



## Full Length Article

# Atlas 2022 of African health Statistics: Key results towards achieving the health-related SDGs targets

Bataliack Serge<sup>a,\*</sup>, Mbondji Ebongue<sup>b,c,d</sup>, Saha Tahoum Ursull Alexandra<sup>b,c</sup>, Karamagi Humphrey<sup>a</sup>

<sup>a</sup> Data, Analytics and Knowledge Management, World Health Organization Regional Office for Africa, People's Republic of Congo

<sup>b</sup> Health Systems Strengthening Development Group, Cameroon

<sup>c</sup> Institut Supérieur Pierre et Marie Mbondji, Cameroon

<sup>d</sup> School of Health Systems and Public Health, University of Pretoria, South Africa



## ARTICLE INFO

## Keywords:

health-related SDGs  
health SDGs  
SDGs  
Atlas African health statistics  
Monitoring SDGs  
Health observatory

## ABSTRACT

**Introduction:** The Atlas 2022 of African Health Statistics is a comprehensive tool that gives an overview of the health ecosystem in the African region. As such, it tracks progress towards globally agreed objectives, such as Sustainable Development Goals (SDGs), assesses the capacity of African countries to achieve them, and helps policymakers identify gaps and areas requiring substantial reinforcement.

**Methods:** We analyzed health-related SDGs' key indicators in the Atlas 2022 of African Health Statistics. This platform is a nexus for consistent and comparable data sources across countries. A review of studies addressing the evolution of health-related SDG indicators in Africa was also considered for discussion and recommendations.

**Results:** Hunger and different forms of malnutrition remain prevalent in the Region. Maternal and neonatal mortality is still high compared to other regions, with increasing incidences of non-communicable diseases and poor mechanisms to address mental health issues. Many inequalities are noted in violence against women, access to health services, or access to water and basic sanitation, which is exacerbated in rural areas. Regarding achieving the SDGs, the trend of most indicators shows they will be challenging to perform at the Regional level. However, a few countries are on track to achieve some goals. These results clearly show that countries have different experiences and, therefore, different progress in achieving sustainable development goals. The delays experienced by many countries in terms of development in other sectors, such as climate and the environment, poverty reduction and economic growth, equity and justice, etc., will make it even more difficult to achieve the health-related SDGs. Achieving these goals should, therefore, be seen as a transdisciplinary and inclusive process.

**Conclusion:** Beyond the COVID-19 pandemic that has recently challenged health systems worldwide, the African Region is also dealing with several threats, jeopardizing its progress toward achieving the SDGs by 2030. Given the Region's particular context, a readjustment of the regional targets and/or deadlines would be advisable to ensure they are achievable.

## 1. Introduction

The Sustainable Development Goals (SDGs) are 17 goals adopted in 2015 to address five critical areas of importance by 2030: people, planet, prosperity, peace, and partnership [1]. They comprise 169 targets and 247 indicators [2], covering various topics, including health, education, gender equality, climate change, clean energy, decent work, justice, and partnerships. They are interconnected and aim to balance sustainable

development's social, economic, and environmental dimensions [3].

Every year, governments join all the actors at the UN High-Level Political Forum on Sustainable Development to review progress and accelerate global efforts to deliver meaningful progress on the 2030 Agenda for Sustainable Development and its 17 SDGs.<sup>1</sup> Reports are regularly produced on this progress at global, continental, subregional, and country levels to give policymakers and global partners a better vision and reference evidence for decisions. In the WHO African Region

\* Corresponding author at: Data, Analytics and Knowledge Management, World Health Organization Regional Office for Africa, Congo.

E-mail address: [sergebataliack@gmail.com](mailto:sergebataliack@gmail.com) (B. Serge).

<sup>1</sup> United Nations. High-Level Political Forum on Sustainable Development. Available at <https://www.un.org/sustainabledevelopment/monitoring-and-progress-hlpf/#:~:text=Countries%20present%20their%20Voluntary%20National,countries%20have%20submitted%20their%20VNRs>. Accessed 19 February 2024.

<https://doi.org/10.1016/j.hpopen.2024.100121>

Received 4 December 2023; Received in revised form 14 April 2024; Accepted 6 May 2024

Available online 8 May 2024

2590-2296/© 2024 Published by Elsevier B.V. This is an open access article under the CC BY-NC-ND IGO license (<http://creativecommons.org/licenses/by-nc-nd/3.0/igo/>).

(WHO/AFRO), the Atlas of African Health Statistics (AAHS) has been established as an ever-evolving tool for monitoring the health ecosystem in the Region. It provides up-to-date information on the state of health in the 47 WHO/AFRO countries and serves as a reference point for monitoring progress against globally and regionally agreed targets.

The SDGs UN Global Report 2022 reveals that the 2030 Agenda for Sustainable Development is in grave jeopardy due to multiple cascading and intersecting crises that predominantly include COVID-19, climate change and conflicts.<sup>2</sup> As with many other reports, The 2022 edition of the AAHS presents the latest data on over 60 health-related indicators of the SDGs and the WHO's "triple billion" targets in WHO/AFRO. It is also a mean of assessing the availability and use of health data in the Region, as well as the capacity of Member States to achieve health-related SDGs and other internationally agreed targets [4].

This article analyses the key findings of Atlas 2022 to provide an overview of the status of health-related SDG target indicators in WHO/AFRO, identify areas needing improvement, highlight trends among member states and track progress towards the SDGs. Furthermore, the overarching goal of this research paper is to equip policymakers with comprehensive insights, facilitating their ability to pinpoint gaps and areas requiring substantial reinforcement, thus contributing to a more effective and informed decision-making process for achieving the SDGs.

## 2. Methodology

We analyzed the critical results of health-related SDG indicators in the WHO/AFRO presented by the Atlas of African Health Statistics 2022, which we authored. The data and figures in this analysis comes essentially from Atlas 2022, which has drawn its data from various data sources, including international (WHO/AFRO and global datasets) and grey literature sources, ensuring consistency and comparability across countries. To prioritize accuracy and recency, the data for some indicators was gathered from national and subnational sources like the Demographic Health Survey or other standardized/international surveys such as SARA, HHFA, STEPS, etc. The following criteria were used to help identify the best data sources. However, every data source did not satisfy all these criteria: [1] credibility and validity of the data, [2] national scope and potential to provide subnational level detail, [3] availability and consistency of the data over time and across sources, [4] timeliness of the data, [5] ability to support subgroup- and condition-specific analyses, [6] public accessibility of the data, [7] generalisability of the data/results to the country context. We also reviewed studies that mentioned the progress of health-related SDGs in African countries and discussed the data compared with Atlas 2022 data. The analysis included a comparative analysis of trends and progress, considering the SDGs targets, country contexts, and regional trends, and a prospective analysis to assess whether or not countries will achieve the SDGs by 2030. Data are presented in tables and figures to facilitate interpretation and comparison.

## 3. Results

### 3.1. Analytical overview of health-related SDGs critical indicators in 2022 in the WHO African Region and progress made

Progress towards achieving the health-related SDGs in the African Region varied across countries and goals. As the attainment of progress is complex and nuanced, various factors, including socioeconomic conditions, healthcare infrastructure, and governance, influenced progress toward the health-related SDGs as described hereafter.

<sup>2</sup> United Nations The Sustainable Development Goals Report 2022. 2022. Available at <https://unstats.un.org/sdgs/report/2022/>. Accessed 19 February 2924.

