

Inequalities in Human Development in the 21st Century

Briefing note for countries on the 2019 Human Development Report



Papua New Guinea

Introduction

The main premise of the human development approach is that expanding peoples' freedoms is both the main aim of, and the principal means for sustainable development. If inequalities in human development persist and grow, the aspirations of the 2030 Agenda for Sustainable Development will remain unfulfilled. But there are no pre-ordained paths. Gaps are narrowing in key dimensions of human development, while others are only now emerging. Policy choices determine inequality outcomes – as they do the evolution and impact of climate change or the direction of technology, both of which will shape inequalities over the next few decades. The future of inequalities in human development in the 21st century is, thus, in our hands. But we cannot be complacent. The climate crisis shows that the price of inaction compounds over time as it feeds further inequality, which, in turn, makes action more difficult. We are approaching a precipice beyond which it will be difficult to recover. While we do have a choice, we must exercise it now.

Inequalities in human development hurt societies and weaken social cohesion and people's trust in government, institutions and each other. They hurt economies, wastefully preventing people from reaching their full potential at work and in life. They make it harder for political decisions to reflect the aspirations of the whole society and to protect our planet, as the few pulling ahead flex their power to shape decisions primarily in their interests. Inequalities in human development are a defining bottleneck in achieving the 2030 Agenda for Sustainable Development.

Inequalities in human development are not just about disparities in income and wealth. The 2019 Human Development Report (HDR) explores inequalities in human development by going beyond income, beyond averages, and beyond today. The proposed approach sets policies to redress these inequalities within a framework that links the formation of capabilities with the broader context in which markets and governments function.

Policies matter for inequalities. And inequalities matter for policies. The human development lens is central to approaching inequality and asking why it matters, how it manifests itself and how best to tackle it. Imbalances in economic power are eventually translated into political dominance. And that, in turn, can lead to greater inequality and environmental disasters. Action at the start of this chain is far easier than relying on interventions farther down the track. The 2019 HDR contributes to that debate by presenting the facts on inequalities in human development and proposing ideas to act on them over the course of the 21st century.

This briefing note is organized into seven sections. The first section presents information on the country coverage and methodology for the 2019 Human Development Report. The next five sections provide information about key composite indices of human development: the Human Development Index (HDI), the Inequality-adjusted Human Development Index (IHDI), the Gender Development Index (GDI), the Gender Inequality Index (GII), and the Multidimensional Poverty Index (MPI). The final section covers five dashboards: quality of human development, life-course gender gap, women's empowerment, environmental sustainability, and socioeconomic sustainability.

It is important to note that national and international data can differ because international agencies standardize national data to allow comparability across countries and in some cases may not have access to the most recent national data.

1- Country coverage and the methodology of the 2019 Human Development Report

The 2019 Human Development Report presents the 2018 HDI (values and ranks) for 189 countries and UN-recognized territories, along with the IHDI for 150 countries, the GDI for 166 countries, the GII for 162 countries, and the MPI for 101 countries.

It is misleading to compare values and rankings with those of previously published reports, because of revisions and updates of the underlying data and adjustments to goalposts. Readers are advised to assess progress in HDI values by referring to Table 2 ('Human Development Index Trends') in the 2019 Human Development Report. Table 2 is based on consistent indicators, methodology and time-series data and, thus, shows real changes in values and ranks over time, reflecting the actual progress countries have made. Small changes in values should be interpreted with caution as they may not be statistically significant due to sampling variation. Generally speaking, changes at the level of the third decimal place in any of the composite indices are considered insignificant.

Unless otherwise specified in the source, tables use data available to the Human Development Report Office (HDRO) as of 15 July 2019. All indices and indicators, along with technical notes on the calculation of composite indices, and additional source information are available online at <http://hdr.undp.org/en/data>

For further details on how each index is calculated please refer to [Technical Notes 1-6](#) and the associated background papers available on the Human Development Report website: <http://hdr.undp.org/en/data>

2- Human Development Index (HDI)

The HDI is a summary measure for assessing long-term progress in three basic dimensions of human development: a long and healthy life, access to knowledge and a decent standard of living. A long and healthy life is measured by life expectancy. Knowledge level is measured by mean years of schooling among the adult population, which is the average number of years of schooling received in a life-time by people aged 25 years and older; and access to learning and knowledge by expected years of schooling for children of school-entry age, which is the total number of years of schooling a child of school-entry age can expect to receive if prevailing patterns of age-specific enrolment rates stay the same throughout the child's life. Standard of living is measured by Gross National Income (GNI) per capita expressed in constant 2011 international dollars converted using purchasing power parity (PPP) conversion rates. For more details see [Technical Note 1](#).

