

Road Traffic Accident (RTA)



What is Road Traffic Accident?

- The **definition** of a road traffic accident occurs when a vehicle that is moving along a roadway collides partially or fully with another vehicle or object on a public road.
- WHO has projected that road traffic injuries will move up to the **third position** by the year 2020 among leading causes of the global disease burden.

Road Accident may happen due to...

- 1 Over Speed
- 2 Without wearing helmet and seatbelt
- 3 Driving under the influence of alcohol
- 4 While speaking in phone
- 5 Not following traffic rules



Road Accident



What will happen after Road Accident?

1

- Fatality (Death)

2

- Injury

3

- Property Damage

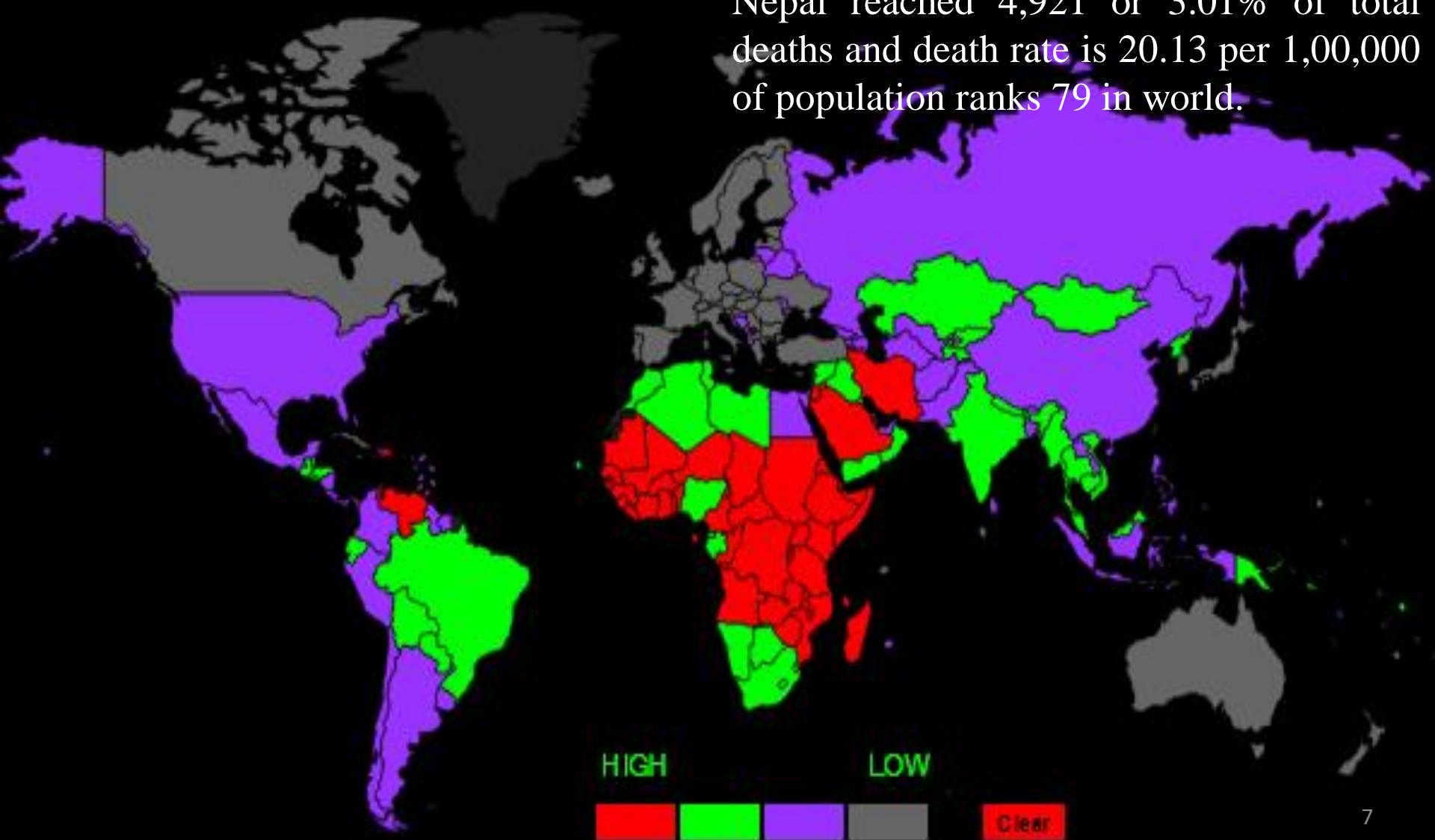
Global Status on Road Traffic Accident

- About 1.35 million people die on the world and 20 - 50 million peoples are injured every year.
- Road traffic injuries are the leading cause of death for children and young adults aged 5-29 years.
- Road traffic accident cost most countries 3% of their gross domestic product.
- More than half of all road traffic deaths are among vulnerable road users: pedestrians, cyclists, and motorcyclists.
- 93% of the world's death on the roads occur in low- and middle-income countries, even though these countries have approximately 60% of the world's vehicles.