## 3.2. Health SDG

### 3.2.1. SDG 3: Good health and well-being (Table 1).

- *Maternal, Neonatal and Child Health (SDG 3.1 and 3.2)*

Nearly 99 % of all maternal deaths occur in developing countries, with more than half in sub-Saharan Africa, where the rate stands at 525 deaths per 100,000 live births [5]. Although some African countries have significantly reduced maternal and child mortality, disparities persist across the Region. West and Central Africa sub-regions were the most affected in 2022, with 12 of the 15 countries of the Region having an MMR<sup>3</sup> above 500 deaths per 100,000 live births. As for neonatal mortality, despite the decline of 17 % in the WHO/AFRO Region between 1990 and 2020, the Region still has the highest rate, with 27 deaths per 1000 live births. Factors contributing to these high death rates include the low proportion of births attended by skilled health personnel (65 %), the high prevalence of women of reproductive age (15–49 years) with an unmet need for family planning (43.7 % in 2020), and high adolescent birth rate among women aged 10 to 14 years (102 births per 1000 adolescents), the highest in the world.

Africa remains the Region with the highest under-five mortality rate globally, with 72 deaths per 1000 live births. In 2019, half of all under-five child deaths occurred in just five countries, three of which were in Africa.

- *Infectious Diseases (SDG 3.3)*

From 2010 to 2020, the incidence rate of HIV declined by 31 % in Africa. East and Southern Africa accounted for 54 % of all the people living with HIV and 43 % of all the new HIV infections globally in 2019. In 2020, the African Region carried the highest share of the global malaria burden, with 95 % of malaria cases and 96 % of malaria deaths. Central and West African sub-regions were the most affected areas, and four countries, Nigeria DRC, Tanzania and Mozambique, accounted for over half of all malaria deaths worldwide [7] (Fig. 2). Despite the progress made in tackling HIV/AIDS, malaria, and tuberculosis (TB) in some African countries, challenges such as access to treatment, prophylaxis, and addressing new health threats remain.

- *Non-Communicable Diseases and Mental Health (SDG 3.4)*

Among the WHO Regions, the African Region had the third highest mortality rate from NCDs in 2019, with 21 % of people aged 30–69 years dying from NCDs. Countries such as Nigeria, DRC, Côte d'Ivoire, Cameroon, Senegal, and South Africa saw their numbers of people needing NCD interventions increase from 2015 to 2018. Cardiovascular diseases, cancer, and diabetes were rising in some African countries, posing a growing health challenge.

Mental health remains a neglected aspect of health in many African countries, as limited resources and stigma surrounding mental illness increase barriers to care. The suicide rate in the Region is the highest globally, with 11.2 per 100,000 population in 2019. This rate is consistently higher for men (18 per 100 000) than for women (5.2 per 100 000). In 2020, only Algeria, Congo, and Madagascar were developing a national suicide prevention strategy.

- *Substance abuse (SDG 3.5)*

There has been a growing burden of harmful alcohol consumption in the African Region, with disastrous effects, causing 48.7 premature deaths per 100,000 people. Nearly half of the African countries have

<sup>3</sup> MMR=Maternal Mortality Rate.

**Table 1**  
Status of SDG 3 in the WHO African Region in 2022.

SDG	Baseline (2015)	Target	WHO/AFRO average from AAHS 2022 (Year)	Countries that have met or are on track to meet the target (n)	Have not met or are not on track to meet the target (n)
<b>Maternal, Neonatal and Child Health (SDG 3.1 and 3.2)</b>					
Maternal mortality ratio	536	<70	525 (2017)	6	41
Proportion of births attended by skilled health personnel.		90 %	65 % (2021)	35	12
Under-5 mortality rate	83	<25	72 (2020)	17	30
Neonatal mortality rate	29	<12	27 (2020)		
<b>Infectious Diseases (SDG 3.3)</b>					
Number of new HIV infections per 1,000 uninfected population by sex, age, and key populations	0—5	0.02	0.99 (2018)	6	35 (6 with no available data)
Tuberculosis incidence per 100,000 population	270	<20	234 (2018)	13	34
Malaria incidence per 1,000 population	238.9	<9	232.8 (2020)	9	34 (4 with no available data)
<b>Non-Communicable Diseases and Mental Health (SDG 3.4)</b>					
Mortality rate attributed to cardiovascular disease, cancer, diabetes, or chronic respiratory disease	22 %		20.8 % (2019)	9	38
Age-standardized suicide rate (per 100 000 population)	14.1		11.2 (2019)		
<b>Substance abuse (SDG 3.5)</b>					
Coverage of treatment interventions for substance use disorders					
Alcohol consumption among people aged 15 years or older	4.8		4.5 (2019)	10	37
<b>Road traffic (SDG 3.6)</b>					
Road traffic death rate (per 100 000 population)	26.7		26.6 (2019)		
<b>Sexual and reproductive health (SDG 3.7)</b>					
Women of reproductive age (15–49 years) whose family planning needs are satisfied with modern methods	52.8 %	90 %	56.3 % (2020)		
Adolescent birth rate for girls aged 10–14 years (per 1000 girls in that age group)	110/1000	0	102/1000 (2020)		
<b>Universal health coverage (SDG 3.8)</b>					
Coverage of essential health services	44 %	100 %	46 % (2022)		
Proportion of the population with large household expenditures on health as a share of total household expenditure or income	12.7 %	0 %	8 % (2022)		
<b>Environmental health (SDG 3.9)</b>					
Ambient and household air pollution attributable to death rate (per 100 000 population)		<5	181 (2016)		
Mortality rate attributed to exposure to unsafe WASH services (per 100 000 population)	38.9		45.8 (2016)		
Mortality attributed to unintentional poisoning (per 100 000 population)	2.7	0	2.6 (2018)		
<b>Tobacco Control (SDG 3. a)</b>					
Prevalence of current tobacco use among persons aged 15 years or older	11.7 %	30 %	10.3 % (2020)		
<b>Medicines and vaccines (SDG 3. b)</b>					
Target population covered by all vaccines included in the national programmes		100 %	57.8		
Total net official development assistance (ODA) to medical research and basic health sectors (\$)	0.32	5.5	4.65 (2020)	30	17
Health facilities with a core set of relevant essential medicines that are available and affordable on a sustainable basis		50 %		1	46
<b>Health financing and workforce (SDG 3. c)</b>					
Density of medical doctors (per 10 000 population)			2.9 (2012–2020)		
Density of nursing and midwifery personnel (per 10 000 population)			12.9 (2012–2020)		
Density of dentists (per 10 000 population)			0.3 (2012–2020)		
Density of pharmacists (per 10 000 population)			0.8 (2012–2020)		

(continued on next page)

Table 1 (continued)

SDG	Baseline (2015)	Target	WHO/AFRO average from AAHS 2022 (Year)	Countries that have met or are on track to meet the target (n)	Have not met or are not on track to meet the target (n)
<b>Emergency preparedness (SDG 3.d)</b>					
International Health Regulations (2005) capacity and health emergency preparedness	60 %		48 % (2021)		
Percentage of bloodstream infections due to <i>Escherichia coli</i> resistant to third-generation cephalosporin among patients seeking care whose blood was tested					

levels of alcohol consumption higher than the Regional average (4.8 L per year), and men consume almost seven times more alcohol than women.

- *Road traffic (SDG 3.6)*

Africa has the worst road death rate in the world, with 26.6 deaths per 100,000 people and almost twice as many men than women dying from road accidents. These figures are rising, with the highest rates observed in Central Africa. Road traffic injuries are the leading cause of death for children and young adults aged 5–29. Around 93 % of the world's fatalities on the roads occur in low- and middle-income countries [8].

- *Sexual and reproductive health (SDG 3.7)*

The proportion of women of reproductive age in Africa who need family planning with access to modern contraceptive methods increased from 52.8 % in 2015 to 56.3 % in 2020. Contraceptive use has also increased by 30 %, but not enough to cover the huge gap between WHO/AFRO and other Regions. Rwanda, Ethiopia, Malawi, and other countries have made rapid progress in family planning due to factors such as multisectoral and political commitment.

