












Assessing progress toward the World Health Organization's Global action plan alcohol reduction target in Sub-Saharan Africa 2010–2019

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ABSTRACT

The World Health Organization (WHO) Global Action Plan for the Prevention and Control of Noncommunicable Diseases calls for a 10% relative reduction in the harmful use of alcohol by 2025. We assessed progress across 45 sub-Saharan African countries between 2010 and 2019 using WHO data on alcohol per capita consumption (APC) and heavy episodic drinking (HED). Trends were analysed for both the total population and past-year drinkers, using population-weighted averages and non-parametric methods. Regionally, both total APC (+6.6%) and HED per capita (+4.0%) increased slightly between 2010 and 2019. Among drinkers, APC also rose (+4.9%), while HED prevalence remained stable at around 51%. Central Africa was the only subregion to show meaningful declines in both APC and HED per-capita, although it continued to report the highest levels of HED per capita (around 30%). One-third of countries met or exceeded the 10% reduction target in APC per-drinker, while 44% saw increases. Sub-Saharan Africa is not on track to have met the alcohol reduction target, but trends vary markedly by country, with some signs of progress in Central Africa. Harmful drinking remains widespread and unevenly distributed, underscoring the need for stronger, context-specific alcohol policy and targeted interventions, particularly where consumption is rising or HED remains high.

Introduction

Alcohol consumption is a major global health concern, causally linked to >200 diseases and conditions, including cancers, liver and cardiovascular disease, injuries, and alcohol dependence (World Health Organization, 2024). Recognising its impact, the global community has prioritised reducing alcohol harm in the Sustainable Development Goals (SDG 3.5), the World Health Organization's (WHO's) 13th General Programme of Work, and the Global Action Plan for the Prevention and Control of Noncommunicable Diseases (United Nations, 2030; World Health Organization, 2013,2019). The latter sets a clear target of at least

a 10% relative reduction in the harmful use of alcohol by 2025, measured against a 2010 baseline (World Health Organization, 2013). Progress is tracked using alcohol per capita consumption (APC) within the voluntary WHO Global Monitoring Framework.

Sub-Saharan Africa has become a priority growth market for multinational alcohol producers, alongside Latin America and Asia (Jernigan & Babor, 2015; Room et al., 2022). Rising household incomes, trade liberalisation, and expanding retail and distribution networks have increased alcohol availability and affordability across the region (Babor et al., 2022; Jock et al., 2024; Morojele et al., 2021). In parallel, both APC and alcohol-attributable harm are trending upward (World Health

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Organization, 2024). The alcohol-attributable share of disability adjusted life years (DALYs) in sub-Saharan Africa increased from 0.9% in 1990 to 1.4% in 2021 (IHME, 2024). Among 15- to 49-year-olds, alcohol is now the second leading behavioural risk factor, accounting for 2.7% of DALYs in this region.

Demographic and structural factors compound these risks. The region has the world's youngest population, with roughly 70% of residents under the age of 30 (Economist Intelligence Unit, 2024), representing both a vulnerable population that are susceptible to alcohol-related harms and a sizeable segment for industry marketing and recruitment (Burnhams et al., 2019). Increased urbanisation, labour migration, new retail formats, and increasingly sophisticated alcohol marketing campaigns are reshaping alcohol consumption environments and patterns (Babor, 2024; Morojele et al., 2018). At the same time, persistent poverty, unemployment, and limited health-service coverage heighten susceptibility to alcohol-related harm (Fontes Marx et al., 2021; Gordon et al., 2020; World Health Organization, 2024). These vulnerabilities are further compounded by environmental and health-system stressors such as food insecurity, unsafe water, poor sanitation, and high burdens of communicable disease, such as HIV and tuberculosis (IHME, 2024; World Health Organization, 2024). Despite this evolving landscape, policy responses have not kept pace. Comprehensive controls on alcoholic beverage price, availability, and marketing remain weak or absent in many countries, and enforcement of existing measures is often limited (Ferreira-Borges et al., 2015,2017; World Health Organization, 2024, 2024).

