

**Proposed Abstract Submissions to the 3rd AfroSAFE conference, 8–12 June 2026,
Lusaka, Zambia**

Theme: Building sustainable road safety systems for Africa: from data to
implementation and ownership

***Title: Tracking Zambia's Progress Towards Road Safety Targets: Trends in Road
Traffic Fatalities and Injuries***

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Background

The Second United Nations Decade of Action for Road Safety (2021–2030) and Sustainable Development Goal (SDG) 3.6 aim to halve global road traffic deaths and injuries by 2030. In many low- and middle-income countries (LMICs), however, progress monitoring is constrained by fragmented crash data systems. Zambia, characterised by rapid motorisation and limited traffic surveillance, exemplifies these challenges.

This study provides a national assessment of Zambia's road safety trends from 2017 to 2024, evaluating progress towards global targets and changes in fatalities, serious injuries, and crash rates per population and per registered vehicle. The findings inform assessment of Zambia's National Road Safety Strategy and its alignment with SDG 3.6.

Aim

To determine Zambia's progress towards achieving the SDG 3.6 target of halving road traffic deaths and injuries by 2030, using national crash data to estimate annual trends, identify structural changes, and project likely outcomes under current conditions.

Method

We analysed national police-reported crash data (2016–2024), harmonised with vehicle registration and mid-year population estimates from the Road Transport and Safety Agency and the Zambia Statistics Agency. Annual fatalities, serious injuries, and total crashes were expressed per 100,000 population and per 10,000 registered vehicles.

Trends were examined using joinpoint regression to estimate Annual and Average Annual Percentage Change, and 2030 projections were generated under a business-as-

usual scenario using log-linear models. Analyses were conducted in R (v4.3.1), with statistical significance set at $p < 0.05$.

Results

Zambia recorded an average of 1,633 fatalities per year, equivalent to 8.43 deaths per 100,000 population, and 5,396 serious injuries annually during 2016–2024. Joinpoint regression identified an inflection in 2020, coinciding with the COVID-19 period.

- Pre-2020 period (2016–2019): Fatality rates declined non-significantly by -2.1% per year (95% CI: -19.4 to 19.0%).
- Post-2020 period (2020–2024): Fatality rates increased by $+1.8\%$ per year (95% CI: -6.7 to 11.1%).

Crash rates showed a similar reversal: a -3.6% annual decline before 2020 followed by a $+2.8\%$ increase thereafter.

When adjusted for vehicle growth, fatalities per 10,000 registered vehicles declined by 2.6% per year ($p = 0.104$), suggesting improved safety per vehicle but stagnant outcomes per population.

Projections indicate that if current trends persist, Zambia will achieve only a 37.7% reduction in population-based fatality rates by 2030, falling short of the 50% target. To meet the UN Decade of Action for Road Safety and SDG 3.6, the national fatality decline would need to accelerate by approximately 20 percentage points.

Further disaggregation showed that pedestrians and motorcyclists remain over-represented in fatalities, together accounting for more than 60% of deaths. Urban areas, especially Lusaka and Copperbelt, contributed nearly half of all recorded crashes, though rural provinces exhibited higher fatality rates relative to population.

Conclusions

- Limited overall progress: Zambia's road safety outcomes have plateaued, with population-adjusted indicators showing stagnation since 2020.
- Positive but insufficient gains: Modest improvements in vehicle-adjusted fatality rates reflect safer motorisation but insufficient to offset rapid traffic growth.
- Impact of COVID-19: The 2020 inflection suggests pandemic-related service disruptions and enforcement slowdowns reversed earlier progress.

Policy implications

- Strengthen enforcement and data quality within RTSA and police systems.
- Prioritise vulnerable road user protection through infrastructure and behavioural interventions.
- Integrate multisectoral collaboration under Zambia's National Road Safety Strategy to realign progress with SDG 3.6.

- Expand national analytical capacity to institutionalise trend monitoring and joinpoint analysis as part of annual safety reviews.

In conclusion, while Zambia has achieved modest gains relative to motorisation, it remains off track to halve road traffic deaths and injuries by 2030. Sustained political commitment, improved surveillance, and targeted interventions are essential to reverse the post-2020 stagnation and accelerate progress toward global and national road safety goals.

Keywords: road safety, Sustainable Development Goals, joinpoint regression, trend analysis, fatalities, Zambia

