world for education issues in 2019, ahead of many high-income European countries. However, six Asian countries, namely Pakistan (ranked at 151), Bangladesh (at 149), India (at 148), Vietnam (at 140), Myanmar (at 127), and Afghanistan (125) are the bottom 20% of the world. Of the six lowest-ranking countries in Asia, four were from South Asia, and two were from Southeast Asia.

The two most representative countries in East Asia are Japan and China. Japan is the highest-ranked country in Asia for education issues. As the world's third-largest economy and with a population of more than 120 million, Japan performed very well in both dimensions of performance and contribution to education, ranking fifth and twenty-seventh on these, respectively. Furthermore, Japan ranked twenty-first in the world on the unweighted performance dimension, suggesting that the level of basic education provided by Japan to its citizens ranks among the highest in the world.

China is the only developing country to reach the top 20 worldwide. We examine the two dimensions of performance and contribution separately and find that China ranks first in the dimension of educational performance, while its performance in the dimension of contribution is seventieth. Additionally, China ranked sixty-fourth in the world in the unweighted performance dimension, above the world average in 2019. This finding is consistent with the fact that, as the most populous developing country in the world in 2019, China provided more than the average level of basic education opportunities to a significant proportion of the world's population.

South Asia is not only the lowest-ranked region in Asian but also one of the lowest-ranked regions in the world, only slightly higher than West Africa. South Asia

has the lowest relative investment in education in the world. In 2019, government expenditures on education in South Asian accounted for only 2.5% of GDP, lower than the amount in both sub-Saharan Africa (3.5%) and the world average (3.7%).⁹⁷ The most representative countries in this region are Pakistan, India, and Bangladesh. We separately examine the rankings of the three countries in the dimensions of performance and contribution, and we find that in the performance dimension of education issues among 151 countries, Pakistan's rank is 151, and those of Bangladesh and India are 149 and 148, respectively, while they rank slightly better in the contribution dimension than the performance dimension, at ranks of 134, 140, and 117, respectively.

The population-weighted model used in constructing this index means that we should focus on each country's contribution to humanity as a whole. While performing index calculations, we weight the population positively when a country's performance is above the global average and negatively otherwise. Thus, when a country with a large population performs better in basic education than the global average, it can achieve a very high ranking on this dimension, as this indicates that it offers educational opportunities above the global average to a large population. This is the case in China. China ranks first in the world in the dimension of educational performance, which does not mean that China has the best score on all indicators of educational performance but rather that China provides education opportunities that are higher than the world average for a very large population. We re-estimate a country's performance on basic education using the unweighted model, which only assesses the country's provision of basic education and does not consider its contribution to justice for all of humanity in relation to global justice. The results of the unweighted model provide China the sixty-fourth place. This is comparable to the ranking (fifty-fourth) of China's GDP per capita.

Conversely, a country with a large population may rank low on the dimension of educational performance when its score for the indicators is lower than the global average, indicating that it leaves a significant portion of the population with lower educational opportunities than the global average. This is the case in India. In the unweighted model, India's educational performance gives it a rank of 102 out of 151 countries, a lower-middle position but below the global average. The results of the population-weighted model from a global justice perspective, however, indicate that India is third from the bottom in educational performance.

Europe ranked second only to North America in 2019. Within Europe, as shown in Fig. 8, Northern Europe has the highest rank, Eastern Europe the lowest, and Western Europe ranks higher than southern Europe but lower than Northern Europe.

The outstanding performance of European countries on education issues is mainly reflected in the following. First, 8 of the top 10 countries in the global ranking for education issues are in Europe. Five of them are in Northern Europe, namely Norway (first), Iceland (second), Denmark (third), Sweden (sixth), and Finland (eighth); and three are in Western Europe, namely, Switzerland (fourth), Switzerland (ninth),

⁹⁷ See <https://data.worldbank.org/>.

and Belgium (tenth). Second, 17 of the 36 European countries were in the top 20% of the world. Furthermore, 33 of the 36 European countries ranked in the top 50% of the world. Third, even the five lowest-ranked countries in Europe are in the middle of the world rankings. These five are Albania (eighty-ninth) and Serbia (eighty-first) in southern Europe and Republic of Moldova (eighty second), Ukraine (sixty-ninth), and Romania (sixty-fifth) from Eastern Europe. Fourth, European countries also performed very well on the unweighted performance dimension, which measures the development of a country's basic education, with 28 of the 36 European countries ranking in the top third of the world on this dimension in 2019.

We examine the rankings of European countries on the dimensions of performance and contribution and find that they performed better on the contribution dimension than on the performance dimension. For example, 8 European countries in the top 10 are ranked in the top 10 worldwide in the dimension of contribution but not in performance. This is associated with the smaller populations of European countries. As developed countries, these countries have sufficient capacity to invest in basic education. Although these countries have invested heavily in basic education, their basic education development level ranks among the top in the world. However, due to their small populations, they only provide high-quality basic education to a very small proportion of the world's population.

North America North America was the highest-ranked region in the world for education issues from the perspective of global justice in 2019. In this region, the United States and Canada were ranked fifth and eleventh in the world on education issues, respectively. We also examine the performance and contribution dimensions of the two countries and find that they perform well on both dimensions. Specifically, the United States and Canada are ranked second and sixth in the dimension of educational performance and sixth and sixteenth in the dimension of educational contribution, respectively. First, for performance, we compare the results of the population-weighted and unweighted models and find that the higher performance of these two countries in the performance dimension is closely related to their large populations. For instance, the US ranks only fifty-sixth in the performance dimension in the unweighted model but second in the population-weighted model. Second, it is worth noting that, as discussed in last year's report, high rankings on the performance dimension indicate high investment on basic education in the US and Canada.⁹⁸

Latin America Latin America ranks in the middle of the world on the dimensions of both contribution and performance on education issues relative to global justice. In 2019, for example, government expenditures on education in Latin America accounted for only 4.0% of GDP, slightly higher than the value in countries with middle and upper-middle incomes (3.9%).⁹⁹ Latin America performs better than Africa and West Asia on the performance of education.¹⁰⁰

⁹⁸ Gu et al. (2021).

⁹⁹ See <https://data.worldbank.org/>.

¹⁰⁰ We will further compare the educational performance of sub-Saharan Africa, North Africa and West Asia, Latin America and East Asia when discussing education issues in Africa.

Latin America consists of the subregions Caribbean (including 10 countries in this issue), South America (including 10 countries) and Central America (including 8 countries). In 2019, the Caribbean was ranked slightly higher than South America in terms of education, but South America is ranked higher than Central America. Cuba had the highest ranking in the Latin America countries, at twenty-fifth, followed by Brazil (thirty-fifth) and the Bahamas (thirty-eighth). Nicaragua's rank was 129, the lowest in the Latin America, following Guyana (116) in South America and Guatemala (109) in Central America.

Examining the performance and contribution dimensions of this region showed that in terms of the contribution dimension of education, the Caribbean performed better than Central America, which did better than South America. However, the ranking in the performance dimension of education was just the opposite. The opposite trend of the three subregions in terms of performance and contribution may be due to the fact that South America has a larger population than Central America, while the population of Central America is more than that of the Caribbean.

Africa As shown in Fig. 8, this report includes only 40 African countries' rankings on education issues due to data limitations. Africa is the worst-performing region in the world on education issues, which is consistent with its economic development. Of the bottom 50 countries for education, 31 countries are in Africa. Southern Africa is the best performing region in Africa, followed by North and Central Africa, and East Africa is the worst-performing region. In East Africa, 5 countries, namely Ethiopia, Tanzania, Zambia, Kenya, and Uganda, rank in bottom 10 for education. The Seychelles was the best performing country in Africa, at fifty-fifth of 151 countries, followed by Mauritius (fifty-eighth) and Botswana (sixty-first). Ethiopia is the lowest-ranked country in Africa.

We also examine the rankings for African countries on the dimensions of performance and contribution, respectively. First, consistent with their rankings on education issues, African countries rank low in educational contribution: 31 of the 40 African countries rank below 100 in this dimension. This suggests that African countries invest less in basic education. Second, as with the ranking for the contribution dimension, African countries' rankings on the performance dimension are also very low: 29 countries rank below 100. We use the unweighted model to evaluate the development of basic education in African countries and find that 30 of the 40 African countries rank below 100, which is highly similar to the value of the population-weighted model. Africa has the worst performance in terms of basic education. In sub-Saharan Africa, for example, 8% of children of primary school age in the richest class and 47% in the poorest class are not in school, compared with 5% and 30% in North Africa and West Asia, 3% and 13% in Central and South Asia, and 1% and 4% in Latin America, respectively. Similarly, only 86% of children from the richest class and 31% of children from the poorest class in sub-Saharan Africa have completed primary education, compared with 97% and 78% in Central and South Asia, 98% and 88% in Latin America and the Caribbean, and 98% and 94% in East and Southeast Asia, respectively.¹⁰¹

¹⁰¹ See World Inequality Database on Education (<https://www.education-inequalities.org>).

Oceania Oceania as a whole performs better than Africa, Asia, and Latin America, but worse than North America and Europe. Oceania's regions are Polynesia (including three countries for this issue), Melanesia (two countries), Micronesia (two countries), and Australia and New Zealand (two countries). The region including Australia and New Zealand is of the best performing regions on education in the world, second only to North America and Northern Europe but better than any other region. However, three other regions in Oceania, namely Polynesia, Melanesia, and Micronesia performed poorly on education issue. Micronesia outperformed only Central Africa, West Africa, East Africa, and South Asia, but did worse than the rest of the world. Melanesia and Polynesia outperformed only Central America and the above five regions and did worse than the rest of the world.