To date, only a handful of studies have systematically assessed progress toward the WHO Global Action Plan targets. A global analysis concluded that the 10% reduction is unlikely to be achieved, particularly in low- and middle-income countries (LMICs) (Rehm et al., 2021). In the Americas, half of 35 countries showed APC declines, but overall regional progress was negligible (Monteiro et al., 2021). In contrast, the WHO European region had achieved the APC target by 2017, largely due to steep reductions in its eastern subregion, while little change occurred elsewhere (Probst et al., 2020). Although there is periodic reporting on SDG 3.5.2, which tracks national progress on alcohol per capita consumption, this reporting is not disaggregated or complemented with subregional or per-drinker analysis (World Health Organization, 2024). To our knowledge, no study has yet systematically assessed progress across sub-Saharan Africa in this way, leaving it unclear whether the region, its subregions, or individual countries have met this goal.

This paper addresses that gap. Using validated, country-reviewed data from the WHO Global Information System on Alcohol and Health (GISAH) (World Health Organization, 2024), we examine trends in APC and heavy episodic drinking (HED) across 45 sub-Saharan countries. Our objective is to assess whether the region, its subregions, and individual countries were progressing toward the Global Action Plan target of a 10% relative reduction in the harmful use of alcohol by 2025, using the most recent comparable pre-pandemic data available (2010 and 2019).

Method

Study design

This study is a secondary analysis of publicly available, country-validated data on alcohol use in sub-Saharan Africa from 2010 to 2019.

Setting

The analysis included 45 Member States of the African Union located in the sub-Saharan region, grouped into four non-overlapping subregions: Central, Eastern, Southern, and Western Africa, based on official African Union classifications (African Union, 2025) (Table 1). Although these groupings were not designed specifically for alcohol epidemiology, they are widely recognised in African policy and

Table 1

Country groupings.

Subregion	Country
Central (n = 9)	Burundi; Cameroon; Central African Republic; Chad; Congo; Democratic Republic of the Congo; Equatorial Guinea; Gabon; Sao Tome and Principe
East (n = 11)	Comoros; Djibouti; Eritrea; Ethiopia; Kenya; Madagascar; Mauritius; Rwanda; Seychelles; United Republic of Tanzania; Uganda
Southern (n = 10)	Angola; Botswana; Eswatini; Lesotho; Malawi; Mozambique; Namibia; South Africa; Zambia; Zimbabwe
West (n = 15)	Benin; Burkina Faso; Cabo Verde; Cote d'Ivoire; Gambia; Ghana; Guinea; Guinea-Bissau; Liberia; Mali; Niger; Nigeria; Senegal; Sierra Leone; Togo

Source: (African Union, 2025).

institutional contexts and offer a transparent framework for summarising patterns at a level between individual countries and the whole continent.

Somalia and Sudan report a total ban on alcohol so were excluded. South Sudan was excluded due to missing data.

Data source

Alcohol exposure estimates were obtained from the WHO's Global Information System on Alcohol and Health (GISAH) (World Health Organization, 2024). GISAH compiles national alcohol exposure indicators using multiple sources, including administrative data on alcohol taxation or production, imports, and exports, alongside survey data, expert data, and modelling adjustments. All data represent 3-year moving averages and incorporate recorded and unrecorded alcohol consumption, adjusted for tourist consumption, as per WHO methodology (World Health Organization, 2024).

Variables and measurement

We extracted four sex-stratified indicators:

- 1) APC: litres of pure alcohol consumed per person aged 15+ years.
- 2) APC per-drinker: litres of pure alcohol consumed among people who drink.
- 3) HED per capita: age-standardised prevalence of consuming ≥ 60 g of pure alcohol on one occasion in the past 30 days.
- 4) HED per-drinker: age-standardised HED prevalence among people who drink.

Although the Global Action Plan target focuses on a 10% reduction in population-level APC, this metric can be misleading in countries with high levels of abstention. In many sub-Saharan African countries, national APC appears low only because most adults do not drink (Burton et al., 2026; Probst et al., 2017; World Health Organization, 2024). Among those who do, consumption is often very high and concentrated in a numerically large minority. These drinkers are situated on the steep part of the alcohol dose-response curve and contribute disproportionately to alcohol-related harm (Shield et al., 2020). In these contexts, APC per-drinker offers a more meaningful indicator of harmful use than the population average. Our analysis therefore prioritises reporting APC among past-year drinkers, while also reporting population-wide APC in an appendix to align with global monitoring frameworks.