Road Traffic Accidents

Age adjusted death rate

Nepal reached 4,921 or 3.01% of total deaths and death rate is 20.13 per 1,00,000 of population ranks 79 in world.



Rank	Country	Rate	Rank	Country	Rate	Rank	Country	Rate
1	ZIMBABWE	75.02	62	VIET NAM	23.60	123	GEORGIA	10.68
2	SAO TOME	47.90	63	KAZAKHSTAN	23.26	124	UZBEKISTAN	10.54
3	RWANDA	46.59	64	GUATEMALA	22.55	125	BAHAMAS	10.42
4	LIBERIA	46.20	65	HONDURAS	22.52	126	ARAB EMIRATES	10.39
5	BURUNDI	45.95	66	TUNISIA	22.51	127	UNITED STATES	10.04
6	UGANDA	45.69	67	INDIA	22.51	128	MOLDOVA	9.90
7	MOZAMBIQUE	44.52	68	SOUTH AFRICA	22.46	129	AZERBAIJAN	9.78
8	GAMBIA	43.85	69	IRAQ	22.34	130	JAMAICA	9.75
9	TANZANIA	43.56	70	KYRGYZSTAN	22.28	131	UKRAINE	9.11
10	MALAWI	43.10	71	BOTSWANA	22.23	132	SOUTH KOREA	9.05
11	VENEZUELA	42.18	72	BRAZIL	21.96	133	MONTENEGRO	9.01
12	COMOROS	41.83	73	KUWAIT	21.27	134	LATVIA	8.85
13	MADAGASCAR	40.55	74	ECUADOR	21.22	135	TURKEY	8.85
14	BURKINA FASO	39.57	75	MONGOLIA	20.89	136	CROATIA	8.22
15	TOGO	39.30	76	NEW GUINEA	20.89	137	BRUNEI	8.05
16	KENYA	39.22	77	TAJIKISTAN	20.68	138	BAHRAIN	8.04
17	SENEGAL	38.40	78	CAMBODIA	20.50	139	POLAND	7.93
18	SOUTH SUDAN	37.80	79	NEPAL	20.13	140	ROMANIA	7.89

