G20 BRASIL 2024

**BUILDING A JUST WORLD
AND A SUSTAINABLE PLANET**

G20 Joint Finance and Health Ministerial Meeting (JFHMM)

INFORMATION NOTE

Assess the economic impact of countries most affected by Mpox through the application of the Framework for Health, Social and Economic Vulnerabilities and Risks to Pandemics (FEVR)

October 2024

I. BACKGROUND

The G20 Finance and Health Ministers Statement on Mpox released on 27th September 2024 called for the G20 Joint Finance Health Task Force (JFHTF) to leverage the expertise and experience it has accumulated to contribute to the Mpox response and further tasked the JFHTF Secretariat to "*Assess the economic impact of countries most affected by Mpox through the application of the Framework for Health, Social and Economic Vulnerabilities and Risks to Pandemics (FEVR)*". This Information Note is in response to the Statement and intends to support discussions on the Mpox response agenda item at the G20 Joint Finance and Health Ministerial Meeting on October 31st, 2024.

II. INTRODUCTION

The linkage between health emergencies and economic impacts requires a range of analyses to assess and mitigate the macroeconomic implications of health emergencies and pandemics. The Framework for Economic Vulnerabilities and Risks (FEVR) is a set of indicators and related modeling to support a better understanding of the link between a country's health system resilience and response capacity, the pre-existing social and macroeconomic conditions, and how these impact the scope for a country to respond to a health emergency and pandemic. Early application of the FEVR analysis as a diagnostic tool can support countries and partners in considering the channels through which the current Mpox outbreak could impact the economic outlook of the most affected countries, helping to identify areas of risk and improve preparedness for any wider impacts.

The epidemiological data of Mpox highlights the significant impact of Mpox in Africa, with a case fatality rate of 2.11% (see Figure 1). The Mpox outbreak was declared by the Africa Centre for Disease Control and Prevention (Africa CDC) as a Public Health Emergency of Continental Security (PHECS) on 13 August 2024 and by the World Health Organization (WHO) as a Public Health Emergency of International Concern (PHEIC) on August 15, 2024. The WHO data of 13 Oct 2024, states a total of 8,540 confirmed cases in 2024, of which 987 deaths (Annex I).

The joint Africa CDC/WHO Mpox Continental Preparedness and Response Plan for Africa[1] released on 6 September 2024 categorizes African Union member states into four categories based on their status on Mpox and their risk level. There are six countries identified in the highest risk category 1; the Democratic Republic of Congo (DRC), Burundi, Nigeria, South Africa, Cote D'Ivoire, and Central African Republic. This analysis focuses on both the African continent for a broad context and countries with elevated risk levels.

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1. [Mpox Continental Preparedness and Response Plan for Africa | WHO | Regional Office for Africa](#)