Statistical approach

For each indicator, we calculated the percentage change between 2010 and 2019 based on population-weighted means, so that countries contributed to regional estimates in proportion to their population size rather than each country contributing equally. Population weights were

applied separately for each year using country-level population aged 15–64 from the World Bank (World Bank, 2025), chosen as a proxy for the adult population likely to engage in alcohol consumption, balancing relevance and data availability.

To account for uncertainty at both time points and in the resulting change, as well as the skewed distribution of changes across countries, we applied a non-parametric bootstrap approach with 1000 replications. Countries were resampled with replacement (i.e. clustered by country), and percentile-based 95% confidence intervals (CIs) were derived directly from the empirical distribution of the bootstrap replications. This provides a robust, distribution-free method well-suited to the observed asymmetry in the data. To explore regional variation, we also conducted stratified bootstrap analyses for each subregion.

Absolute changes (in litres of pure alcohol) were also calculated to provide additional context, though our primary focus was on relative (percentage) change, in line with the Global Action Plan target (World Health Organization, 2013).

To provide context for the indicators, we also examined past 12-month drinking prevalence. Country estimates of past 12-month abstinence were converted to drinking prevalence (100 – abstinence). Regional and subregional estimates were calculated using population-weighted means, and uncertainty was estimated using the same bootstrap procedure described above.

Results

Alcohol consumption in sub-Saharan Africa remained highly gendered and varied by subregion. In every subregion, men drank more

than women, both in volume and in prevalence of HED per capita (Table 2). Southern Africa reported the highest APC per-drinker for both sexes in 2010, but by 2019, Eastern Africa had overtaken it: male drinkers consumed 24.0 litres in Eastern Africa compared to 23.2 litres in Southern Africa, and female drinkers 9.1 litres versus 8.8 litres. HED was most common in Central Africa across all groups and both years. Strikingly, women who drank in Central Africa had higher HED per capita than men in any other subregion.

For the region, APC per-drinker increased modestly between 2010 and 2019, with little change in HED per capita (Table 2). Trends were similar across sexes, and none of the changes were statistically significant. Central Africa was the only subregion to show significant declines. APC per-drinker fell by nearly 20% among both men and women, and HED per capita also dropped slightly. This reduction may be partly explained by declines observed in the prevalence of past-year drinking (Table 3). Despite this progress, Central Africa continued to report the highest levels of HED per capita in the region.

In contrast, Eastern Africa recorded the largest increases in APC per-drinker for both sexes, though these were not statistically significant (Table 2). Modest increases in HED per capita were also observed. Southern and Western Africa saw smaller changes overall. APC per-drinker rose slightly in the South and declined slightly in the West, with little movement in HED per capita. Past 12-month drinking prevalence remained broadly stable across these subregions (Table 3).

The regional trends mask wide variation at the country-level. As shown in Fig. 1, by 2019 one-third of countries (15/45) had met or exceeded the NCD Global Action Plan target of a 10% relative reduction in APC per-drinker between 2010 and 2025. Several countries, such as

Table 2
Alcohol per capita consumption (APC) and heavy episodic drinking (HED) per capita in 2010 and 2019, by sex and subregion.