The performance of the Oceanian countries on education issues varies greatly. This is mainly reflected in the differences not only between Australia and New Zealand and other regions but also across countries. For example, Australia and New Zealand rank seventh and fifteenth among 151 countries, respectively, ranking in the top 10% of the world. However, Togo and Kiribati are the worst-performing countries in the world: their ranks are 143 and 139, in the bottom 10% of the world. Indicators of educational performance are consistent with this pattern. In Australia, for example, 99% of children complete primary school and 98% complete lower secondary school, compared with 94% and 78% in Kiribati, and only 61% and 50% in Papua, respectively.

2.8.5 Conclusion

Education is one of the 10 issues selected to examine for global justice in this report. We collect data from the World Bank and UNESCO, and we then apply a population-weighted model to construct each country's score, consisting of performance and contribution dimensions, for education from the perspectives of global justice. We find that North America as a whole performs best, followed by Europe and Oceania, while Africa has the worst performance. The performance of subregions within each continent varies greatly.

We find a strong and positive correlation between the score for education and economic development, which we also noted in last year's report. Using GDP per capita as a proxy for economic development, we find that the Pearson correlation coefficient between the score for education issue and per capita GDP exceeds 0.76. This correlation is also observable when a country's income level is used as a proxy for its economic development. We further examine the relationship between economic development and the scores of performance and contribution dimensions, respectively; and we find that the score for contribution to education is highly correlated with economic development, but a country's score for performance dimension is only weakly correlated with its economic development.

The contribution dimension in our model measures a country's efforts to or investment in basic education. The more economically developed a country is, the better position it is in to invest more to basic education. This explains why the Pearson correlation coefficient between the score of contribution dimension score and GDP per capita exceeds 0.8.

Table 18 Data on public health

Category	Dimension	Indicator	Data Source	Coverage
Performance	Life expectancy	Life expectancy at age 60 (years)	WHO	185 countries
		Life expectancy at birth (years)		
	Mortality	Adult mortality rate (probability of dying between 15 and 60 years per 1000 population)		
		Infant mortality rate (probability of dying between birth and age 1 per 1000 live births)		
		Neonatal mortality rate (per 1000 live births)		
		Under five mortality rate (probability of dying by age 5 per 1000 live births)		
	Public health infrastructure	Population using at least basic sanitation services (%)		
		Population using at least basic drinking-water services (%)		
		Raised fasting blood glucose (≥ 7.0 mmol/L or on medication) (age-standardized estimate)		
	Key disease	Treatment success rate: new tuberculosis cases		
Contribution	Expenditure	Tuberculosis effective treatment coverage (%)		
		Incidence of tuberculosis (per 100 000 population per year)		
		Domestic general government health expenditure as a percentage of general government expenditure (%)		
		Domestic general government health expenditure per capita in US\$		

Table 19 Country rankings in the public health aspect of promoting global justice in 2019

Country	Ranking	Country	Ranking
United States of America	1	Turkey	94
Japan	2	Guyana	95
Norway	3	Sao Tome and Principe	96
Germany	4	Saint Vincent and the Grenadines	97
Sweden	5	Cabo Verde	98
Ireland	6	United Arab Emirates	99
Iceland	7	Bhutan	100
Denmark	8	Solomon Islands	101
United Kingdom of Great Britain and Northern Ireland	9	Brunei Darussalam	102
Canada	10	Eswatini	103
Australia	11	Grenada	104
China	12	Albania	105
Luxembourg	13	Gabon	106
New Zealand	14	Georgia	107
Belgium	15	Sri Lanka	108
Austria	16	Oman	109
France	17	Nauru	110
Netherlands	18	Malaysia	111
Costa Rica	19	Saint Lucia	112
Finland	20	Bahrain	113
Italy	21	Turkmenistan	114
Panama	22	Kazakhstan	115
Uruguay	23	Saint Kitts and Nevis	116
Spain	24	Lesotho	117
Iran (Islamic Republic of)	25	Fiji	118
Switzerland	26	Rwanda	119
Andorra	27	Burkina Faso	120
Maldives	28	Indonesia	121
Republic of Korea	29	Ukraine	122
Chile	30	Uzbekistan	123
Czechia	31	Dominica	124
Israel	32	Niger	125
Slovenia	33	Zimbabwe	126
Malta	34	Burundi	127
Cuba	35	Malawi	128
Singapore	36	Tonga	129
Palau	37	Kiribati	130
Colombia	38	United Republic of Tanzania	131
Bahamas	39	Kyrgyzstan	132
Nicaragua	40	Philippines	133
Portugal	41	Morocco	134
Guatemala	42	Mongolia	135

Table 19 (continued)

Country	Ranking	Country	Ranking
Argentina	43	Mauritania	136
El Salvador	44	Kenya	137
Suriname	45	Cambodia	138
Dominican Republic	46	Madagascar	139
Estonia	47	Tajikistan	140
Bosnia and Herzegovina	48	Zambia	141
Slovakia	49	Libya	142
Peru	50	Ghana	143
Lithuania	51	Micronesia (Federated States of)	144
Tuvalu	52	Iraq	145
Thailand	53	Papua New Guinea	146
Botswana	54	Armenia	147
Paraguay	55	Guinea	148
Romania	56	Sierra Leone	149
South Africa	57	Mali	150
Poland	58	Vanuatu	151
Samoa	59	Togo	152
Croatia	60	Haiti	153
Ecuador	61	Timor-Leste	154
Lebanon	62	Lao People's Democratic Republic	155
Kuwait	63	Central African Republic	156
Bolivia (Plurinational State of)	64	Mozambique	157
Saudi Arabia	65	Gambia	158
Jamaica	66	Angola	159
Cyprus	67	Djibouti	160
Serbia	68	Chad	161
Brazil	69	Senegal	162
Jordan	70	Equatorial Guinea	163
Russian Federation	71	Comoros	164
Bulgaria	72	Azerbaijan	165
Tunisia	73	Liberia	166
Belize	74	Nepal	167
Montenegro	75	Congo	168
Latvia	76	Egypt	169
Antigua and Barbuda	77	Benin	170
Greece	78	Sudan	171
Republic of Moldova	79	Myanmar	172
Barbados	80	Bangladesh	173
Venezuela (Bolivarian Republic of)	81	Guinea-Bissau	174
Seychelles	82	Afghanistan	175
Mexico	83	Eritrea	176
Belarus	84	Uganda	177

Table 19 (continued)

Country	Ranking	Country	Ranking
Trinidad and Tobago	85	South Sudan	178
Hungary	86	Yemen	179
Vietnam	87	Pakistan	180
Honduras	88	Ethiopia	181
Algeria	89	Democratic Republic of the Congo	182
Mauritius	90	Cameroon	183
Namibia	91	Nigeria	184
Marshall Islands	92	India	185
Qatar	93		

The performance dimension in the population-weighted model measures the extent to which a country provides a sizable population with educational opportunities above the global average. Thus, the score for the performance dimension in education issue in relation to global justice depends on two factors: population size and the provision of basic education. We use an unweighted model to estimate a country's performance in basic education, which proxies for the provision of basic education, and then we further examine the relationship between the scores for performance dimension, population size, and the provision of basic education, and we find a moderate correlation between the score for the performance dimension and the provision of basic education, and a weak correlation between the score of the performance dimension and population size.

In the population-weighted model, we weight the population positively when a country's performance is above the global average, and negatively otherwise.

It is necessary to highlight two limitations of this study. The first is the ceiling effect for basic education in terms of global justice: when an economy develops to a certain level, the continued development of the economy does not necessarily improve opportunities for basic education.¹⁰² For this reason, we observe a moderate rather strong correlation between economic development and the score of performance dimension in education issue. For global justice, we focus on basic education (including primary and low secondary education), but we exclude secondary and tertiary education from the education issue. A country with a better-developed economy may provide its people with more educational opportunities, especially the opportunities of secondary and tertiary education. Therefore, the exclusion of secondary and tertiary education can produce a systematic bias in our results. Because the provision of secondary and tertiary education is highly correlated with economic development, however, this exclusion may not affect the ranking of education.

The second limitation is lack of systematic data to compare the quality of basic education.¹⁰³ Data to provide cross-country comparisons are unavailable. Thus,

¹⁰² Gu et al. (2021).

¹⁰³ Gu et al. (2021).

in this report, we use the indicators of completion rate, school enrollment, pupil-teacher ratio, and out of school rate to measure the provision of basic education. However, quality is an important aspect of basic educational outcomes and was necessarily neglected in this report. Fortunately, the quality of basic education is highly correlated with investment in education, namely the score of contribution dimension in our model, so, the lack of explicit measurement of quality in this report may not lead to a significant bias in the rankings.

2.9 Issue 9: Public Health

2.9.1 Introduction

Public health is considered one of the top 10 issues for global justice in this report. Health is a fundamental human right and is indispensable for the exercise of many other human rights; without health, no other rights would be possible.¹⁰⁴ Despite significant improvements worldwide over the past several decades, huge challenges remain ahead in global public health. Life expectancy is the key indicator for assessing population health. Evidence suggests that a large difference in health across the world. For example, in 2019, people in the Central African Republic had a life expectancy at birth of 53 years, while in Monaco life expectancy was 86.8 years. Similarly, life expectancy at birth in the Africa as a whole is only 63.2 years in 2019 but more than 79 years in North America. Child mortality rate, which measures the number of deaths per 1000 live births of children under 5, also varies widely across countries. In 2019, the child mortality rate in the San Marino was only 0.17, the lowest child mortality rate in the world, while it was more than 10 in some countries, such as Nigeria (11.7), Somalia (11.7), Chad (11.4), Central African Republic (11), and Sierra Leone (10.9), which means that more than 10 out of 1000 children die before they are 5 years old in these countries. Similarly, in 2019, 0.37 of every 1000 children in Europe as a whole died before the age of 5 years, but 9.7 of every 1000 children in West and Central Africa died.