Figure 1. Map of total confirmed mpox cases in Africa
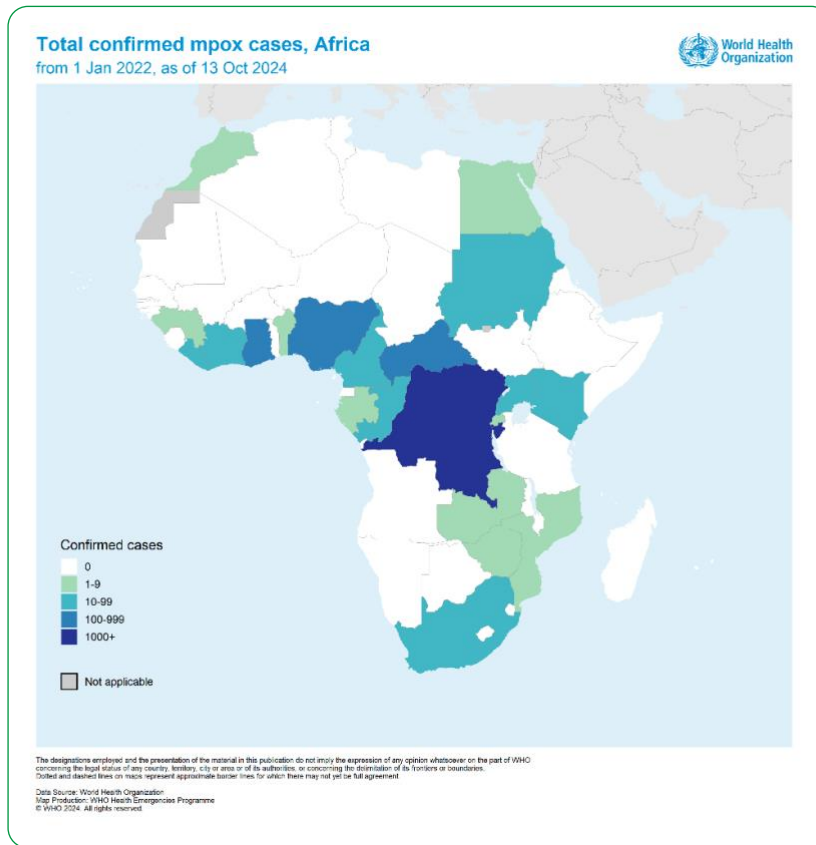
III. MACROECONOMIC CONTEXT

Economic growth and outlook – The African Development Bank (AfDB) assesses that African countries continue to contend with significant structural challenges and multiple severe shocks, including heightened food and energy prices driven by geopolitical tensions, climate issues affecting agriculture and energy production, and persistent political instability. This challenging environment has led to a slowdown in Africa's GDP growth to 3.1% in 2023 from 4.3% in 2022 and is forecast to recover to 3.7% in 2024 and 4.3% in 2025. This growth rebound will be underpinned by expected improvements in global economic conditions and effective policy measures.[2]

Economic structure – Despite these improving trends, AfDB states that Africa still faces challenges in achieving sustainable economic and social transformation. Historical growth rates have been insufficient to offset population increases, leading to minimal gains in per capita GDP. Structural transformation has been limited, with economies heavily reliant on traditional, low-productivity sectors like agriculture or low-skilled services for growth and employment. To achieve substantial structural transformation, AfDB indicates that Africa needs to focus on strategic investments in key Sustainable Development Goal areas, such as education, energy, productivity-enhancing technology and innovation, and productive transport infrastructure, and will require scaling up domestic resource mobilization and fostering private sector investment.

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2. https://www.afdb.org/en/knowledge/publications/african-economic-outlook

Debt, fiscal, and structural challenges – In a recent report, the World Bank informs that debt remains a critical issue for many African countries. 21 countries in Sub-Saharan Africa are either at high risk of external debt distress or already in debt distress. While public debt ratios have broadly stabilized, the cost of debt repayments has increased, posing a challenge to fiscal sustainability.[3] Inflation has been a persistent challenge, but there are signs of improvement; inflation has almost halved in the region, although it remains high in some countries.[4]

Structural reforms are essential to address the underlying economic challenges. The AfDB's recent report underscores the importance of decoupling economies from commodity dependence, renewing strategic investment in key growth sectors, and promoting private consumption.[5] The AU also highlights the need for structural reforms to mitigate fiscal pressure and manage risks, particularly in the context of Agenda 2063, which aims for economic transformation and sustainable development.[6]

IV.   APPLICATION OF FEVR ANALYSIS

The ability of a country to respond can depend heavily on the macroeconomic conditions which will determine the resources available to a country to effectively respond both financially and operationally to the public health emergency. This analysis is an early assessment of the current epidemiological and economic situation and serves as an early identification of potential future risks. The application of FEVR provides an initial approach to analyzing the specific economic risks and vulnerabilities most affected countries may face should the situation require further measures to be taken.

