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# पेट्रोलियम एवं प्राकृतिक गैस विनियामक बोर्ड Petroleum and Natural Gas Regulatory Board



## Excellence in Safety in Road Transportation

13.10.2025  
(Hyderabad)

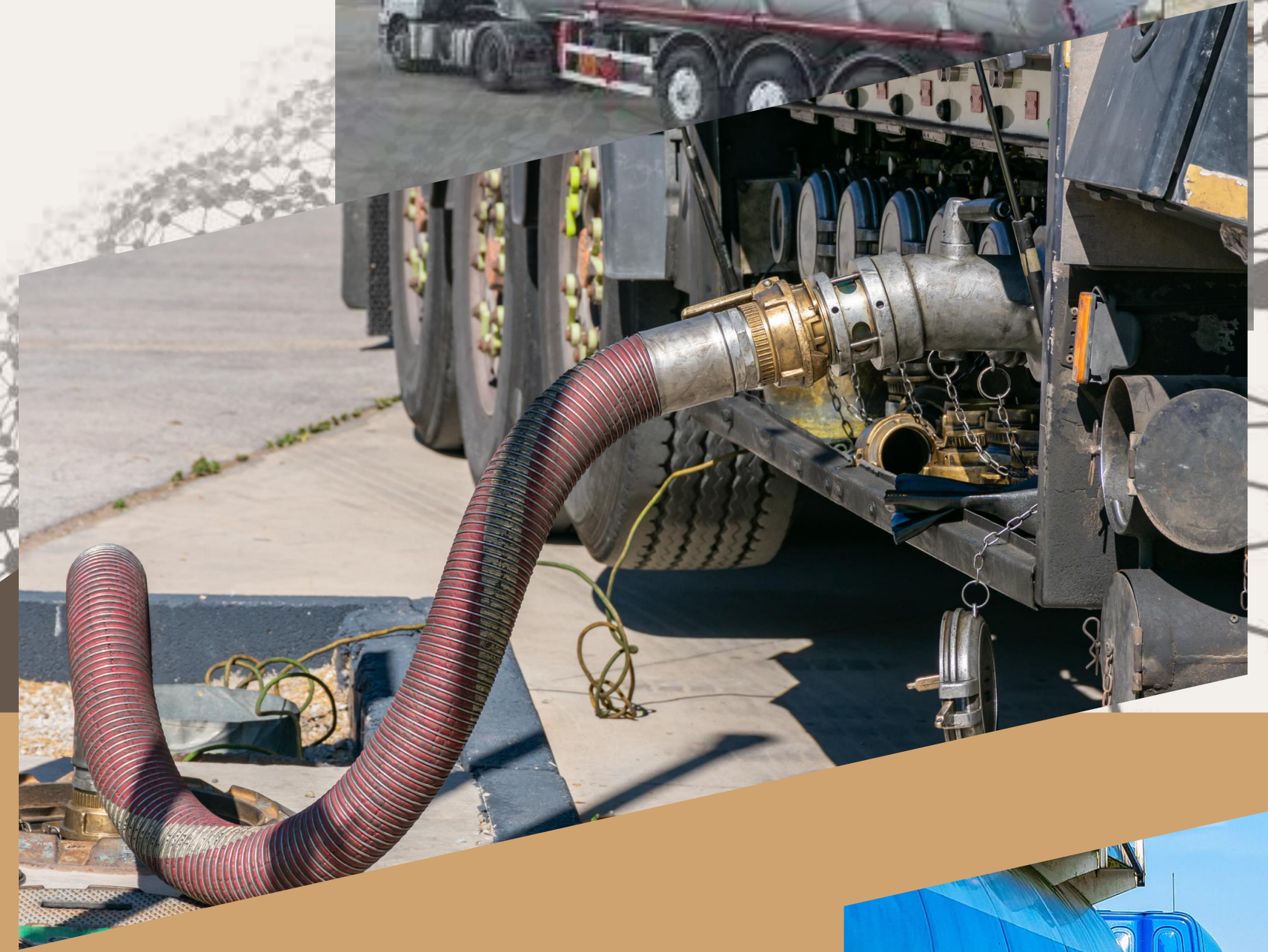
**Presented By:**

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Pradeep Saxena, Senior Consultant (Tech)

# TABLE OF CONTENTS



- Technical functions of PNGRB
- Major Road Incidents- India
- Road Incidents- Trends
- Journey covered so far
- Way Forward –Excellence in safety in Road Transportation





