

Briefing Note on HDI and PHDI

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1. Human Development Index 2019

- This year the Human Development Index (HDI) is calculated for 189 countries, the same number of countries as in last year. There are still six UN Member States for which it is not possible to calculate the HDI.¹
- The methodology for computing Human Development indices has not changed in 2020.
- All the data and statistics presented in the 2020 report are based on available data for 2019 and earlier years and describe the state of human development before the COVID-19 pandemic. Data reflecting changes caused by the COVID-19 pandemic and its socioeconomic fallout in 2020 will be available next year, and will be presented in tables and related analyses of the 2021 HDR.
- Data revisions and updates that have had major impact on the 2019 HDI (published in HDR2020):
 - (i) The updates of the population data (World Population Prospect, 2019 Revision, published in June 2019), which affected all measures expressed per capita, means, etc. UIS published education indicators with the revised denominators in February 2020.
 - (ii) Major revision of GDP and GNI data in purchasing-power-parity (PPP) terms (World Bank, May 2020.) Data collected in the 2017 International Comparison Program were used for computation of the PPP conversion factors with the new base year set at 2017; also the new population data were used as denominator. We use these new GDP and GNI data expressed in constant 2017 PPP international dollars. The unweighted average 2018 GNI per capita in constant 2017 PPP terms is more than 9% higher than in constant 2011 PPP terms.
- Summary of HDI 2019 for countries in the Europe and Central Asia Region²:
 - Since 1990, the HDI value has increased by almost 22.6% globally, and in the Europe and Central Asia region it increased by 19.5%.
 - The HDI is calculated for all 17 countries in the Europe and Central Asia region. There are 6 countries that are in the very high human development group – Montenegro, Kazakhstan, Belarus, Turkey, Georgia and Serbia. There are 9 countries in the high

¹ Monaco, Nauru, the Democratic People's Republic of Korea, San Marino, Somalia and Tuvalu.

² In the HDR's developing regions list, Europe and Central Asia region includes 17 countries. The RBEC's 18 country programmes list includes Kosovo which is not included in the HDRO's Europe and Central Asia country list.

human development group and 2 in the medium group (Kyrgyzstan and Tajikistan), and no country in the low human development group.

- The average HDI value for the region is 0.791, which is above the average for developing countries (0.689) and also above the world average (0.737). This places the region on the top of all other developing regions.
 - The region's averages for all the HDI components are above the world averages.
 - The region's average life expectancy at birth is 74.4 years, which is above the average of developing countries and the world. There is a variation across countries – between 68.2 years for Turkmenistan and 78.6 years for Albania.
 - The average expected years of schooling is 14.7 years, which is above all other developing regions in this indicator. There is a large variation across countries – between 11.2 years for Turkmenistan and 16.6 years for Turkey.
 - The average mean years of schooling is 10.4 years, which is above all other developing regions in this indicator. There is a large variation across countries – between 8.1 years for Turkey and 13.1 years for Georgia.
 - The average gross national income per capita is \$17,939 (constant 2017 PPP international dollars), which is above all other developing regions in this indicator. There is also a large variation in GNI per capita across countries – between \$3,954 for Tajikistan to \$27,701 for Turkey.
- The table below ranks the 17 countries in the Europe and Central Asia region by the biggest drop in the HDI ranking (2019 HDI values vs. 2018 HDI values published in HDR2020). The 2019 HDI and the 2018 HDI values are calculated using the most recently revised historical data available in 2020. In general, the rankings change little between two successive years.
 - But often the countries and the readers compare the HDI values and ranks published in different editions of HDR (e.g., comparing 2019 HDI rank published in HDR2020 with 2018 HDI rank published in HDR2019). Please note that the changes between published HDI values and ranks in the 2020 HDR and in the 2019 HDR includes changes due to revisions of data series and methodologies and due to the true progress (regress) in the HDI indicators.
 - Belarus has registered gains in all indicators and yet they lost a certain number of ranks compared to their ranking in the 2019 HDR. This is because other countries that were previously ranked below are now ranked higher.