ROAD TRAFFIC ACCIDENTS

ASIA



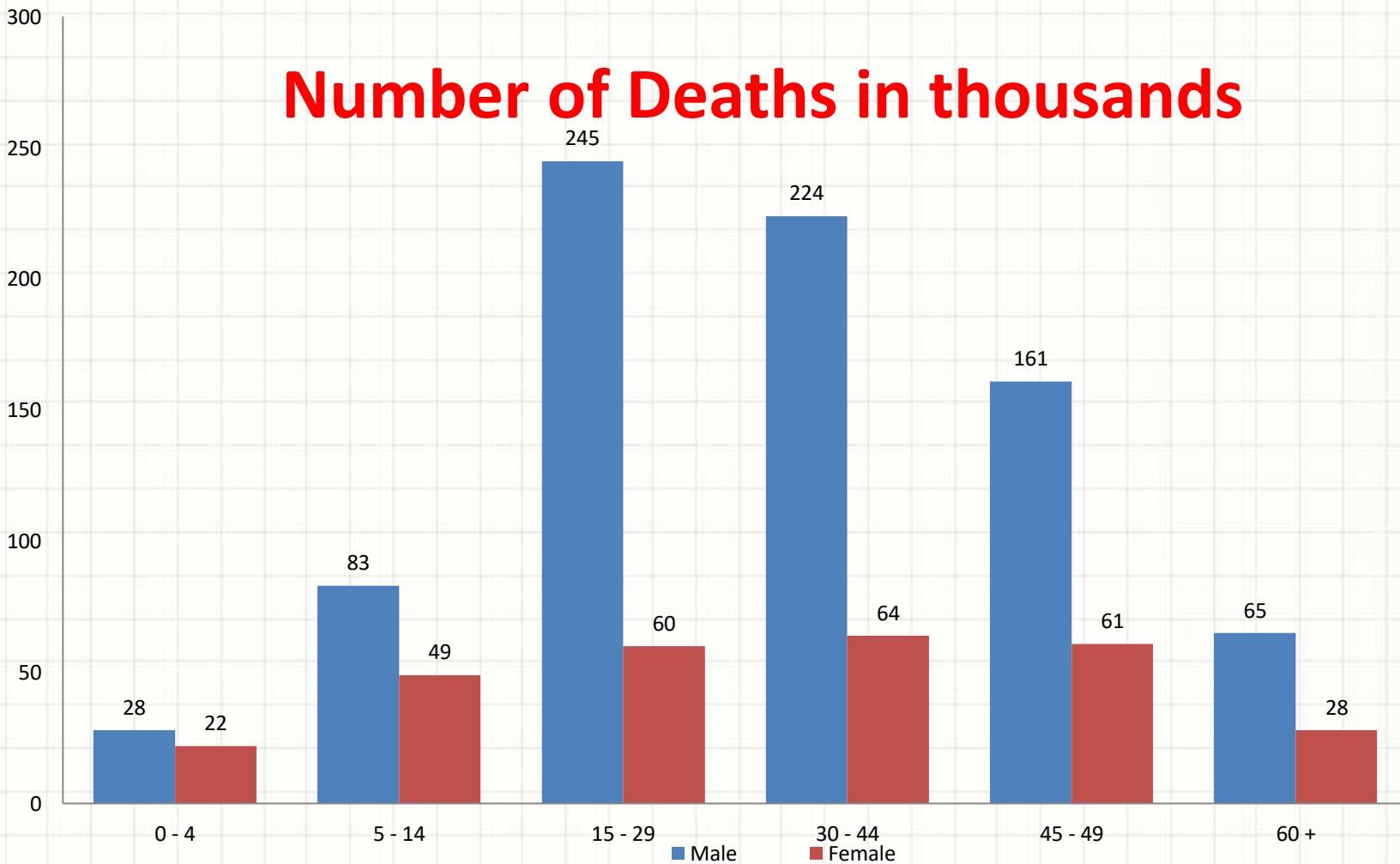
Death Rate per 100,000

GOOD POOR

Region Rank	Rate	World Rank	Region Rank	Rate	World Rank
1. Thailand	28.28	44	18. Sri Lanka	16.33	98
2. Malaysia	24.51	59	19. Laos	16.13	99
3. Viet Nam	23.60	62	20. Bhutan	15.91	100
4. Kazakhstan	23.26	63	21. Russia	15.85	102
5. India	22.51	67	22. Bangladesh	15.56	103
6. Kyrgyzstan	22.28	70	23. Pakistan	15.42	104
7. Mongolia	20.89	75	24. Armenia	14.52	107
8. Tajikistan	20.68	77	25. Philippines	11.82	116
9. Cambodia	20.50	78	26. Georgia	10.68	123
10. Nepal	20.13	79	27. Uzbekistan	10.54	124
11. Myanmar	20.10	80	28. Azerbaijan	9.78	129
12. North Korea	19.67	82	29. South Korea	9.05	132
13. Timor-Leste	19.34	84	30. Brunei	8.05	137
14. Afghanistan	18.73	90	31. Maldives	4.03	167
15. Turkmenistan	17.64	93	32. Singapore	3.24	173
16. China	17.59	94	33. Japan	3.04	174

Road Traffic Deaths Worldwide by Sex and Age Group, 2002

Number of Deaths in thousands



Source: WHO Global Burden of Disease Project, Version 1 (2002)

