

Road Traffic Accident Mortality in Nepal

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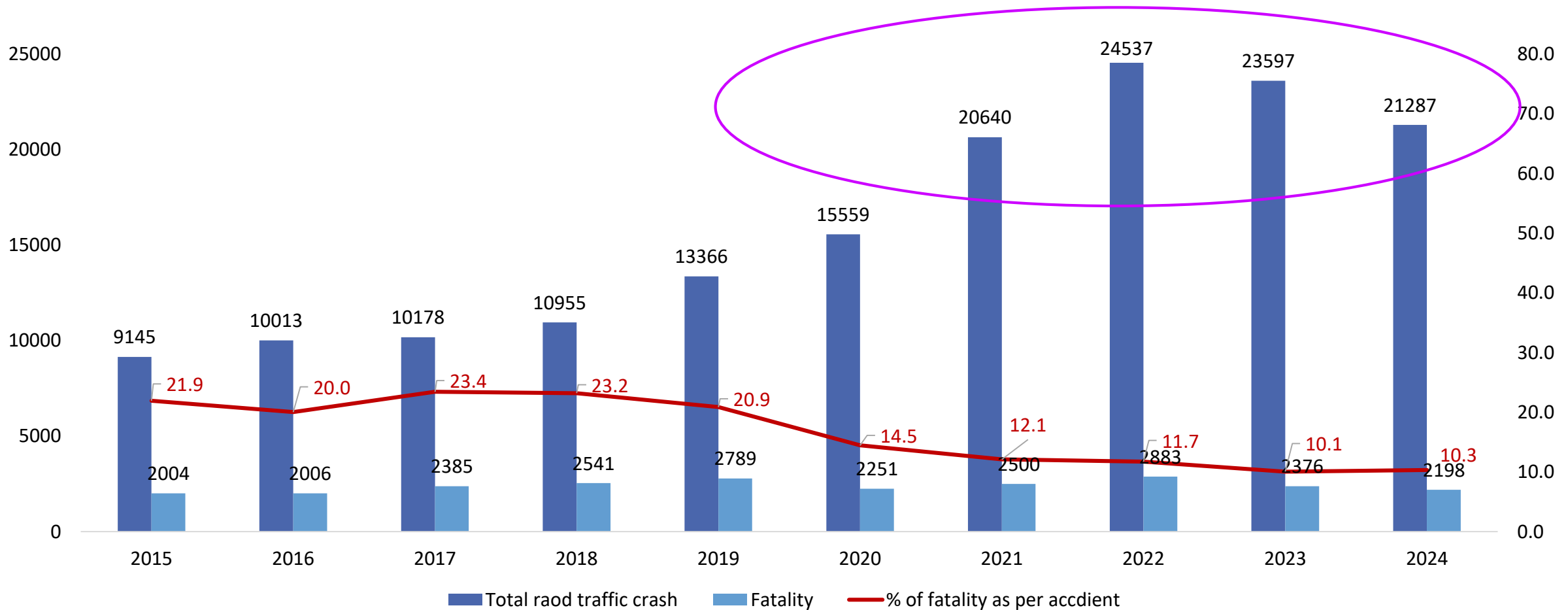
Outline

- Context
- Trend of road traffic fatality
- Objectives
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- Conclusion