**Europe and Central Asian Countries ranked by the largest drop in HDI ranking
(2019 HDI vs. 2018 HDI)**

| HDR 2020 | | | | HDR 2019 | | Total changes in indicators (HDR2020 vs. HDR2019) | | | | |
|--------------------|-----------------|---------------|---------------|---------------|--------------------|--|--------------------|--------------------|------------------------|----------------------------|
| Change in HDI Rank | Country | 2019 HDI Rank | 2018 HDI Rank | 2018 HDI Rank | Change in HDI Rank | Diff. in LE (yrs) | Diff. in EYS (yrs) | Diff. in MYS (yrs) | Diff. in GNIpc (\$PPP) | Diff. (%) in GNIpc (\$PPP) |
| -4 | Belarus | 53 | 49 | 50 | -3 | 0.20 | 0.05 | 0.00 | 1508.0 | 8.9 |
| -1 | Albania | 69 | 68 | 69 | 0 | 0.11 | -0.53 | 0.09 | 1698.5 | 13.8 |
| -1 | Armenia | 81 | 80 | 81 | 0 | 0.14 | -0.10 | -0.49 | 4616.8 | 49.8 |
| 0 | Azerbaijan | 88 | 88 | 87 | -1 | 0.14 | 0.49 | 0.10 | -1456.5 | -9.6 |
| 0 | BiH | 73 | 73 | 75 | 2 | 0.14 | 0.01 | 0.12 | 2182.1 | 17.2 |
| 0 | Kyrgyzstan | 120 | 120 | 122 | 2 | 0.13 | -0.39 | 0.22 | 1547.6 | 46.7 |
| 0 | Montenegro | 48 | 48 | 52 | 4 | 0.11 | -0.03 | 0.20 | 3888.5 | 22.2 |
| 0 | North Macedonia | 82 | 82 | 82 | 0 | 0.11 | 0.12 | 0.13 | 2990.9 | 23.2 |
| 0 | Turkey | 54 | 54 | 59 | 5 | 0.25 | 0.16 | 0.44 | 2795.5 | 11.2 |
| 1 | Moldova | 90 | 91 | 107 | 17 | 0.09 | -0.08 | 0.15 | 6830.5 | 100.0 |
| 1 | Serbia | 64 | 65 | 63 | -1 | 0.15 | -0.03 | 0.01 | 1974.0 | 13.0 |
| 1 | Tajikistan | 125 | 126 | 125 | 0 | 0.22 | 0.25 | 0.06 | 471.2 | 13.5 |
| 1 | Turkmenistan | 111 | 112 | 108 | -3 | 0.12 | 0.30 | 0.49 | -1498.8 | -9.1 |
| 1 | Ukraine | 74 | 75 | 88 | 14 | 0.11 | 0.00 | 0.06 | 5221.7 | 65.3 |
| 1 | Uzbekistan | 106 | 107 | 108 | 2 | 0.15 | 0.05 | 0.28 | 680.1 | 10.5 |
| 2 | Georgia | 61 | 63 | 70 | 9 | 0.17 | -0.16 | 0.32 | 4859.3 | 50.8 |
| 2 | Kazakhstan | 51 | 53 | 50 | -1 | 0.36 | 0.35 | 0.11 | 689.8 | 3.1 |

2. Planetary Pressures-Adjusted HDI 2019

- Planetary pressures-adjusted HDI (PHDI) is an experimental index introduced in HDR2020 to adjust the HDI for planetary pressures in the Anthropocene.
- Two indicators - (production-based) CO2 emissions per capita and (consumption-based) material footprint per capita are used to account for the excessive human pressure on the planet. The data source for CO2 emission is Global Carbon Atlas, published by Global Carbon Project, and material footprint data is from UNEP. The PHDI is computed as the product of the HDI and an adjustment factor based on these two variables.
- In an ideal scenario where there are no pressures on the planet, the adjustment factor will be 1, and the PHDI equals the HDI. However, as pressures appear, the PHDI falls below the HDI.
- In HDR 2020, the PHDI is calculated for 169 countries. The PHDI value is very close to the HDI value for low- and medium-human development countries (i.e. those countries with HDI up to 0.7). At higher levels of the HDI, differences between the PHDI value and the HDI value start to open up. For very-high-human development countries (i.e. those countries with HDI greater than 0.8), there is a wide divergence in the PHDI values.
- Countries heavily dependent on fossil fuels exhibit significant drops in PHDI rank compared with the HDI.

