

Multidimensional Poverty and Vulnerability to COVID-19: A Rapid Overview of Disaggregated and Interlinked Vulnerabilities in Sub-Saharan Africa

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NOTE

This Briefing¹ presents a 2020 global MPI update to the 2019 global MPI analyses and results presented in: OPHI Briefing 54, 'Multidimensional Poverty and Vulnerability to COVID-19: A Rapid Overview of Disaggregated and Interlinked Vulnerabilities in Sub-Saharan Africa', OPHI, 2020.

We include updated data and results for nine countries, which cover over 35% of both the population and poor persons in the region.²

ACKNOWLEDGEMENTS

Microdata: This research applies the global Multidimensional Poverty Index (MPI) 2020 microdata and conducts analysis for 103 of the 107 countries, based on 8,992,491 of the 9,275,945 observations included in the 2020 global MPI database. National surveys for Botswana, Cuba, Seychelles, and Sri Lanka were not included here due to restrictions on data usage. The microdata were cleaned, standardised, and produced by Alkire, Kanagaratnam, and Suppa (2020). We gratefully acknowledge receiving the microdata from the authors, which facilitated the analysis in this paper.

The COVID-19 pandemic has spread swiftly across sub-Saharan Africa, from well-connected and densely populated urban centres to remote and disadvantaged rural areas.³ Rapid, large-scale policy responses are needed to protect those who are most vulnerable to COVID-19, while also mitigating additional human costs from other existing deprivations.

Why does context matter? For some, COVID-19 is the biggest immediate threat to their life and livelihood. But the survival and livelihoods of many in sub-Saharan Africa are, at the same time, gravely threatened by other conditions – ranging from abject poverty and food insecurity to natural disasters or production shocks, conflict, and unmet health needs. Throughout the policy planning process there is also a need to assess the impact that new deprivations, such as job loss during lockdown, will have on the lives of all members of a household, even if they do not contract the virus. How can policy actors access the evidence on the multiple vulnerabilities people face and respond decisively to COVID-19 without unintentionally creating even worse situations for many people?

This briefing provides evidence on the situation across 479 subnational regions and 40 countries of sub-Saharan Africa. It maps some simultaneous deprivations that people are already facing so that policy actors can adjust their COVID-19 responses based on differing levels of vulnerability. Maps on the OPHI website cover each of the 479 regions in greater depth.

KEY MESSAGES

1. Information on overlapping vulnerabilities can be used a) to reduce direct fatalities from COVID-19 and b) to reduce the collateral human cost of COVID-19 policies.
2. The scale of existing vulnerabilities in sub-Saharan Africa is the highest in the world (see Alkire et al. 2020). The collateral impact of COVID-19 on lives and livelihoods needs strong policies of mitigation in this region.
3. Plans need to consider the number of vulnerable people and the percentage of the population that is vulnerable. Some clusters of high-risk areas also span national boundaries and require a regional approach.
4. Virtually all MPI poor are at risk, while some of the most vulnerable subnational regions are in Ethiopia, Chad, and the Democratic Republic of the Congo.

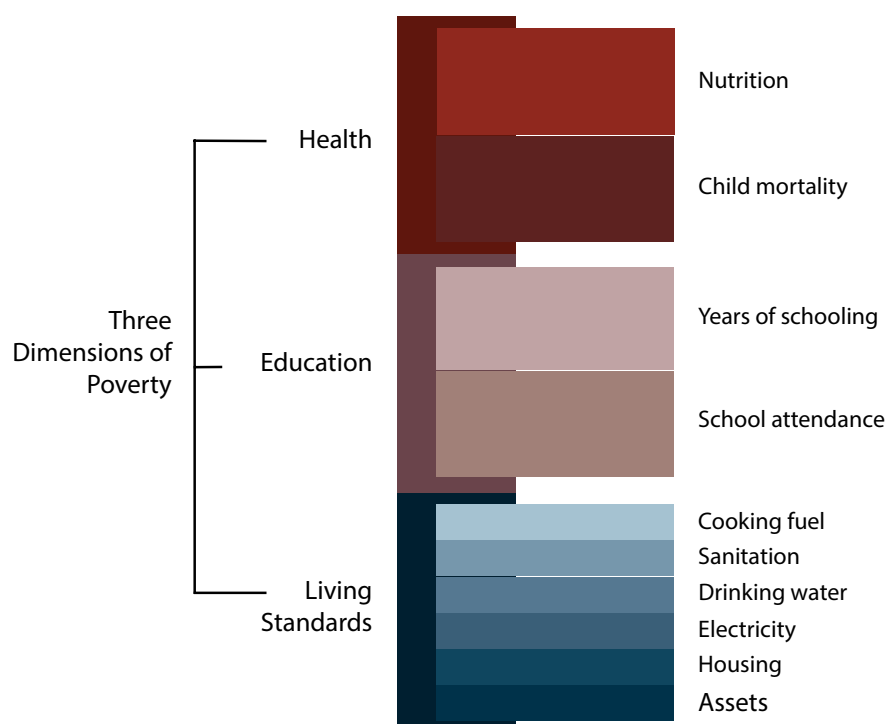
1. Information on overlapping vulnerabilities can be used a) to reduce direct fatalities due to COVID-19 and b) to reduce the collateral human cost of COVID-19 policies.

This rapid overview provides information on where in sub-Saharan Africa people are likely to be at increased risk from COVID-19. These people already have overlapping deprivations in key indicators that can lead to a more critical or even lethal course of this disease.

Our analysis builds on the global Multidimensional Poverty Index (MPI) and its ten indicators: nutrition, child mortality, years of schooling, school attendance (these first four are weighted at 1/6th), cooking fuel, sanitation, drinking water, electricity, housing, and assets (weighted at 1/18th). A person who is deprived in at least one third of the weighted indicators is identified as being multidimensionally (or MPI) poor.