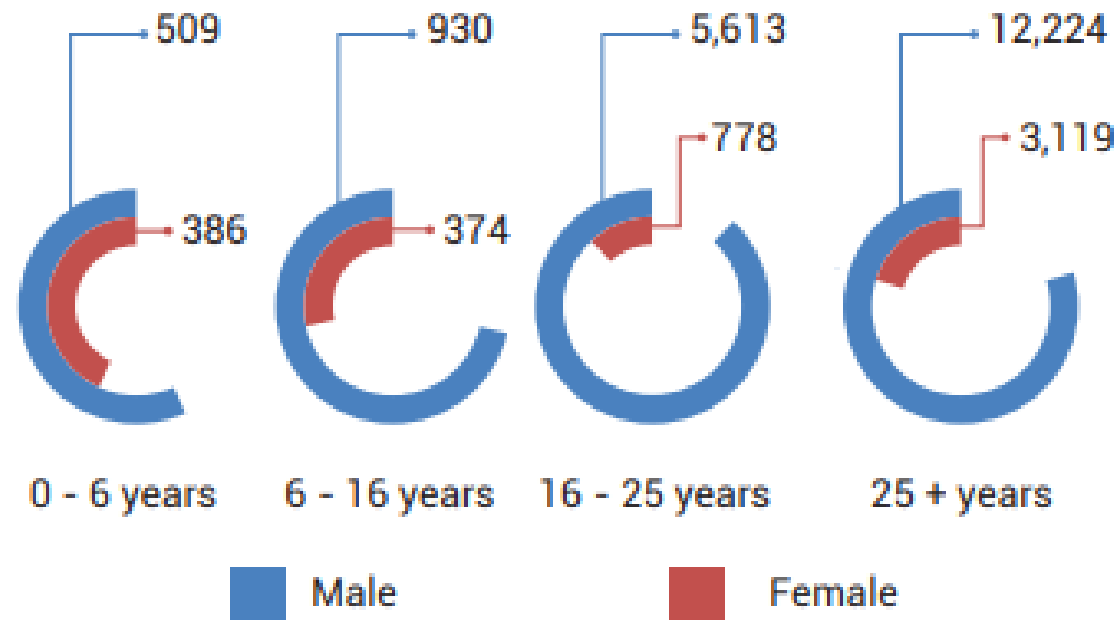
Context

- Road traffic accidents are one of the leading causes of mortality and a major public health crisis
- Every year, 1.19 million people die in road accidents
- Low- and middle-income countries, which have about 60% of the world's vehicles, account for 92% of global road fatalities
- However, many of these deaths are preventable by reducing accidents and injuries.
- Nepal's accidents arise from substandard roads, vehicle safety, and reckless driving

Road Traffic Accidents and Fatality in Nepal



Road Traffic Fatalities in the Past Decade in Nepal



Age wise fatalities over the past decade in Nepal.



Objectives

The General Objective of the study is to analyze road traffic accident (RTA) fatalities and their distribution across administrative levels, providing insights for targeted interventions to reduce risks.

Specifically:

- To assess the overall burden of road traffic accident deaths.
- To examine variations in RTA fatalities across different administrative levels.
- To identify high-risk areas requiring priority intervention.

Method

Data Source – Nepal's 2021 Population and Housing Census analyzed.

RTA Mortality Rate Calculation – Computed RTA deaths per 100,000 population, stratified by ecological belt, province, district, and local levels.

Statistical Analysis – Used the Poisson regression model to assess associations with province, local level, ecological zone, and poverty.

Literature Review – Examined publicly available documents for contextual insights.