- *Universal health coverage (SDG 3.8)*
- *Coverage of essential health services*

The increase of the service coverage index in the African Region, from 24 % in 2000 to 46 % in 2019, contributed to nine additional years of life expectancy [9]. However, critical gaps remain, and WHO/AFRO still ranks last among the other Regions. The level of family planning needs among women aged 15–49 years satisfied with modern methods was only 56.3 % in 2022. Access to qualified health personnel for birth attendance and immunization services remains challenging for antenatal care and childbirth. The COVID-19 pandemic has primarily contributed to reducing these coverages by limiting access to vaccination and other services. Meanwhile, the Region has seen rapid improvement in the range of insecticide-treated bed nets for children, which accounts for an essential share of the decline in child mortality [10]. Also, about 57 % of TB cases diagnosed in the Region now have access to treatment, and 15.3 million people living with HIV in the Region have access to lifesaving antiretroviral drugs.

- *Household expenditures on health as a share of total household expenditure or income*

Total health expenditure has grown rapidly in countries of the African Region over the last two decades, but domestically financed government spending has stalled. Government spending on health as a share of total government spending has decreased in half of the countries in the Region. Only four countries met the Abuja target of allotting 15 % of general government spending on health (10). The increase in health expenditure has been remunerated mainly by households' out-of-pocket (OOP) spending and development assistance, underscoring the financial burden of health for the people in the Region. In the WHO African

Region, 8 % of the population incurred catastrophic health expenditure exceeding 10 % of their household expenditure and 2 % exceeding 25 % of their expenditure in 2017. Angola had the highest proportion of households (12.5 %), with health expenditure exceeding the threshold of 25 %, followed by Zimbabwe (7 %).

- *Environmental health (SDG 3.9)*

In 2019, 99 % of the world's population lived where the air quality thresholds were unmet. The WHO/AFRO has the highest ambient and household air pollution attributable rate, with 181 deaths per 100,000 population.

The COVID-19 pandemic highlighted the urgent need to provide everyone the opportunity to get access to running water. Only 54 % of the people in Africa use safe water, a level that drops to 25 % in fragile contexts. The mortality rate due to exposure to unsafe Water, Sanitation, and Hygiene (WASH) services in the Region is four times higher than the global average of 11.7 deaths per 100,000 population.

- *Tobacco Control (SDG 3. a)*

Tobacco use in the WHO/AFRO, the lowest rate among the Regions, decreased from 15 % in 2010 to about 10 % in 2020. However, recent trends show an increase in tobacco use among girls (from 4.6 % to 36.6 %) and boys (from 7.8 % to 36.5 %). As of February 2020, 44 of 47 countries in the African Region had ratified the WHO Framework Convention on Tobacco Control (FCTC), but they have yet to fully implement FCTC-compliant legislation [11].

- *Medicines and vaccines (SDG 3. b)*

The WHO estimates that around half of the African population needs regular access to necessary medicines. Antibiotic consumption is poorly controlled in the Region, leading to an estimated antimicrobial resistance death of 24 per 100,000 population in 2019, the highest globally.

Inequalities in access to vaccines and the disruptions caused by the COVID-19 pandemic have hindered routine immunization services in many African countries. As a result, 23 million children did not receive vaccines in 2020, the highest number since 2009. This situation has led to the resurgence of vaccine-preventable disease outbreaks in the region since 2021.

- *Health financing and workforce (SDG 3. c)*

African Region's weighted average of official development assistance (ODA) for health per capita was the highest among the Regions (US\$ 4.65 per capita). Although the Region has made considerable efforts to increase human resources and improve its capabilities, severe shortages and maldistribution of health workers in Africa continue to hamper access to and delivery of health services. The Regional density of physicians, nurses, and midwives per 1000 population was 1.55 (3.6 million health workers) 2018. Only Mauritius, Namibia, Seychelles, and South Africa had densities of more than 4.45 health workers per 1000 people as required by WHO to deliver essential health services and achieve UHC [6 12].

Dentists constitute 14 % of the health workers in the Region, making a dentist-to-population ratio of about 1:150000, far lower than the 1:2000 ratio in high-income countries [13]. Similarly, WHO/AFRO has the lowest density of pharmacists globally, with 0,8 pharmacists per 10.000 population.

- *Emergency preparedness (SDG 3.d)*

The WHO African Region has an International Health Regulations (IHR) core capacity score of 49 % in 2021, reflecting a low health security level. National health emergency frameworks exist in countries but must be updated and implemented. Thirty-nine Member States have a national action plan for health security that, if funded and implemented, can significantly improve health security and the health system.

### 3.3. Health-related SDGs

Table 2.

#### 3.3.1. SDG 2: No hunger

Among regions, Africa bears the heaviest burden of hunger, as one in five people in Africa faced hunger in 2021. Food insecurity worsened globally between 2015 and 2020, increasing from 52 % to 60 % in WHO/AFRO (Fig. 1). In 2020, an analysis of undernourishment across the African continent revealed a notable trend, with a total of fourteen countries displaying a prevalence of undernourishment that exceeded the Regional average of 20.7 %. This observation highlights the significance of Regional disparities in food security and nutritional well-being. Among these fourteen nations, seven stood out as particularly affected, experiencing a disproportionately high burden of undernourishment. Of these seven, the Central African Republic, Madagascar, and the Democratic Republic of the Congo (DRC) emerged as the most profoundly impacted, with their cumulative undernourishment prevalence reaching twice the Regional average. As the prevalence of hunger increases and malnutrition persists, achieving the zero-hunger goal by 2030 is challenging.

Nutritional indicators for children under five in the African region have improved significantly but are still insufficient. Between 2000 and 2020, the prevalence of wasting (5.8 % in 2020) was reduced by around 57 % and in 2020, the Region became the most affected region by stunting. The prevalence of overweight was 4.2 % in 2020, with 14 countries that had reached the target. The burden of food scarcity begins long before the child is born, as pregnant women and women of reproductive age are also affected by undernourishment. In 2019, more than half of the countries still had a very high anaemia prevalence rate, above 40 %.

#### 3.3.2. SDG 4 quality education

The African Region has 60 % of children under five who are developmentally on track regarding health, learning, and psychosocial well-being (57 % boys and 63 % girls) (Fig. 3). Algeria has the most children whose development is on track with 77 %, as opposed to the Central African Republic, which has only 36 %. In 2020, about 85 % of countries in the WHO African Region where data are available (27 countries) had more than 50 % of their under-five children developmentally on track regarding health, learning, and psychosocial well-being.

#### 3.3.3. SDG 5 gender equality

Women suffer the most from gender inequality and marginalization on the continent. The occurrence of early marriage and forced marriage is highest in the WHO African Region, where 34 % of girls are forced into marriage before 18, compared to 4 % of boys. Over the past decade, the incidence of child marriage has declined, with the proportion of young women aged 20–24 who got married before the age of 18 years falling by 15 % from 2010 to 2020. In addition, 33 % of women are victims of

partner violence, and 36 % of women aged 15–49 are still victims of genital mutilation/cutting. Although there has been a decline in different forms of marginalization, the COVID-19 pandemic threatens the progress made in the Region [14]. In 2019, 72 % of sub-Saharan African countries had laws and regulations to ensure full and equal access of women and men aged 15 to sexual and reproductive health care, information, and education.

#### 3.3.4. SDG 6- clean water and sanitation

In 2020, only 32 % of the population had access to basic drinking water services (Fig. 4), and 23 % used managed sanitation services. There is a disparity in both components according to the place of residence, favouring urban areas. Only Algeria, Cabo Verde, Mauritius, and South Africa are on track to achieve SDG 6.1 on basic water supply services. At the same time, Seychelles, Algeria, and Botswana could provide access to adequate and equitable sanitation to at least 80 % of its population in 2020 (SDG 6.2).