Subregion	Sex	APC per-drinker 2010 (95% CI)	APC per-drinker 2019 (95% CI)	% change	HED per capita 2010 (95% CI)	HED per capita 2019 (95% CI)	% change
African Region	Female	7.66 (5.58, 9.76)	7.64 (5.71, 9.44)	4.61 (–8.23, 23.63)	9.21 (6.60, 13.73)	9.10 (6.61, 13.17)	3.47 (–2.95, 11.00)
	Male	20.04 (14.46, 25.83)	19.98 (14.81, 25.05)	4.66 (–8.28, 23.90)	23.19 (18.74, 30.43)	23.28 (19.10, 29.74)	3.35 (–2.21, 9.96)
	Total	15.52 (11.27, 19.85)	15.58 (11.57, 19.36)	4.87 (–7.85, 23.82)	15.80 (12.33, 21.63)	15.88 (12.57, 21.26)	3.95 (–1.85, 10.67)
Central African Region	Female	5.83 (3.87, 10.30)	4.81 (2.96, 8.88)	–19.81 (–25.71, –1.99)	20.38 (12.73, 23.70)	19.45 (11.29, 23.13)	–5.33 (–13.10, –2.08)
	Male	15.06 (9.81, 27.27)	12.39 (7.44, 23.32)	–20.24 (–26.26, –1.46)	41.87 (30.20, 46.50)	40.30 (27.73, 45.35)	–4.05 (–9.71, –1.68)
	Total	11.40 (7.44, 20.27)	9.45 (5.69, 17.61)	–19.70 (–25.66, –1.40)	30.70 (21.20, 34.68)	29.61 (19.25, 33.97)	–3.97 (–10.17, –1.36)
Eastern African Region	Female	8.10 (3.65, 14.48)	9.14 (4.00, 13.54)	27.51 (–6.64, 57.71)	6.33 (3.93, 10.07)	6.50 (4.58, 9.70)	10.41 (–5.69, 24.86)
	Male	21.44 (9.25, 38.95)	23.99 (10.21, 35.96)	27.49 (–7.22, 58.16)	18.49 (12.51, 27.16)	19.22 (14.75, 26.37)	9.41 (–4.69, 22.22)
	Total	16.57 (7.26, 29.76)	18.67 (8.00, 27.56)	27.27 (–7.01, 57.51)	12.05 (7.99, 17.97)	12.52 (9.43, 17.55)	9.75 (–5.03, 22.84)
Southern African Region	Female	9.24 (4.96, 12.32)	8.76 (5.47, 11.68)	3.48 (–10.46, 28.77)	11.35 (5.52, 24.69)	11.24 (5.91, 22.52)	1.65 (–5.75, 12.25)
	Male	24.28 (12.65, 32.69)	23.18 (14.00, 31.39)	4.03 (–10.60, 29.21)	26.17 (16.80, 43.97)	26.54 (18.06, 41.78)	1.96 (–3.43, 10.94)
	Total	18.55 (9.77, 24.99)	17.82 (10.77, 24.15)	4.34 (–10.15, 29.06)	18.09 (10.59, 33.81)	18.39 (11.49, 31.60)	3.00 (–3.61, 12.39)
Western African Region	Female	7.20 (3.80, 8.44)	6.97 (3.75, 8.66)	–3.93 (–8.71, 8.79)	6.16 (4.47, 8.77)	6.16 (4.45, 8.22)	2.13 (–4.71, 5.19)
	Male	18.69 (9.80, 22.08)	18.11 (9.79, 22.59)	–3.89 (–8.72, 9.26)	18.29 (13.68, 23.59)	18.41 (13.34, 22.67)	1.98 (–4.24, 4.63)
	Total	14.73 (7.70, 17.44)	14.35 (7.61, 17.91)	–3.50 (–8.31, 9.25)	11.93 (8.81, 15.79)	12.08 (8.69, 15.19)	2.79 (–3.51, 5.34)

The reported percentage change may not match a simple difference in point estimates, due to the combined influence of population weights and the bootstrap method. Data for total APC and HED per-drinker is shown in Appendix 1.

Table 3
Past 12-month drinking prevalence.

Subregion	Sex	Past 12-month drinking prevalence% 2010 (95% CI)	Past 12-month drinking prevalence% 2019 (95% CI)	% change
African Region	Female	21.8 (18.3, 27.1)	21.9 (18.7, 26.7)	2.8 (−1.5, 7.7)
	Male	38.7 (34.0, 45.1)	39.2 (35.1, 45.2)	2.7 (−0.6, 6.7)
	Total	30.1 (26.0, 35.8)	30.4 (26.8, 35.7)	2.8 (−0.9, 7.0)
Central African Region	Female	34.3 (26.3, 42.1)	33.1 (24.7, 39.5)	−3.3 (−9.3, −1.0)
	Male	53.6 (44.0, 61.4)	52.5 (44.6, 60.3)	−1.9 (−5.5, −0.6)
	Total	43.8 (35.1, 51.7)	42.7 (33.4, 49.4)	−2.4 (−6.9, −0.7)
Eastern African Region	Female	19.1 (13.2, 27.6)	19.7 (15.0, 27.1)	7.2 (−4.0, 17.2)
	Male	35.0 (26.8, 45.9)	36.3 (30.1, 45.3)	6.2 (−3.3, 14.3)
	Total	27.0 (20.0, 36.5)	27.8 (22.5, 36.0)	6.5 (−3.6, 15.3)
Southern African Region	Female	24.1 (16.6, 35.8)	24.4 (17.9, 34.0)	2.2 (−4.3, 8.2)
	Male	42.1 (32.7, 53.4)	43.4 (34.7, 52.6)	3.3 (−1.9, 6.9)
	Total	32.6 (24.2, 44.1)	33.5 (25.9, 42.9)	3.1 (−2.8, 7.5)
Western African Region	Female	18.0 (13.7, 24.3)	18.1 (13.8, 23.9)	1.8 (−2.3, 4.3)
	Male	34.3 (27.0, 42.0)	34.5 (27.2, 41.6)	1.4 (−1.1, 3.2)
	Total	26.1 (20.3, 33.1)	26.3 (20.5, 32.7)	1.6 (−1.5, 3.6)