Findings



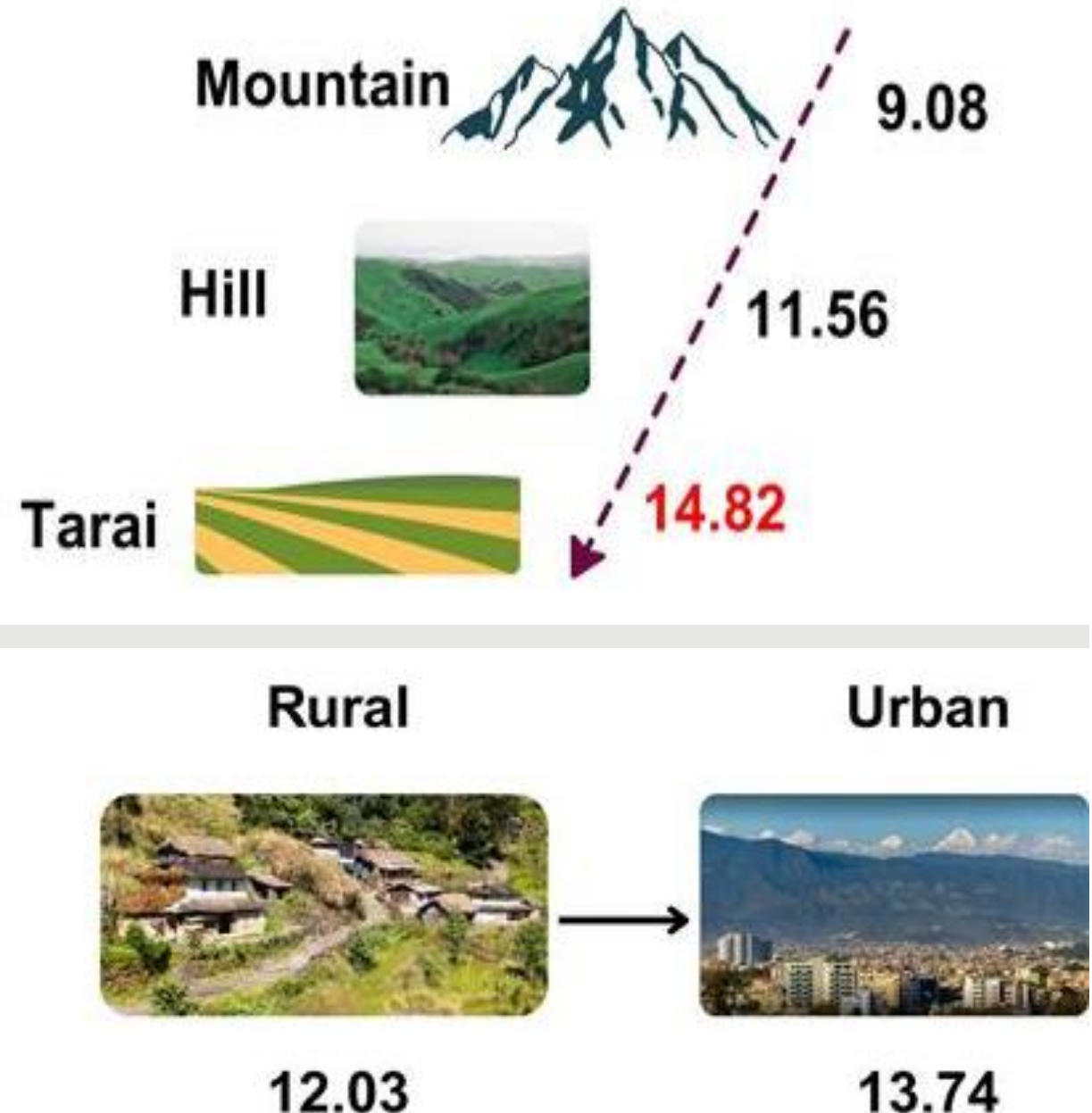
Findings

- More than ten people die in road traffic accidents daily in Nepal
- About 2 people die within five hours every day due to road traffic accident
- RTA mortality rate is 13.1 per 100,000 population