FEVR consists of a list of 23 indicators that have been selected to reflect the health, social, and economic factors that increase vulnerability and risk from pandemics. The indicators in health cover factors such as health spending per capita and universal health coverage, but also factors important in a health emergency such as diagnostic and response capability, community engagement, and vaccination coverage. Social indicators provide critical context on vulnerabilities and the economic data indicates the potential economic impact through measures of the general economic conditions as well as particular risks from international connectedness.

The countries most affected by Mpox are characterized by low GDP per capita, and relatively low universal health coverage and in two of the countries, significantly less than 50% have access to safe sanitation facilities, and high levels of urban slum populations. The previous analysis of FEVR showed that both *Low-Income Countries* and *Middle-Income Countries* could improve the resilience of their economies by investing in increasing coverage of social protection mechanisms and measures to support those in informal employment.[7] Figure 2 shows that most countries affected by Mpox have low social protection benefit coverage. These findings are in line with the recent analysis by the Africa

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3. [Macro Poverty Outlook for Sub-Saharan Africa (worldbank.org)](#)
4. [Macro Poverty Outlook for Sub-Saharan Africa (worldbank.org)](#)
5. [Africa Overview: Development news, research, data | World Bank](#)
6. [Agenda 2063: The Africa We Want. | African Union (au.int)](#)
7. G20 JFHTF Brief, June 2023, *Initial analysis on economic vulnerabilities and risks to pandemics and potential policy measures.*

Union on the impact of COVID-19 on the African economy which recommends reinforcing the health and social protection systems.[8]

Figure 2. SDG 1.3.1 Proportion of population covered by social protection floors/systems in Africa[9]
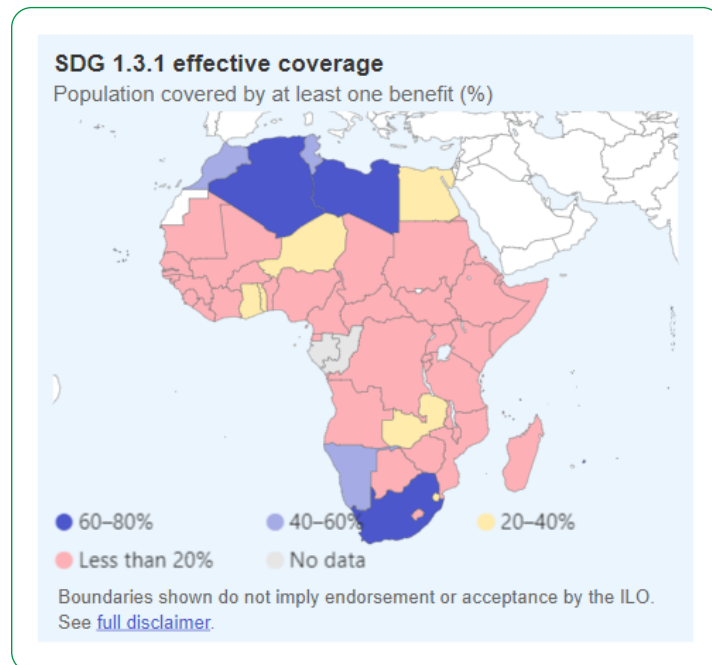
As the macroeconomic context demonstrates, the overall regional conditions remain challenging. Specific country analysis is needed to better understand the specific context for the most affected countries as identified by the Continental Plan. The FEVR indicators confirm these countries are characterized by low levels of both GDP and low health expenditure per capita (<$100 per capita), and a high level of debt to GDP (over 50%). Elevated levels of debt for some countries and a relatively high level of debt servicing costs (over 10%) for four countries highlight budgetary pressures. Previous analysis using FEVR highlighted the importance of global interconnectedness. The degree of international exposure for these economies in the context of Mpox can have a mixed impact. Currently, the countries most affected by Mpox have a relatively low exposure to tourism and international trade with the exception of one country that has gearing to international commodity markets. While there are no impacts from policies affecting international movement, should the spread of Mpox result in measures affecting international activity, further analysis will be needed to assess future impacts. Any significant change in economic activity, both domestic and international, and domestic revenue generation could have implications for debt sustainability. Further details on FEVR indicators are presented in Annex II.