National governments have the primary responsibility to provide equitable access to effective health care systems and adequate public health-related goods to their citizens, and the international community has a secondary responsibility to provide public health-related goods. Therefore, although the different actors, such as, for instance, local government, the national government and the international community, which may provide public health-related goods, should receive attention to from the perspective of global justice, this report, which aims to evaluate the contribution of a country to global justice, only focuses on each country's in providing not only equitable access to effective health care systems but also adequate public health goods for its citizens.¹⁰⁵

¹⁰⁴ Meier (2006), Susser (1993) and Riedel (2009).

¹⁰⁵ We agree that international community, such as WHO, the World Bank, other United Nations organizations, and other international organizations, also play important roles in resolving global health problems. As discussing in last year report, the distinction between our approach and Ruger's provincial globalism lies in the fact that Ruger's (2009) provincial globalism emphasizes that all local, national and global actors have responsibilities in reducing health inequalities while this report only focus on the role of a country. Gu et al. (2021) and Ruger (2009).

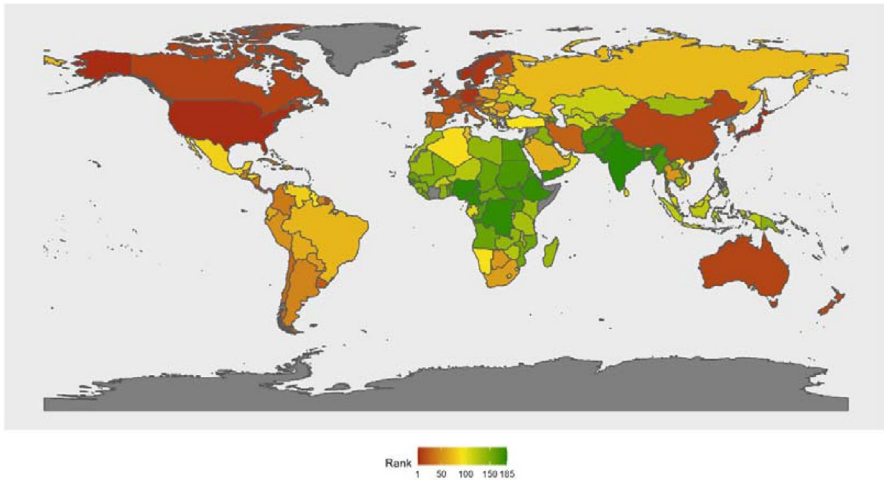


Fig. 9 2019 index ranking of public health issue on a world map

2.9.2 Dimensions and Indicators

Consistent with the Global Justice Index Report in 2020,¹⁰⁶ we measure each a country's public health contribution to global justice from two perspectives, namely the performance of the country in public health and its contribution to public health. First, the performance of a country in public health involves three dimensions, namely life expectancy and mortality, public health infrastructure, and treatment of key disease. Specifically, (1) because both life expectancy and mortality are common measures of a population's health and closely highly relate to the government's public health expenditure, we use life expectancies at birth and at 60 years old to proxy for life expectancy and use neonatal mortality rate, infant mortality rate, under five mortality rate, and adult mortality rate to proxy for mortality rate. (2) Public health infrastructure is also a common measure of public health. We use the share of population with at least basic drinking-water services and the share of population using at least basic sanitation services to measure public health infrastructure. (3) We use the following four indicators to measure the treatment of key diseases, namely treatment success rate of new tuberculosis (TB) cases, TB effective treatment coverage, Incidence of TB per 100,000 population per year and raised fasting blood glucose. Second, we use health expenditures to assess a country's contribution to public health. Because the role of a country in providing equitable access to effective health care systems and adequate public health-related goods to their citizens at the perspective of global justice tends to be the focus of attention, we use three indicators, namely, domestic general government health expenditures per capita

¹⁰⁶ Gu et al. (2021).

and domestic general government expenditure as a percentage of general government expenditure, to measure a country's contribution to public health. The former reflects the intensity of the government's investment in public health, and the latter indicates the direct effects of government spending on public health.

The data on public health in this report are taken from WHO. The details are shown in Table 18.

2.9.3 Results

This section presents the ranking results of the countries' contribution to global justice from public health. As shown in Table 19, the public health rankings include 185 countries in 2019. The top 10 countries of the ranking are the USA, Japan, Norway, Germany, Sweden, Ireland, Iceland, Denmark, the UK, and Canada; 7 of the top 10 countries are in Europe, 2 are in North America and 1 is in Asia. Relative to the 2018 ranking, Ireland moved six places up the rankings and into the top 10 at No. 6, and the UK and Canada also entered the top 10, up from eleventh and sixteenth places in 2018 to ninth and tenth in 2019, respectively, France, Luxembourg and Belgium dropped from fifth, sixth, and tenth to seventeenth, thirteenth, and fifteenth, respectively—out of the top 10. The most impressive leap in 2019 is made by China with a jump of 9 places from twenty-first to twelfth. China is particularly prominent not only because it ranks highest among developing countries but also because it now surpasses the rankings of many developed countries, such as New Zealand, Belgium, France, Netherlands, Finland, Italy, and others.

The bottom 10 countries of the ranking are all developing countries and are among the countries with the lowest incomes. The bottom 10 countries of the ranking are Eritrea, Uganda, South Sudan, Yemen, Pakistan, Ethiopia, Congo, Cameroon, Nigeria, and India. Of these, four are in Asia, and six are in Africa. We find that, of the bottom 10 countries, 8 have a GDP per capita below USD 2000 in 2019, and four have populations of more than 100 million, namely Pakistan (216 million), Ethiopia (112 million), Nigeria (200 million), and India (1366 million).

As with education, it is worth noting that the score for public health consists of two parts, where the first is the score of the country's contribution to public health, and the other is the score of countries on education performance. We use country's expenditure on public health to measure a country's contribution, and we use a population-weighted model to estimate its score on the performance dimension for public health. Therefore, population size may highly correlate with the score on performance of public health. A country's low ranking in the public health issue may not mean that the country is not doing well in terms of public health but instead that it fails to provide public health to a standard higher than the world average for a large number of people. For example, according to our results, India is at the bottom of the ranking of 185 countries not only in public health but also in public health performance. However, when using an unweighted model to evaluate India's performance in public health, we find that its rank is 120 of 185 countries in 2019. This suggests that although India's performance in public health is not the worst in itself,

it fails to provide public health more than the world average for a large proportion of the world's population, so it falls to the bottom of the ranking in public health. We will discuss this in detail below.

2.9.4 Regional Analysis

This section provides a regional analysis of the above ranking. Figure 9 shows the geographic distribution of the public health rankings across countries in 2019. The figure clearly shows that North America has the highest ranking for public health, followed by Europe and Latin America, while Africa is ranked last, behind Asia and Oceania. The regions of North America, Australia and New Zealand, Western Europe, Northern Europe, and East Asia have the highest ranking, while Central Africa, West Africa, East Africa, North Africa, South Asia, Melanesia, Central Asia, and Southeast Asia are ranked at the bottom. The figure also shows there sub-regional variation of the ranking the within continents. This is the case in Asia and Africa. For example, East Asia is one of the highest ranking regions in the world, while South Asia and Central Asia rank at the bottom. Southern Africa ranks near the middle, while Central Africa is at the bottom.

Asia Asia as a whole ranks near the bottom, slightly higher than Africa. However, the rankings of countries within Asia vary greatly. As shown in Fig. 9, South Asia ranks at the bottom for public health in Asia, following Central Asia, while East is one of the highest ranking regions in the world, behind only North America, Australia and New Zealand, Western Europe, and Northern Europe.

Our results indicate that two of the nine South Asian countries, namely India (185) and Pakistan (180) are in the bottom 10 of the ranking on public health. However, two countries from East Asia, namely Japan and China, are ranked second and twelfth in the world, ahead of many developed countries from North America, Europe, and Oceania, such as Luxembourg (thirteenth), New Zealand (fourteenth), Belgium (fifteenth), Austria (sixteenth), France (seventeenth), and Netherlands (eighteenth).

Variation in countries' rankings also exists within subregion in Asia. For example, Maldives, in South Asia, has a rank of 28 in the world, while India (185), Pakistan (180), Afghanistan (175), and Bangladesh (173), all of which are in South Asia, rank in the bottom 20% of the world. Singapore, in Southeast Asia, ranks thirty-sixth in the world. However, two other countries in the subregion, namely Myanmar and Lao, are in the bottom 20% of the world with ranks of 172 and 155, respectively.

The ranking for public health depends on the scores of two dimensions, namely, the dimensions of contribution and performance. We use two indicators, domestic general government health expenditures per capita and current health expenditure per capita, to measure a country's contribution to public health. The score for contribution measures a country's effort to improve its people's health. Then, based on a population-weighted model, we use a series of indicators on life expectancy and mortality, public health infrastructure, and treatment of key diseases to evaluate scores on the performance dimension on public health. As in education issue, we weight the population positively when a country's performance is above the global average, and negatively otherwise. Therefore, when a country with a large

population performs better in public health than the global average, the country may rank very high in performance for public health. This means that the country offers public health goods that are above the global average to a sizable population. This is the case in Japan and China. We use an unweighted model to evaluate a country's level of public health, and we find that Japan and China enter the top 20% of the world at No.23 and 32 in the score of unweighted performance, below their rankings at fourth and first in the (population-weighted) performance dimension. Israel performs very well, ranking sixth in the world in the score of unweighted performance. However, due to its small population size, it only ranks thirty-second for the score of population-weighted performance dimension. This suggests that although Israel provides its people with enough public health good, it also fails to provide a large proportion of the world population with public health good above the world average from the perspective of global justice. India is another example, being completely different from China and Japan. Due to its large population size and its lower performance in terms of public health than the world average, India ranks bottom in the score of population-weighted performance dimension. However, India's performance in public health is not as bad as its ranking in population-weighted dimension. We find that India's rank is 120 in the unweighted performance in public health, just slightly below to the world average. Specifically, India's life expectancies at birth and at age 60 years in 2019 are 70.79 and 18.82 years, ranking at 113 and 103, respectively. Furthermore, India performs well on a range of mortality indicators. For instance, infant mortality rate, under-5 mortality rate and neonatal mortality rate for India are 21.66, 28.26 and 34.27, ranking the top 30% of the world at thirty-ninth, fifty-third, and fifty-fourth, respectively.