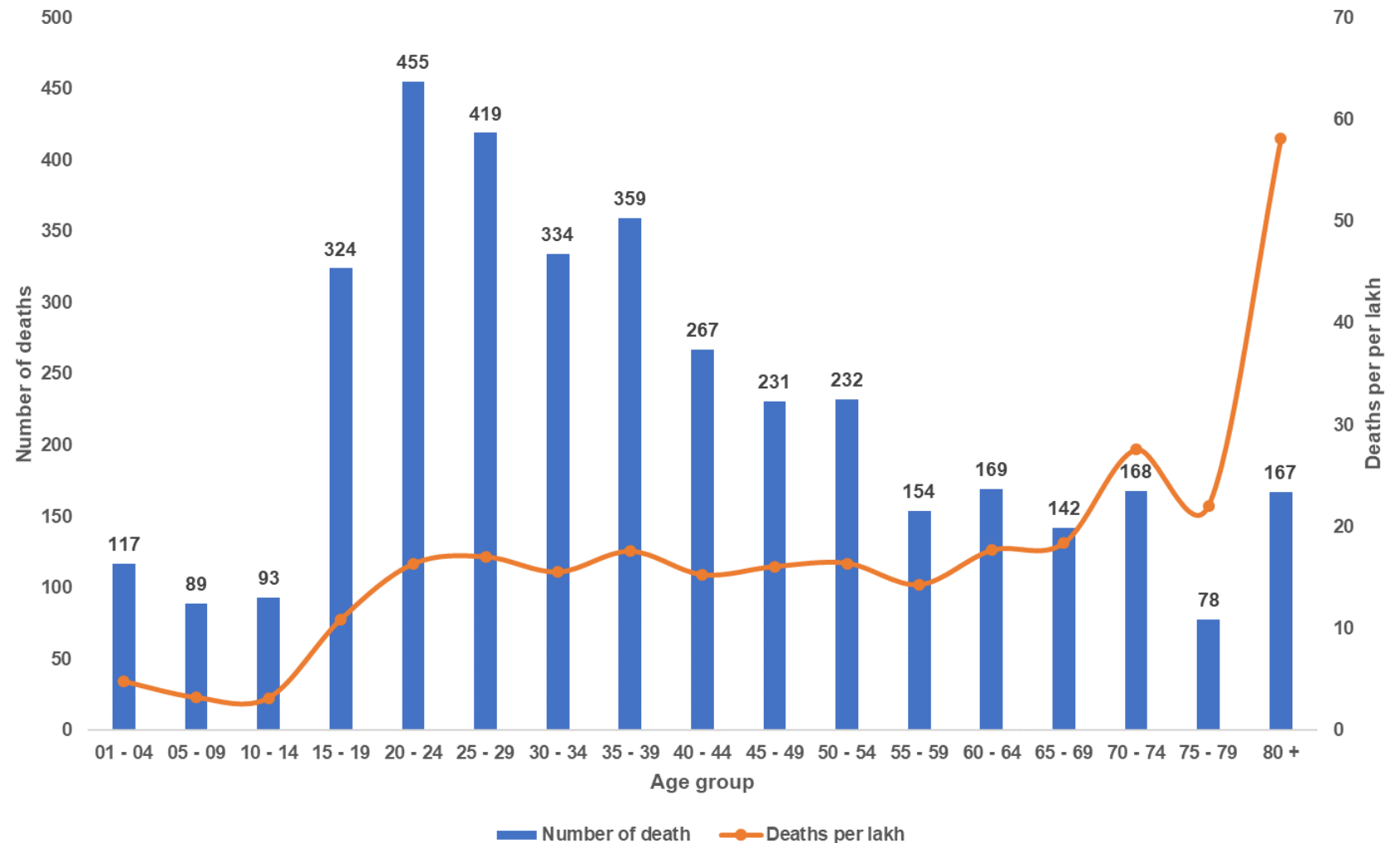
Variations in RTA Mortality Rates

- About 15 deaths per 100000 population due to RTA in a year in Tarai Nepal
- RTA death rate is slightly higher in urban areas