The reported percentage change may not match a simple difference in point estimates, due to the combined influence of population weights and the bootstrap method.

the Gambia, Djibouti, Burundi, Angola, and the Democratic Republic of the Congo reduced APC per-drinker by over 25%, with all but the Democratic Republic of the Congo seeing absolute declines of more than three litres per-drinker.

In contrast, 20 countries (44.4%) recorded increases in APC per-drinker. Ethiopia saw the largest rise both in relative (+73.1%) and absolute (+7.3 litres) terms, followed by Seychelles and Comoros. The remaining 10 countries reported decreases in APC per-drinker under 10%, not yet reaching the NCD Global Action Plan target.

While the NCD Global Action Plan does not set a specific target for HED, tracking it remains essential given its strong link to harm (Shield et al., 2020; World Health Organization, 2024). Fig. 2 shows changes in HED per capita by country. Only four (8.9%) countries, Angola, Burundi, Djibouti and the Gambia, achieved reductions of 10% or more. Meanwhile, over one-half (23/45) saw increases, including countries where baseline HED per capita was already high.

Discussion

This is the first study to systematically assess progress toward the NCD Global Action Plan target for reducing harmful alcohol use across sub-Saharan Africa. Using validated, country-reviewed WHO data, we analysed trends in APC among drinkers and HED per capita in 45 countries between 2010 and 2019. At the regional level, both APC per-drinker and HED per capita remained broadly stable, with no statistically significant changes. Central Africa was the only subregion to record statistically significant declines. APC per-drinker fell by nearly 20%, and HED per capita by almost 4%. This reduction may be partly explained by a reduction in the prevalence of past-year drinking. Still, heavy drinking remains widespread, and Central Africa reported the highest HED prevalence per capita in 2019 at around 40% of men and 19% of women. High levels were also seen in Southern Africa (27% of men, 11% of women), with similar levels in Eastern and Western Africa (between 7–19%). Taken together, these figures point to a concerning pattern. Sub-Saharan Africa reports among the highest prevalence of HED globally (World Health Organization, 2024). This raises serious public health concerns given the strong links between HED and injury,