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8. African Union, Impact of the Coronavirus (COVID-19) on the African Economy, April 2020. Available at: https://www.tralac.org/ documents/resources/covid-19/3218-impact-of-the-coronavirus-covid-19-on-the-african-economy-african-union-reportapril-2020/file.html.
9. Source: World Social Protection Data Dashboard. Retrieved on 21 Oct 2024.

Table 1. Economic & fiscal FEVR indicators

Indicator	Country 1	Country 2	Country 3	Country 4	Country 6	Country 5
Economic & fiscal	Burundi	CAR	DRC	Nigeria	South Africa	Uganda
12 Exports of goods and services (% of GDP) (2023)	5.3%	14.4%	44.2%	10.7%	13.4%	13.4%
13 International tourism receipts (% of GDP)	0.17% (2011)	0.92% (2013)	0.13% (2018)	0.07% (2021)	33.0% (2020)	1.28% (2021)
14 Trade (% GDP) (2023)	29.6%	43.5%	91.26%	na	65.7%	37.2%
15 General government gross debt (% of GDP) (2024)	65.5%	45.2%	9.0%	39.8%	73.7%	51.0%
16 Debt servicing ratio (% of exports of goods, services, and primary income) (2022)	10.7%	5.6%	2.4%	4.3%	9.1%	11.5%

Source: World Bank and IMF

Further analysis in Table 2 *Latest Publicly Available Debt Sustainability Analyses Under the Joint Bank-Fund Debt Sustainability Framework for Low-Income Countries (LIC-DSF)* and Sovereign Risk and Debt Sustainability Framework for Market-Access Countries (MAC-SR-DSF) indicates the already existing high and moderate debt risk profiles for all six most affected countries.

Table 2. Debt sustainability assessments

Latest Publicly Available Debt Sustainability Analyses Under the Joint Bank-Fund Debt Sustainability Framework for Low-Income Countries (LIC-DSF)	Risk of external debt distress	Risk of overall debt distress	Date of publication
Burundi	High	High	06/23
CAR	High	High	10/23
Côte d'Ivoire	Moderate	Moderate	06/24
DRC	Moderate	Moderate	06/23
Nigeria	NA	NA	NA
South Africa	NA	NA	NA
Uganda	Moderate	Moderate	06/23

Source: IMF and World Bank.

V. ASSESSMENT OF ECONOMIC IMPACTS FROM MPOX

Evidence on the economic impact of health emergencies and pandemics on affected countries

There is now a wide range of literature on the economic impacts of the COVID-19 pandemic, and to a lesser extent on the impact of Ebola, SARS, and MERS. Adopting analysis applied to the Ebola outbreaks in 2014-15, which is also characterized by the need to reduce contact, indicates there are two main channels of economic impact. Firstly, the direct health impacts on the labor force arise from the reduction in the number of workers driven by mortality and those unable to work. Secondly, there are fiscal and related impacts which include direct fiscal impacts of an increase in health costs associated

with the public health emergency and any measures that impact the economic activity due to direct public health measures as well as precautionary measures by economic actors.

The impact of reduced economic activity associated with any measures to reduce transmission can have a greater effect than direct labor impacts. Public health measures will have a direct impact where they affect the movement of people or goods, both domestically as well as internationally. The extent of behavior changes where individuals take precautionary measures, such as reduced contact with others to avoid the risk of becoming infected affects both work and consumption patterns. The interconnectedness of financial markets and economic activity can further result in delayed investments or a higher risk premium for investment in areas where epidemics and health emergencies occur. Finally, international impacts through the movement of goods and people, for example, tourism and trade can be significant and were a key factor in the economic impact of COVID-19.