#### 3.3.5. SDG 7 -affordable and clean energy

In the Region, there is a challenge to ensuring a healthy living environment. Only 20 % of the African population uses clean fuels and technologies as a first resort. More than 93 % of the rural population needs access to these energy sources, compared with 61 % for urban areas. Algeria, Mauritania and Seychelles are the only countries on track to achieve SDG 7.1.

#### 3.3.6. SDG 8 – Decent work and economic growth

Most fatal injuries from work accidents occur in Asia (65 %) and Africa (17 %). According to the available sources (Mauritius, Seychelles, and Zimbabwe), men are more exposed than women to work accidents, regardless of whether they result in fatal or non-fatal injuries.

#### 3.3.7. SDG 11 – Sustainable cities and communities

Sub-Saharan Africa's urban population is experiencing the fastest urbanizing in the world. In the Region, 25 countries have a concentration of fine particulate matter (PM2.5) over 40 µg/m3. Ambient air pollution-related deaths have increased, from 361,000 in 2015 to 383,000 in 2019, mainly in the most highly developed countries. PM2.5 pollution was estimated to be responsible for 1.96 billion lost intelligence quotient points in African children in 2019.

#### 3.3.8. SDG 13 – Climate action

The African Region is prone to natural disasters, and 622 disasters affected the Region from 2010 to 2020. Most disasters in the last ten years (83 %) triggered by a natural hazard were caused by extreme weather and climate events such as floods, storms, and heat waves. In 2019, 20 million people were affected by disasters in Africa (Fig. 5). By 2022, up to 22 countries in the region had developed national health adaptation plans for climate change, and only 5 % of the countries were on track in implementing their national strategies. The COVID-19 pandemic has disrupted the progress in reducing disaster mortality worldwide, accentuating the importance of multi-hazard and multi-sectoral approaches to disaster risk reduction.

#### 3.3.9. SDG 16 – Peace, justice, and strong institutions

Many African countries encounter security problems, with the highest rates of intentional homicide during 2018–2020. One-third of the homicides committed worldwide happened in the Region, most of which are committed by men. In 2020, around 7500 people died from the armed conflicts. Studies show that more than half of African children are physically abused, and about 40 % of girls are sexually abused before the age of 15 years.

Four countries are on track to provide birth registration for all their citizens by 2030 (SDG 16.9), as they have more than 90 % of children under five whose births were registered with a civil authority.

**Table 2**  
Status of Health-related SDGs in the WHO African Region in 2022.

SDG	Baseline (2015)	Target	WHO/AFRO average from AAHS 2022 (Year)	Countries that have met or are on track to meet the target (n)	Have not met or are not on track to meet the target (n)
<b>No hunger (SDG2)</b>					
Prevalence of undernourishment (% of population)	19.2 %	0	20.83 (2020)	3	33 (11 with no available data)
Prevalence of food insecurity in the population	52.6		59.5 (2019)	1	40 (6 with no available data)
Prevalence of stunting among under-five children	34.3 %	5 %	31.7 % (2020)	2	45
Prevalence of wasting among under-five children		<5%	5.8 % (2020)	40	7
Prevalence of overweight among under-five children	3.9 %		4.2 % (2020)	17	29 (1 with no available data)
Prevalence of anemia among women of reproductive age (15–49 years)	39.8 %		40.55 (2019)	1	46
<b>Quality Education (SDG4)</b>					
Under-five children who are developmentally on track in health, learning and psychosocial well-being	43 %	90 %	59.7 % (2020)	10	19 (28 with no available data)
<b>Gender equality (SDG5)</b>					
Women and girls aged 15–49 years were subjected to physical or sexual violence by an intimate partner in the previous 12 months.			20 (2018)	16	22 (9 with no available data)
Prevalence of non-partner sexual violence in low and middle-income countries			11.9 (2015)	14	4 (29 with no available data)
Prevalence of female genital mutilation or cutting among women aged 15–49 years (%)			36 % (2020)		
Prevalence of female genital mutilation or cutting among girls aged 0–14 years.			17 % (2020)		
Proportion of young women aged 20–24 years who were married or in a union before age 18.			34 % (2020)		
Proportion of women aged 15–49 years who make their own decisions regarding sexual relations, contraceptive use and reproductive health care.					
Countries with laws and regulations that guarantee women aged 15–49 years access to sexual and reproductive health care, information, and education.			72 % (2019)		
<b>Clean water and sanitation (SDG6)</b>					
Population using at least basic drinking-water services (%)	29 %	80 %	32 % (2020)	34 (Urban, >80 %) 4 (Rural, >80 %)	13 (Urban, <80 %) 43 (Rural, <80 %)
Population using at least basic sanitation services (%)		80 %	23 % (2020)	43 (Urban, >80 %) 19 (Rural, >80 %)	3 (Urban, <80 %) 28 (Rural, <80 %)
<b>Affordable and clean energy (SDG7)</b>					
Population with primary reliance on clean fuels and technologies (%)		80 %	20 % (2020)	8 (Urban, >80 %) 3 (Rural, >80 %)	39 (Urban, <80 %) 44 (Rural, <80 %)
<b>Decent work and economic growth (SDG8)</b>					
Fatal occupational injuries (per 100 000 workers)			65		
Non-fatal occupational injuries (per 100 000 workers)					
<b>Sustainable cities and communities (SDG11)</b>					
Annual mean concentrations of fine particulate matter (PM2.5) in urban areas (µg/m3)	35 mg/m3		39 mg/m3 (2016)		
<b>Climate action (SDG13)</b>					
Deaths and disappearance of people attributed to disasters (per 100 000 population)			11	18 (0–1)	29
People directly affected by disasters (per 100 000 population)	0.05		5	15 (0–50)	32
<b>Peace, justice, and strong institutions (SDG16)</b>					
Numbers of victims of intentional homicide (per 100 000 population)		0	35	7 (less than 2)	24 (16 with no available data)
Deaths from major conflicts (per 100 000 population)	10.69	0	10.04 (2019)	27 (less than 10)	20
Population subjected to physical violence.		0 %	20 %		
Proportion of children aged 1–14 years who experienced physical punishment or psychological aggression by caregivers in the past month.		0 %	>70 %	1 (less than 65)	26 (20 with no available data)
Number of victims of human trafficking per 100,000 population		0	77	7	21 (19 with no available data)

(continued on next page)



Table 2 (continued)

SDG	Baseline (2015)	Target	WHO/AFRO average from AAHS 2022 (Year)	Countries that have met or are on track to meet the target (n)	Have not met or are not on track to meet the target (n)
Population aged 18–29 years who experienced sexual violence by age 18 (% of population aged 18–29)		0	5	13	8 (26 with no available data)
Proportion of children under five years of age whose births have been registered with a civil authority, by age.		100	51 % (2020)	25	21 (1 with no available data)
<b>Partnerships for the Goals (SDG17)</b>					
Countries with birth and death registration data that are at least 90 % complete.		90 %	45.5 %	7	18 (22 with no available data)
Countries that have conducted at least one population and housing census in the last 10 years.		100 %	42.5 %	20	10 (16 with no available data)
Countries with death registration data that are at least 75 % complete.		75 %	15 %	7	16 (24 with no available data)

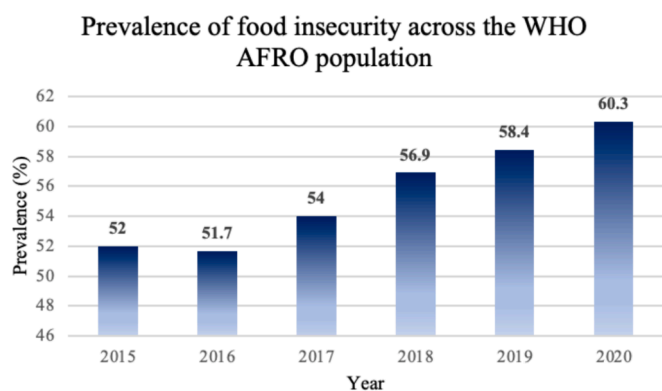


Fig. 1. Prevalence of food insecurity in the population of the WHO African Region, 2015–2020 (). Source: FAO

3.3.10. SDG 17 – Partnerships for the Goals

Many countries still have very weak completeness in causes of death data, and only seven countries will have reached 90 % completeness for births and deaths registration by 2020. Population data is obsolete or inaccurate in many countries, as only twenty countries have conducted population censuses in the past ten years. (SDG 17.18).