Europe For public health, Europe as a whole ranked second only to North America in 2019. Figure 9 shows the regional variation of the ranking of countries on public health within Europe. Western Europe and Northern Europe rank ahead of the rest of Europe on health issue. According to our results, Western Europe and Northern Europe as a whole rank second only to North America as a whole and to Australia and New Zealand as a region, but ahead of the rest of the world. Not only does Eastern Europe rank bottom in Europe, it scored lower than South America as a whole.

European countries perform very well on public health issue. The most typical example is the Nordic countries. For instance, Norway ranks first in Europe and third in the world in terms of public health from the perspective of global justice. Further, 6 of the top 10 countries in the global ranking of public health issue are in Northern Europe, including Norway (third), Sweden (fifth), Ireland (sixth), Iceland (seventh), Denmark (eighth), and the UK (ninth). In addition, another Western country (Germany) ranks fourth in the world.

Europe countries' outstanding performance on public health is also reflected in the fact that, according to our results, 20 of the 39 European countries are in the top 20% of the world by this value, and even the worst-ranked countries in Europe are still in or near the middle reaches of the ranking. For example, Albania, in southern Europe, and Ukraine in Eastern Europe, are the two worst-performing European countries on public health issues, with ranks of 105 and 122, respectively.

North America North America only consists of developed countries, the United States and Canada. It is therefore the best performer in the world for public health from the perspective of global justice. Both the United States of America and Canada are in the top 10, ranking first and tenth.

It is worth pointing out that while the USA and Canada perform very well on public health, this does not imply that they have the best performance on each indicator, especially in terms of performance. The population-weighted model used in the report assigns higher scores when a country performs better than the global average on a certain indicator in relation to the size of that country's population. The United States benefits from this rule here. According to WHO estimates, neonatal mortality rate in the USA was 3.7 per 1000 live births in 2019, and the infant mortality rate (deaths under 1 year of age per 1000 live births) was 5.56, the under-5 mortality rate (deaths by age 5 per 1000 live births) was 6.45, and adult mortality rate (deaths between 15 and 60 years per 1000 population) was 112.5, ranking forty-eighth, forty-fifth, forty-fifth, and sixty-fifth in the world, respectively. In fact, the United States underperformed the high-income country average on all four measures of mortality. The statistics for life expectancy in the United States are similar to those for mortality. According to WHO estimates, life expectancy at birth and life expectancy at age 60 in the United States in 2019 were 78.5 and 23.1, ranking fortieth and thirty-seventh in the world, respectively. The United States performed close to the high-income country average on the two indicators of life expectancy.

However, the United States has performed very well in the contribution dimension of public health. In 2019, domestic general government health expenditure per capita in the United States reached US\$5553, ranking second among the 185 countries which this report covers. And domestic general government health expenditure as a percentage of general government expenditure reached 22.35%, ranking fourth in the world.

Latin America In 2019, Latin America (33 countries) as a whole ranked higher than Oceania, Asia, or Africa in public health but lower than North America and Europe. Latin America consists of South America (covering 12 countries in this issue), Central America (including 8 countries), and the Caribbean (including 13 countries). We find that Central America performed best on public health issue in Latin America, better than southern Europe but worse than East Asia. South America performed better than Eastern Europe but worse than southern Europe on this issue in 2019. The Caribbean performance on this issue was the worst in Latin America, better than Polynesia's but worse than Southern Africa's.

According to our results, five countries, namely Costa Rica (nineteenth) and Panama (twentieth) from Central America, Uruguay (twenty-third) and Chile (thirtieth) from South America, and Cuba (thirty-fifth) from the Caribbean, in Latin America have are in the top 20% in the world. Furthermore, 26 of the 33 Latin American countries in this report are in the world's top 50% for public health issue. The five worst-performing Latin American countries are Grenada (104), Saint Lucia (112), Saint Kitts and Nevis (116), the Dominican Republic (124), and Haiti (153). Of the five worst-performing Latin American countries, all except Haiti performed only slightly below the world average.

This ranking consists of the dimensions of performance and contribution. Because Latin American countries as a whole performed better than the world average on this topic in 2019, their populous countries ranked high on the performance dimension in the population-weighted model. For example, Brazil ranked tenth, Mexico eighteenth, and Colombia twenty-first. However, they only ranked seventy-first, sixty-fifth, and fifty-first unweighted, respectively. In the unweighted model that measures a country's level of public health, 22 of 33 Latin American countries rank higher than the world average.

Further, Latin American countries performed very well in terms of contribution. Six countries ranked in the top 20% of the world, namely, Costa Rica (eighteenth), Panama (twentieth), Uruguay (twenty-first), Chile (twenty-ninth), Cuba (thirty-sixth), and Bahamas (thirty-seventh). In all, 27 of the 33 Latin American countries are in the top 50% of the world in terms of contribution ranking.

Africa In 2019, Africa (52 countries in this report) as a whole has the worst performance in the world in public health.

Africa consists of Southern Africa (five countries), North Africa (six countries), East Africa (seventeen countries), West Africa (fifteen countries), and Central Africa (nine countries). Southern Africa performed best, better than the Caribbean but worse than Eastern Europe, and the four other regions ranked at the bottom of the global rankings, with Central Africa being the worst-performing region, led by West Africa, East Africa, and North Africa.

Africa as a whole performs poorly on public health issues, mainly in the following aspects. The best performer in Africa was Botswana, ranking fifty-fourth in the world, followed by South Africa (fifty-seventh), Tunisia (seventy-third), Seychelles (eighty-second), and Algeria (eighty-ninth). Second, no African country ranks in the top 20% of the world, and only 7 of the 52 African countries rank in the top 50% of the world. Last but not least, of the bottom 10 countries in the world on this issue, 5 were from East Africa, namely, Eritrea (176), Uganda (177), South Sudan (178), Ethiopia (181), and Nigeria (184)[†], and 2 from Central Africa, viz., Democratic Republic of the Congo (182) and Cameroon (183).

Next, we examine the performance and contribution dimension of African countries in public health, respectively. First, in 2019, African countries performed poorly on the performance dimension of public health issues. In the population-weighted model, we find that only 6 African countries were in the top 50% of the world, and the other 46 African countries ranked below rank 100. Of the bottom 10 countries in the world in terms of performance, seven were from Africa. Similarly, in an unweighted model that measures a country's public health, we find that only 8 countries were in the top 50% of the world, and the other 44 countries were all below rank 120. Of the bottom 10 countries in the world for the score of unweighted performance, six 6 were from Africa. This suggests that African countries not only failed to provide a considerable number of people with public health but also that the absolute level of public health in African countries lagged far behind the world average. Second, African countries' performance in terms of contribution to public health issue is very similar to their performance on the performance dimension. Our results show that, in 2019, only 8 African countries were in the top 50% of the world in terms of contribution, and 42 African countries ranked below 100 in this

Table 20 Data on protection of women and children

Category	Dimensions	Indicators	Data Source	Coverage
Performance (women)	Health and demography	Life expectancy at birth, ratio female to male (years)	World Bank	161 countries
		Maternal mortality ratio female to male (modeled estimate, per 100,000 live births)		
		Number of under-5 death of 1000s, female		
		Sex ratio at birth (male to female births)		
		Unemployment, female (% of female labor force)		
Performance (children)	Children's health and demography	Vulnerable employment, ratio female to male	WHO	
		Wage and salaried workers, ratio female to male		
		Proportion of seats held by women in national parliament (%)		
		Number of deaths per 1000+ (include 13 indicators)		
		Prevalence of thinness among children and adolescents, BMI < - 2 standard deviations below the median (crude estimate) (%)		
Performance (children)	Children's education (educational difference between males and females)	School enrollment, primary (gross), gender parity index (GPI)	World Bank	

Table 21 Country rankings in protection of women and children

Country	Ranking	Country	Ranking
China	1	Mauritius	82
United States of America	2	Paraguay	83
Brazil	3	Montenegro	84
Russian Federation	4	Malta	85
Germany	5	Iceland	86
Mexico	6	Luxembourg	87
United Kingdom of Great Britain and Northern Ireland	7	Bahamas	88
France	8	Suriname	89
Italy	9	Barbados	90
Thailand	10	Belize	91
Spain	11	Samoa	92
Poland	12	Cabo Verde	93
Ukraine	13	Saint Lucia	94
Republic of Korea	14	Saint Vincent and the Grenadines	95
Argentina	15	Tonga	96
Canada	16	Vanuatu	97
Australia	17	Sao Tome and Principe	98
Saudi Arabia	18	Fiji	99
Vietnam	19	Guyana	100
Syrian Arab Republic	20	Solomon Islands	101
Philippines	21	Brunei Darussalam	102
Colombia	22	Maldives	103
Cuba	23	Bhutan	104
Netherlands	24	Honduras	105
Kazakhstan	25	Timor-Leste	106
Romania	26	Oman	107
Sweden	27	Rwanda	108
Belarus	28	Djibouti	109
Belgium	29	Comoros	110
Czechia	30	Eswatini	111
Sri Lanka	31	Namibia	112
Chile	32	Tajikistan	113
Portugal	33	Botswana	114
Malaysia	34	Turkmenistan	115
Peru	35	Cambodia	116
Uzbekistan	36	Azerbaijan	117
Hungary	37	Equatorial Guinea	118
Austria	38	Gambia	119
Dominican Republic	39	Senegal	120
Israel	40	Guatemala	121
Tunisia	41	Lesotho	122
Finland	42	Lao People's Democratic Republic	123