This overview focuses on the joint distribution of **three COVID-19 risk indicators** from the global MPI. These are nutrition, drinking water, and cooking fuel. Persons are at risk if they suffer from **at least one** of these COVID-19 risk indicators. At **high risk** are those suffering **simultaneously from all three** COVID-19 risk indicators (Figure 1). We also identify those who suffer from two out of three COVID-19-related deprivations.⁴

Figure 1. Structure of the global MPI



Source: OPHI (2018).

Table 1. MPI and COVID-19 risk indicators across world regions

	Population (millions)*	At least one risk indicator	Any two out of three risk indicators	Three risk indicators	MPI poor and at risk	MPI poor and at high risk
Sub-Saharan Africa	1,012.6	899.0 (88.8%)**	398.4 (39.3%)	204.4 (20.2%)	555.8 (54.9%)	201.9 (19.9%)
Arab States	335.4	112.1 (33.4%)	32.6 (9.7%)	12.6 (3.8%)	48.1 (14.3%)	11.9 (3.5%)
East Asia and the Pacific	2,057.1	1,117.9 (54.3%)	501.9 (24.4%)	114.4 (5.6%)	105.5 (5.1%)	32.7 (1.6%)
Europe and Central Asia	112.5	23.2 (20.6%)	5.8 (5.1%)	0.3 (0.3%)	1.0 (0.9%)	0.2 (0.2%)
Latin America and the Caribbean	520.7	138.1 (26.5%)	71.8 (13.7%)	13.3 (2.6%)	34.2 (6.6%)	7.6 (1.5%)
South Asia	1,792.8	1,317.3 (73.5%)	499.4 (26.7%)	89.8 (5.0%)	520.8 (29.1%)	81.8 (4.6%)
Developing World	5,831.2	3,607.5 (61.9%)	1,509.8 (25.9%)	434.8 (7.5%)	1,265.4 (21.7%)	336.1 (5.8%)

* All population figures are computed based on 2018 UN DESA population estimates, see UN DESA PD (2019).

** Percentage values indicate the proportion of people in the given region (row) affected by the given statistic (column).

Source: Authors' computations based on global MPI data computed by Alkire, Kanagaratnam, and Suppa (2020).

This analysis uniquely covers the joint distribution of deprivations in the COVID-19 risk indicators of the global MPI. But these indicators do not cover other important risk indicators related to the COVID-19 pandemic, such as, for example, handwashing, informal work, overcrowding, or underlying health conditions. Subsequent analyses will include additional indicators.

2. The scale of existing vulnerabilities in sub-Saharan Africa is the highest in the world (see Alkire et al. 2020). The collateral impact of COVID-19 on lives and livelihoods needs strong policies of mitigation in this region.

The region of sub-Saharan Africa is home to the largest number and proportion of people in the world who are most vulnerable to COVID-19 (Table 1). Nearly 900 million (or 89%) of the just over 1 billion people in sub-Saharan Africa are **at risk** to COVID-19. Almost two in five (39%) are affected by two COVID-19 risk

indicators, and more than one in five people (204 million or 20%) are **at high risk**. This suggests a disproportionate prevalence of vulnerability to COVID-19 in sub-Saharan Africa.⁵ The region accounts for almost half (46%) of all people globally who are at high risk from COVID-19 according to these indicators.⁶

Eighty-three per cent of people in sub-Saharan Africa use **solid cooking fuel** (Table 2, next page). In the absence of adequate ventilation, 841 million people in the region are likely to be exposed to indoor air pollution, increasing their risk of experiencing respiratory or other diseases and a more severe coronavirus disease course. Other COVID-19 risk indicators are widespread too. More than 375 million people in the region (37%) live in households where at least one person is malnourished and almost half of the population (48% or 487 million) does not have access to safe drinking water (Table 2, first row).

Table 2. Deprivations in COVID-19 risk indicators in sub-Saharan Africa

	Nutrition	Drinking Water	Cooking Fuel
Among the total population*	377.5 (37.3%)	487.0 (48.1%)	840.5 (83.0%)
Among MPI poor population	323.8 (32.0%)	366.3 (36.2%)	545.8 (53.9%)