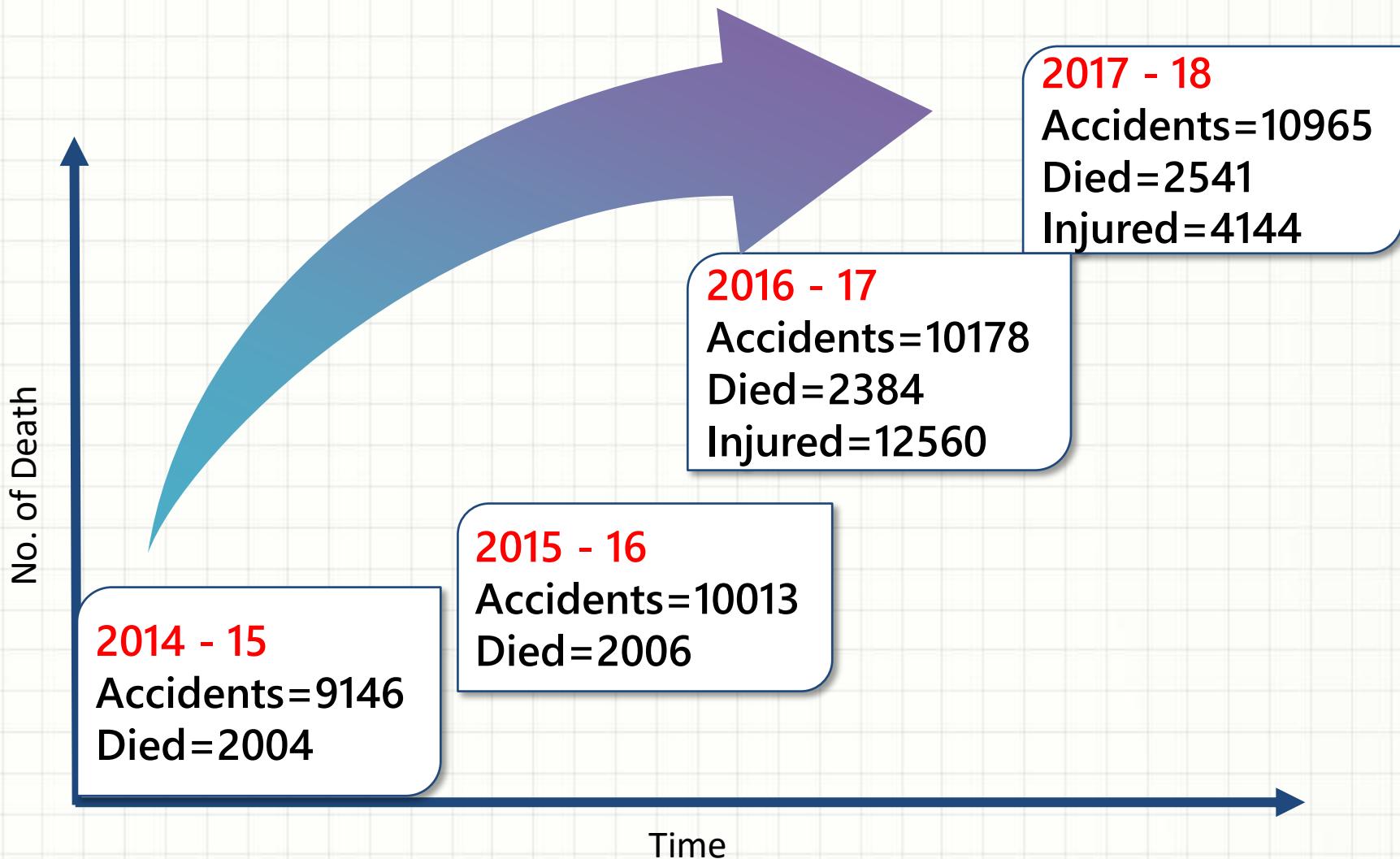
Road Traffic Accident in Nepal

- 7 people die every day in road accidents in Nepal
- According to the Ministry of Health, road accident (7 %) is the fourth leading cause of death after infectious diseases, child and maternal mortality (42%), cardiovascular diseases (25 %) and cancer (11 %) in Nepal.
- In the last 10 years, 22,461 lost their lives in RTA, according to Nepal Police.
- The lack of trauma centres along Nepal's highways has worsened the death rate.
- About 0.8% of the GNP is lost due to accidents.