Table 21 (continued)

Country	Ranking	Country	Ranking
Bulgaria	43	Madagascar	124
Switzerland	44	Myanmar	125
Denmark	45	Morocco	126
Norway	46	Papua New Guinea	127
Serbia	47	Congo	128
Ireland	48	Burundi	129
Slovakia	49	Mauritania	130
Jordan	50	Liberia	131
Greece	51	Nepal	132
Kyrgyzstan	52	Malawi	133
New Zealand	53	Central African Republic	134
Iran (Islamic Republic of)	54	Togo	135
Kuwait	55	Uganda	136
Costa Rica	56	United Arab Emirates	137
Croatia	57	Sierra Leone	138
Lithuania	58	Zambia	139
Ecuador	59	Benin	140
Algeria	60	Burkina Faso	141
Turkey	61	South Africa	142
Georgia	62	Guinea	143
Qatar	63	Ghana	144
Republic of Moldova	64	Niger	145
Uruguay	65	Kenya	146
Slovenia	66	United Republic of Tanzania	147
Mongolia	67	Mozambique	148
Panama	68	Indonesia	149
Latvia	69	Chad	150
Nicaragua	70	Cameroon	151
Estonia	71	Yemen	152
Jamaica	72	Mali	153
Bolivia (Plurinational State of)	73	Bangladesh	154
Albania	74	Afghanistan	155
Venezuela (Bolivarian Republic of)	75	Egypt	156
Republic of North Macedonia	76	Ethiopia	157
Trinidad and Tobago	77	Democratic Republic of the Congo	158
El Salvador	78	India	159
Armenia	79	Pakistan	160
Bahrain	80	Nigeria	161
Cyprus	81		

dimension. In addition, 5 African countries ranked in the bottom 10 in the world on this dimension. This suggests that African countries spent far less than the world average on public health. This is clearly related to the level of economic development of Africa countries.

Oceania In 2019, Oceania (covering 15 countries) as a whole ranked higher than Asia and Africa but lower than North America, Europe, and Latin America in public health issue from the perspective of global justice. Oceania consists of Australia and New Zealand (two countries), Melanesia (four countries), Micronesia (five), and Polynesia (four). Oceania's performance on public health issue varied widely in 2019. The Australia and New Zealand region is not only the best performer in Oceania but also one of the best performers in the world on public health issues, second only to North. Polynesia performed better than Micronesia but worse than the Caribbean on public health. Melanesia is the worst-performing region in Oceania on public health, but on a global scale it still performed better than South Asia but worse than Central Asia.

The wide variation of Oceania's performance on public health issue is also reflected in the ranking of countries. In 2019, Australia and New Zealand were the two best performers in Oceania, in the top 10% in the world at eleventh and fourteenth places, respectively. Of the 15 Oceanian countries, 6 entered the top 50% of the world, but the remaining 9 countries ranked below 100.

Oceania as a whole has good performance, but the individual countries' performance varied widely among Oceanian countries. For example, in a population-weighted model, Australia ranks twentieth in the world on the performance dimension, but 12 of the 15 Oceanian countries ranked in the bottom 50% of this dimension in 2019. In an unweighted model that measures absolute levels of public health, Australia and New Zealand outperformed on the unweighted performance dimension, ranking fifth and ninth in the world, respectively; however, 11 of the 15 Oceania countries ranked below 100 on this dimension. This shows that, with the exception of Australia and New Zealand, the vast majority of Oceania countries underperformed on both the population-weighted and unweighted performance dimension of public health. Additionally, Oceanian countries performed similarly on the contribution dimension as on the performance dimension in 2019. Australia and New Zealand performed well on this dimension, ranking eleventh and twelfth in the world, respectively, followed by Palau (thirty-fourth), Tuvalu (fifty-first) and Samoa (fifty-seventh); 9 of the 15 Oceanian counties, however, ranked in the bottom 50% of the world on this dimension.

2.9.5 Conclusion

We collect public health data from WHO and then use a population-weighted model to construct each country's score, which consists of performance and contribution dimensions of public health from the perspectives of global justice. We find that, in 2019, North America had the best performance on public health issues, followed by Europe and Latin America, while Africa had the worst performance, behind Asia and Oceania. We also find that performance varied widely within regions. For example, Asia and Oceania performed poorly overall, but

both East Asia and the subregion of Australia and New Zealand performed very well. Specifically, Australia and New Zealand performed second only to North America and outperformed the rest of the world, while East Asia's performance was behind only to North America, Australia and New Zealand, Western Europe, and Northern Europe, and led the rest of the world.

We find a strong and positive correlation between the score for public health and economic development measured by GDP per capita. The Pearson correlation coefficient between the score of public health issue and per capita GDP exceeds 0.75. The correlation remains when a country's income level is used as a proxy for economic development.

We further examine the relationship between economic development and the scores for the performance and contribution dimensions, respectively; we find that the contribution dimension score of public health issues is highly correlated with economic development, and its correlation coefficient with GDP per capita exceeds 0.77; however, a country's performance dimension score is weakly correlated with its economic development, and its correlation coefficient with GDP per capita is only 0.4.

We also examine the relationship between population size and the performance and contribution dimensions, respectively, and we find that population size is unrelated to the score for the contribution dimension of public health, but it is weakly correlated with score on the population-weighted performance dimension. The weak correlation between the population-weighted performance score and population size is related to the population-weighted model, in which we weight the population positively when a country's performance is above the global average, and negatively otherwise. In other words, the direction in which the population is weighted in the population-weighted model depends on the relationship of the country's educational performance to the global average, which avoids the strong correlation between population and the score of population-weighted performance dimension.

A unique advantage of public health is that data on this subject are available for 185 countries. This makes the ranking globally representative. Because the WHO data have few missing values, we are only required to impute a few indicators for public health; in particular, we never impute the indicators for the contribution dimension, which further reduces measurement error and makes the ranking more reliable.

It is worth noting the limitations of this study. First, although we try to measure a country's performance in terms of life expectancy, mortality, public health underlying society, and major diseases, these do not cover the full spectrum of public health. For example, our measurements do not capture food safety, air quality, quality of public health systems, etc., mainly due to the lack of systematic country-by-country data. Second, the performance of developed countries in the 2020 COVID-19 global pandemic differs dramatically from the 2019 public health rankings. This reminds us that our rankings of public health issues can only explain performance in normal times, not extraordinary ones. In fact, for the 2020 rankings of public health issue and beyond, we specify the normative rankings as we do this year, and the denormalized rankings that take into account the COVID-19 global pandemic.

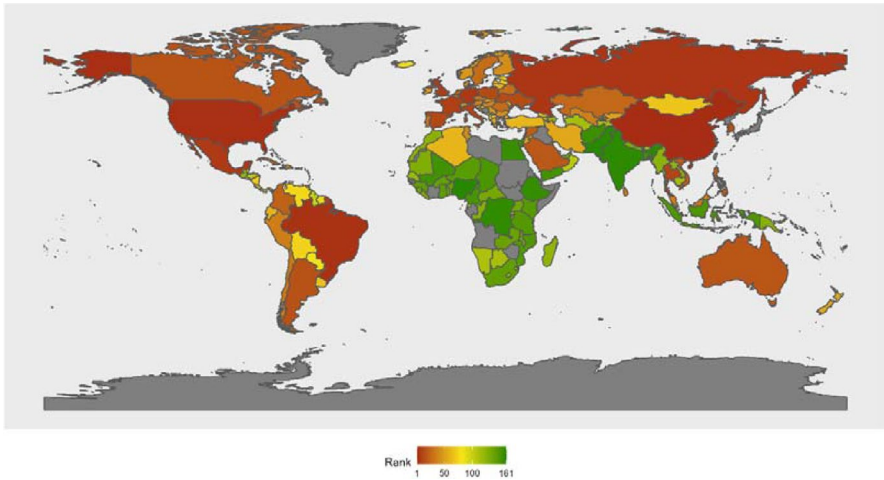


Fig. 10 2019 index ranking of protection of women and children on a world map

2.10 Issue: Protection of Women and Children

2.10.1 Introduction

Protection of women and children has long been an important part of achieving global justice, so we incorporated this issue in our index. As we indicated last year, in contrast to other indexes that cover the protection of women and children from the perspective of human rights, we focus on the total contributions of different states to global justice and use a population-based weighted score of indices to construct the score. In this way, our measurement takes into consideration the impact of population and evaluates the living condition of all women and children as a whole, rather than that of every single woman and child without a population-based and -weighted perspective.

2.10.2 Dimensions and Indicators

We used the same framework of indicators for our measurement as we did last year. Since a country's performance on this issue is clearer and more measurable, we focus on the performance dimension rather than a combination of performance and contribution as in other issues. By looking at the ratio of health, demography, economic status, and political empowerment between men and women, we can assess gender inequality in terms of differences in resources and opportunities between men and women. The second area of focus is the gender gap in children's situations, as seen from the perspective of poverty, health, and education. Regarding the population-based weighted methodology, we set up a baseline. If a country performed better than the baseline, the more population this country has, the greater the total contribution of the country, and the higher its

score. However, if a country performed worse than the baseline, the more population it has, the lower its score.

Table 20 shows the detailed information on the indicators we use. We obtain data on children's health and demography from the WHO and the remainder from the World Bank.

2.10.3 Results

This section reports the ranking results of the countries' contribution to global justice from the perspective of protection of women and children (Table 21).

China remains the first place in women and children protection from 2019. It is worth recalling here that the score indicates not the level of women and children protection in the perspective of an individual right, but the country's total contribution in improving women and children's living situation as a whole. China performed better than the baseline we set in 2019, and ranked first due to its large population. By contrast, India performed worse than the baseline, and its rank was 159, due to its large population in 2019.