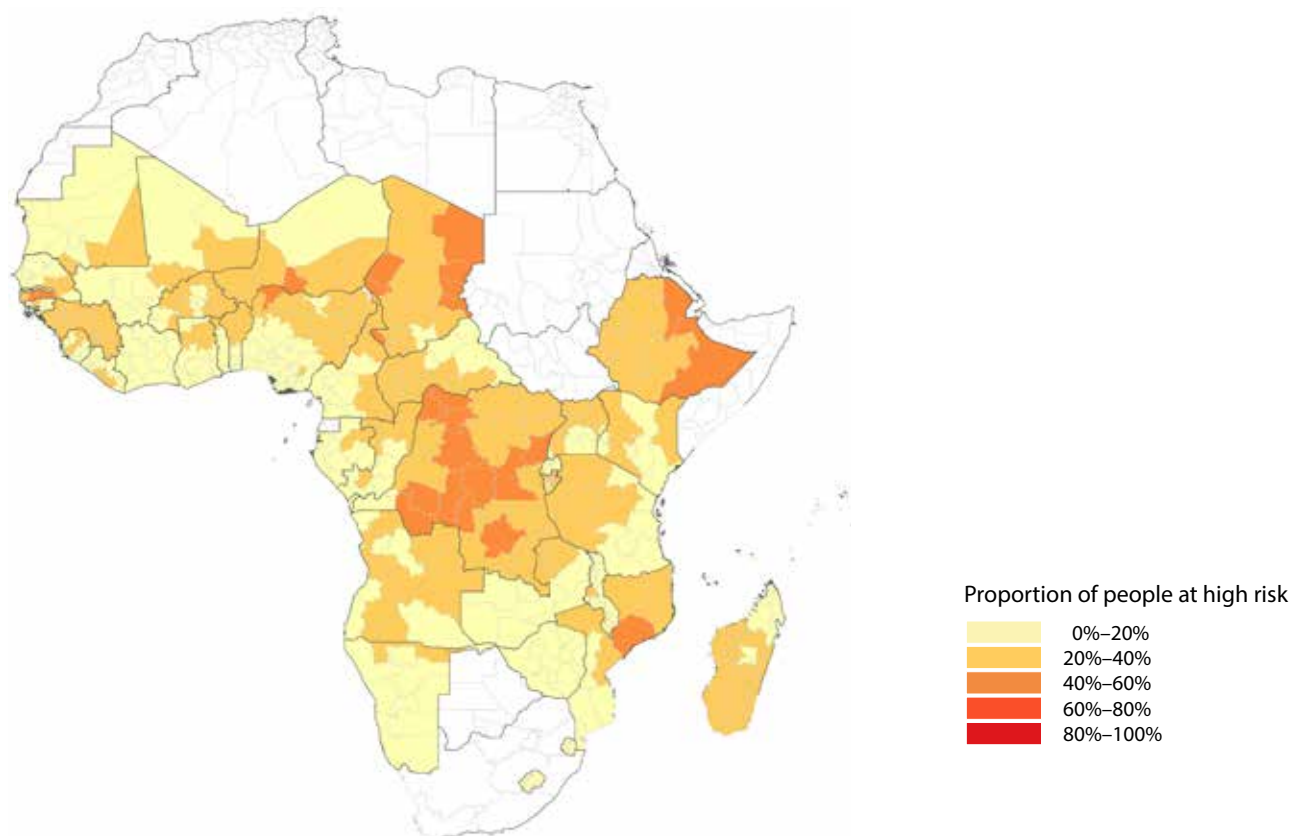
* All population figures are computed based on 2018 UN DESA population estimates, see UN DESA PD (2019).

Source: Authors' computations based on global MPI data computed by Alkire, Kanagaratnam, and Suppa (2020).

3. Plans need to consider the number of people at risk and the percentage of the population who are at risk

The maps visualise the number and percentage of people who are at high risk from COVID-19 in 479 subnational regions within sub-Saharan Africa. Figure 2a shows the proportion of people at high risk in each subnational region. This can be a guide for policy makers deciding be-

tween different policy interventions, such as universal or targeted programmes. Figure 2b, which shows the number of people at risk, is useful for estimating the budget of any universal or targeted interventions that may be needed in high-risk areas.

Figure 2a. Proportion of people at high risk in Sub-Saharan Africa

Notes: Underlying shp-files are from Demographic and Health Surveys Program (2020) and *GADM Maps and Data* website. Final boundary between the Republic of Sudan and the Republic of South Sudan has not yet been determined. No MPI data for Equatorial Guinea and Eritrea. No subnational MPI data was available for Botswana, Seychelles, South Africa and South Sudan. The mapping style is inspired by Ayush Patel.

Source: Christian Oldiges using MPI data computed by Alkire, Kanagaratnam and Suppa (2020).

3.1 Some clusters of high-risk areas also span national boundaries and require a regional approach

Clusters of areas at high risk for COVID-19 are visibly spread across national borders. Given that many borders are porous, there is a high potential benefit from coordinated multi-country preventive policies. For example, in West Africa (as seen in Figure 2a), clusters of high-risk areas span the Sahel region from Mali and Burkina Faso to Niger, Northern Nigeria and the extreme north of Cameroon. Some subnational regions within this zone are home to one million or more people who are at high risk – in particular in northern Nigeria and Niger (see Figure 2b). In Central and East Africa, subnational regions with at least one million people at high risk include several regions in the Democratic Republic of the Congo (DRC) and many adjoining parts of Tanzania, Kenya, and Ethiopia.

3.2 The level of risk varies tremendously across regions within every country. Subnational regions in Chad and the DRC are most at risk

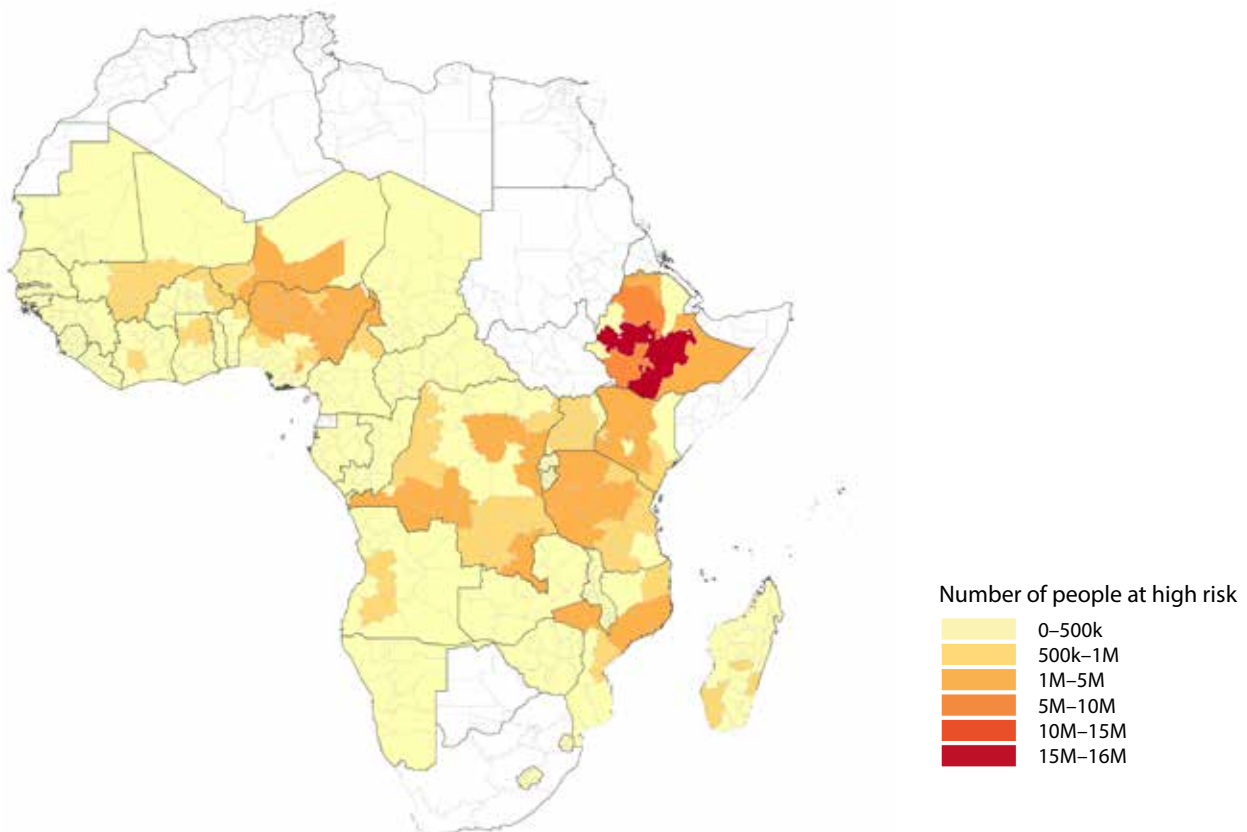
National averages often hide the uneven distributions of COVID-19 risk and multidimensional poverty across subnational regions. The maps and Figure 3 reveal these within-country differences; *online maps* showing these statistics for all subnational regions are also available.