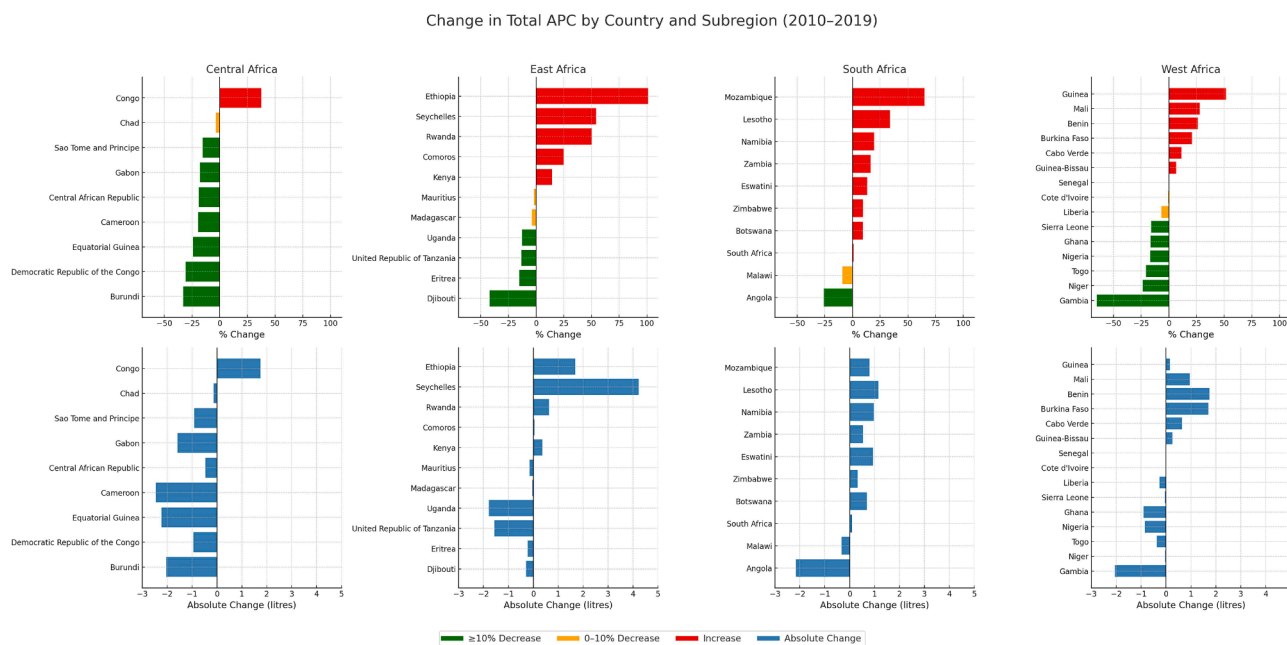


Fig. 1. Country-level changes in APC per-drinker by subregion, 2010–2019: relative (%) and absolute (litres) change. Bars are colour-coded to reflect progress towards the Global Action Plan target of a $\geq 10\%$ relative reduction. Green ($\geq 10\%$ decrease); orange (0–10% decrease); red (increase). Data represent litres of pure alcohol consumed per-drinker (aged 15+ years) per year. See Appendix 2 for the equivalent figure based on total population APC. (For interpretation of the references to colour in this figure legend, the reader is referred to the web version of this article.)

Change in HED per Drinker by Country and Subregion (2010–2019)