The United States remained in second place on this issue from 2019. Through the result, we could see that population has a strong impact on the ranking. The result is quite similar to that of the previous year. For example, those countries that performed better than the baseline with a large population have top ranking: Brazil, Russia, and Mexico. Most European countries rank high as well.

The top 10 countries in 2019 are China, the United States, Brazil, Russia, Germany, Mexico, the United Kingdom, France, Italy, and Thailand. Five of them are European countries. Two of them are Asian countries. The last three are American countries, with two from Latin America. The relatively large population in Brazil, Russia, Mexico, and Thailand explained large about its high rankings. Due to their better performance than the baseline, the ranking indicates that they have made the living condition of a large number of women and children better off than the world average.

2.10.4 Regional Analysis

This section provides a regional analysis of the ranking on protection of women and children (Fig. 10).

Asia The top five countries in Asia on this issue are China, Thailand, Korea, Saudi Arabia, and Vietnam, while the lowest-scoring five countries in Asia on this issue are Pakistan, India, Afghanistan, Bangladesh, and Yemen.

For China, the sex ratio at birth in 2019 is 1.12, lower than that for previous years in China, but still a very high number. To improve gender justice, China should work to achieve a more balanced sex ratio at birth. General female life expectancy is 79, while the male life expectancy is 74. The proportion of unemployment women to the general female labor force is 3.98%, a relatively positive result among all of the countries. About 25% of parliament seats are held by women, which is not bad, but there is still a long way to go to achieve 50%. For the protection of children, the gender parity index of school enrollment is a bit higher than 1, suggesting that girls

are not more disadvantaged than boys in terms of learning opportunities. Basically, the protection of women and children in China is above the baseline. Due to its large population, China has made the living condition of a great number of women and children better than the world average, which leads to its first ranking in the world.

Thailand, as the country ranks the second in Asia, the sex ratio at birth is 1.06, with almost no changes compared with the data of previous years. General female life expectancy is 80, male life expectancy is 73. The proportion of unemployment women is 0.73%, a superlative result. The proportion of seats held by women in the national parliament is about 16%. For the protection of children, the gender parity index of school enrollment is a little higher than 1, suggesting that girls are not more disadvantaged than boys in learning opportunities. Thailand ranks the second in all Asia countries and the tenth in the world.

The sex ratio in Korea at birth in 2019 is 1.05, similar to previous years. General female life expectancy is 86, while male life expectancy is 80. The proportion of unemployed women is 3.58%, and the proportion of seats held by women in national parliament is about 16%. The gender parity index of school enrollment is a little lower than 1, suggesting that girls are a little more disadvantaged than boys in learning opportunities. Korea ranks third in all Asia countries and the fourteenth in the world.

Europe According to our results, the top five countries on this issue in Europe are Russia, Germany, the United Kingdom, France, and Italy. The lowest five scores on this issue are those of Republic of North Macedonia, Montenegro, Malta, Iceland, and Luxembourg.

Russia ranks the first in all of the European countries. The sex ratio at birth in Russia in 2019 is 1.05, with not much change compared with previous years. General female life expectancy is 78, while male life expectancy 68. The proportion of unemployed women is 4.4%. The proportion of seats held by women in national parliament is about 15%. The gender parity index of school enrollment is a little higher than 1, suggesting that girls are not more disadvantaged than boys in terms of learning opportunities. In general, Russia performs better than the baseline. As a result, due to its population, Russia has made the living condition of a great number of women and children better than the world average, which leads to its first ranking in Europe.

In Germany, the sex ratio at birth in 2019 is 1.05, with not much change compared with the data of previous years. General female life expectancy is 83, while male life expectancy is 78. The proportion of unemployment women is 2.7%. The proportion of seats held by women in national parliament is about 31%. The gender parity index of school enrollment is higher than 1, suggesting that girls are not more disadvantaged than boys in learning opportunities. Although Germany actually outperforms Russia in each of the indicators, taking into consideration the population, it is second in the European countries.

For the United Kingdom, the sex ratio at birth in 2019 is about 1.05, similar to its previous data as well as the situation in Russia and Germany. General female life expectancy is 83, and male life expectancy is 79. Proportion of unemployed women is 3.5%. Proportion of seats held by women in national parliament is 32%. The gender parity index of school enrollment is higher than 1, suggesting that girls are not

more disadvantaged than boys in learning opportunities. The United Kingdom ranks the third in all European countries and the seventh in the world.

North America For the United States, the sex ratio at birth in 2019 is 1.04. General female life expectancy is 81, while male expectancy is 76. The proportion of unemployed women is 3.6%. The proportion of seats held by women in national parliament is 23%. The gender parity index of school enrollment is higher than 1, suggesting that girls are not more disadvantaged than boys in learning opportunities. The United States ranks second in the world.

In Canada, the sex ratio at birth in 2019 is 1.05. General female life expectancy is 84, while male life expectancy is 80. The proportion of unemployed women is 5.3%, higher than that of the US. The proportion of seats held by women in national parliament is 29%, also higher than that of the US. The gender parity index for school enrollment is higher than 1, suggesting that girls are not more disadvantaged than boys in learning opportunities. Canada ranks the sixteenth in the world in this category.

Generally, the rankings of the US and Canada are stable across the last decade.

Latin America According to our results, the top five countries on this issue in Latin America are Brazil, Mexico, Argentina, Colombia, and Cuba. The last five countries on this issue are Guatemala, Honduras, Guyana, Saint Vincent and the Grenadines, and Saint Lucia.

Brazil ranks the first. The sex ratio at birth in Brazil in 2019 is 1.05. General female life expectancy is 79, while general male life expectancy is 72. The proportion of unemployed women is 14%, a relatively high number. The proportion of seats held by women in national parliament is 15%. The gender parity index of school enrollment is higher than 1, suggesting that girls are not more disadvantaged than boys in learning opportunities. Brazil ranks the first in all Latin American countries and the third in the world.

For Mexico, the sex ratio at birth in 2019 is 1.05. General female life expectancy is 77, while general male life expectancy is 72. The proportion of unemployed women is 3.5%. The proportion of seats held by women in national parliament is 48%. The gender parity index of school enrollment is higher than 1, suggesting that girls are not more disadvantaged than boys in learning opportunities. Mexico ranks second in all Latin American countries and the sixth in the world.

In Argentina, the sex ratio at birth in 2019 is 1.04. General female life expectancy is 79, and general male life expectancy is 73. The proportion of unemployment is 10%. The proportion of seats held by women in national parliament is 40%. The gender parity index of school enrollment is higher than 1, suggesting that girls are not more disadvantaged than boys in learning opportunities. Argentina ranks third in Latin American countries and fifteenth in the world.

Africa According to our results, most of the African countries perform not very well on this issue. The top five countries are Tunisia, Algeria, Mauritius, Cabo Verde, and Sao Tome and Principe, where Tunisia ranks forty-first in the world. The lowest five countries are Nigeria, Congo, Ethiopia, Egypt, and Mali.

In Tunisia, the sex ratio at birth in 2019 is about 1.05. General female life expectancy is 74, and male life expectancy is 74. The proportion of unemployed women is 22.4%, a relatively large number. Proportion of seats held by women in national

Table 22 Global justice index in 2019 (except for both climate change and anti-poverty)

Country	Ranking	Country	Ranking
United States of America	1	Slovakia	69
Germany	2	Madagascar	70
United Kingdom of Great Britain and Northern Ireland	3	Trinidad and Tobago	71
China	4	Jamaica	72
Sweden	5	Estonia	73
Norway	6	Dominican Republic	74
Canada	7	Hungary	75
Belgium	8	Ukraine	76
Italy	9	Burkina Faso	77
Finland	10	Mauritius	78
Denmark	11	Colombia	79
Switzerland	12	Algeria	80
Spain	13	Iran (Islamic Republic of)	81
Austria	14	El Salvador	82
Netherlands	15	Uganda	83
Australia	16	Samoa	84
Ireland	17	Namibia	85
New Zealand	18	Botswana	86
Brazil	19	Kenya	87
Israel	20	Republic of Moldova	88
Argentina	21	Cuba	89
Portugal	22	Nicaragua	90
Iceland	23	Honduras	91
Russian Federation	24	Benin	92
South Africa	25	Oman	93
Uruguay	26	Timor-Leste	94
Chile	27	Eswatini	95
Mexico	28	Niger	96
Panama	29	Kazakhstan	97
Indonesia	30	Liberia	98
Costa Rica	31	Kyrgyzstan	99
Philippines	32	Bahamas	100
Egypt	33	Serbia	101
Malta	34	Armenia	102
Mozambique	35	Tajikistan	103
Paraguay	36	Fiji	104
Ethiopia	37	Pakistan	105
Peru	38	Croatia	106
Kuwait	39	Mongolia	107
Poland	40	Cambodia	108
India	41	Sierra Leone	109
Cyprus	42	Belize	110

Table 22 (continued)

Country	Ranking	Country	Ranking
Malaysia	43	Albania	111
Senegal	44	Chad	112
United Republic of Tanzania	45	Cameroon	113
Czechia	46	Georgia	114
Thailand	47	Guyana	115
Lithuania	48	Mauritania	116
Lesotho	49	Azerbaijan	117
United Arab Emirates	50	Burundi	118
Qatar	51	Djibouti	119
Ghana	52	Maldives	120
Slovenia	53	Uzbekistan	121
Malawi	54	Barbados	122
Zambia	55	Mali	123
Bangladesh	56	Central African Republic	124
Romania	57	Sri Lanka	125
Rwanda	58	Gambia	126
Guatemala	59	Vietnam	127
Nepal	60	Congo	128
Belarus	61	Tonga	129
Latvia	62	Lao People's Democratic Republic	130
Ecuador	63	Saint Vincent and the Grenadines	131
Jordan	64	Saint Lucia	132
Togo	65	Myanmar	133
Tunisia	66	Bhutan	134
Suriname	67	Afghanistan	135
Bulgaria	68		

parliament is about 22.5%. The gender parity index of school enrollment is higher than 1, suggesting that girls are not more disadvantaged than boys in terms of learning opportunities.