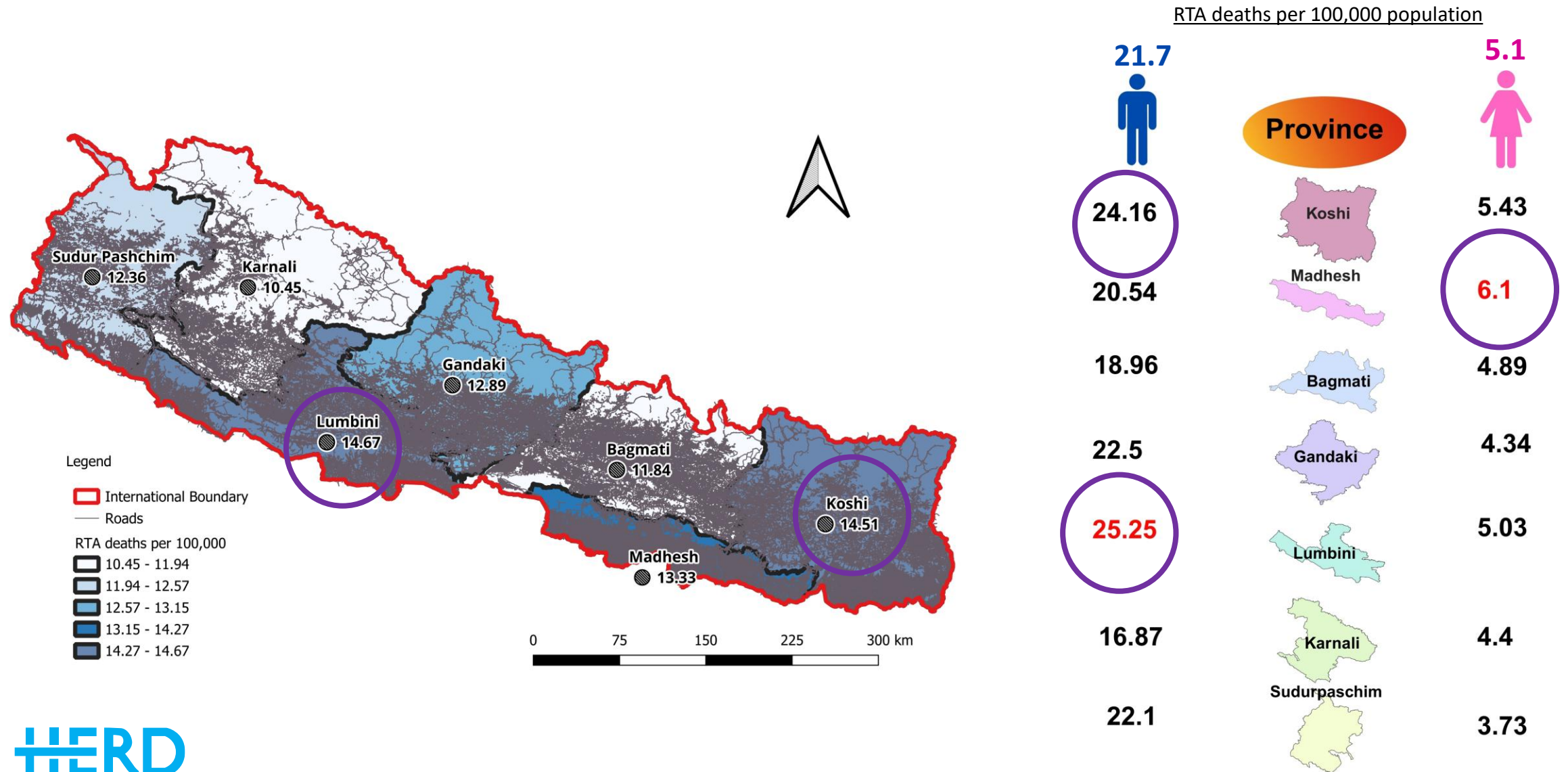


Age wise Variations in RTA and Deaths

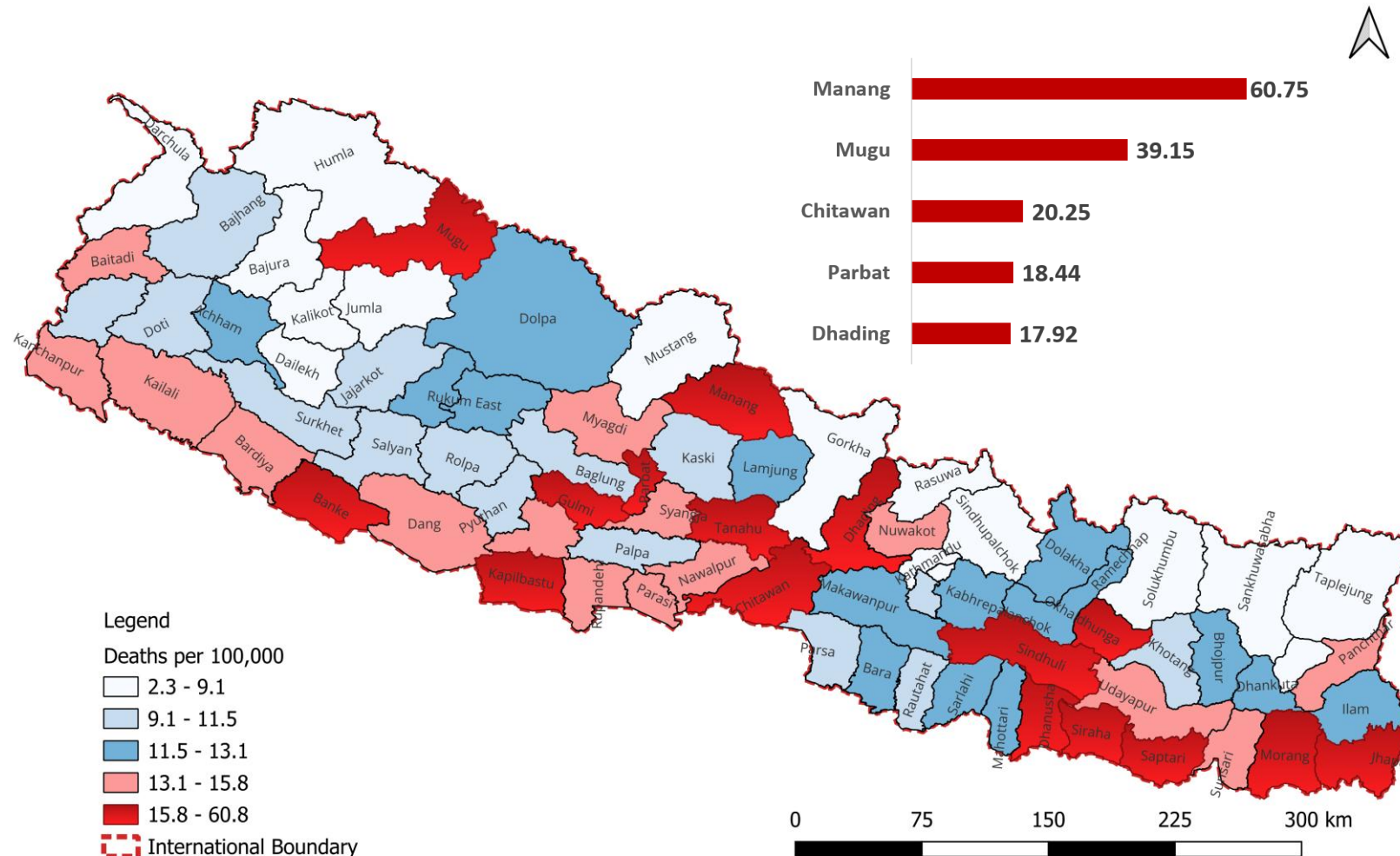
- The number of RTA deaths is relatively high among late adolescents and the adult population.
- The RTA mortality rate is higher among senior citizens.