पी एन जी आर बी  
PNGRB

## TECHNICAL FUNCTIONS AS PER PNGRB ACT

Under PNGRB Act, 2006

- As per clause 11 sub clause (i), the Board shall lay down, by regulations, the technical standards and specifications including safety standards in activities relating to petroleum, petroleum products and natural gas, including the construction and operation of pipeline and infrastructure projects related to downstream petroleum and natural gas sector
- As per clause 61 sub clause (1), the Board may, by notification, make regulations consistent with this Act and the rules made there under to carry out the provisions of this Act

The PNGRB Act, 2006

# Notified Technical Regulations



पी एन जी आर बी  
PNGRB

1 Procedure for Development of T4S Regulations

8 Technical Standards and Specifications including Safety Standards

3 Integrity Management System

1 Emergency Response and Disaster Management Plan

1 Third Party Conformity Assessment

2 Determining Capacity of PPPL & NGPL and CGD

**16/38**  
Total Number



# INSTALLATIONS UNDER REGULATIONS OF PNGRB



## INSTALLATIONS



**~ 98,614**

Total No of Installations

**~610**

TPIA Audits Conducted (FY 2024-25)

**32**

TPIA's Empaneled



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# Major Road Incidents- India

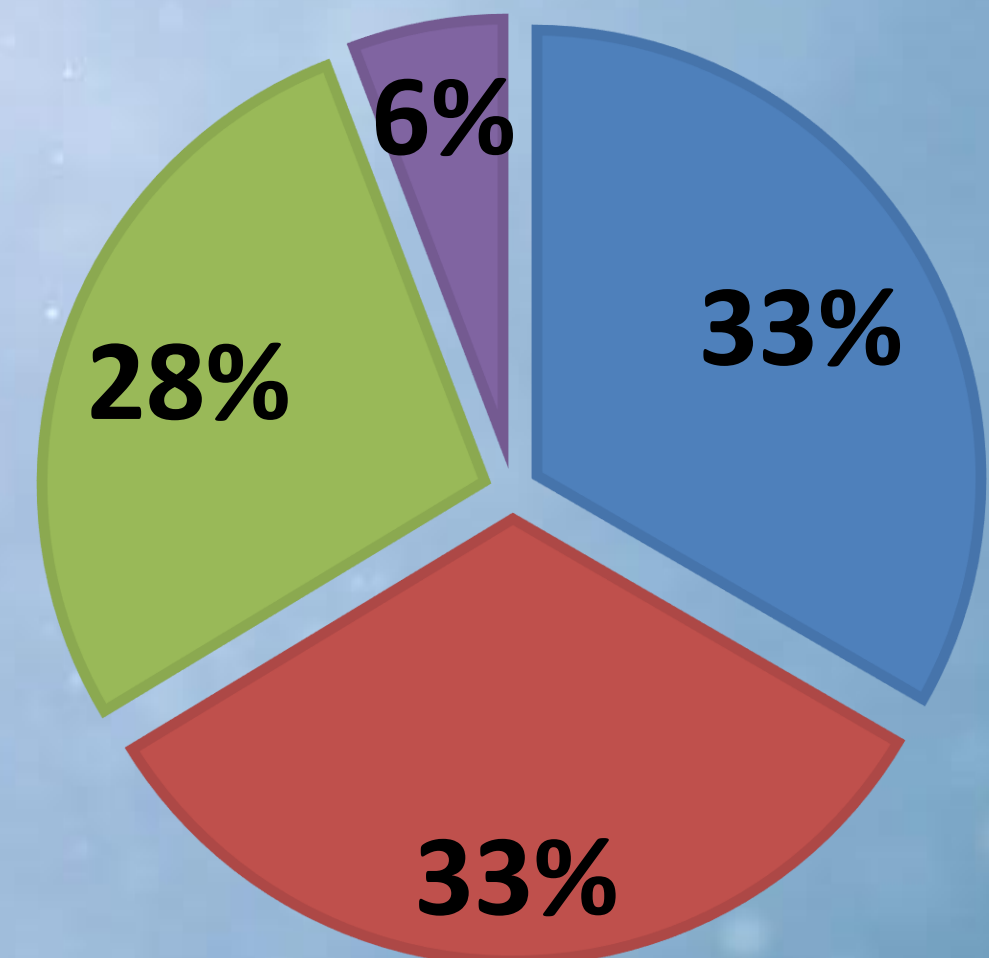
# Road Incidents Analysis in India



- India reported 4.61 lakh road accidents in 2022, causing 1.68 lakh deaths and 4.43 lakh injuries.
- In the year 2023, India recorded 4.8 lakh road accidents, resulting in 1.73 lakh deaths and 4.62 lakh injuries.
- With just 1 % of the world's vehicles, India accounts for 11 per cent of the global death in road accidents, the highest in the world, according to a report by the World Bank.