COUNTRIES MOST AT RISK

Country rankings by absolute numbers and proportions of people at high risk differ (Table 4 on pages 12–13).

1. The total number of people at high risk per country ranges from 5 thousand in São Tomé and Príncipe and 69 thousand in Gabon to 40 million in Ethiopia.
2. The countries with the five highest absolute numbers of people at high risk are Ethiopia (40 million), Nigeria (36 million), DRC (24 million), Tanzania (12 million), and Kenya (10 million).

Figure 2b. Number of people at high risk in sub-Saharan Africa



Notes: Underlying shp-files are from Demographic and Health Surveys Program (2020) and *GADM Maps and Data* website. Final boundary between the Republic of Sudan and the Republic of South Sudan has not yet been determined. No MPI data for Equatorial Guinea and Eritrea. No subnational MPI data was available for Botswana, Seychelles, South Africa and South Sudan. The mapping style is inspired by Ayush Patel.

Source: Christian Oldiges using MPI data computed by Alkire, Kanagaratnam and Suppa (2020).

million), and Uganda (9 million). These five countries alone are home to 60% of all who are at high risk in sub-Saharan Africa.

- The countries with the five highest proportions of people at high risk are Ethiopia (37%), Niger (35%), Chad (32%), DRC (29%), and Burundi (26%).

People in these five countries are disproportionately at high risk compared to the population-weighted average for sub-Saharan Africa of 20%.

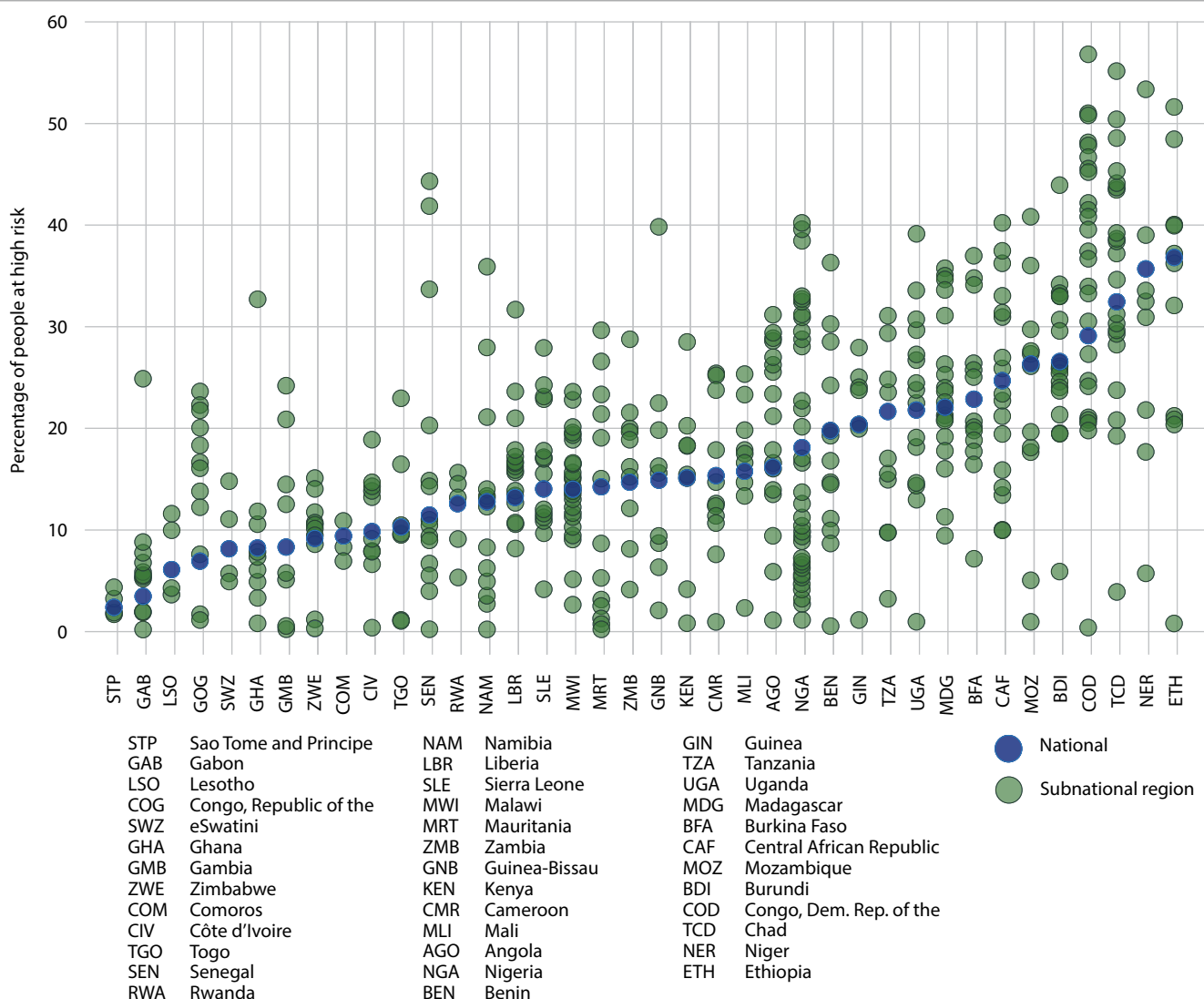
3.3 Subnational regions vs national averages