To ensure as much cross-country comparability as possible, the HDI is based primarily on international data from the United Nations Population Division (the life expectancy data), the United Nations Educational, Scientific and Cultural Organization Institute for Statistics (the mean years of schooling and expected years of schooling data) and the World Bank (the GNI per capita data). As stated in the introduction, the HDI values and ranks in this year's report are not comparable to those in past reports because of some revisions to the component indicators. To allow for assessment of progress in HDIs, the 2019 Human Development Report includes recalculated HDIs from 1990 to 2018 using consistent series of data.

2.1- Papua New Guinea's HDI value and rank

Papua New Guinea's HDI value for 2018 is 0.543— which put the country in the low human development category—positioning it at 155 out of 189 countries and territories.

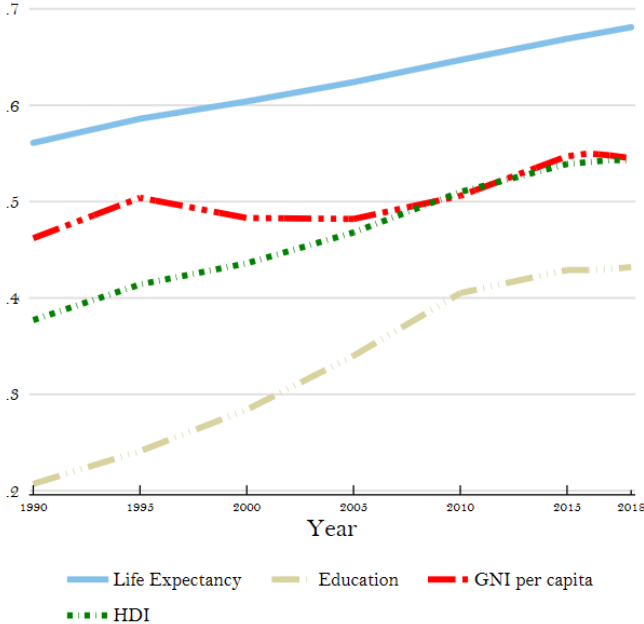
Between 1990 and 2018, Papua New Guinea’s HDI value increased from 0.377 to 0.543, an increase of 43.9 percent. Table A reviews Papua New Guinea’s progress in each of the HDI indicators. Between 1990 and 2018, Papua New Guinea’s life expectancy at birth increased by 7.8 years, mean years of schooling increased by 2.3 years and expected years of schooling increased by 5.3 years. Papua New Guinea’s GNI per capita increased by about 72.8 percent between 1990 and 2018.

Table A: Papua New Guinea’s HDI trends based on consistent time series data and new goalposts

	Life expectancy at birth	Expected years of schooling	Mean years of schooling	GNI per capita (2011 PPP\$)	HDI value
1990	56.5	4.7	2.3	2,133	0.377
1995	58.1	5.2	2.9	2,809	0.414
2000	59.3	6.3	3.3	2,453	0.436
2005	60.5	8.0	3.6	2,439	0.468
2010	62.0	9.8	4.0	2,854	0.510
2015	63.5	10.2	4.3	3,739	0.539
2016	63.7	9.9	4.6	3,810	0.541
2017	64.0	10.0	4.6	3,765	0.543
2018	64.3	10.0	4.6	3,686	0.543

Figure 1 below shows the contribution of each component index to Papua New Guinea’s HDI since 1990.