## TYPE OF ROAD ACCIDENTS

- Fatal Accidents
- Grievous Injury Accidents
- Minor Injury Accidents
- Non-Injury Accidents



# ROAD TRANSPORTATION OF PETROLEUM PRODUCTS/GAS



Petroleum  
&  
Petroleum  
Products  
(MS, HSD,  
ATF etc.)

Liquified  
Petroleum  
Gas  
(LPG)

Compressed  
Natural Gas  
(CNG)

Liquefied  
Natural  
Gas  
(LNG)

Transportation  
of LPG  
cylinders

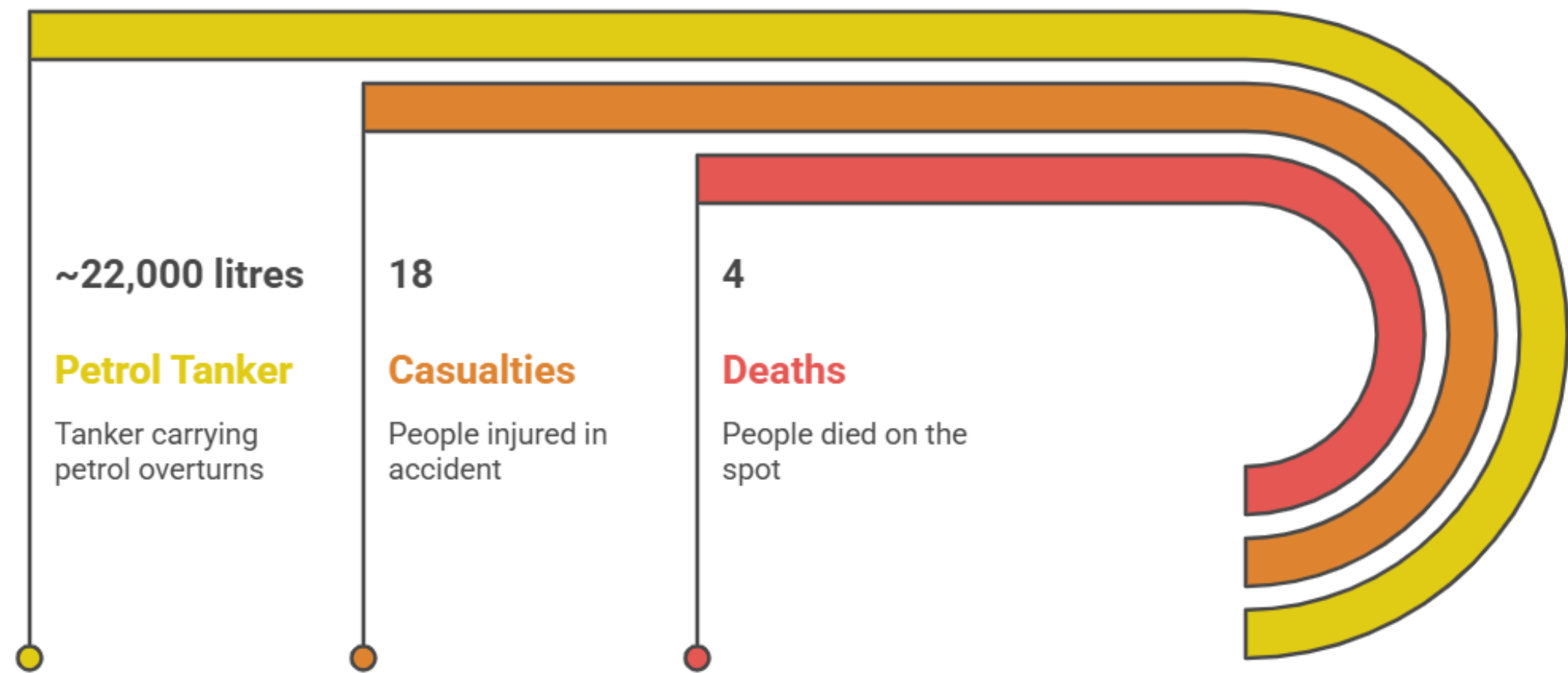
Mobile  
Dispensing  
HSD, LNG  
& CNG

# MAJOR ROAD ACCIDENTS - INDIA

Date : 29 October 2022

- Near Tuirial (about 18 km from Aizawl), Mizoram.
- A petrol tanker carrying ~22,000 litres of petrol overturned on the highway.
- Petrol leaked from the tanker; many locals gathered to collect it in containers.
- Around 5:50 PM, the fuel caught fire—reportedly due to someone lighting a lighter/smoking.