The proportion of people who are at high risk at the subnational level can vary substantially from national averages. Figure 3 shows differences in high risk incidence with

in 38 countries in sub-Saharan Africa.⁷ While the blue dots represent national averages, the green dots show the percentage of people who are at high risk in each subnational region within the countries. In nearly all countries, there is a large range of risk levels.

In Senegal, for example, 11% of the population is at high risk. But within the country, risk rates range from 4% in Thiès to 43% in Kolda and 44% in Sédhiou. Across countries, the DRC accounts for the highest proportion of people at risk (29%). Subnational risk rates, however, range from as low as nearly 0% for Kinshasa to as high as 57% for Kwango. Variation in the second most at-risk country, Ethiopia, is between 1% (Addis Ababa) and 51% (Afar), with a national average of 37%. The most

Figure 3. Percentage of people at high risk at the country level and subnational level



Note: Population figures are computed based on 2018 UN DESA Population estimates, see UN DESA PD (2019). Subnational MPI disaggregations were not possible for South Africa and South Sudan.

Source: Authors' computations based on global MPI data computed by Alkire, Kanagaratnam, and Suppa (2020).

vulnerable of all 479 subnational regions is Kwango in the DRC, where 57% of the population is at high risk.

This evidence suggests that any national-level COVID-19 response needs to consider the substantial differences across subnational regions.

4. Virtually all MPI poor are at risk, while the most vulnerable subnational regions are in Chad, Ethiopia, and the DRC

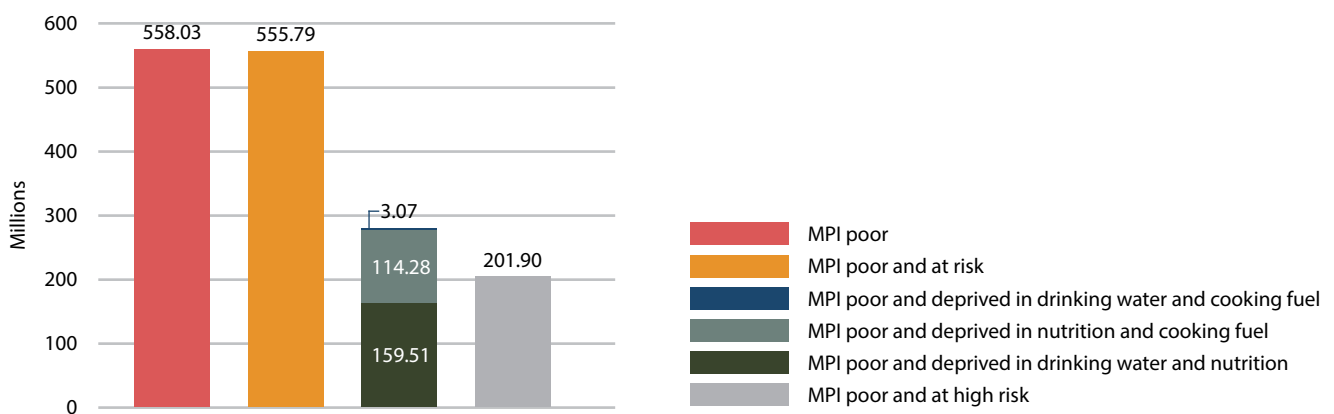
Zooming into the subset of the MPI poor population of sub-Saharan Africa (Table 2 and Figure 4), 546 million people (or 54%) are MPI poor and deprived of clean cooking fuel. More than one in three are both MPI poor and deprived of safe drinking water (36%, or 366 mil-

at high risk, affected by all three COVID-19 risk indicators at the same time. These people account for 60% of the MPI poor and the COVID-19-high-risk population globally, which makes clear the unequal disadvantage suffered by those living in sub-Saharan Africa.

4.1 MPI and the subnational regions most at risk

Ordering subnational regions – either by the absolute number of people or by the percentage of people who are MPI poor and at high risk – provides useful information for budgeting and the types of intervention that may be needed, respectively. For example, as Table 3 shows, with more than 15 million people who are MPI poor and at high risk, Oromia in Ethiopia leads the ranking of subna-

Figure 4. MPI poor people and overlapping COVID-19 vulnerabilities in sub-Saharan Africa



Note: Population figures are computed based on 2018 UN DESA population estimates, see UN DESA PD (2019).

Source: Authors' computations based on global MPI data computed by Alkire, Kanagaratnam and Suppa (2020).

lion), while 32% are MPI poor and deprived in nutrition (324 million).