Road Traffic Accident in Nepal

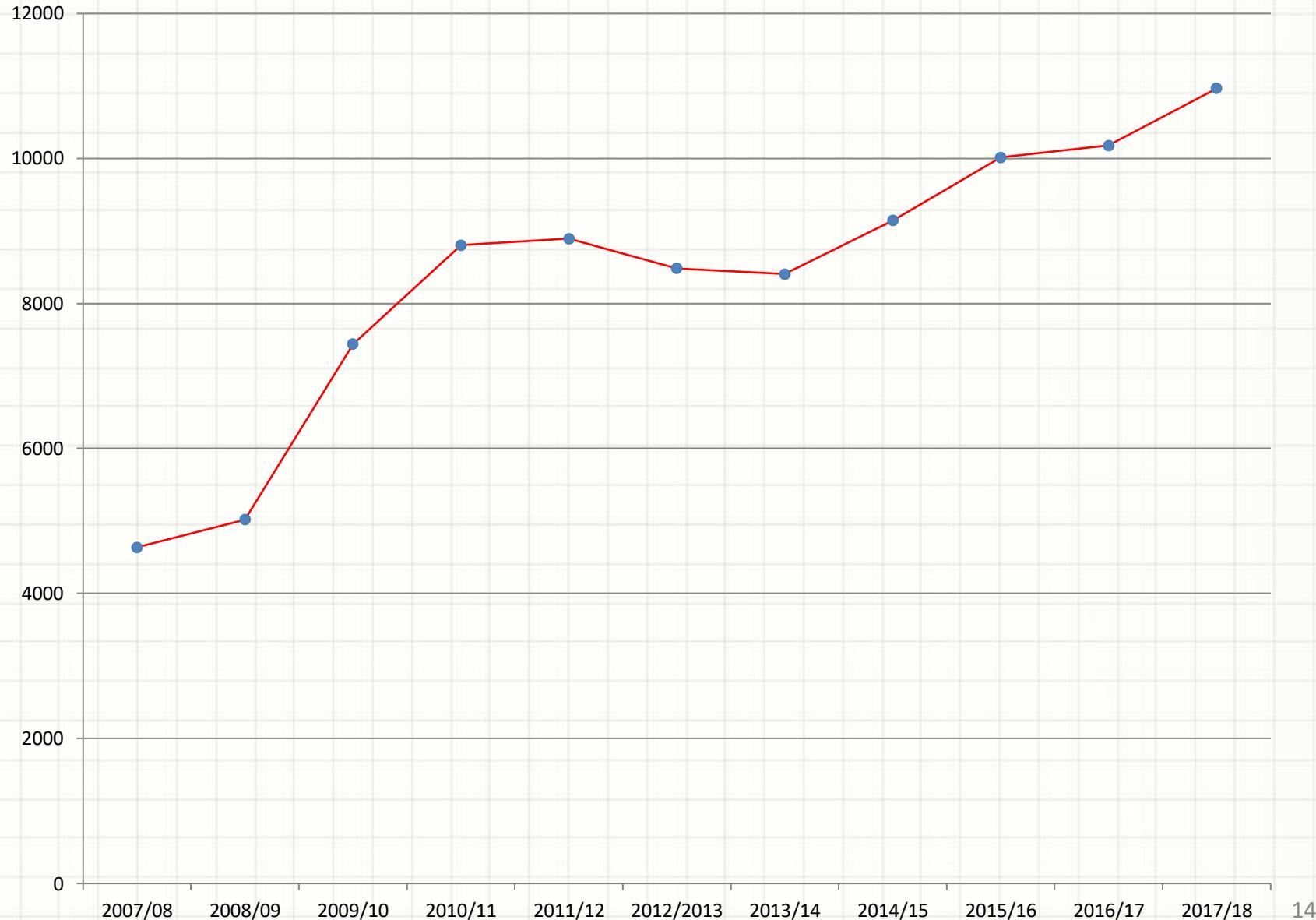
- Out of the total registered vehicles in Nepal, about **50%** ply inside Kathmandu valley.
- About **50% of the road traffic accidents** occur in Kathmandu
- Death Rate is higher outside Kathmandu in case of traffic accidents
- Motorcycles** are mostly involved inside Kathmandu
- Heavy vehicles **like bus, truck, etc.** are involved outside Kathmandu
- In **March 2018**, the government amended the Vehicle and Transport Management Rules and banned buses **older than 20 years**
- Police records blame **95% of accidents** in Nepal on negligence of drivers.