4. Discussions: Prospective analysis of countries’ achievement of the SDGs by 2030

Not all SDGs targets are set for 2030. Some expired in 2020, and others will expire in 2025.

4.1. SDG to be achieved by 2020

No African country has met the target of halving the number of road traffic deaths and injuries by 2020 (SDG 3.6). Instead, the number of road deaths has increased. The Stockholm Declaration has called for a new goal to halve road deaths by 2030 [15], which was endorsed by the UN General Assembly [16]. Although the deadline has been extended, upward trends show that, unless new strategies are implemented, the target will still not be met by WHO/AFRO countries. A country-specific target should be envisaged that considers the country’s level of development, including the road network and compliance with road safety measures.

4.2. Sdgs to be achieved by 2025

Although the prevalence of stunting among under-five children is declining in the WHO African Region, only Algeria and Seychelles are on

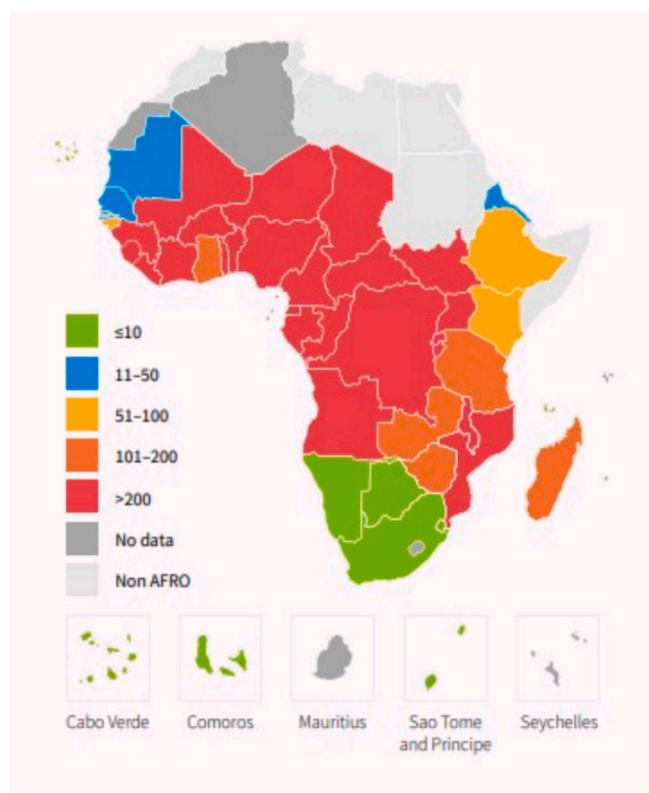


Fig. 2. Malaria incidence (per 1000 population at risk) in the WHO African Region in 2022 (). Source : WHO



Fig. 3. Under-five children who are developmentally on track in health, learning, and psychosocial well-being in the WHO African Region, 2020 (). Source: UNICEF

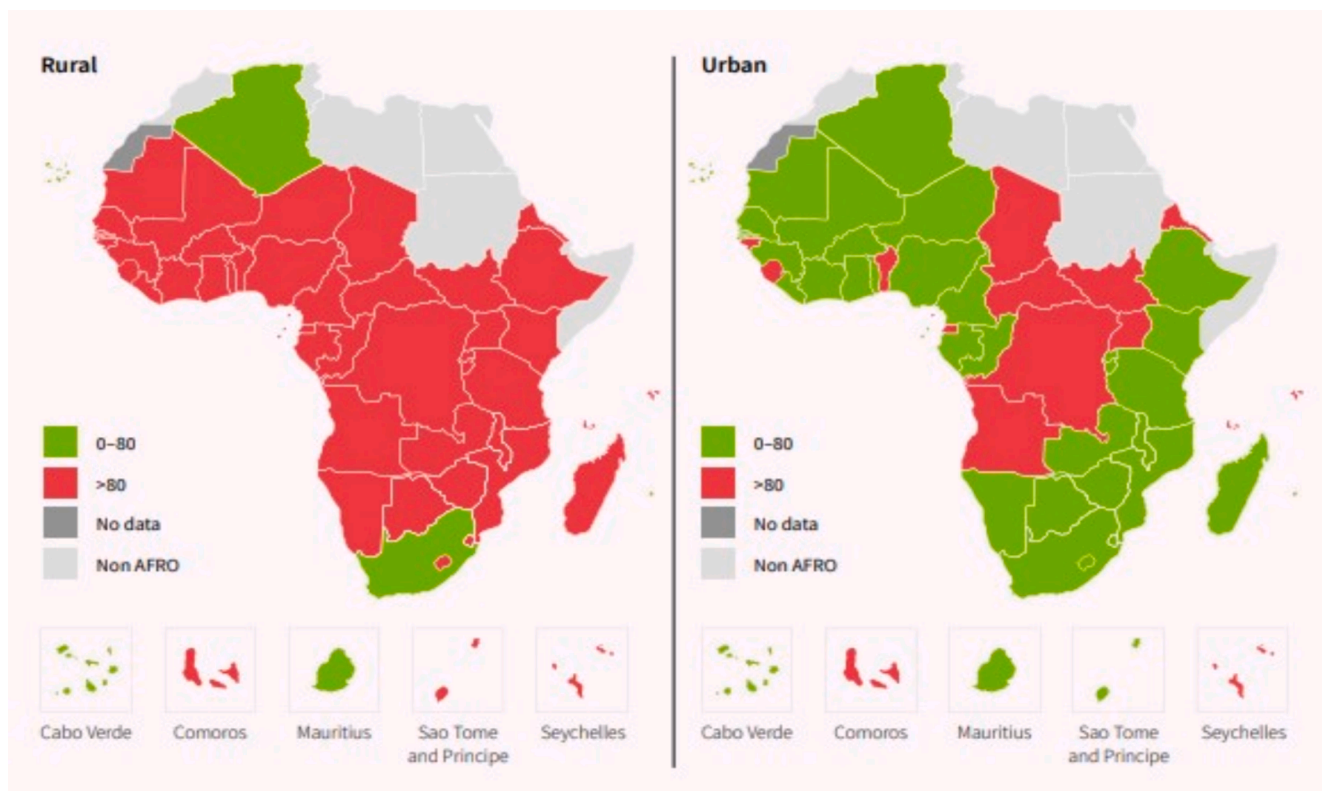


Fig. 4. Population using at least basic drinking-water services in the WHO African Region, 2020 (). Source: WHO

track to achieve this target by 2025. As for undernourishment, only Côte d'Ivoire, Ghana, and Algeria are the closest to achieving the target, making halving the prevalence of anaemia in women of reproductive age by 2025 challenging in the region. From 2015 to 2020, the trend in the prevalence of overweight children under five was very weak (from 3.9 % to 4.2 %), and about 12 countries have missed the mark, making the achievement of this target in the region by 2025 uncertain. In 2020, eleven countries achieved the global target of not exceeding a prevalence of 5 % by 2025, and only two (Sudan Mauritius) still had a prevalence above 15 %. If this last trend is maintained, the Region might meet this goal.