The specific economic impact will differ according to country circumstances, policy, and financing decisions by governments and behaviors by individuals in countries affected as well as overseas. Taking this into account, the evidence on the economic impact of recent epidemics and pandemics can help better understand and prepare for a range of scenarios in countries currently affected by Mpox. It should also be noted that the negative effects of these shocks are not uniform across workers and households and country-level analysis provides an average that does not reflect a range of inequalities in access to health services.

Evidence from the West Africa Ebola Crisis 2014-15 indicates the overall impact of the Ebola crisis on Guinea, Liberia, and Sierra Leone has been estimated at $2.8 billion ($600 million for Guinea, $300 million for Liberia, and $1.9 billion for Sierra Leone). This includes the shocks in 2014 and 2015, and there was strong evidence the economic impact outlasted the epidemiological impact. In all three countries, government revenues declined across the board, including direct taxes on companies, VAT receipts, and indirect taxes; Additionally, the decline in private and foreign investors' confidence led to financing gaps of more than US$600 million over the two years.[10] The impact in sub-regions of the mobility of workers and trade activity was significant. In addition, there were higher impacts from the additional health impacts of other common diseases such as malaria as fear of infection led to fewer people attending health centres as well as malnutrition and increased poverty.

Evidence from the SARS outbreak in 2003 showed that the direct health impact on the economy was limited to 774 deaths, but a much greater impact came from changes in activity to reduce risks of exposure and infection which included a significant reduction in tourism and retail sales. The overall GDP losses have been calculated at $40 bn.[11] While short-term GDP losses were limited, in the region of 0–1%, their longer-term impact on increased risk premium in investing in the region has a much greater effect. Evidence from MERS (2012-2019) taken from the impact of an outbreak in Korea in 2015

10. https://www.worldbank.org/en/topic/macroeconomics/publication/2014-2015-west-africa-ebola-crisis-impact-update
11. Lee JW, McKibbin WJ. ESTIMATING THE GLOBAL ECONOMIC COSTS OF SARS. In: Institute of Medicine (US) Forum on Microbial Threats; Knobler S, Mahmoud A, Lemon S, et al., editors. Learning from SARS: Preparing for the Next Disease Outbreak: Workshop Summary. Washington (DC): National Academies Press (US); 2004. Available from: https://www.ncbi.nlm.nih.gov/books/NBK92473/

corresponded with a $2.6 bn loss in tourism revenue.[12] Evidence from COVID-19 has the greatest amount of literature but is less relevant given the current stage of Mpox and the modes of transmission through contact rather than airborne, but evidence on the precautionary behavior is high.[13]

Health spending

In terms of the impact on health spending, there are three main sources in low and lower-middle-income countries, as illustrated below: (i) government spending; (ii) private spending through households (out-of-pocket), and (iii) external: donors and external sources, mainly grants.

Figure 3. Pre-pandemic components of current health spending by country income group, 2019

Source: WHO GHED April 2024 updates
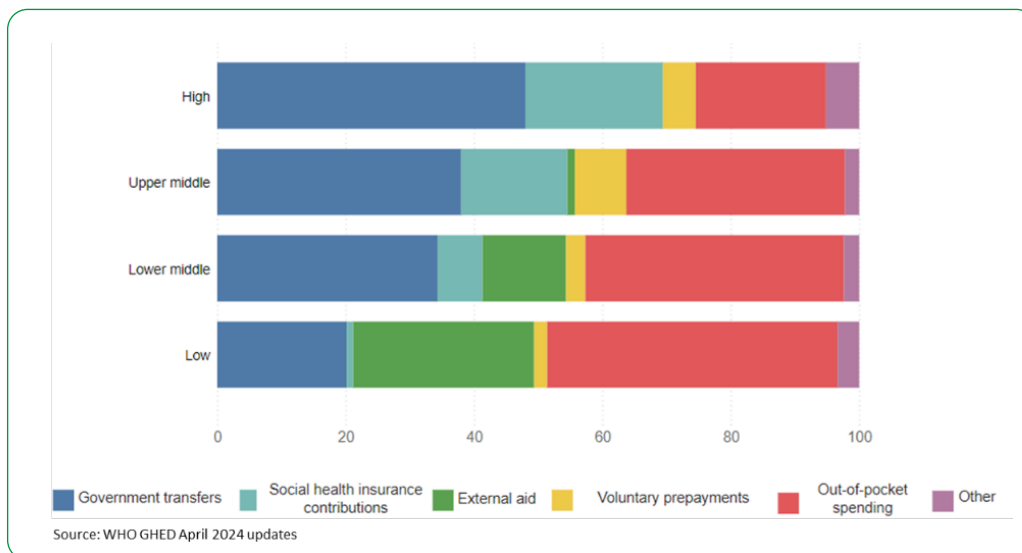
A response to a health emergency will require an increase in spending on expanding testing and diagnosing those affected, treatment, and ensuring ways of reducing the transmission such as measures including isolation. An increase in health spending can come from 3 sources identified:

Government spending: reallocation of health budget, improvement in efficiency, or reprioritization with potential impacts of delivery of other health measures. Alternatively, governments can increase overall debt through access to loans, dependent on overall debt levels and ability to meet wider financing obligations.

An increase in household spending on medical care and treatment: where the coverage of medical care is not through insurance schemes, households will incur unexpected costs. In countries of the WHO African Region, Out-of-Pocket payments (OOP) are a significant source of funding for health. In 2019,

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12. https://www.researchgate.net/profile/Clive-Brown-3/publication/332336842_Economic_Impact_of_the_2015_MERS_Outbreak_on_the_Republic_of_Korea%27s_Tourism-Related_Industries/links/5e96708092851c2f52a2e0cb/Economic-Impact-of-the-2015-MERS-Outbreak-on-the-Republic-of-Koreas-Tourism-Related-Industries.pdf?origin=publication_detail&_tp=eyJjb250ZXh0Ijp7ImZpcnN0UGFnZSI6InB1YmxpY2F0aW9uIiwicGFnZSI6InB1YmxpY2F0aW9uURG93bmxvYWQiLCJwcmV2aW91c1BhZ2UiOiJwdWJsaWNhdGlvbiJ9fQ
13. https://pmc.ncbi.nlm.nih.gov/articles/PMC8250825/

OOP payments accounted for over 25% of current health spending in 29 countries. The potential for unanticipated health spending can push households into poverty, affecting longer-term economic outcomes as it may force people to reduce their consumption of other necessities such as food, housing, and utilities and is also a major financial barrier to access for many people, especially the poorest and most vulnerable population.

Increase in external funding: this can be through a range of channels including bilateral sources, multilateral sources such as WHO, UNICEF, and other organizations, and resources from vertical global health initiatives.

Applying the evidence to Mpox

- <u>Household spending impacts.</u> Higher direct spending by households (out-of-pocket spending) can be a significant cost and reduce other essential consumption. Individuals are less likely to seek medical support due to the perceived risks of incurring severe costs for care that would push them into poverty, for example, for most countries affected by Mpox, direct healthcare costs are covered but not those for carers which is a significant issue given the prevalence of Mpox in children. Mpox occurs in areas with high levels of poverty and malnutrition, so these costs are relatively significant.
- <u>High pressure on domestic budgets:</u> For the countries most affected – they are characterized by low levels of health spending as % of GDP from 3.4% to 9.1%. Given that health spending comes from 3 sources, of which a low proportion is government spending, increases could be a significant share of domestic budgets.
- <u>Fiscal constraints:</u> Four of the six most affected countries have at least a moderate risk of external and overall debt distress indicating that countries will need to take into account fiscal constraints when considering whether and how to increase health spending and how to finance it. Secondly, they will be vulnerable to any reduction in government revenues from reduced economic activity.
- <u>Economic activity:</u> There are no public health measures that directly impact economic activity so far. WHO has released public health guidance on gatherings in the context of the 2024 Mpox outbreak. This guidance indicates a risk-based approach based on the likelihood of close and prolonged interaction with mitigation measures including may include modification of the event characteristics or public health measures, such as vaccination, risk communication, and diagnostics.[14]
- <u>Identification of transmission routes</u> so far seems to be the spread along some local trade and trucking areas, including at borders, which are likely to be areas most affected and the use of targeted social protection and other measures for those most affected may be an approach countries might consider.
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14. https://iris.who.int/bitstream/handle/10665/379242/B09143.pdf?sequence=1&isAllowed=y