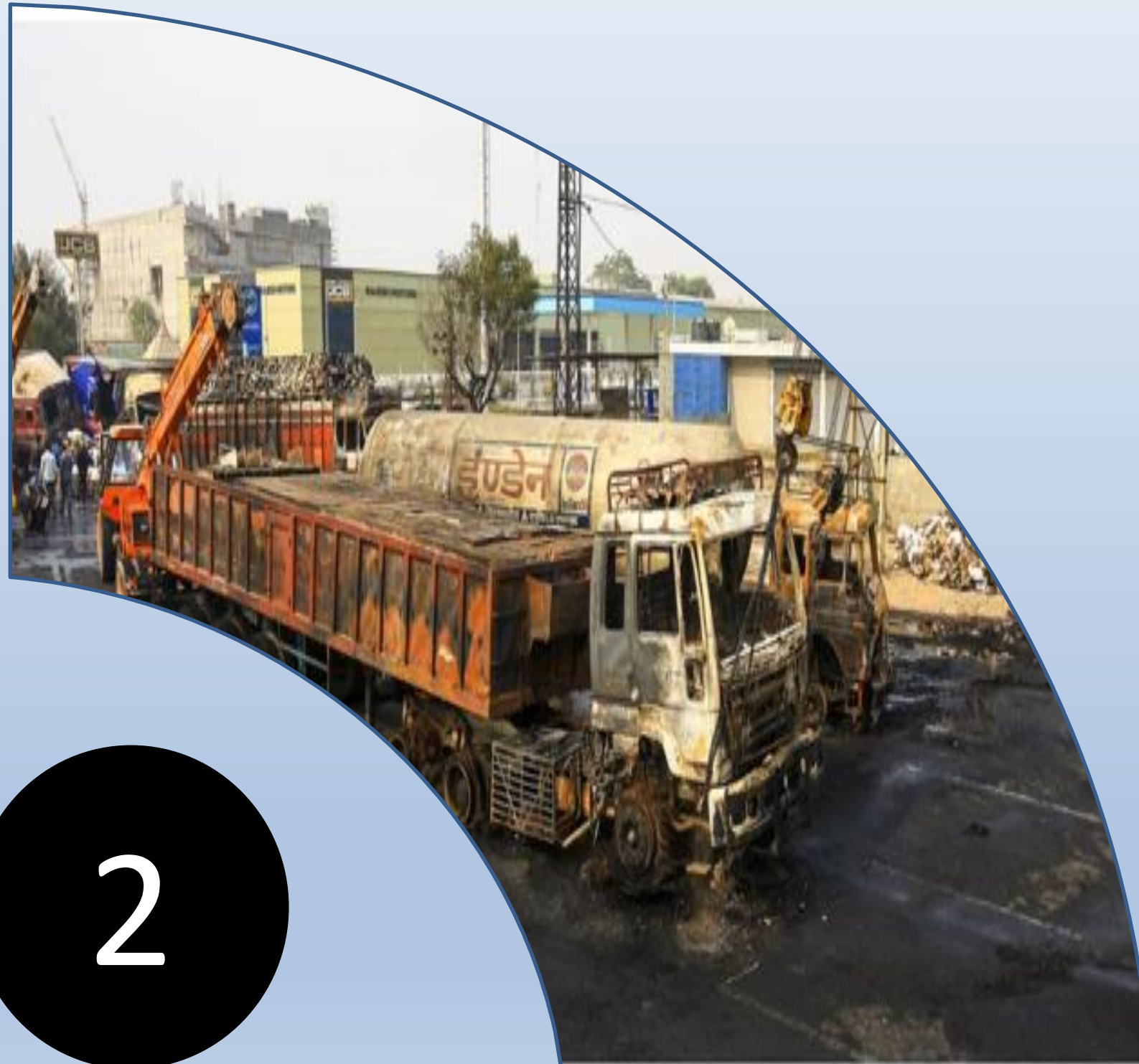
1



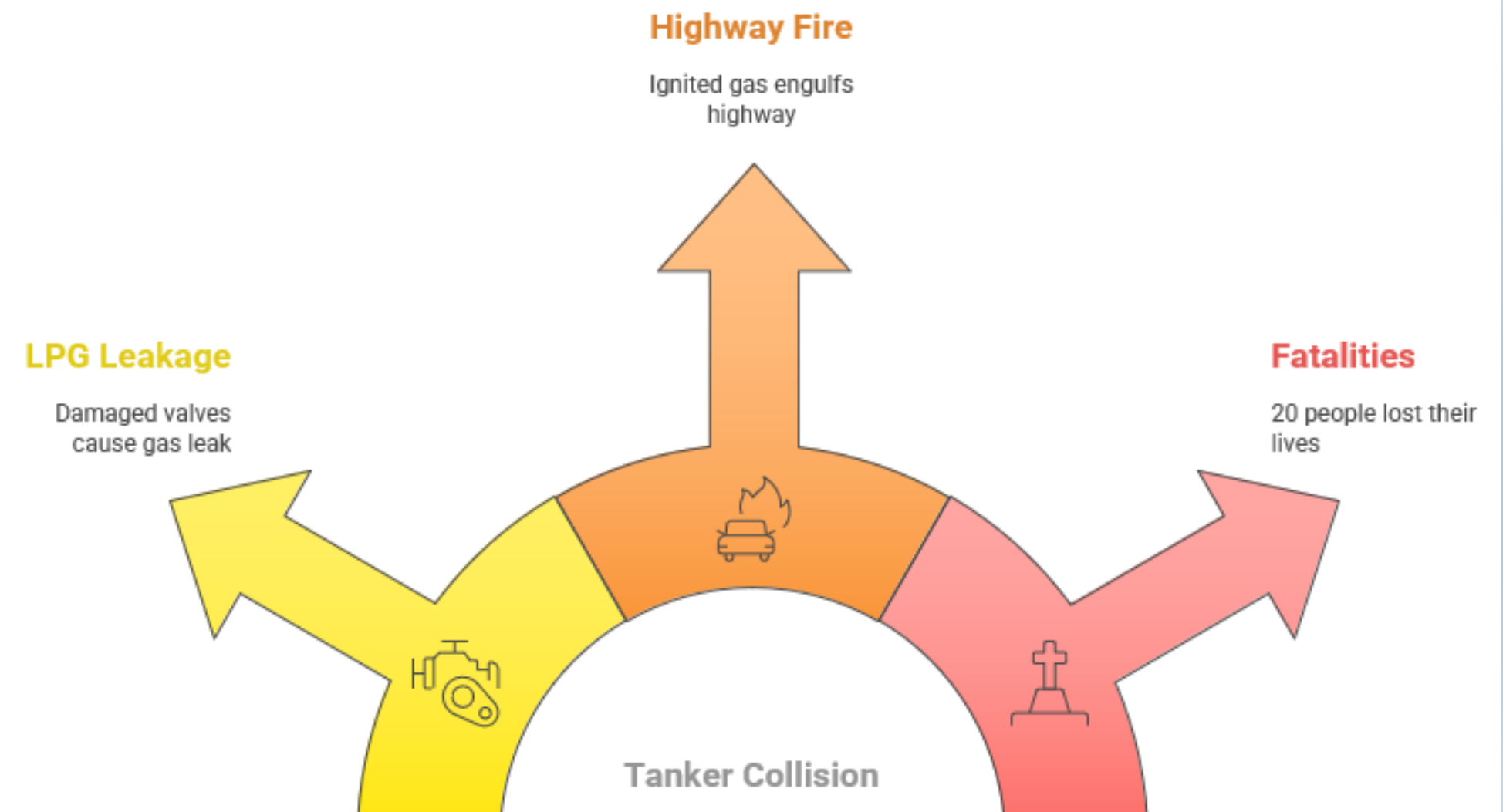
# MAJOR ROAD ACCIDENTS - INDIA

Date : 20 December 2024

An LPG tanker collided with a truck on the Jaipur-Ajmer highway near the Bhankrota. The tanker was reportedly doing a U-turn; during the manoeuvre it was hit by the other vehicle coming from the opposite direction. This collision damaged the tanker's nozzle / safety valves, causing a leak of LPG which then ignited.