#### 4.3. Sdgs to be achieved by 2030

About 90 % of the countries in the WHO African Region have food insecurity levels higher than the global average of 29 %. These alarming figures have gone unaddressed, increasing the challenge of ensuring access to sufficient food for all by 2030 (SDG 2.1). An examination of the current trends for under-five and neonatal mortalities (SDG 3.1) reveals that the African Region will not achieve the related target. Although individually, Cabo Verde, Mauritius, and Seychelles, all small islands with few populations, have already attained a ratio of less than 70 maternal deaths per 100,000 live births. Estimates based on AARR modelling indicate that by 2030, there will still be 390 maternal deaths per 100,000 live births in the Region. This trend correlates with the indicator for births attended by skilled health personnel, which is far from the 90 % minimum coverage target. As for lowering the under-five mortality ratio to less than 25 deaths per 1000 live births (SDG 3.2) (Fig. 6), only Algeria is close to reaching that goal in the region.

Malaria elimination has been officially certified by WHO only in Algeria [7], and seven other countries<sup>4</sup> are close to elimination. With an incidence rate of 0.99 per 1000 uninfected people, the Region is on the verge of ending new HIV infections.

Most countries in the Region still do not have a national suicide prevention strategy, making it uncertain whether they will achieve the target for SDG 3.4 by 2030. Based on the reduction rate in deaths due to NCDs, the Region will need to intensify efforts to achieve a one-third reduction by 2030. Epidemiological data on drug use prevention and information on integrating these services into healthcare facilities in sub-Saharan Africa are scarce, making it challenging to monitor SDG 3.5 and predict whether the objective will be achieved by 2030. Health workforce numbers and density still look insufficient for delivering essential health services as SDG 3. c recommends. The projected health workforce size by 2030 shows a decrease in workforce shortage of only 7 % in WHO/AFRO [17].

The strides made in providing women across the Region with modern contraceptives are undeniable. However, the impact is more explicit in some countries than others. The projection for contraceptive use in the Region by 2030 remains below the current global average and the target of 90 % coverage.

Despite substantial progress, unsafe WASH services remain important determinants of the global disease burden, especially among young children [18]. The WASH-attributable burden of disease estimates that progress toward SDG 3.9 would yield significant public health returns [19]. However, the African Region will not reach this goal, together with SDG 6.1 and 6.2. Tobacco-attributable deaths (SDG3.a) are projected to double in low-income and middle-income countries, including those in the African Region, between 2002 and 2030.

<sup>4</sup> South Africa, Namibia, Botswana, Swaziland, Cabo Verde, Comoros, and Sao Tome and Principe.



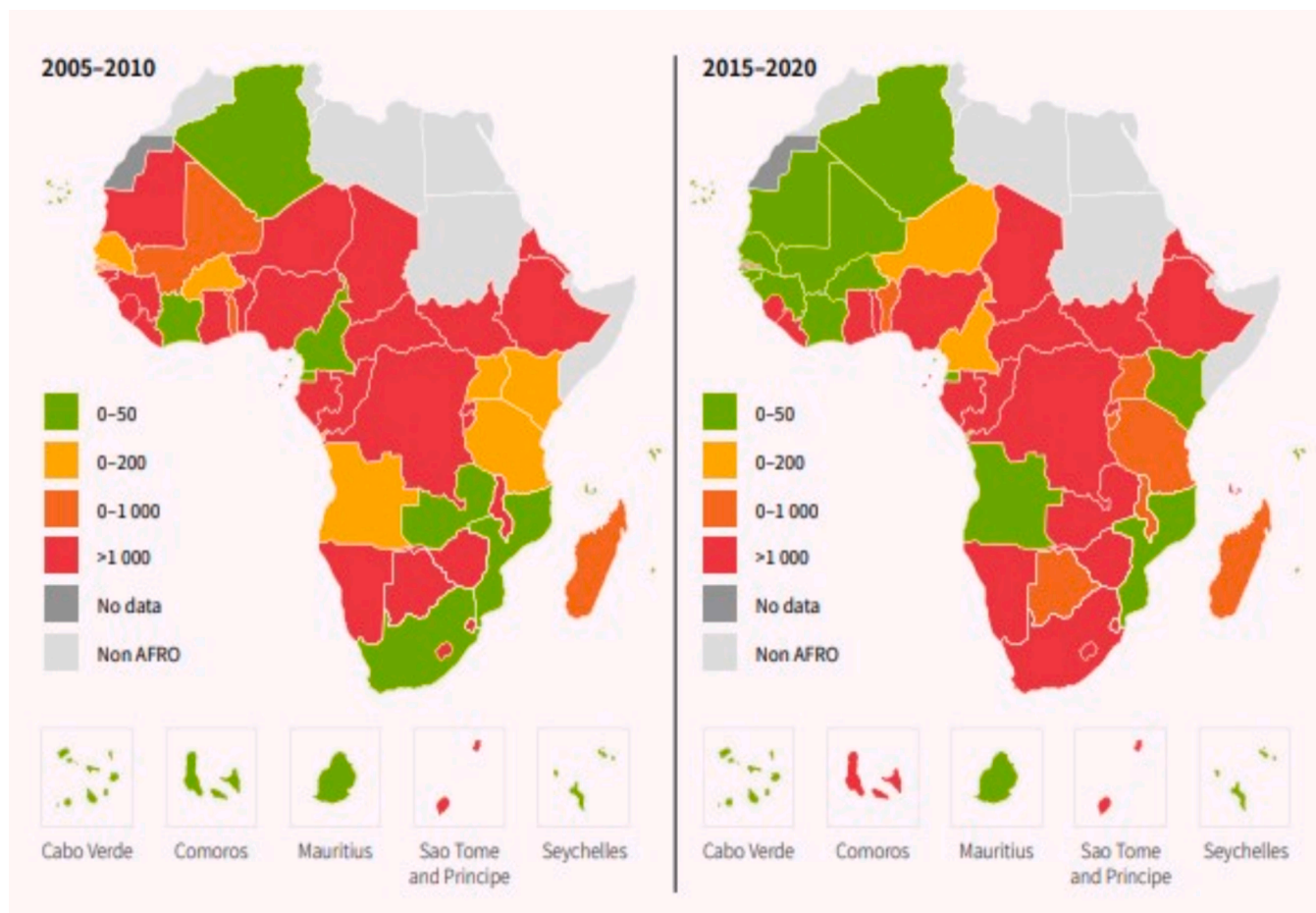


Fig. 5. People directly affected by disasters (per 100 000 population) in the WHO African Region, 2005–2010 and 2020 (). Source: UNEP