- The PHDI has been developed to signal changes that are needed to navigate the Anthropocene. The proposed adjustment to the HDI recognizes that easing the disruptions of planetary processes require reducing CO2 emissions and closing material cycles.
- One must be careful in interpreting the PHDI though, because it does not account for individual countries' responsibilities—current or historical.
- The trajectory of countries over the last three decades, however, shows different paths for different levels of human development. Countries with low and medium levels of human development have been able to improve significantly social and economic conditions without imposing a high burden on planetary balances. But improvements in wellbeing and rising pressure on the planet have been coupled in countries with high and very high human development.
- Summary of HDI 2019 for countries in the Europe and Central Asia Region:
 - The PHDI has been calculated for all 17 countries in the region.
 - PHDI has fallen below HDI over the past thirty years, and the gap between the PHDI and the HDI has been widening in the recent years.
 - The region suffers an overall loss of 8.0% when the HDI is adjusted for planetary pressure. This is above the world average loss of 7.3% and also above the average loss for developing countries - 5.5%.
 - The highest loss due to planetary pressures is suffered by country Kazakhstan (18.5%), while the country experiencing the lowest loss is Tajikistan (1.6%).
 - The planetary pressure from CO2 emissions is the highest in Kazakhstan (17.6 tonnes of CO2 emissions per capita). The country with the lowest CO2 emissions is Tajikistan (0.6 tonnes of CO2 emissions per capita).
 - The planetary pressure from material footprint is the highest in Montenegro (26.7 tonnes of material per capita). Belarus experienced the lowest material footprint (0.4 tonnes of CO2 emissions per capita).
- The table below ranks the 17 countries in the Europe and Central Asian region by the biggest drop in the HDI ranking when planetary pressures are accounted for.

**Europe and Central Asian Countries ranked by the largest drop in ranking
(PHDI vs. HDI)**

| Difference from HDI rank | 2019 PHDI rank | 2019 HDI rank | Country | 2019 HDI value | 2019 PHDI value | Overall loss (%) |
|--------------------------|----------------|---------------|------------------------|----------------|-----------------|------------------|
| -46 | 97 | 51 | Kazakhstan | 0.825 | 0.672 | 18.5 |
| -18 | 129 | 111 | Turkmenistan | 0.715 | 0.595 | 16.8 |
| -1 | 49 | 48 | Montenegro | 0.829 | 0.738 | 11.0 |
| 8 | 65 | 73 | Bosnia and Herzegovina | 0.780 | 0.718 | 7.9 |
| 10 | 44 | 54 | Turkey | 0.820 | 0.746 | 9.0 |
| 10 | 54 | 64 | Serbia | 0.806 | 0.732 | 9.2 |
| 11 | 109 | 120 | Kyrgyzstan | 0.697 | 0.669 | 4.0 |
| 12 | 113 | 125 | Tajikistan | 0.668 | 0.657 | 1.6 |
| 13 | 61 | 74 | Ukraine | 0.779 | 0.720 | 7.6 |
| 15 | 91 | 106 | Uzbekistan | 0.720 | 0.691 | 4.0 |
| 19 | 63 | 82 | North Macedonia | 0.774 | 0.720 | 7.0 |
| 24 | 64 | 88 | Azerbaijan | 0.756 | 0.720 | 4.8 |
| 28 | 41 | 69 | Albania | 0.795 | 0.756 | 4.9 |
| 30 | 31 | 61 | Georgia | 0.812 | 0.772 | 4.9 |
| 32 | 49 | 81 | Armenia | 0.776 | 0.745 | 4.0 |
| 33 | 20 | 53 | Belarus | 0.823 | 0.781 | 5.1 |
| 36 | 54 | 90 | Moldova (Republic of) | 0.750 | 0.734 | 2.1 |