For Algeria, the sex ratio at birth in 2019 is about 1.05. General female life expectancy is 77, and general male life expectancy is 75. The proportion of unemployed women is 20%. The proportion of seats held by women in national parliament is about 25%. The gender parity index of school enrollment is higher than 1, suggesting that girls are not more disadvantaged than boys in learning opportunities. Algeria ranks second among all African countries and sixtieth in the world.

For Mauritius, the sex ratio at birth in 2019 is about 1.04. General female life expectancy is 77, and general male life expectancy is 71. The proportion of unemployed women is 9%. The proportion of seats held by women in national parliament is 20%. The gender parity index of school enrollment is a little lower than 1, suggesting that girls are a little more disadvantaged than boys in learning opportunities.

Table 23 Global justice index in 2019 (except for climate change)

Country	Ranking	Country	Ranking
United States of America	1	Jamaica	60
China	2	Senegal	61
Germany	3	Bangladesh	62
United Kingdom of Great Britain and Northern Ireland	4	Algeria	63
Sweden	5	Mozambique	64
Norway	6	Iran (Islamic Republic of)	65
Canada	7	Colombia	66
Belgium	8	United Republic of Tanzania	67
Italy	9	Republic of Moldova	68
Finland	10	El Salvador	69
Denmark	11	Samoa	70
Switzerland	12	Lesotho	71
Spain	13	Kazakhstan	72
Austria	14	Rwanda	73
Netherlands	15	Botswana	74
Australia	16	Serbia	75
Ireland	17	Namibia	76
Brazil	18	Zambia	77
Israel	19	Croatia	78
Portugal	20	Togo	79
Iceland	21	Nicaragua	80
Russian Federation	22	Honduras	81
Uruguay	23	Armenia	82
India	24	Mongolia	83
Chile	25	Fiji	84
Panama	26	Kyrgyzstan	85
Mexico	27	Tajikistan	86
Costa Rica	28	Albania	87
Malta	29	Burkina Faso	88
South Africa	30	Malawi	89
Paraguay	31	Pakistan	90
Indonesia	32	Azerbaijan	91
Egypt	33	Kenya	92
Poland	34	Georgia	93
Cyprus	35	Uganda	94
Peru	36	Eswatini	95
Philippines	37	Mauritania	96
Malaysia	38	Cameroon	97
Czechia	39	Madagascar	98
Thailand	40	Maldives	99
Lithuania	41	Sri Lanka	100
Slovenia	42	Timor-Leste	101

Table 23 (continued)

Country	Ranking	Country	Ranking
Romania	43	Vietnam	102
Belarus	44	Niger	103
Latvia	45	Benin	104
Ethiopia	46	Liberia	105
Jordan	47	Uzbekistan	106
Bulgaria	48	Tonga	107
Ecuador	49	Chad	108
Slovakia	50	Sierra Leone	109
Tunisia	51	Gambia	110
Ghana	52	Lao People's Democratic Republic	111
Guatemala	53	Mali	112
Hungary	54	Congo	113
Estonia	55	Bhutan	114
Ukraine	56	Burundi	115
Mauritius	57	Myanmar	116
Nepal	58	Central African Republic	117
Dominican Republic	59		

Oceania The Oceanian countries are ranked as follows: Australia, New Zealand, Samoa, Tonga Vanuatu, Fiji, Solomon Islands and Papua New Guinea. Among them, Australia ranks the seventeenth in the world, New Zealand the fifty-third, and the rest rank around 100.

The sex ratio at birth in Australia in 2019 is about 1.05. General female life expectancy is 85, and general male life expectancy is 80. The proportion of unemployed women is 5%. The proportion of seats held by women in national parliament is about 30%. The gender parity index of school enrollment is a little lower than 1, suggesting that girls are a little more disadvantaged than boys in learning opportunities.

For New Zealand, the sex ratio at birth in 2019 is about 1.05. General female life expectancy is 83, and that of male is 80. The proportion of unemployed women is 4%. The proportion of seats held by women in national parliament is about 41%. The gender parity index of school enrollment is higher than 1, suggesting that girls are not more disadvantaged than boys in learning opportunities. For Samoa, the sex ratio at birth in 2019 is about 1.08. General female life expectancy is 75, and male life expectancy is 71. The proportion of unemployed women is 9.8%. Proportion of seats held by women in national parliament is about 10%. The gender parity index of school enrollment is higher than 1, suggesting that girls are not more disadvantaged than boys in learning opportunities.

Table 24 Global justice index in 2019 (including all ten issues)

Country	Ranking	Country	Ranking
United States of America	1	Philippines	29
China	2	Egypt	30
Germany	3	Poland	31
United Kingdom of Great Britain and Northern Ireland	4	Malaysia	32
Sweden	5	Cyprus	33
Norway	6	Lithuania	34
Canada	7	Thailand	35
Finland	8	Czechia	36
Italy	9	Slovenia	37
Belgium	10	Latvia	38
Denmark	11	Romania	39
Switzerland	12	Belarus	40
Spain	13	Ecuador	41
Austria	14	Bulgaria	42
Australia	15	Slovakia	43
Netherlands	16	Estonia	44
Brazil	17	Hungary	45
Ireland	18	Ukraine	46
Russian Federation	19	Colombia	47
Israel	20	Bangladesh	48
Portugal	21	Algeria	49
Iceland	22	Iran (Islamic Republic of)	50
India	23	Kazakhstan	51
Chile	24	Azerbaijan	52
Mexico	25	Pakistan	53
Indonesia	26	Sri Lanka	54
Peru	27	Vietnam	55
South Africa	28	Uzbekistan	56

2.10.5 Conclusion

In this section, we measure the performance of each country in achieving women and children protection. We use 11 indicators used to measure the protection of women (life expectancy, maternal mortality ratio, death ratio, sex ratio, unemployment, vulnerable employment, wage and salaried, proportion of seats held by women in national parliament) and the protection of children (number of deaths per 1000+, prevalence of thinness among children and adolescents, school enrollment). The top 10 countries in 2019 are China, the United States, Brazil, Russia, Germany, Mexico, the United Kingdom, France, Italy, and Thailand. China ranks the first, but it must make greater efforts to achieve a more

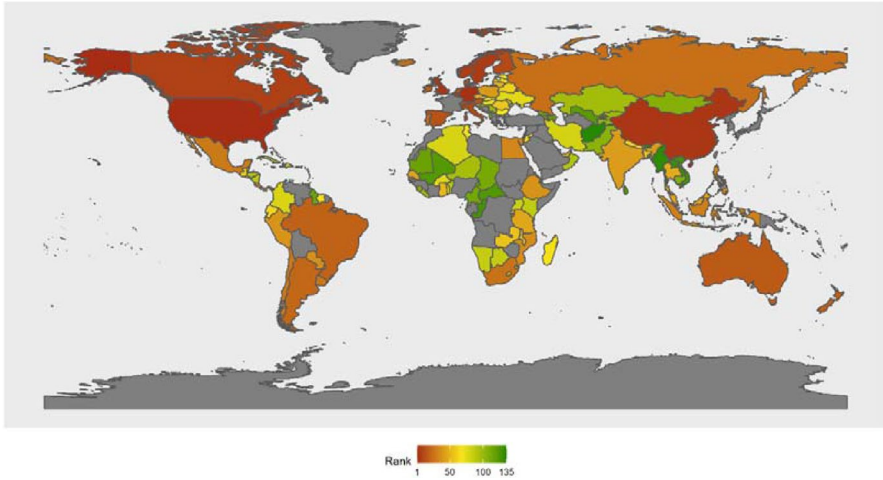


Fig. 11 2019 Index ranking of global justice (except for climate change and anti-poverty)

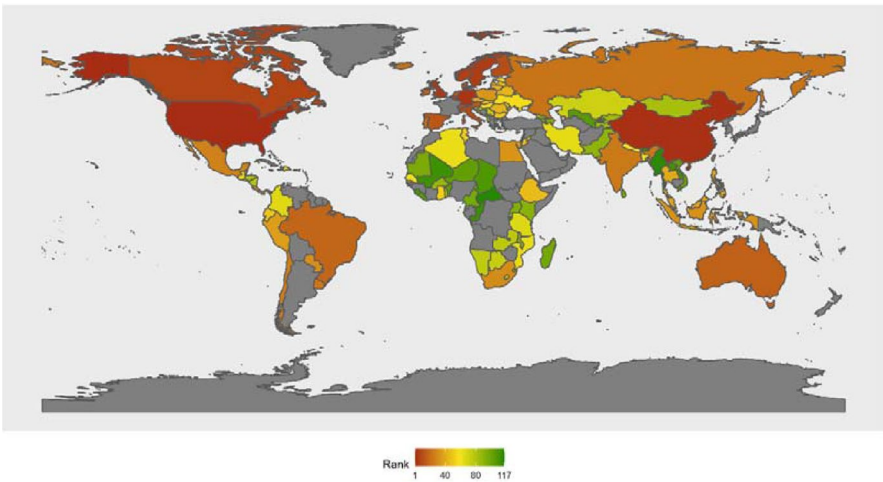


Fig. 12 2019 Index ranking of global justice (except for climate change)

balanced sex ratio at birth. European countries perform very well on this issue, and a large number of the top 10 countries are European. Latin American countries and African countries have a relatively higher proportion of unemployed women. Generally, the ranks are stable in comparison with the results of previous years. As we have already noted, we use a population-based weighed score of indices to construct the score for this issue. High scores show a higher level of protection for women and children than the world average.