Virtually all MPI poor people (99.6%) in sub-Saharan Africa are affected by at least one COVID-19 risk indicator (Figure 3). While 556 million people are MPI poor and at risk, 277 million are MPI poor and are affected by two out of three underlying conditions. Among them, 160 million lack clean cooking fuel and drinking water, while 114 million are deprived of clean cooking fuel and good nutrition. To make significant progress towards both reducing the MPI and vulnerability to COVID-19, these two combinations of deprivations (unclean cooking fuel and unsafe drinking water, and unclean cooking fuel and malnutrition) need to be reduced. Fully 202 million people in sub-Saharan Africa, however, are MPI poor and

tional regions at high risk in terms of absolute numbers. Thus, it may require special attention by governments and the global community. At the same time, since just over one third of Oromia's population (37.0%) is MPI poor and at high risk, a universal roll-out of policy interventions across all 43 million people in the Oromia region may either be inefficient or not feasible. In contrast, the number of MPI poor people at high risk in Wadi Fira in Chad seems small: 205,864. Yet, with 54.9% of its population being MPI poor and at high risk,

Wadi Fira ranks second in the subnational ranking in terms of proportion. A swift emergency response through universal provision of assistance may be both more effective and efficient than a targeted one in this region.

Table 3. Ten subnational regions at highest risk

Rank	Subnational region (country)	Number of MPI poor and at high risk (thousands)*	Rank	Subnational region (country)	MPI poor and at high risk (%)
1	Oromia (Ethiopia)	15,813	1	Kwango (DRC)	56.6
2	Amhara (Ethiopia)	9,931	2	Wadi Fira (Chad)	54.9
3	SNNPR (Ethiopia)	8,610	3	Maradi (Niger)	53.1
4	Lake (Tanzania)	4,660	4	Basse (Gambia)	37.7
5	Kano (Nigeria)	3,852	5	Afar (Ethiopia)	51.4
6	Katsina (Nigeria)	3,811	6	Mongala (DRC)	50.8
7	Nord Kivu (DRC)	2,969	7	Kasai-Central (DRC)	50.6
8	Tigray (Ethiopia)	2,880	8	Mayo Kebbi Ouest (Chad)	50.2
9	Maradi (Niger)	2,759	9	Ennedi Est & Ennedi Ouest (Chad)	48.3
10	Rift Valley (Kenya)	2,726	10	Maniema (DRC)	47.9

Note: Population figures are computed based on 2018 UN DESA population estimates, see UN DESA PD (2019). Subnational MPI disaggregations were not possible for South Africa and South Sudan.

Source: Authors' computations based on global MPI data computed by Alkire, Kanagaratnam, and Suppa (2020).

In the ten most vulnerable subnational regions, according to the proportion of the population who are MPI poor and at high risk, between 56.6% and 47.9% of all people are at high risk (Table 3). These include four subnational regions from the DRC, three from the Chad, and one each from Ethiopia, Niger, and the Gambia.

The regions with the highest number of high-risk people range from around 2.7 million (Rift Valley, Kenya) to 15.8 million (Oromia, Ethiopia). All are large regions by geographic size or population density, or both. Effective targeted responses should consider both statistics (absolute number and proportion) to design and appropriately budget for programmes and interventions.

CONCLUDING REMARKS

1. The COVID-19 pandemic requires a clear, empirical focus on overlapping deprivations for three reasons:
 - Overlapping deprivations amplify the risk of fatality if a person contracts COVID-19.
 - Lives may also be put at risk if poor people's existing deprivation load is exacerbated by job loss or restrictions on movement.
 - Evidence on overlapping deprivations can be used to manage the risks from the COVID-19 pandemic and its policy responses for the poorest and most vulnerable.
2. This briefing draws on the global MPI database for sub-Saharan Africa and provides information on people's joint deprivations across 40 countries, 479 subnational regions, and 1 billion people.

With its associated online data tables this briefing provides detailed data on two groups of people:

- The 558 million people in the region who live in acute multidimensional poverty, experiencing deprivations in at least one third of the ten weighted global MPI indicators spanning health, education, and living standards.

- Persons who are simultaneously deprived in at least one (899 million), two out of three (398 million), or three (204 million) COVID-19 risk indicators: nutrition, drinking water, and cooking fuel.
3. Maps visually depict both the percentage and the number of people at high risk from COVID-19 across 479 subnational regions. This information can inform preventive policy interventions and decisions related to choosing between targeting and universal coverage of policies in subnational regions. These maps are also available online.
 4. Nearly all countries have high variations in the percentage of people at risk from COVID-19. A uniform set of preventive policies within countries risks being inefficient. Close coordination between national and subnational actors may deliver better results.
 5. High-risk regions span national boundaries, which are often porous. There may be a great need for regional or global actors to adopt a coordinating role for highly vulnerable people in these areas.





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WHAT WE MEASURE

THE GLOBAL MPI

The global Multidimensional Poverty Index (global MPI) is a measure of acute multidimensional poverty, based on household surveys covering 107 countries and 5.9 billion people in developing countries. Complementing traditional monetary poverty metrics, it captures the overlapping deprivations that poor people experience across ten indicators in the dimensions of education, health, and living standards.

THE GLOBAL MPI IN SUB-SAHARAN AFRICA

The 2020 global MPI database covers 1 billion people or 99% of the regional population in sub-Saharan Africa, spanning 42 countries and 486 subnational regions. It offers readily available data that can be used now to shed light on how people across the continent suffer from deprivations that may make them more vulnerable to COVID19.⁸ The joint distribution of vulnerabilities makes visible how the same person may be simultaneously affected by multiple COVID19 risk indicators. The global MPI data help to identify subgroups that are both MPI poor and simultaneously affected by COVID19 risk indicators – which ultimately helps policymakers ensure that no one is left behind.⁹ This briefing used data from 40 of these 42 countries as well as 479 out of 486 subnational regions.