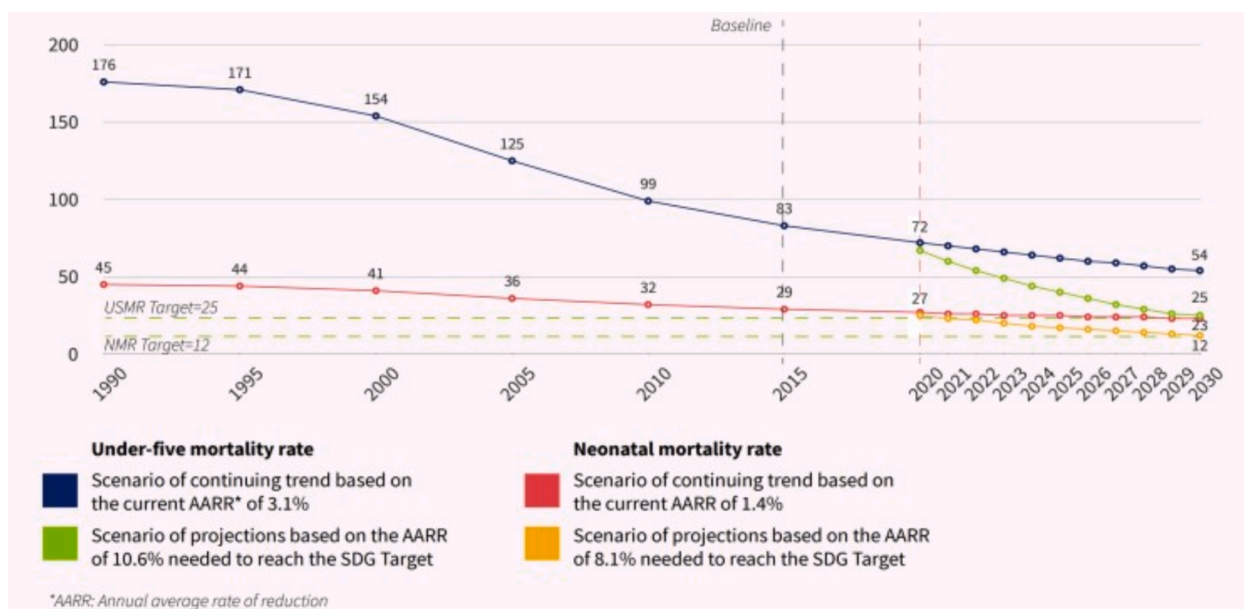


Fig. 6. Under-five mortality rate and neonatal mortality rate in the WHO African Region, 1990–2020, with projections to 2030 (). Source: UN IGME

From available data, a few countries have reduced violence (homicide particularly) (SDG 16.1), but three countries have a different trend with several homicides that have increased. Kenya was among the first countries to complete violence against children and youth surveys in 2010 and 2019 (SDG 16.2), showing a significant decrease in sexual, physical, and emotional violence against children between 2010 and 2019.

The use of clean energy sources remains a big challenge in the Region and is very dependent on the level of development of countries. Since 2005, West African countries have successfully made major efforts to reduce the number of deaths and disappearances attributed to disasters and the number of people directly affected by disasters face disasters (SDG 13.1),.

Civil registration in African countries is still challenging (SDG 16.9 & 17.19). There was an increase of 2 % in the proportion of children under five whose births were registered in Africa from 2008 to 2020. Projection scenarios built on existing trends show that, unless progress is accelerated, the number of unregistered children in Africa will continue to rise and exceed 100 million by 2030.

## 5. Challenges in the progress of SDG targets by 2030

Although countries differ, most share the same trajectory regarding developing their health, economic and socio-cultural systems. Analyzing the SDG progress situation highlighted many areas for improvement to reach the SDGs target by 2030. In general, the dual issue of availability and quality of health personnel and the low coverage and use of maternal, child, and adolescent health services has been affecting the health status of this vulnerable group. National immunization programs report a decrease in the completely vaccinated population. The figures have dropped recently, showing few people's adherence to vaccination services. The rise of the infodemic and misinformation in social media has been one of the main contributors, which immunization programmes and health promotion experts have not addressed efficiently. The disruption of routine immunization and other services in many countries due to the COVID-19 pandemic has demonstrated the low resilience of AFRO countries' health systems.

On a broader note, other sectors are highly involved in health results. The main areas concerned are 1) governance, plagued by corruption and a lack of accountability; 2) socio-political crisis resulting in protracted conflicts and slow development; and 3) climate change causing droughts, floods, and other effects [20]. Moreover, patients in the African Region are still poorly protected against high OOP, leading to increased poverty with secondary effects on malnutrition and health. Although various projects have been carried out in the Region, access to basic drinking water and sanitation services still needs to be addressed, especially in rural areas. With a gender index score of just 48.6 % in 2019 [21], efforts are still needed to achieve the gender equality target.

Ensuring equitable access to health services will require these services to be more centred around the needs of people and communities, meaning a transformation in how health services are funded, managed, and delivered. In regards to the effective delivery of health services, more than 18 million additional health workers are needed by 2030 to meet the health workforce requirements of the SDGs and UHC targets, with gaps concentrated in the African Region. [22].

Countries in the Region are particularly affected by the juxtaposition of implemented health programs without overall coherence [24]. There is still a persistent discrepancy between the need to promote a multi-sectoral approach to health, as advocated by the WHO [25], and a tendency to spread the available resources between different levers and mechanisms (health programmes, local projects, etc...), strongly supported by donors and technical partners in development [23].

Monitoring progress towards SDGs is a crucial activity to address challenges timely. WHO estimates that two-thirds (38 million) of 56 million deaths globally each year are still not registered [22] and so are not classified and considered for strategic planning in response to health

threats. That reflects the weakness of health information systems in producing quality routine data and of the "civil registration and vital statistics" systems to produce trustable civil registration data and vital statistics.

## 6. Implications for policy making

The figures and trends seen for the SDGs in the African region once again raise the question of the objectivity of the targets set in relation to the context and capabilities of several countries in the region to reach them. Indeed, the 2015 assessment of the Millennium Development Goals (MDGs), to which the SDGs succeeded, already showed that initial conditions invariably influence the pace of progress on development agendas,<sup>5</sup> making the targets overestimated and partly justifying countries' inability to achieve them. Although the SDGs' target-setting procedure has involved countries a little more, we still find that the current state of the health system, coupled with economic growth and socio-cultural developments in countries, does not guarantee the conditions for achieving the targets as set out in the SDGs. It looks as though the SDGs are still overestimated. Policymakers therefore need to review most of the objectives, make them more realistic in line with its context, and develop policies that take into account the country's overall economic and development projections, in order to define more realistic targets and more appropriate actions.

### 6.1. Limitations

Analysing the progress of the Sustainable Development Goals (SDGs) in Africa is crucial for understanding the continent's development trajectory. However, this endeavour is fraught with challenges and limitations. One primary obstacle is the lack of reliable and comprehensive data across many African countries. In a continent where data collection infrastructure remains underdeveloped, gaps and inconsistencies in SDG monitoring persist, hindering accurate assessment of progress [27]. Moreover, African nations' diverse socio-economic and environmental contexts make it difficult to apply a one-size-fits-all approach to SDG analysis. Conflicts, political instability, and economic vulnerabilities in certain regions further complicate the assessment process, rendering it challenging to capture the full spectrum of development outcomes [28]. To address these limitations, concerted efforts are needed to strengthen data collection systems, tailor interventions to local contexts, and foster partnerships between governments, civil society, and international organizations [29]. Only by overcoming these obstacles can Africa effectively track progress towards achieving the SDGs and ensure inclusive and sustainable development for all.

## 7. Conclusion/Recommendations

According to WHO, healthy life expectancy in the African Region has increased on average by ten years per person between 2000 and 2019, essentially due to improvements in the provision of essential health services, gains in reproductive, maternal, newborn, and child health, as well as progress in the fight against infectious diseases [26]. It demonstrates that with appropriate and consistent efforts made by governments in implementing recommendations, progress towards the SDGs can be accelerated. However, current trends clearly show that achieving them will still be challenging by 2030. Hardly any of the goals are nearing their target for the allotted time. To expect the achievement of

<sup>5</sup> ECA (Economic Commission for Africa), AUC (African Union Commission), AfDB (African Development Bank) and UNDP (United Nations Development Programme). 2015. MDG Report 2015. Lessons learned in implementing the MDGs. Assessing Progress in Africa toward the Millennium Development Goals. Addis Ababa, Ethiopia. Available at: [https://www.afdb.org/fileadmin/uploads/afdb/Documents/Publications/MDG\\_Report\\_2015.pdf](https://www.afdb.org/fileadmin/uploads/afdb/Documents/Publications/MDG_Report_2015.pdf) accessed 15/03/2024.