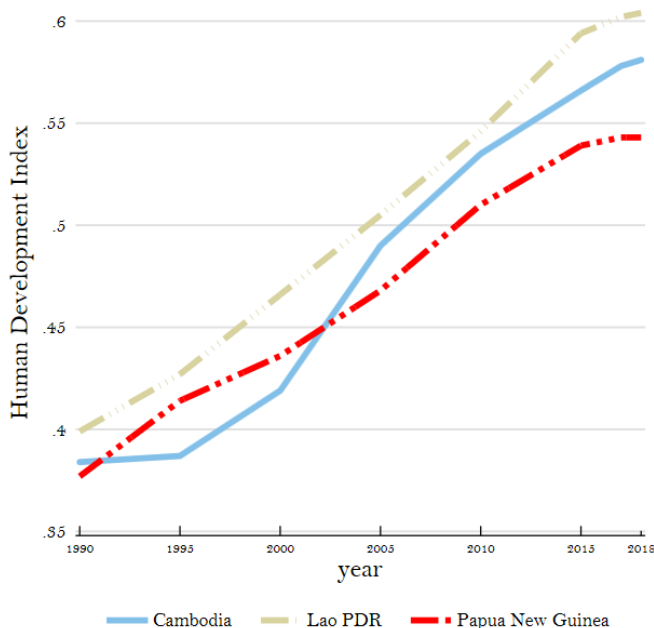
Figure 1: Trends in Papua New Guinea’s HDI component indices 1990-2018



2.2- Assessing progress relative to other countries

Human development progress, as measured by the HDI, is useful for comparison between two or more countries. For instance, during the period between 1990 and 2018 Papua New Guinea, Cambodia and Lao People’s Democratic Republic experienced different degrees of progress toward increasing their HDIs (see Figure 2).

Figure 2: HDI trends for Papua New Guinea, Cambodia and Lao People's Democratic Republic, 1990-2018



Papua New Guinea's 2018 HDI of 0.543 is above the average of 0.507 for countries in the low human development group and below the average of 0.741 for countries in East Asia and the Pacific. From East Asia and the Pacific, countries which are close to Papua New Guinea in 2018 HDI rank and to some extent in population size are Lao People's Democratic Republic and Solomon Islands, which have HDIs ranked 140 and 153 respectively (see Table B).

Table B: Papua New Guinea's HDI and component indicators for 2018 relative to selected countries and groups

	HDI value	HDI rank	Life expectancy at birth	Expected years of schooling	Mean years of schooling	GNI per capita (2011 PPP US\$)
Papua New Guinea	0.543	155	64.3	10.0	4.6	3,686
Lao People's Democratic Republic	0.604	140	67.6	11.1	5.2	6,317
Solomon Islands	0.557	153	72.8	10.2	5.5	2,027
East Asia and the Pacific	0.741	—	75.3	13.4	7.9	14,611
Low HDI	0.507	—	61.3	9.3	4.8	2,581

3- Inequality-adjusted HDI (IHDI)

The HDI is an average measure of basic human development achievements in a country. Like all averages, the HDI masks inequality in the distribution of human development across the population at the country level. The 2010 HDR introduced the IHDI, which takes into account inequality in all three dimensions of the HDI by 'discounting' each dimension's average value according to its level of inequality. The IHDI is basically the HDI discounted for inequalities. The 'loss' in human development due to inequality is given by the difference between the HDI and the IHDI, and can be expressed as a percentage. As the inequality in

a country increases, the loss in human development also increases. We also present the coefficient of human inequality as a direct measure of inequality which is an unweighted average of inequalities in three dimensions. The IHDI is calculated for 150 countries. For more details see [Technical Note 2](#). Due to a lack of relevant data, the IHDI has not been calculated for this country.

4- **Gender Development Index (GDI)**

In the 2014 HDR, HDRO introduced a new measure, the GDI, based on the sex-disaggregated Human Development Index, defined as a ratio of the female to the male HDI. The GDI measures gender inequalities in achievement in three basic dimensions of human development: health (measured by female and male life expectancy at birth), education (measured by female and male expected years of schooling for children and mean years for adults aged 25 years and older) and command over economic resources (measured by female and male estimated GNI per capita). For details on how the index is constructed refer to [Technical Note 3](#). Country groups are based on absolute deviation from gender parity in HDI. This means that the grouping takes into consideration inequality in favour of men or women equally. Due to a lack of relevant data, the GDI has not been calculated for this country.