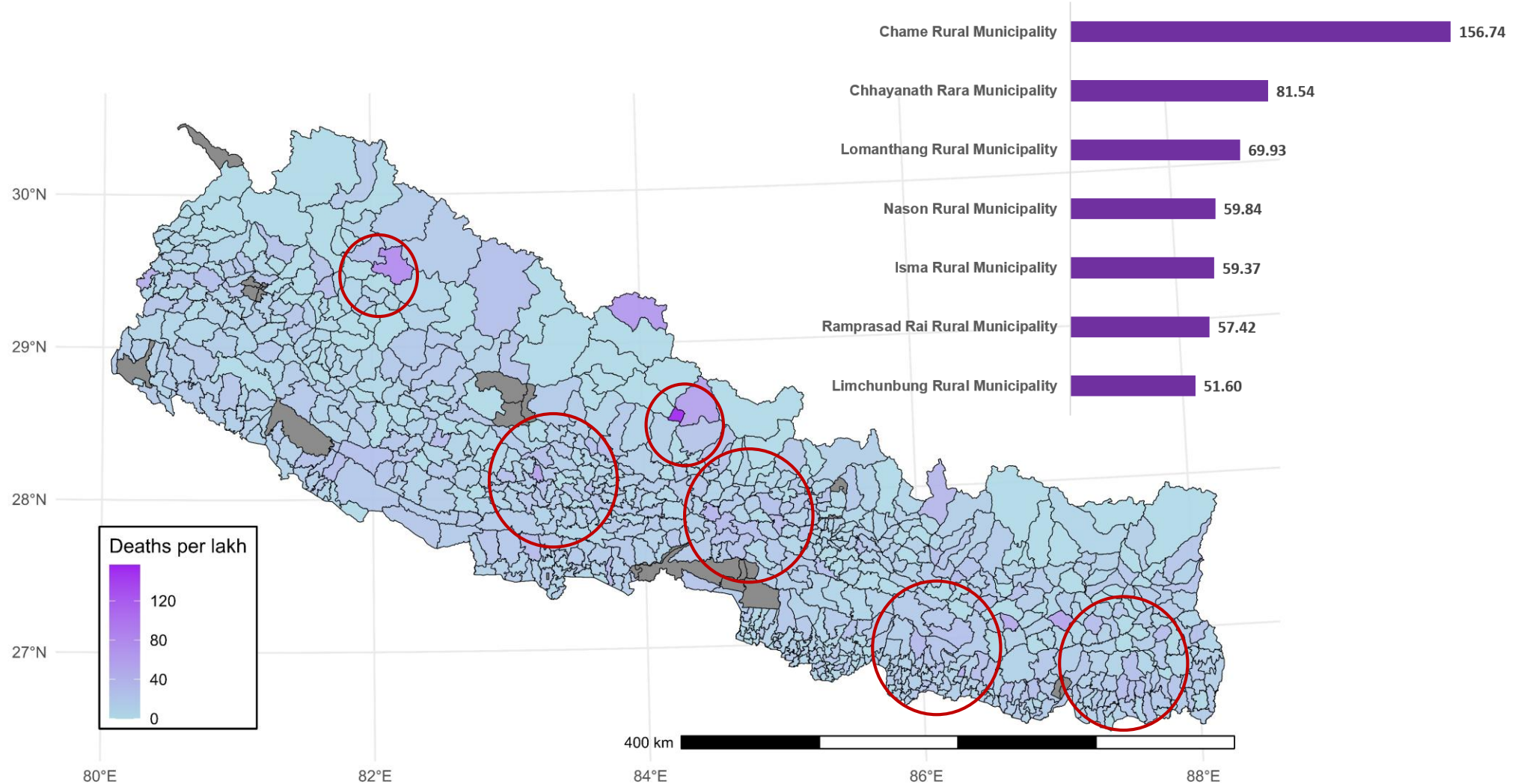
Province wise Variations in RTA Mortality



RTA Mortality Rate by Districts



RTA Mortality by local level



Findings from Regression Analysis

Poisson Regression Results

	<u>β</u>	<u>95% C.I</u>
Proportion of disabled population in the local level	<u>6.179**</u>	(0.601 - 11.757)
Proportion of literate population in the local level	0.649	(-0.156 - 1.454)
Disaster severity in local level	<u>0.007***</u>	(0.004 - 0.009)
Public facility access within 30 minutes	<u>-0.006***</u>	(-0.008 - -0.004)
Proportion of poorest population	<u>-0.005**</u>	(-0.009 - -0.001)
Koshi Province	0.113	(-0.034 - 0.260)
Madhesh Province	<u>0.195**</u>	(0.011 - 0.380)
Bagmati Province	0.009	(-0.157 - 0.175)
Gandaki Province	-0.090	(-0.263 - 0.082)
Lumbini Province	0.117	(-0.038 - 0.273)
Karnali province	-0.148	(-0.420 - 0.125)
Sudurpaschimprovince (omitted)	-	
Place of residence : Rural	-0.075	(-0.194 - 0.044)
Place of residence : Urban (omitted)	-	
Constant	-9.662***	(-10.338 - -8.987)
Observations	753	

*** p<0.01, ** p<0.05, * p<0.1

Conclusion

The study highlights significant disparities in RTA mortality across Nepal, with higher risks among the Terai region, adolescents, adults, and males.

Addressing these disparities through policy-driven, region-specific strategies can help reduce preventable deaths and improve road safety nationwide.

A concrete roadmap addressing multi-sectoral components can help reduce accidental deaths during road travel.

A collaborative plan among different levels of government is urgently needed to prevent early-life deaths due to road traffic accidents and to reduce RTA-related mortality among the aging population.

THANK YOU!

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Photo and bio



Mr. Bishnu Prasad Dulal works at HERD International as the "Lead - Information System and Population Services." He holds a master's degree in Population Studies from Tribhuvan University. Since 2003, he has been actively engaged in research and development, with a focus on public health, population, and health systems.