Highest Death Toll Recorded in 2017-18

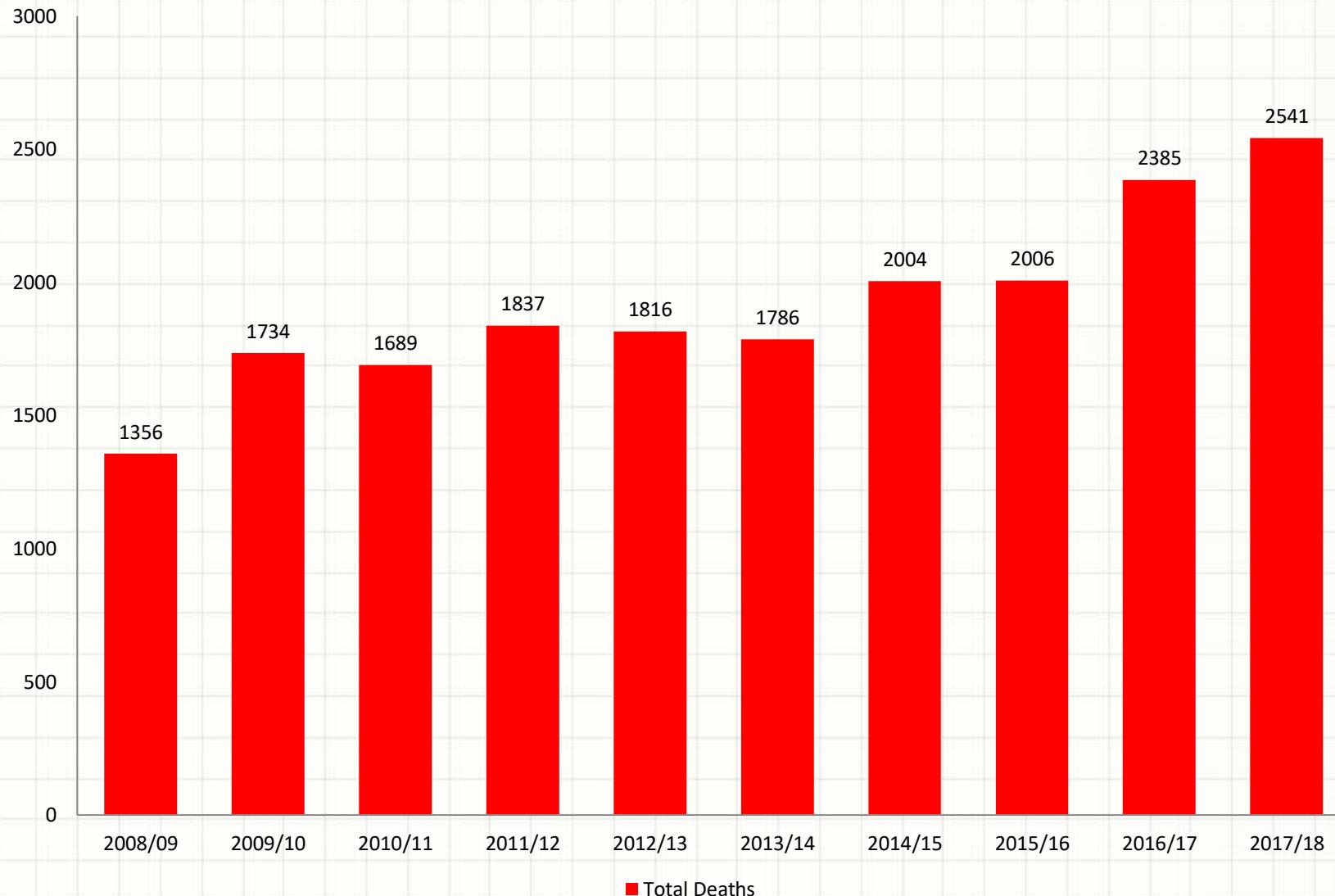


Past 10 Years Road Accident in Nepal

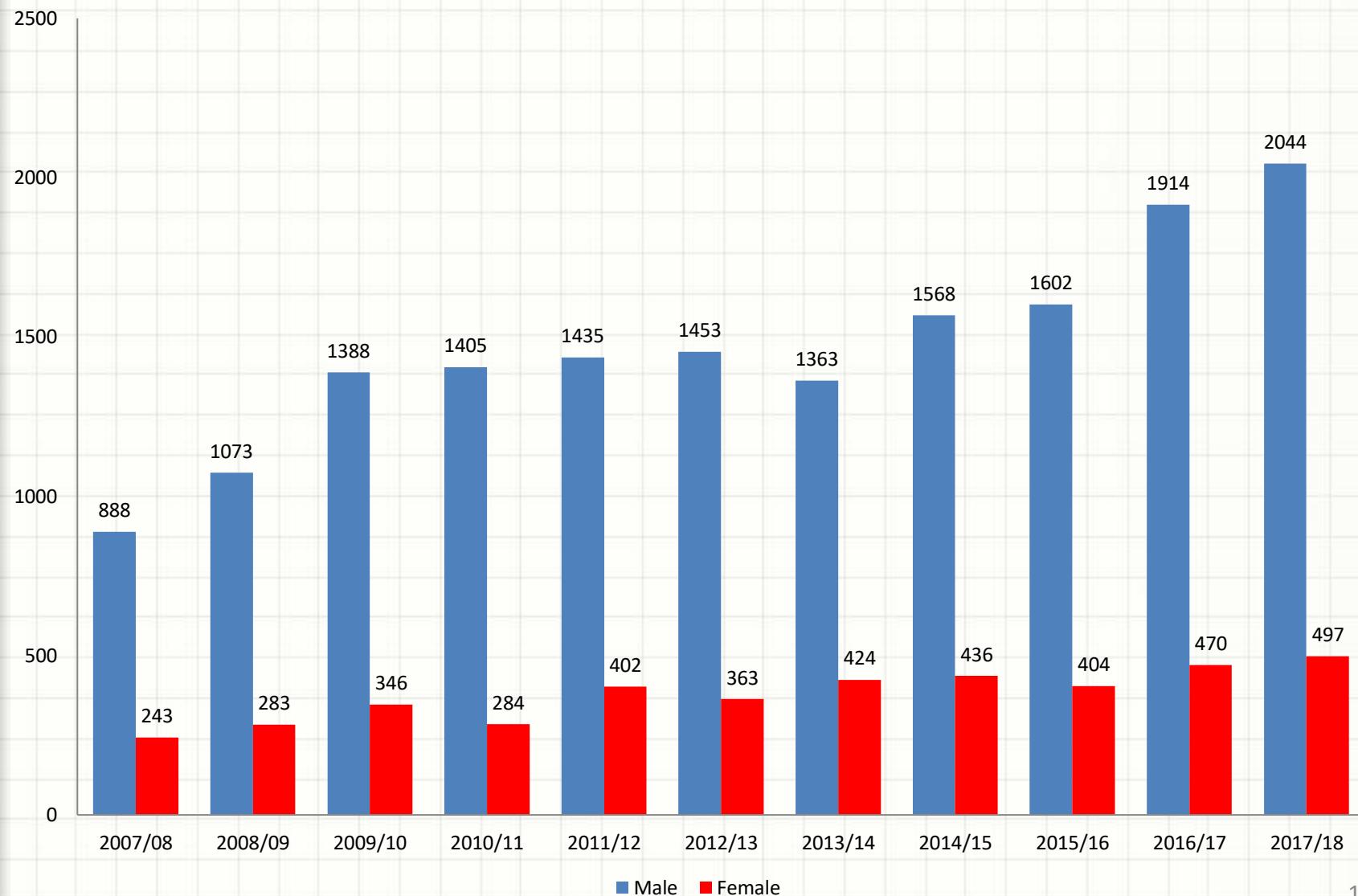
Total accidents



Last 10 Years No. of Death Increasing in Road Accident



Road Traffic Deaths in Nepal by Sex

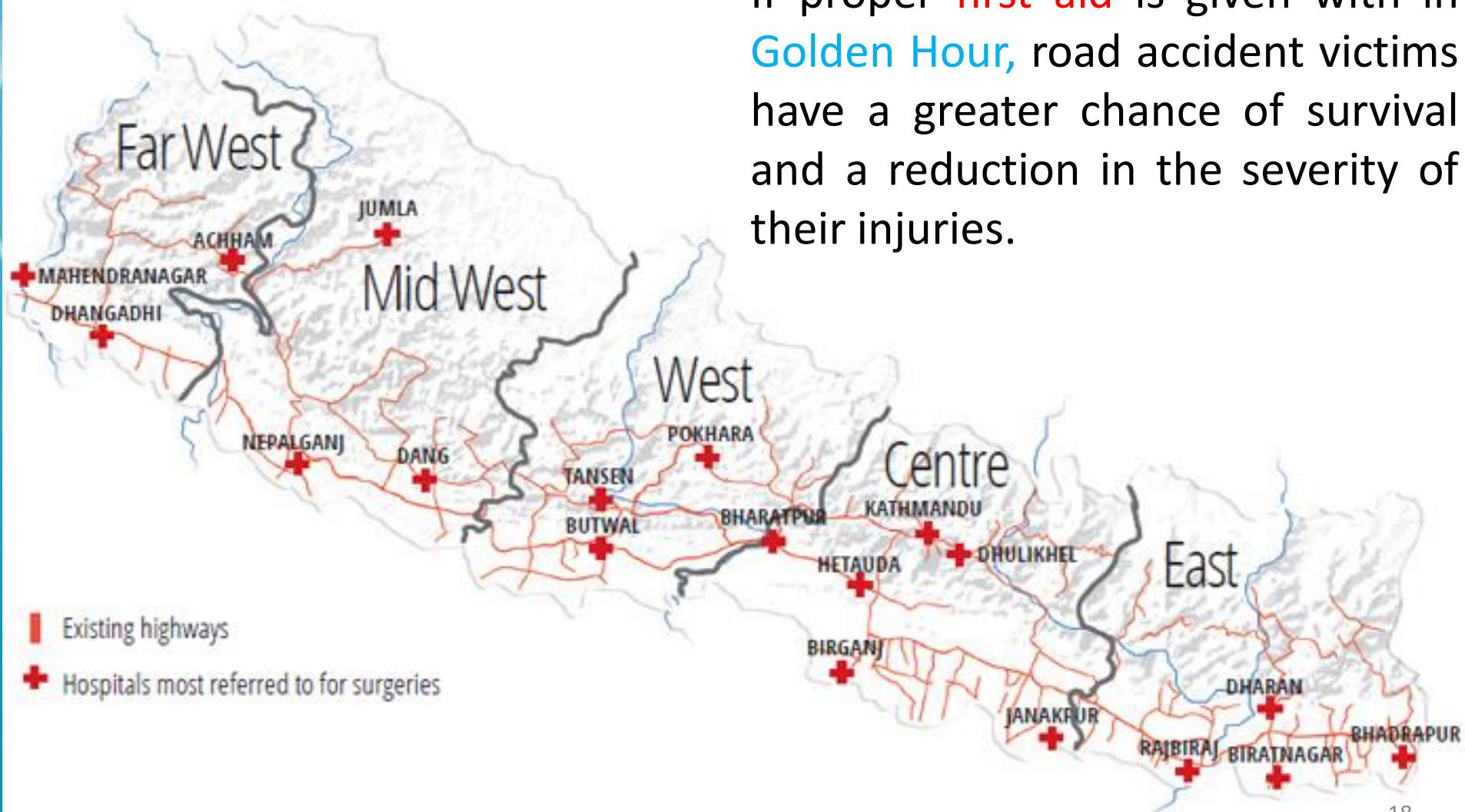


Vehicle Types in RTA

Among the vehicles involved in accidents, truck and tripper were at the top position (27%), followed by two wheelers (25%).



Road Network and Hospital Mapping



If proper **first aid** is given within the **Golden Hour**, road accident victims have a greater chance of survival and a reduction in the severity of their injuries.

Who is at risk?

Socioeconomic status

More than 90% of road traffic deaths occur in low- and middle-income countries. Road traffic injury death rates are highest in the African region. Even within high-income countries, people from lower socioeconomic backgrounds are more likely to be involved in road traffic accidents.

Age

Road traffic injuries are the leading cause of death for children and young adults aged 5-29 years.

Sex