SDGs by 2030, the countries in the African Region must rectify and ratify their current action plans. They also need to develop and implement new strategies and laws. In addition to strengthening the health systems, two complementary and unavoidable levers must be addressed: the social determinants of health (SDH) and good levels of complementarity between institutions [23] and other allied sectors. Political commitment in and outside the health sector, effective partnerships, and collaboration are essential to closing the gap between the current conditions and a more prosperous future. A new agenda with more attainable targets, contextualized by country, should be implemented with a robust monitoring system that can inform decision-makers with quality data in a timely manner.

### CRedit authorship contribution statement

**Bataliack Serge:** Writing – review & editing, Visualization, Validation, Supervision, Methodology, Data curation, Conceptualization. **Mbondji Ebongue:** Writing – original draft, Methodology, Formal analysis, Conceptualization. **Saha Tahoum Ursull Alexandra:** Writing – original draft, Formal analysis. **Karamagi Humphrey:** Writing – review & editing, Supervision, Conceptualization.

### Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

### References

- [1] UNDP. What are the Sustainable Development Goals?2023; Available: .
- [2] UN environment program. Sustainable development goals. 2023; Available : .
- [3] UN. The17 SDGs?. 2023. Available: <https://sdgs.un.org/goals>.
- [4] WHO Regional Office for Africa. Atlas of African Health Statistics 2022: Health situation analysis of the African Region- Summary report.2022; Available: <https://apps.who.int/iris/bitstream/handle/10665/364839/9789290234845eng.pdf?sequence=1>.
- [5] WHO African Region. Maternal Health: Where do maternal deaths occur? 2022; Available: <https://www.afro.who.int/health-topics/maternal-health>.
- [6] Ahmat A, Okoroafor SC, Kazanga I, Avoka J, Millogo JS, Lllou MA, Nyoni J. The health workforce status in the WHO African Region: findings of a cross-sectional study. *Br Med J Glob Health* 2022;7(1).
- [7] WHO. World Malaria Report 2021. 2021; Available: <https://www.who.int/teams/global-malaria-programme/reports/world-malaria-report-2021>.
- [8] WHO. Road traffic injuries - Key facts. 2023, Available: <https://www.who.int/news-room/fact-sheets/detail/road-traffic-injuries>.
- [9] WHO Regional Office for Africa. Tracking Universal Health Coverage in the WHO African Region, 2022. 2022; Available : <https://apps.who.int/iris/bitstream/handle/10665/361229/9789290234760eng.pdf?sequence=3>.
- [10] The World Bank, World Health Organization, JICA, Global Fund to Fight AIDS, Tuberculosis, Malaria, the African Development Bank. UHC in Africa: A Framework for Action. T. W. Bank, Éd.. 2016; Available: <https://www.worldbank.org/en/topic/universalhealthcoverage/publication/universal-healthcoverage-in-africa-a-framework-for-action>.
- [11] FCTC Compliance in Africa. (2020). Accessed on September 05, 2023 on Tobacco Tactics: <https://tobaccotactics.org/article/fctc-compliance-in-africa/>.
- [12] WHO. Global strategy on human resources for health: workforce 2030. 2016; Available: <https://iris.who.int/bitstream/handle/10665/250368/?sequence=1>.
- [13] Bhayat A, Chikte U. The changing demographic profile of dentists and dental specialists in South Africa: 2002–2015. *Int Dent J* 2018;68(2):91–6. <https://doi.org/10.1111/idj.12332>.
- [14] UN Women East and Southern Africa Regional Office. Impact of COVID-19 on Gender Equality and women’s empowerment in East and Southern Africa. 2021 ; Available: <https://data.unwomen.org/sites/default/files/documents/Publication/s/Abridged%20Version%20-%20Impact%20of%20COVID19%20on%20GEWE%20in%20East%20and%20Southern%20Africa.pdf>.
- [15] The Royal Society for the Prevention of Accidents. Road Safety Factsheet: Sustainable Development Goals. 2020 ; Available : <https://www.rospa.com/media/documents/road-safety/factsheets/sustainabledevelopment-goals-factsheet.pdf>.
- [16] United Nation. Improving global road safety. Seventy-fourth session(Agenda item 12). Resolution adopted by the UN .2020; Available : <https://documents-dds-ny.un.org/doc/UNDOC/GEN/N20/226/30/N2022630.pdf?OpenElement>.
- [17] Boniol M, Kunjumen T, Nair TS, Siyam A, Campbell J, Diallo K. The global health workforce stock and distribution in 2020 and 2030: a threat to equity and ‘universal’ health coverage? *BMJ Glob Health* 2022;7(6):e009316.
- [18] Prüss-Ustün Annette, et al. The burden of disease from inadequate water, sanitation, and hygiene for selected adverse health outcomes: An updated analysis focusing on low- and middle-income countries. *Int J Hyg Environ Health* 2019;222(5):pp765777. <https://doi.org/10.1016/j.ijheh.2019.05.004>.
- [19] Wolf Jennyfer, Johnston Richard B, Ambelu Argaw, Arnold Benjamin F, Bain Robert, Brauer Michael, Brown Joe, Caruso Bethany A, Clasen Thomas, Colford John M, Mills Joanna Esteves, Evans Barbara, Freeman Matthew C, Gordon Bruce, Kang Gagandeep, Lanata Claudio F, Medlicott Kate O, Prüss-Ustün Annette, Troeger Christopher, Boisson Sophie, Cumming Oliver. Burden of disease attributable to unsafe drinking water, sanitation, and hygiene in domestic settings: a global analysis for selected adverse health outcomes. *Lancet* 2023;401(10393):2060–71. [https://doi.org/10.1016/S0140-6736\(23\)00458-0](https://doi.org/10.1016/S0140-6736(23)00458-0).
- [20] Africa Center for Strategic Studies. COVID-19: A threat to food security in Africa. 2021; Available : <https://africacenter.org/spotlight/food-insecurity-crisis-mounting-africa/>.
- [21] AFDB. Africa Gender Index Report 2019 - Analytical report. 2020; Available: <http://www.afdb.org/en/documents/africa-gender-index-report-2019-analytical-report>.
- [22] WHO Regional Office for Africa. Universal Health Coverage - Factsheet - Key Facts. 2022 ;Available: <https://www.afro.who.int/health-topics/universal-health-coverage>.
- [23] Boidin B. Sustainable Development Goals: an opportunity for health in Africa? *Glob Health Promot* 2019;26(1):91–4. <https://doi.org/10.1177/1757975916677513>.
- [24] Meessen B, Gilson L, Tibouti A. User fee removal in low-income countries: sharing knowledge to support management implementation. *Health Policy Plann* 2011;26(Suppl. 2):ii.1ii.4. <https://doi.org/10.1093/heapol/czr071>.
- [25] World Health Organization. The Helsinki Statement on Health in All Policies. Helsinki: Ministry of Social Affairs and Health.2013.
- [26] Boakye-Agyemang, C. Healthy life expectancy in Africa has risen by almost ten years. 2022; Available: WHO Regional Office for Africa: <https://www.afro.who.int/news/healthy-life-expectancy-africa-rises-almost-ten-years>.
- [27] AbouZahr C, Boerma T. Health information systems: the foundations of public health. *Bull World Health Organ* 2005;83(8):578–83.
- [28] McArthur JW, Rasmussen K, Yamey G. How many lives are at stake? Assessing 2030 sustainable development goal trajectories for maternal and child health. *BMJ* 2017;358:j3398.
- [29] Nwabuzor A. Strengthening the Health Information System in Africa: Data for Decision Making. *International Journal of Population Research* 2020.