THREE COVID-19 RISK INDICATORS: NUTRITION, DRINKING WATER AND COOKING FUEL

Certain population subgroups are expected to be particularly vulnerable to suffering more severe symptoms and be at greater risk of dying if they contract this new coronavirus.¹⁰

Among its poverty indicators and associated information platform, the global MPI includes three indicators that can be readily deployed to indicate whether or not a household may include members who are more vulnerable to COVID19. Undernutrition is associated with immunodeficiency, morbidity, and mortality – particularly among children, older persons, and those affected by acute respiratory infections.¹¹ Through the nutrition indicator, the global MPI captures households with at least one undernourished member, i.e. a child under 5 years of age who is stunted or underweight, or any other person with a low body mass index. Lack of access to safe drinking water is associated with immune deficiencies, undernutrition, morbidity, and mortality.¹² The drinking water indicator in the global MPI captures individuals who do not have access to safe drinking water according to Sustainable Development Goal standards. Solid or unclean cooking fuel is associated with indoor air pollution, which is related to much of the global disease burden, including respiratory infections.¹³ The Centers for Disease Control and Prevention identify those with pre-existing respiratory infections as another possible COVID19 high-risk group, based on currently available information and clinical expertise.¹⁴ The global MPI captures those who are likely to be affected by indoor air pollution in their homes. These indicators make visible gradients of vulnerability to more severe illness from coronavirus and other diseases.

Table 4. Number and levels of multidimensional poverty and COVID-19 risk by country (millions)

Country	Population*	At least one risk indicator (at risk)	Two risk indicators	Three risk indicators (at high risk)	MPI poor and at risk	MPI poor and at high risk
Angola	30.8	23.5 (76.4%)**	9.3 (30.1%)	4.9 (16.0%)	15.3 (49.8%)	4.9 (16.0%)
Burundi	11.2	11.1 (99.7%)	5.3 (47.6%)	2.9 (26.3%)	8.3 (74.2%)	2.9 (26.3%)
Benin	11.5	11.1 (96.7%)	5.0 (43.8%)	2.3 (19.6%)	7.7 (66.7%)	2.2 (19.5%)
Burkina Faso	19.6	19.2 (97.1%)	8.8 (44.6%)	4.5 (22.6%)	16.5 (83.7%)	4.5 (22.6%)
Central African Republic	4.7	4.7 (99.8%)	2.4 (52.0%)	1.1 (24.5%)	3.7 (79.3%)	1.1 (24.4%)
Côte d'Ivoire	25.1	19.0 (75.9%)	7.7 (30.6%)	2.4 (9.7%)	11.3 (45.1%)	2.4 (9.6%)
Cameroon	25.2	21.5 (85.5%)	9.5 (37.5%)	3.9 (15.5%)	11.4 (45.0%)	3.7 (14.8%)
Chad	15.5	15.1 (97.9%)	7.5 (48.3%)	5.0 (32.2%)	13.2 (85.4%)	5.0 (32.2%)
Congo, DR	84.1	80.7 (96.0%)	36.3 (43.1%)	24.3 (28.9%)	54.0 (64.3%)	24.3 (28.9%)
Congo	5.2	3.7 (69.9%)	1.3 (25.2%)	0.4 (6.8%)	1.3 (24.1%)	0.4 (6.7%)
Comoros	0.8	0.7 (87.7%)	0.3 (39.4%)	0.1 (9.7%)	0.3 (37.0%)	0.1 (9.1%)
eSwatini, Kingdom of	1.1	0.8 (68.9%)	0.4 (31.2%)	0.1 (8.9%)	0.2 (18.8%)	0.1 (7.3%)
Ethiopia	109.2	105.9 (97.0%)	46.6 (42.6%)	40.0 (36.6%)	91.1 (83.4%)	40.0 (36.6%)
Gabon	2.1	0.8 (39.7%)	0.2 (10.6%)	0.1 (3.3%)	0.3 (14.4%)	0.1 (3.2%)
Ghana	29.8	24.2 (81.2%)	8.1 (27.2%)	2.4 (8.1%)	8.9 (29.9%)	2.4 (8.0%)
Guinea	12.4	12.2 (98.5%)	5.5 (43.9%)	2.5 (19.9%)	8.2 (66.1%)	2.4 (19.5%)
Gambia	2.3	2.2 (97.4%)	0.8 (36.3%)	0.2 (8.3%)	0.9 (41.5%)	0.2 (8.0%)
Guinea-Bissau	1.9	1.8 (98.5%)	0.8 (40.5%)	0.3 (14.7%)	1.3 (66.9%)	0.3 (14.7%)
Kenya	51.4	45.1 (87.8%)	20.3 (39.4%)	7.7 (15.0%)	19.8 (38.5%)	7.7 (14.9%)
Liberia	4.8	4.8 (99.5%)	2.3 (47.0%)	0.6 (13.0%)	3.0 (62.9%)	0.6 (12.8%)