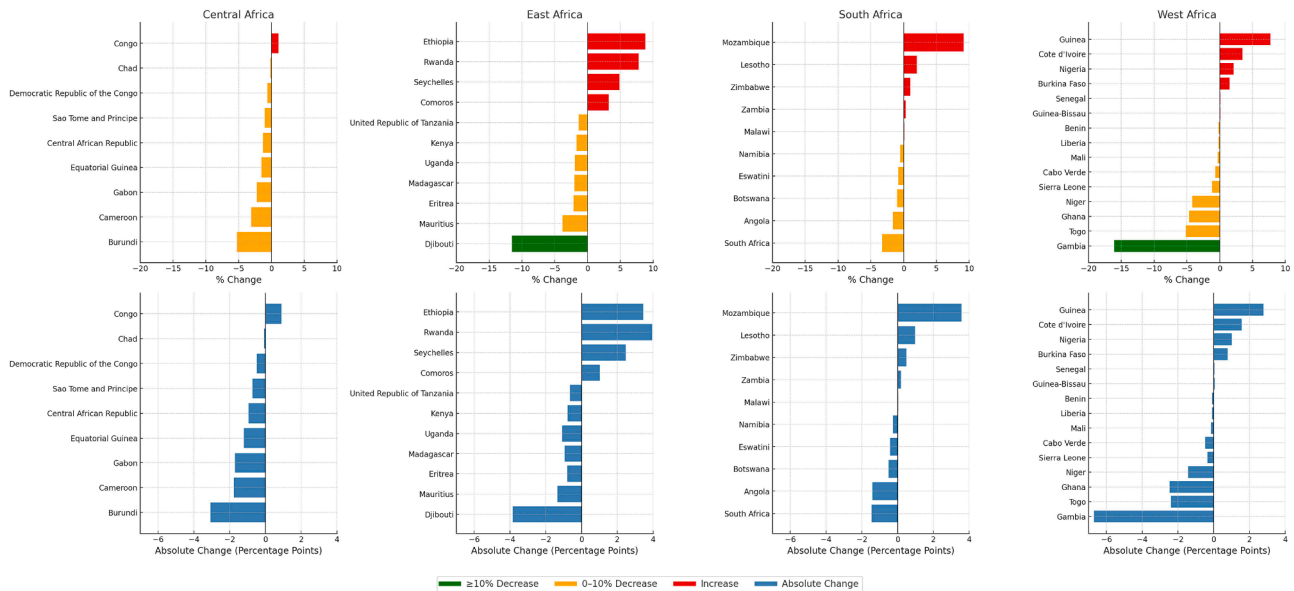


Fig. 2. Country-level changes in HED per-capita by subregion, 2010–2019: relative (%) and absolute (litres) change. Bars are colour-coded to reflect progress. Green ($\geq 10\%$ relative reduction); orange (0–10% decrease); red (increase). Data represent litres of pure alcohol consumed per-capita (aged 15+ years) per year. See Appendix 3 for the equivalent figure based on HED per-drinker. (For interpretation of the references to colour in this figure legend, the reader is referred to the web version of this article.).

violence, and chronic disease (Shield et al., 2020), and underscores the need to prioritise effective policies and interventions (Harker et al., 2020; Morojele et al., 2021).

Central Africa has the highest proportion of countries reporting a national alcohol control regulatory framework (four out of nine countries, 44.4%), although the majority still lack a formal policy (Turyasiima et al., 2025). Notably, it was also the only subregion in which we observed a decline in both APC per-drinker and HED per capita. In comparison, fewer countries in the other subregions reported having such a framework in place: four out of 10 in Eastern Africa (36.4%) five out of 15 in Western Africa (33.3%), and three out of 10 in Southern Africa (30.0%) (Turyasiima et al., 2025).

At the country level, progress was mixed. One-third of countries (15/45) met or exceeded the Global Action Plan target of a 10% relative reduction in APC per-drinker, with several achieving reductions over 25%. In contrast, nearly half (20/45) saw increases. Ethiopia, Seychelles, and Comoros reported the largest relative and absolute rises. Of these three countries, Seychelles has an alcohol regulatory framework, although it lacks a central coordinating entity to oversee its policy implementation (Turyasiima et al., 2025). Ethiopia and Comoros do not have a national policy on drug and alcohol control. Only four countries, Angola, Burundi, Djibouti and the Gambia, reduced HED per capita by 10% or more, while over one-half (23/45) saw increases, including some with already high baseline prevalence. These findings highlight the uneven nature of progress and the importance of disaggregating regional trends to identify countries where urgent action is needed.

This analysis aimed to document, not explain, trends in alcohol consumption across sub-Saharan Africa to understand whether countries are on track to meet the alcohol reduction target. We do not directly examine the effects of policy. However, several policy and market dynamics may help explain country-level differences (Harker et al., 2020; Morojele et al., 2021; Turyasiima et al., 2025). The alcohol industry has identified Africa as a priority market for growth, investing heavily in marketing, retail expansion, and corporate social responsibility initiatives (Dumbili, 2024; Jernigan & Babor, 2015; Mialon & McCambridge, 2018; Purves et al., 2025). At the same time, alcohol policy development has been uneven, and few countries have implemented fully resourced,

multi-sectoral national strategies or the full WHO SAFER package (Ferreira-Borges et al., 2015; Morojele et al., 2021; World Health Organization, 2024). Most African countries lack legally binding regulations on alcohol marketing, for example (Ferreira-Borges et al., 2015; Peer, 2017), and even where policies exist, enforcement is often weak due to limited resources and strong alcohol industry interference (Morojele et al., 2021; Odeigah et al., 2021). In South Africa, for example, industry lobbying has delayed or blocked key policy measures, including proposed marketing restrictions (Bertscher et al., 2018; Mitchell et al., 2025). Similar dynamics have been reported in Nigeria, where industry actors have stalled national policy efforts or taken part in policy development processes themselves (Dumbili, 2014; Leung et al., 2024).

Beyond policy, broader structural, geopolitical, and economic factors likely shaped alcohol trends across the region. In some settings, conflict, poverty, or currency depreciation may have suppressed alcohol use by reducing affordability and disrupting supply chains. In others, rising incomes, urbanisation, and a young population may have expanded commercial markets and driven increases in alcohol consumption. Exploring how these broader forces interact with health-system investment and industry-activity could help clarify what drives change. Mapping trends in health budgets, governance, and alcohol market share may offer a useful next step.