5- **Gender Inequality Index (GII)**

The 2010 HDR introduced the GII, which reflects gender-based inequalities in three dimensions – reproductive health, empowerment, and economic activity. Reproductive health is measured by maternal mortality and adolescent birth rates; empowerment is measured by the share of parliamentary seats held by women and attainment in secondary and higher education by each gender; and economic activity is measured by the labour market participation rate for women and men. The GII can be interpreted as the loss in human development due to inequality between female and male achievements in the three GII dimensions. For more details on GII please see [Technical Note 4](#).

Papua New Guinea has a GII value of 0.740, ranking it 161 out of 162 countries in the 2018 index. In Papua New Guinea, 0.1 percent of parliamentary seats are held by women, and 9.9 percent of adult women have reached at least a secondary level of education compared to 15.2 percent of their male counterparts. For every 100,000 live births, 215.0 women die from pregnancy related causes; and the adolescent birth rate is 52.7 births per 1,000 women of ages 15-19. Female participation in the labour market is 46.0 percent compared to 47.6 for men (see Table E).

In comparison, Lao People's Democratic Republic is ranked at 110 on this index.

Table E: Papua New Guinea's GII for 2018 relative to selected countries and groups

	GII value	GII Rank	Maternal mortality ratio	Adolescent birth rate	Female seats in parliament (%)	Population with at least some secondary education (%)		Labour force participation rate (%)	
						Female	Male	Female	Male
Papua New Guinea	0.740	161	215.0	52.7	0.1	9.9	15.2	46.0	47.6
Lao People's Democratic Republic	0.463	110	197.0	65.4	27.5	35.0	46.0	76.8	79.7
East Asia and the Pacific	0.310	—	62.0	22.0	20.3	68.8	76.2	59.7	77.0
Low HDI	0.590	—	557.0	101.1	21.3	17.8	30.3	58.2	73.1

Maternal mortality ratio is expressed in number of deaths per 100,000 live births and adolescent birth rate is expressed in number of births per 1,000 women ages 15-19.

1- Multidimensional Poverty Index (MPI)

The 2010 HDR introduced the MPI, which identifies multiple overlapping deprivations suffered by individuals in 3 dimensions: health, education and standard of living. The health and education dimensions are based on two indicators each, while standard of living is based on six indicators. All the indicators needed to construct the MPI for a country are taken from the same household survey. The indicators are weighted to create a deprivation score, and the deprivation scores are computed for each individual in the survey. A deprivation score of 33.3 percent (one-third of the weighted indicators) is used to distinguish between the poor and nonpoor. If the deprivation score is 33.3 percent or greater, the household (and everyone in it) is classified as multidimensionally poor. Individuals with a deprivation score greater than or equal to 20 percent but less than 33.3 percent are classified as vulnerable to multidimensional poverty. Finally, individuals with a deprivation score greater than or equal to 50 percent live in severe multidimensional poverty. The MPI is calculated for 101 developing countries in the 2019 HDR. Definitions of deprivations in each indicator, as well as methodology of the MPI are given in [Technical Note 5](#). Due to a lack of relevant data, the MPI has not been calculated for this country.

2- Dashboards 1-5

Countries are grouped partially by their performance in each indicator into three groups of approximately equal size (terciles), thus, there is the top third, the middle third and the bottom third. The intention is not to suggest the thresholds or target values for these indicators but to allow a crude assessment of country's performance relative to others. Three-colour coding visualizes a partial grouping of countries by indicator. It can be seen as a simple visualization tool as it helps the users to immediately picture the country's performance. A country that is in the top group performs better than at least two thirds of countries (i.e., it is among the top third performers); a country that is in the middle group performs better than at least one third but worse than at least one third (i.e., it is among the medium third performers); and a country that is in the bottom third performs worse than at least two thirds of countries (i.e., it is among the bottom third performers). More details about partial grouping in this table are given in [Technical Note 6](#).