VI. OUTLOOK

The Information Note assesses the economic impact of Mpox on the most affected African countries using the FEVR, highlighting significant impacts on countries with low GDP per capita, limited health expenditure, and high debt levels. It identifies key vulnerabilities such as low health system resilience, high out-of-pocket health spending, and limited social protection coverage, emphasizing the need for strategic investments in health and social protection systems to improve preparedness and mitigate economic risks. Despite the uncertain epidemiological outlook and limited measures directly impacting economic activity, it will be important to continue to monitor risks and vulnerabilities and share these findings. As more is understood about the risks related to this stage of the outbreak, further scenario analysis may be helpful in understanding potential economic vulnerabilities and risks specific to each country. Engagement with relevant partners to gain support from tracking and understanding the impacts of this mpox outbreak will be important to be prepared should conditions worsen.

Annex I

Table 3. Laboratory confirmed cases as of 13 Oct 2024

Country	Total cases	Cases in 2024	Death in 2024
Burundi	1,169	1,169	0
Cameroon	51	6	2
Central African Republic	104	57	1
Congo, Dem. Rep.	8207	6962	981
Congo, Rep.	48	22	0
Côte d'Ivoire	67	67	0
Gabon	2	2	0
Ghana	130	2	0
Guinea	1	1	0
Kenya	13	13	0
Liberia	34	17	0
Morocco	7	3	
Nigeria	955	94	0
Rwanda	6	6	
South Africa	30	25	3
Uganda	91	91	
Zambia	1	1	
Sudan	19	0	
Egypt	3	0	
Benin	3	0	
Zimbabwe	2	2	
Mozambique	1	0	
Total	10,944	8,540	987

Source: WHO Data, retrieved on 17 Oct 2024.

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Annex II

Table 4. FEVR Indicators for countries with elevated risk levels[15]

No	Indicator	Country 1	Country 2	Country 3	Country 4	Country 5	Country 6	Data source
I	**Health emergency preparedness & response**	**Burundi**	**CAR**	**DRC**	**Nigeria**	**South Africa**	**Uganda**	-
1	**Timeliness of event detection, notification, and response**	33	20	27	40	53	27	States Parties Self-Assessment Annual Reporting: SPAR capacity C9
2	**Laboratory testing capacity modalities (%) (2023)**	36	32	36	68	100	80	States Parties Self-Assessment Annual Reporting: SPAR capacity C4.4.
3	**Community engagement (%) (2023)**	33	20	40	80	80	80	States Parties Self-Assessment Annual Reporting: SPAR capacity C10.3
4	**Hospital bed capacity per 100k**	71	100	80	50	228	50	World Bank Data and WHO (Global Health Observatory)
5	**Management of health emergency response (%) (2023)**	40	20	27	67	73	73	States Parties Self-Assessment Annual Reporting: SPAR capacity 7.2
6	**Effective national diagnostic network (%) (2023)**	50	60	60	80	40	80	States Parties Self-Assessment Annual Reporting: SPAR capacity C4.5
7	**Vaccination coverage rate for high-priority pathogens**	tbc	tbc	tbc	tbc	tbc	tbc	Data to be confirmed (TBC)

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15. We will expand country coverage.