From a young age, males are more likely to be involved in road traffic crashes than females. About three quarters (73%) of all road traffic deaths occur among young males under the age of 25 years who are almost 3 times as likely to be killed in a road traffic crash as young females.

Factors of Roads Accidents

Drivers: Over-speeding, rash driving, violation of rules, failure to understand signs, fatigue, alcohol.

Pedestrian: Carelessness, illiteracy, crossing at wrong places moving on carriageway, Jaywalkers.

Passengers: Projecting their body outside vehicle, by talking to drivers, alighting and boarding vehicle from wrong side travelling on footboards, catching a running bus etc.

Vehicles: Failure of brakes or steering, tyre burst, insufficient headlights, overloading, projecting loads.

Road Conditions: Potholes, damaged road, eroded road merging of rural roads with highways, diversions, illegal speed breakers.

Weather conditions: Fog, snow, heavy rainfall, wind storms, hail storms.

Overloading Passengers in Vehicles



Highest number of accidents occurred during the month of October coinciding with the higher traffic during because of major national festivals.

Preventive Measures of Road Accidents

- Helmets for two-wheeler riders
- Wearing a seat-belt reduces the risk of death
- Setting and enforcing speed limits
- Setting and enforcing alcohol limits
- Banning drivers from using mobile phone.
- Education and awareness about road safety
- Strict enforcement of law
- Engineering:
 - (a) Vehicle design
 - (b) Road infrastructure

Challenges in RTA

- Road Safety education to students in school/college
- Constructing Trauma Hospital in highway area.
- Raising sustainable fund for road safety and accident
- Increasing and Prioritizing Investment
- Promoting coordinated effort among all stakeholders of road safety
- Capacity building , Research and Development
- Development of National Road Safety Policy and Action Plan
- Effective and sustainable accident database management

Conclusion

- Road Traffic accident create a huge public health problem: **a man made disaster.**
- The situation is going to be **worse** unless prevention strategies are adopted.
- **Avoid** such losses of lives, health and money by setting road safety actions.

Resources

- <https://www.worldlifeexpectancy.com/cause-of-death/road-traffic-accidents/by-country/>
- <https://archive.nepalitimes.com/page/maps-showing-increase-in-road-accident-fatality-rates>
- <https://www.who.int/news-room/fact-sheets/detail/road-traffic-injuries>
- <https://www.nepalitimes.com/banner/nepals-deadly-roads-take-their-toll/>



*Thank
you*