7.1- Dashboard 1: Quality of human development

This dashboard contains a selection of 14 indicators associated with the quality of health, education and standard of living. The indicators on quality of health are lost health expectancy, number of physicians, and number of hospital beds. The indicators on quality of education are pupil-teacher ratio in primary schools, primary school teachers trained to teach, percentage of primary (secondary) schools with access to the internet, and the Programme for International Student Assessment (PISA) scores in mathematics, reading and science. The indicators on quality of standard of living are the proportion of employed people engaged in vulnerable employment, the proportion of rural population with access to electricity, the proportion of population using improved drinking water sources, and proportion of population using improved sanitation facilities.

A country that is in the top third group on all indicators can be considered a country with the highest quality of human development. The dashboard shows that not all countries in the very high human development group have the highest quality of human development and that many countries in the low human development group are in the bottom third of all quality indicators in the table.

Table G provides the number of indicators in which Papua New Guinea performs: better than at least two thirds of countries (i.e., it is among the top third performers); better than at least one third but worse than at least one third (i.e., it is among the medium third performers); and worse than at least two thirds of countries (i.e., it is among the bottom third performers). Figures for Lao People's Democratic Republic and Solomon Islands are also shown in the table for comparison.

Table G: Summary of Papua New Guinea's performance on the Quality of human development indicators relative to selected countries

	Quality of health (3 indicators)			Quality of education (7 indicators)			Quality of standard of living (4 indicators)			Overall (14 indicators)			Missing indicators
	Top third	Middle third	Bottom third	Top third	Middle third	Bottom third	Top third	Middle third	Bottom third	Top third	Middle third	Bottom third	
	Number of indicators												
Papua New Guinea	0	1	1	0	0	1	0	0	4	0	1	6	7
Lao People's Democratic Republic	1	0	2	1	1	0	0	1	3	2	2	5	5
Solomon Islands	1	0	2	0	0	3	0	0	4	1	0	9	4

7.2- Dashboard 2: Life-course gender gap

This dashboard contains a selection of 12 key indicators that display gender gaps in choices and opportunities over the life course – childhood and youth, adulthood and older age. The indicators refer to education, labour market and work, political representation, time use, and social protection. Three indicators are presented only for women and the rest are given in the form of female-to-male ratio. Countries are grouped partially by their performance in each indicator into three groups of approximately equal size (terciles). Sex ratio at birth is an exception - countries are grouped into two groups: the natural group (countries with a value of 1.04-1.07, inclusive) and the gender-biased group (countries with all other values). Deviations from the natural sex ratio at birth have implications for population replacement levels, suggest possible future social and economic problems and may indicate gender bias.

Table H provides the number of indicators in which Papua New Guinea performs: better than at least two thirds of countries (i.e., it is among the top third performers), better than at least one third but worse than at least one third (i.e., it is among the medium third performers), and worse than at least two thirds of countries (i.e., it is among the bottom third performers). Figures for Lao People's Democratic Republic and Solomon Islands are also shown in the table for comparison.

Table H: Summary of Papua New Guinea's performance on the Life-course gender gap dashboard relative to selected countries

	Childhood and youth (5 indicators)			Adulthood (6 indicators)			Older age (1 indicator)			Overall (12 indicators)			Missing indicators
	Top third	Middle third	Bottom third	Top third	Middle third	Bottom third	Top third	Middle third	Bottom third	Top third	Middle third	Bottom third	
	Number of indicators												
Papua New Guinea	1	0	4	1	0	3	0	0	0	2	0	7	3
Lao People's Democratic Republic	2	3	0	3	1	2	0	0	0	5	4	2	1

ic Republic													
Solomon Islands	3	1	0	0	2	1	0	0	0	3	3	1	5

7.3- Dashboard 3: Women’s empowerment

This dashboard contains a selection of 13 woman-specific empowerment indicators that allows empowerment to be compared across three dimensions – reproductive health and family planning, violence against girls and women, and socioeconomic empowerment. Three-color coding visualizes a partial grouping of countries by indicator. Most countries have at least one indicator in each tercile, which implies that women’s empowerment is unequal across indicators and countries.