Table 4. continued

Country	Population*	At least one risk indicator(at risk)	Two risk indicators	Three risk indicators (at high risk)	MPI poor and at risk	MPI poor and at high risk
Lesotho	2.1	0.8 (39.9%)	0.8 (39.9%)	0.1 (6.0%)	0.4 (16.3%)	0.1 (4.9%)
Madagascar	26.3	26.1 (99.4%)	13.1 (49.9%)	5.9 (22.3%)	18.1 (69.1%)	5.9 (22.3%)
Mali	19.1	18.9 (99.3%)	7.9 (41.3%)	3.0 (15.7%)	13.0 (68.2%)	3.0 (15.5%)
Mozambique	29.5	28.6 (97.1%)	13.7 (46.3%)	7.7 (26.2%)	21.3 (72.4%)	7.7 (26.1%)
Mauritania	4.4	3.5 (78.4%)	1.5 (33.0%)	0.6 (14.1%)	2.2 (49.1%)	0.6 (14.0%)
Malawi	18.1	17.8 (98.1%)	8.7 (48.0%)	2.5 (14.0%)	9.5 (52.6%)	2.5 (13.9%)
Namibia	2.4	1.7 (71.0%)	0.7 (29.3%)	0.3 (12.6%)	0.9 (37.8%)	0.3 (12.6%)
Niger	21.4	22.3 (99.2%)	10.0 (44.4%)	8.0 (35.4%)	20.3 (90.3%)	8.0 (35.4%)
Nigeria	195.9	172.7 (85.2%)	73.2 (37.4%)	35.9 (18.3%)	90.7 (46.3%)	34.7 (17.7%)
Rwanda	12.3	12.1 (99.5%)	6.7 (54.1%)	1.5 (12.4%)	6.7 (54.4%)	1.5 (12.3%)
Senegal	15.9	12.5 (78.8%)	4.9 (31.1%)	1.8 (11.4%)	8.3 (52.1%)	1.8 (11.1%)
Sierra Leone	7.7	7.6 (98.7%)	3.4 (43.9%)	1.1 (13.9%)	4.4 (57.8%)	1.1 (13.8%)
South Sudan	11.0	10.9 (99.6%)	5.7 (51.6%)	2.5 (22.9%)	10.1 (91.7%)	2.5 (22.9%)
Sao Tome and Principe	0.2	0.1 (59.8%)	0.0 (17.7%)	0.0 (2.3%)	0.0 (19.8%)	0.0 (2.2%)
Togo	7.9	7.4 (96.3%)	2.9 (37.1%)	0.8 (10.2%)	3.0 (37.5%)	0.8 (10.0%)
Tanzania	36.3	54.8 (97.3%)	26.5 (47.0%)	12.1 (21.5%)	31.2 (55.4%)	12.0 (21.4%)
Uganda	42.7	42.2 (98.7%)	21.5 (50.4%)	9.2 (21.6%)	23.5 (55.0%)	9.2 (21.4%)
South Africa	57.8	23.2 (40.1%)	6.3 (10.8%)	1.8 (3.1%)	3.4 (5.9%)	1.4 (2.4%)
Zambia	17.4	16.2 (93.4%)	7.0 (40.2%)	2.5 (14.6%)	8.3 (47.9%)	2.5 (14.4%)
Zimbabwe	14.4	11.1 (79.2%)	5.6 (38.7%)	1.3 (9.3%)	3.7 (25.7%)	1.3 (8.7%)

* All population figures are computed based on 2018 UN DESA population estimates, see UN DESA PD (2019).

** Percentage values indicate the proportion of people in the given region (row) affected by the given statistic (column).

Source: Authors' computations based on global MPI data computed by Alkire, Kanagaratnam, and Suppa (2020).

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ENDNOTES

- 1 Suggested citation: Alkire, S., Dirksen, J., Nogales, R. and Oldiges, C. (2020). ‘Multidimensional poverty and vulnerability to COVID-19: A rapid overview of disaggregated and interlinked vulnerabilities in Sub-Saharan Africa’, OPHI Briefing 54a, Oxford Poverty and Human Development Initiative, University of Oxford.
- 2 These nine countries are: Democratic Republic of the Congo (MICS 2017-18), Gambia (MICS 2018), Guinea (DHS 2018), Lesotho (MICS 2018), Madagascar (MICS 2018), Mali (DHS 2018), Nigeria (DHS 2018), Zambia (DHS 2018), Zimbabwe (MICS 2019).
- 3 As of 30 October 2020 according to official counts of confirmed cases by the European Centre for Disease Prevention and Control.
- 4 This briefing considers risk indicators within the global MPI that are readily available for rapid analysis. See Alkire, Kanagaratnam, and Suppa (2020) for a detailed description of the indicator definitions. Additional analyses based on wider sets of indicators will shortly be available at the OPHI website. There are other important risk factors – including old-age, non-communicable diseases such as diabetes, which are less strongly associated with unsafe drinking water and undernutrition, or infectious diseases such as HIV/AIDS and access to quality health infrastructure, such as intensive care beds with ventilators – which we cannot consider here. And apart from the most immediate risks to critical or lethal coronavirus disease courses analysed here, there are also risk-gradients of contracting the virus in the first place – where indicators such as access to handwashing facilities and soap as well as overcrowded households, access to information, and the availability of personal protective equipment such as facemasks that can prevent virus transmission are key vulnerability indicators. Lastly, this pandemic also brings with it a multiplicity of socio-economic shocks and associated vulnerable population groups – from home-schooling and social isolation through domestic violence to unemployment and loss of livelihoods and homes. Many who are already poor will face new or exacerbated deprivations. Others will fall into poverty due to this pandemic and its implications.
- 5 See also Alkire, S., Dirksen, J., Nogales, R., and Oldiges, C. (2020).
- 6 This is in line with the results of the Infectious Disease Vulnerability Index, according to which 22 of the 25 most-vulnerable countries are in sub-Saharan Africa. See Moore et al. (2016).
- 7 Following Alkire, Kanagaratnam, and Suppa (2020), subnational disaggregation is not performed for South Africa and South Sudan.
- 8 The full 2020 global MPI database covers 107 countries and 5.9 billion people. For sub-Saharan Africa region, Botswana and Seychelles are not included in this briefing due to data usage restrictions. All population aggregates use 2018 data. The data sources and years as well as country briefings, data tables including standard errors, do-files, and an interactive databank are online at *OPHI website > Global MPI*. Data used to compute the global MPI are from 2008–2019, though 5.7 billion of the 5.9 billion people covered and 1.2 billion of the 1.3 billion multidimensionally poor people identified are captured by surveys from 2013 or later.
- 9 For a general overview and the latest information on the COVID-19 pandemic, please refer to the WHO COVID-19 Coronavirus website (WHO 2020). On Leaving No One Behind and protecting those most vulnerable during this pandemic, see also the United Nations Department of Global Communications (2020).
- 10 See CDC (2020) and WHO (2020).
- 11 Bourke, Berkley, and Prendergast (2016); Ginsburg et al. (2015).
- 12 Clasen et al. (2014); Prüss-Ustün et al. (2019).
- 13 Gordon et al. (2014); Schraufnagel et al. (2019a,b).
- 14 CDC (2020).



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