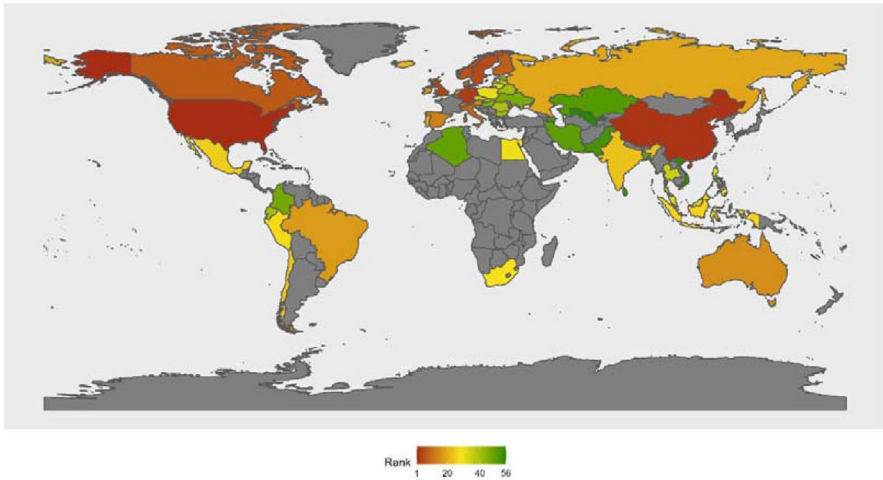


Fig. 13 2019 Index ranking of global justice (including all ten issues)

3 Global Justice Indices: Main Results

In this section, we report each country's contribution to global justice in 2019.

This year we collected data using additional channels to improve it. For example, we supplemented education-related missing value in the World Bank with the UNESCO database, resulting in an increase in the number of countries covered by education issue from 139 in 2018 to 151 in 2019. This report, however, still faces data availability issues. This is particularly acute for certain issues, such as climate change, education, and poverty. For example, due to a lack of data on energy consumption and electricity production, climate change data cover only 75 countries, less than half of that available for the other issues. In addition, although poverty issue affects 152 countries, as we show below, eliminating the poverty issue effectively increases the number of countries covered by the Global Justice Index. So, like last year, we excluded anti-poverty measures from this year's report.

To avoid omitting countries from the Global Justice Index, we report our results using the following strategy. First, we report the Global Justice Index, which excludes climate change and poverty. Excluding these two issues would allow the index to cover 137 countries (Table 22). Second, we include an index that covers 117 countries but excludes climate change (Table 23). Finally, we report a Global Justice Index with all ten issues (Table 24).

Table 22 report the Global Justice Index excluding climate change and anti-poverty. After excluding the two issues, the index finally covers 135 countries. In 2019, as shown in Table 22, the United States, Germany, the United Kingdom, China, Sweden, Norway, Canada, Belgium, Italy, and Finland ranked as the top 10 in the Global Justice Index excluding climate change and anti-poverty. France was not included this year due to lack of data on education issues. As a result, Finland rose from eleventh in 2018 to tenth in 2019. The list of the other nine countries has not

changed, but their ranking has changed slightly. The top 10 countries apart from China are developed countries from Northern Europe, Western Europe, and North America.

The bottom 10 countries in the global justice that exclude climate change and anti-poverty are Gambia, Vietnam, Congo, Tonga, Lao, Saint Vincent and the Grenadines, Saint Lucia, Myanmar, Bhutan, and Afghanistan. The bottom 10 countries are in Africa (2 countries), Asia (5 countries), Latin America (2 countries), and Oceania (1 country).

It should be noted that most of the countries missing from this index are developing countries. Therefore, the bottom 10 countries listed above may not have the worst rankings in global justice but simply perform the worst of the 135 countries on the issues that the index covers. However, since the index covers almost all major developed countries, we believe that the ranking of the top 10 is relatively stable.

Figure 11 shows the index ranking of global justice that excludes climate change and anti-poverty in 2019. From a global justice perspective, as shown in the figure, North America, which consists of two developed countries, is the best performer, followed by Europe and Oceania; while Africa is the worst performer. Asia performs slightly better than Africa but worse than Latin America.

To ameliorate the impact of excluding too many issues from the Global Justice Index, next, we exclude only the issue of climate change, which has the most missing countries, and report the index ranking in Table 23. The Global Justice Index excluding climate change covers 117 countries.

The top 10 countries in the ranking excluding climate change shown in Table 23 are exactly the same as those in Table 22 from which both climate change and anti-poverty are excluded. The only difference in the top 10 countries' ranking between Tables 22 and 23 is that due to its outstanding performance on anti-poverty issues, the inclusion of the anti-poverty issue results in an increase in China's ranking from fourth to second.

The inclusion of anti-poverty issues in the Global Justice Index in Table 23 results in an addition of 18 countries. Most of these are developing countries, and their performance on anti-poverty issues varies widely, resulting in a large change in the bottom ten countries. The bottom 10 countries in the index, which only excludes climate change, are Chad, Gambia, Lao, Mali, Congo, Bhutan, Burundi, Myanmar, and Central African Republic. Of the bottom 10 countries, 7 are in Africa, and 3 are in Asia.

Figure 12 shows index ranking of global justice that excludes climate change in 2019. From the perspective of global justice, North America performed best in the world, followed by Europe and Latin America, while Africa performed worst, after Asia and Oceania. Specifically, North America, Western Europe, Australia and New Zealand, East Asia, and Northern Europe performed are the top five performing regions in the world, while Central Africa, West Africa, Central Asia, Polynesia, and Melanesia are the five worst-performing regions.

In this report, the Global Justice Index should theoretically contain 10 topics. Although the climate change issue covers only 75 countries, therefore, we still attempt to report a Global Justice Index that covers all 10 issues.

As shown in Table 24, the Global Justice Index including all 10 issues covers only 56 countries. Because the data for developed countries is relatively complete, we find that the top 10 countries in Table 24 are exactly the same as those in Table 23. There are only changes in the rankings between the two: Finland has risen from tenth in Table 23 to eighth in 24, and Belgium has dropped from eighth to tenth. This further confirms the robustness of our results, especially the ranking of the top countries in the index.

The inclusion of climate change in the Global Justice Index excluded the data from 61 countries, largely developing countries. Therefore, the bottom 10 countries in Table 24 are quite different from those in Table 23. Here, the bottom 10 countries in the index are Colombia, Bangladesh, Algeria, Iran, Kazakhstan, Azerbaijan, Pakistan, Sri Lanka, Vietnam, and Uzbekistan. Of these, eight are in Asia, and the other two are in Africa and Latin America, respectively. Figure 13 shows the map of index ranking of global justice which includes all ten issues. Because there are only 56 countries in the index, and the missing countries are spread unevenly around the regions, this report does not conduct further analysis of regional performance for this index.

4 Conclusion

In this year's Global Justice Index, we maintained the methodological framework and measurement of last year while improving the data and analysis. We continue with the principles of CBDR-RC and CDDR, which represent a synthesis of rights-based, goods-based, and virtue-based approaches embedded within the historical discussion of global justice. In this way, we established a ten-issue index system: (1) climate change (global warming), (2) peacekeeping, (3) humanitarian aid, (4) terrorism and armed conflicts, (5) cross-national criminal police cooperation, (6) refugee, (7) anti-poverty, (8) education, (9) public health, and (10) the protection of women and children. The issue-system remained unchanged with that of the previous year. We have improved our data to cover a larger amount of nation-states. For example, using the UNESCO database, we added missing data on education from the World Bank to provide data on 151 countries in 2019, which is a significant improvement over the 139 countries in 2018.

Our result shows that the top 10 countries in 2019 are the United States, China, Germany, the United Kingdom, Sweden, Norway, Canada, Belgium, Italy, and Finland. To avoid omitting too many countries due to data limitation, we reported three versions of our calculation: a Global Justice Index including all of the 10 issues mentioned above (a coverage of 75 countries); a Global Justice Index without climate change (a coverage of 117 countries); a Global Justice Index without climate change and poverty (a coverage of 137 countries). For all of the three versions, the rankings of the top 10 countries remain almost the same, suggesting the robustness of our measurement. The main difference is caused by China's outstanding performance on anti-poverty. Thus, when the issue of anti-poverty is included, the ranking of China rises from fourth to second.

The Global Justice Index is a years-long project that measures the relative position of nation-states in enhancing justice at the global level, focusing on 10 key issue areas and using more than 50 qualitative and quantitative measurement indicators from highly respected sources. The index will be useful in at least three domains: (1) it presents an international comparable measure of the annual contributions and performance of individual countries to 10 distinct domains of global justice, through which researchers, practitioners, and governments can trace and observe current trends in global justice issues over time; (2) it will inform state policymakers and international agencies with recent development of global justice in ten respective issue areas, based on which they can reset more targeted policy agenda and take more proactive actions in concerned domains; and (3) its results can be used either as a dependent variable or an independent variable in more comprehensive scholarly research designs, providing more explanatory analyses to further examine the associated drivers and consequences of global justice performance.

Nevertheless, several caveats must be noted for the use and interpretation of the global index results. (1) Due to the problem of data limitations, the number of countries that can be measured and compared for one particular year varies across the 10 issue areas. For some issues, such as climate change, anti-poverty, and education, the problem of missing values for some key indicators is even worse than it is for others. As a result, only 56 countries are covered in the aggregated final index with all the 10 issue areas. (2) Because no theoretical research has informed the proper weighting of the 10 issues in global justice, we currently assume that they contribute equally to global justice. (3) The index results are useful for comparing the performance of countries in the same year, but a longitudinal comparison across years could be inappropriate due to the changing number of observed countries in each year, caused by constrained availability of secondary data.

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Declarations

Conflict of interest On behalf of all authors, the corresponding author states that there is no conflict of interest. Authors have no financial or personal relationship with a third party whose interests could be positively or negatively influenced by the article's content.

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