8	**Multisectoral coordination mechanisms (%) (2023)**	33	33	33	73	40	73	States Parties Self-Assessment Annual Reporting: SPAR capacity C2.2
9	**UHC service coverage index (SDG 3.8.1) (2021)**	41	32	42	38	71	49	WHO data
10	**Health expenditure (% of GDP) (2021)**	9.1%	9.07%	3.79%	4.08%	8.27%	4.67%	World Bank data
11	**Health expenditure per capita (current USD) (2021)**	24.27	42.93	22.32	83.84	584	43.45	Global Health Expenditure Database (who.int)
II	**Economic & fiscal**							
12	**Exports of goods and services (% of GDP) (2023)**	5.26	14.44	44.25	10.74	33.02	13.39	World Bank data
13	**International tourism receipts (% of GDP)**	0.17% (2011)	0.92% (2013)	0.13% (2018)	0.07% (2021)	0.80% (2020)	1.28% (2021)	World Bank data
14	**Trade (% GDP) (2023)**	29.59	43.48	91.26	NA	65.72	37.23	Trade (% of GDP) | Data (worldbank.org)
15	**General government gross debt (% of GDP) (2024)**	65.47	45.24	9.01	39.85	73.71	51.02	https://www.imf.org /en/Publications/WE O/weo-database/2022/Octo ber/download-entire-database
16	**Debt servicing ratio (% of exports of goods, services and primary income) (2022)**	10.7	5.6	2.4	4.3	9.1	11.5	https://databank.wor ldbank.org/metadata glossary/world-development-indicators/series/DT. TDS.DPPF.XP.ZS
III	**Social determinants**							

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#	Indicator						Source
17	**Access to water and sanitation (SDG 6) - Population using safely managed sanitation services (%) (SDG 6.2.1a) (2022)**	7.75	60.57	44.23	81.49	71.86	52.52	SDG Indicators Global Database
18	**Access to education - Net school enrollment rate (preprimary, primary, secondary, tertiary) (%)**							UIS Data Browser (unesco.org)
	Net enrolment rate, pre-primary, both sexes (%)	*8.4 (2020)*	*4.9 (2017)*	*6 (2020)*	*NA*	*17.1 (2022)*	*14.4 (2010)*	
	Total net enrolment rate, primary, both sexes (%)	*82.1 (2020)*	*84.9 (2017)*	*NA*	*64.4 (2010)*	*88.4 (2022)*	*88.5 (2017)*	
	Total net enrolment rate, lower secondary, both sexes (%)	*66.7 (2020)*	*43 (2017)*	*NA*	*NA*	*98.96 (2022)*	*51.1 (2017)*	
	Total net enrolment rate, upper secondary, both sexes (%)	*38.4 (2020)*	*17.2 (2017)*	*NA*	*NA*	*91.4 (2021)*	*24.6 (2017)*	
19	**Urban slum population - Proportion of urban population living in slums, informal settlements, or inadequate housing (%) (SDG 11.1.1) (2022)**	36.75	68.91	78.36	48.50	24.2	52.68	Proportion of urban population living in slums - Sustainable Development Goals - United Nations Economic Commission for Europe (unece.org)

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20	Access to social protection benefits - Proportion of population covered by at least one social protection benefit (%) (SDG 1.3.1)	3.2	3.5	1.7	5.6	19.4	0.8	ILO | Social Protection Platform (social-protection.org)
21	Internet Access (SDG 9 C: Proportion of population covered by a mobile network, by technology) (2023)	51%	65%	54%	86%	100%	92%	GSMA Mobile Connectivity Index
22	Food insecurity (SDG 2.1.2 Prevalence of moderate or severe food insecurity in the population, based on the Food Insecurity Experience Scale (FIES) (2022)	20.9	61.8	41.7	22.6	8.4	23	UNSDG
23	Informal employment	95.09 (2014)	NA	93.84 (2012)	92.70 (2022)	31.87 (2023)	91.63 (2021)	Statistics on the informal economy - ILOSTAT