This study has several strengths. It is the first to systematically assess progress towards the WHO Global Action Plan alcohol reduction target across all sub-Saharan African countries using a consistent and transparent approach. The analysis draws on validated, country-reviewed WHO data from the GISAH, ensuring a high degree of comparability across settings. By disaggregating trends by subregion, country, and sex, we captured heterogeneity often masked in regional averages. Methodologically, we applied population weighting and non-parametric bootstrapping to estimate percentage change and its associated uncertainty, an approach well suited to skewed data and regional variability.

However, the study also has limitations. The APC and HED estimates are derived from the WHO GISAH, which compiles country estimates from multiple sources including national administrative statistics, population surveys, and modelling procedures. The availability, frequency,

and quality of these underlying data sources vary across countries, and survey instruments may differ in how drinking behaviours are measured (Probst et al., 2017; World Health Organization, 2024,2024). Although WHO applies standardised methods and consistency checks to harmonise these inputs, some residual differences in data quality and comparability between countries are unavoidable. We were not able to examine the detailed methodologies underlying each country estimate, which may vary in robustness. Sources of APC data for each country can be found in WHO's report (World Health Organization, 2024).

In some cases, calculated CIs were wide, particularly at the subregional level, reflecting underlying heterogeneity in population size and country trends. As with any bootstrap approach, resampling can over- or under-represent countries with large populations or outlying values. In addition, percentage change can appear exaggerated when baseline values are low. We also applied population weights separately for 2010 and 2019 to reflect demographic shifts. While this enhances realism, it introduced some instability into the bootstrapping process, as each resampling iteration re-weighted both years independently.

The subregional groupings used here were based on African Union classifications rather than alcohol-specific typologies. This provided a consistent and policy-relevant framework for continental comparison, but it also has limitations. Countries within the same subregion can differ regarding drinking patterns, religion, income, urbanisation, alcohol policy development, and industry penetration. The country-level heterogeneity observed in this study suggests that these subregions should be interpreted as pragmatic analytical groupings rather than homogenous alcohol policy regions.

Despite these limitations, this study provides a regionally grounded, methodologically rigorous assessment of progress using the best available data. By focusing on per-drinker metrics, applying subregional disaggregation, and using a non-parametric approach, we offer a more nuanced and policy-relevant understanding of alcohol use and harmful drinking trends in sub-Saharan Africa.

In conclusion, our findings suggest that sub-Saharan Africa is not on track to meet the Global Action Plan target, and that high-risk drinking remains widespread, even where average consumption has declined. These findings highlight the urgent need for renewed attention to alcohol policy across the region. Countries that have achieved declines in APC and HED among drinkers offer important lessons on the potential impact of strong public health leadership, targeted interventions, effective regulation, and efforts to safeguard policy from industry interference. Conversely, countries experiencing increases may represent early warning signs of a shifting alcohol landscape. With the 2025 Global Action Plan deadline fast approaching, and the Global Action Plan now formally extended to 2030 to align with the Sustainable Development Goals (World Health Organization, 2024), these data provide a timely and robust evidence base to support more effective and equitable alcohol control strategies.

Data availability

Data can be downloaded from the WHO GISAH online (World Health Organization, 2024).

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None.

CRedit authorship contribution statement

Robyn Burton: Writing – original draft, Methodology, Formal analysis, Data curation, Conceptualization. **Nadine Harker:** Writing – review & editing. **Benjamin Kaneka:** Writing – review & editing. **Frank Kyei-Arthur:** Writing – review & editing. **Gemma Mitchell:** Writing – review & editing. **Ogochukwu W. Odeigah:** Writing – review & editing. **Charles Parry:** Writing – review & editing. **Marieke Theron:** Writing –

review & editing. **Nazarius M. Tumwesigye:** Writing – review & editing.

Declaration of competing interest

The authors declare the following financial interests/personal relationships which may be considered as potential competing interests:

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Supplementary materials

Supplementary material associated with this article can be found, in the online version, at doi:10.1016/j.drugpo.2026.105257.

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