Table I provides the number of indicators in which Papua New Guinea performs: better than at least two thirds of countries (i.e., it is among the top third performers), better than at least one third but worse than at least one third (i.e., it is among the medium third performers), and worse than at least two thirds of countries (i.e., it is among the bottom third performers). Figures for Lao People’s Democratic Republic and Solomon Islands are also shown in the table for comparison.

Table I: Summary of Papua New Guinea’s performance on the Women’s empowerment dashboard relative to selected countries

	Reproductive health and family planning (4 indicators)			Violence against girls and women (4 indicators)			Socioeconomic empowerment (5 indicators)			Overall (13 indicators)			Missing indicators
	Top third	Middle third	Bottom third	Top third	Middle third	Bottom third	Top third	Middle third	Bottom third	Top third	Middle third	Bottom third	
	Number of indicators												
Papua New Guinea	0	0	0	0	1	0	0	0	2	0	1	2	10
Lao People’s Democratic Republic	0	2	2	1	1	1	1	0	4	2	3	7	1
Solomon Islands	0	0	4	0	1	2	0	0	2	0	1	8	4

7.4- Dashboard 4: Environmental sustainability

This dashboard contains a selection of 11 indicators that cover environmental sustainability and environmental threats. The environmental sustainability indicators present levels of or changes in energy consumption, carbon-dioxide emissions, change in forest area, fresh water withdrawals, and natural resource depletion. The environmental threats indicators are mortality rates attributed to household and ambient air pollution, and to unsafe water, sanitation and hygiene services, percentage of land that is degraded, and the International Union for Conservation of Nature Red List Index value, which measures change in aggregate extinction risk across groups of species. The percentage of total land area under forest is not coloured because it is meant to provide context for the indicator on change in forest area.

Table J provides the number of indicators in which Papua New Guinea performs: better than at least two thirds of countries (i.e., it is among the top third performers), better than at least one third but worse than at least one third (i.e., it is among the medium third performers), and worse than at least two thirds of

countries (i.e., it is among the bottom third performers). Figures for Lao People's Democratic Republic and Solomon Islands are also shown in the table for comparison.

Table J: Summary of Papua New Guinea's performance on the Environmental Sustainability dashboard relative to selected countries

	Environmental sustainability (7 indicators)			Environmental threats (4 indicators)			Overall (11 indicators)			Missing indicators
	Top third	Middle third	Bottom third	Top third	Middle third	Bottom third	Top third	Middle third	Bottom third	
	Number of indicators									
Papua New Guinea	1	1	1	0	1	3	1	2	4	4
Lao People's Democratic Republic	2	0	1	0	0	3	2	0	4	5
Solomon Islands	1	0	2	0	0	3	1	0	5	5

7.5- Dashboard 5: Socioeconomic sustainability

This dashboard contains a selection of 11 indicators that cover economic and social sustainability. The economic sustainability indicators are adjusted net savings, total debt service, gross capital formation, skilled labour force, diversity of exports, and expenditure on research and development. The social sustainability indicators are old age dependency ratio projected to 2030, the ratio of the sum of education and health expenditure to military expenditure, changes in inequality of HDI distribution, and changes in gender and income inequality. Military expenditure is not coloured because it is meant to provide context for the indicator on education and health expenditure and it is not directly considered as an indicator of socioeconomic sustainability.

Table K provides the number of indicators in which Papua New Guinea performs: better than at least two thirds of countries (i.e., it is among the top third performers), better than at least one third but worse than at least one third (i.e., it is among the medium third performers), and worse than at least two thirds of countries (i.e., it is among the bottom third performers). Figures for Lao People's Democratic Republic and Solomon Islands are also shown in the table for comparison.

Table K: Summary of Papua New Guinea's performance on the Socioeconomic sustainability dashboard relative to selected countries

	Economic sustainability (6 indicators)			Social sustainability (5 indicators)			Overall (11 indicators)			Missing indicators
	Top third	Middle third	Bottom third	Top third	Middle third	Bottom third	Top third	Middle third	Bottom third	
	Number of indicators									

Papua New Guinea	0	1	3	1	0	1	1	1	4	5
Lao People's Democrat ic Republic	1	2	2	2	1	2	3	3	4	1
Solomon Islands	1	0	2	2	0	0	3	0	2	6