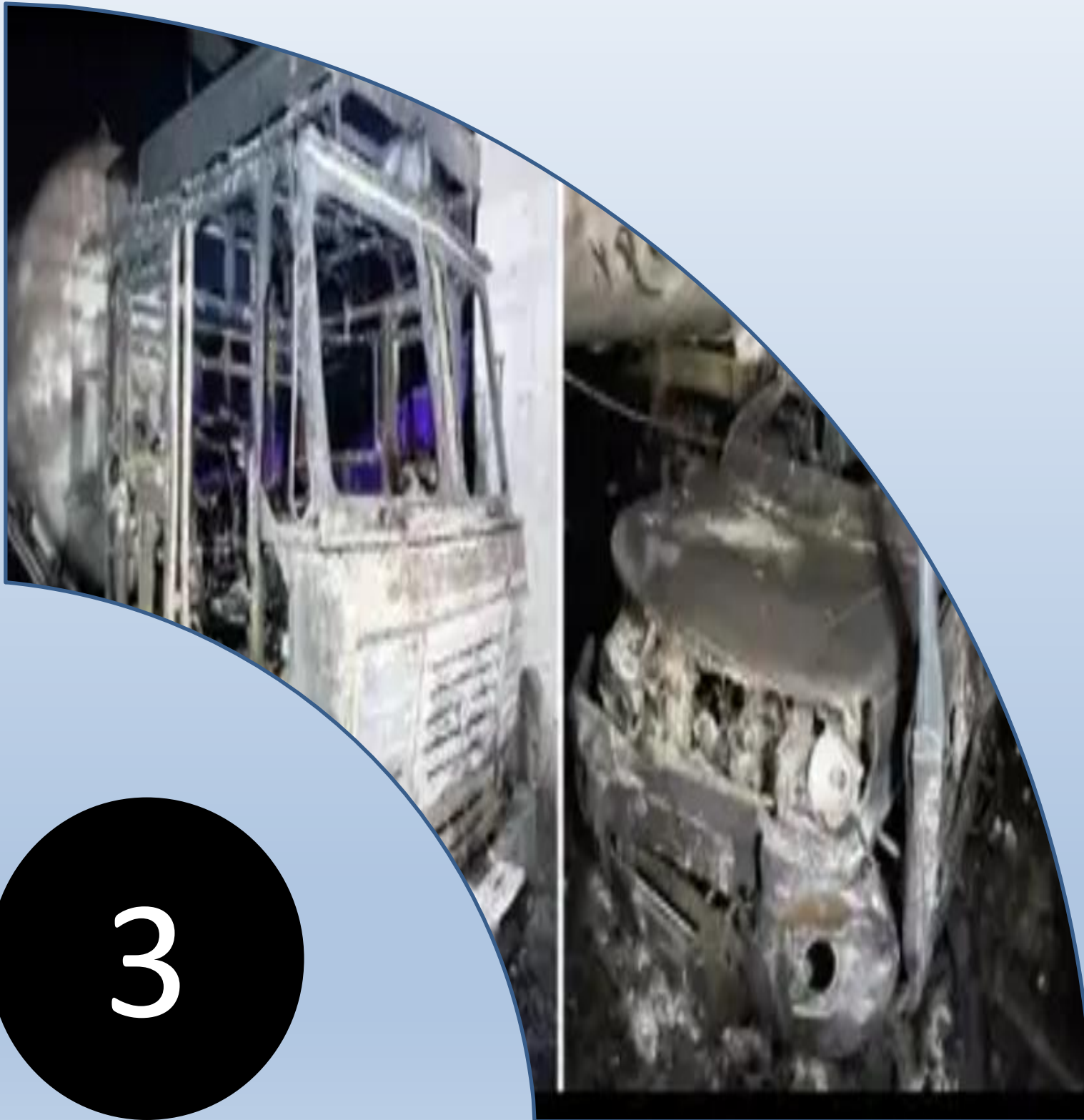
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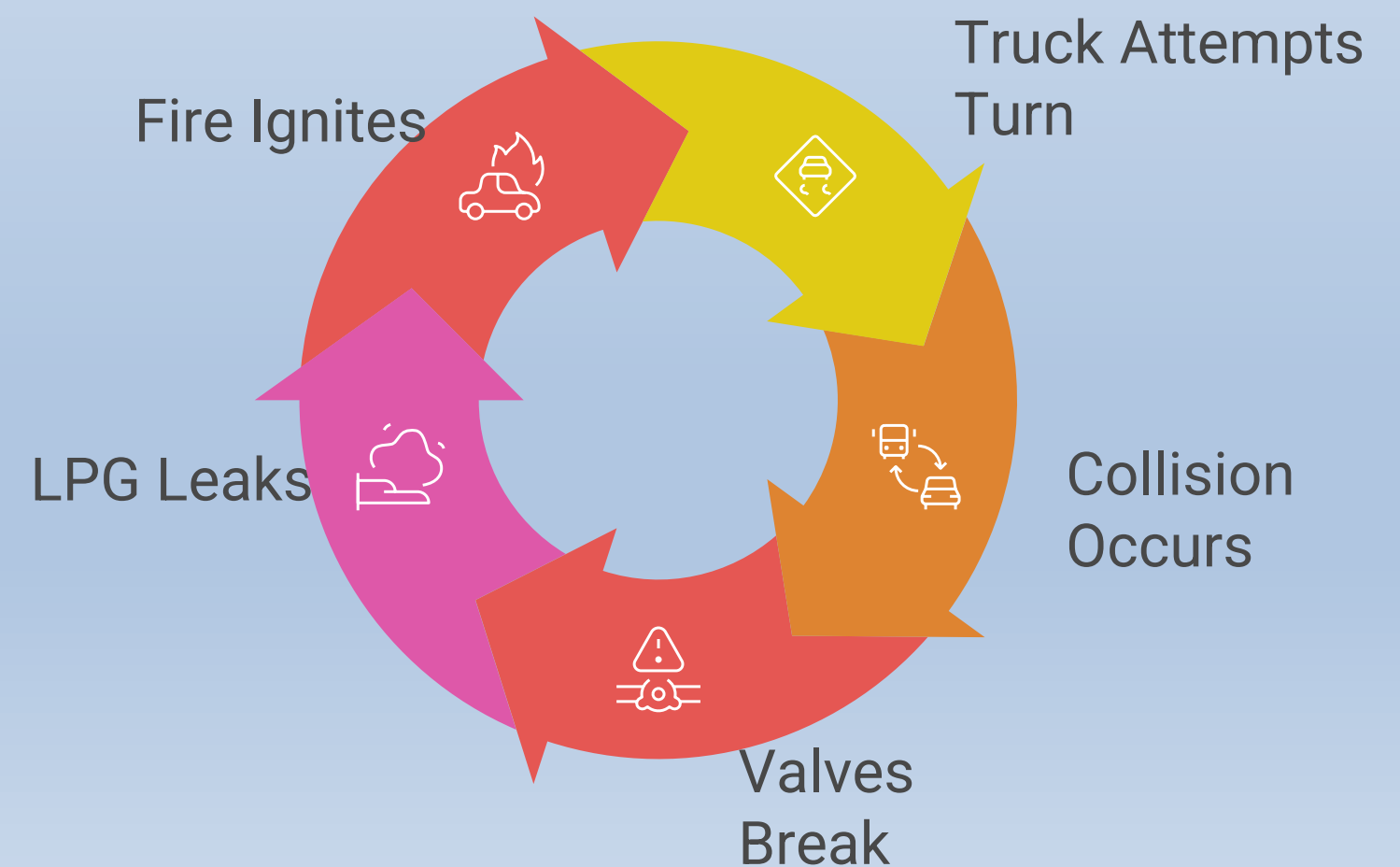
# MAJOR ROAD ACCIDENTS - INDIA

Date : 22 August 2025

- A Tank Truck loaded from Bhatinda LPG Plant to Hoshiarpur LPG Plant attempted to take a turn at the incident spot which is around 2 km before Hoshiarpur LPG Plant. 7 fatalities and 16 injuries occurred.
- While taking the turn, it was hit by a Pick-up vehicle moving on the left side. The impact was on the left side of lateral under run protection guard, valve box and led to falling of all the three manifold valves (two liquid and one vapour) along with connected pipelines. The entire LPG in the TT leaked out and caught fire.



3



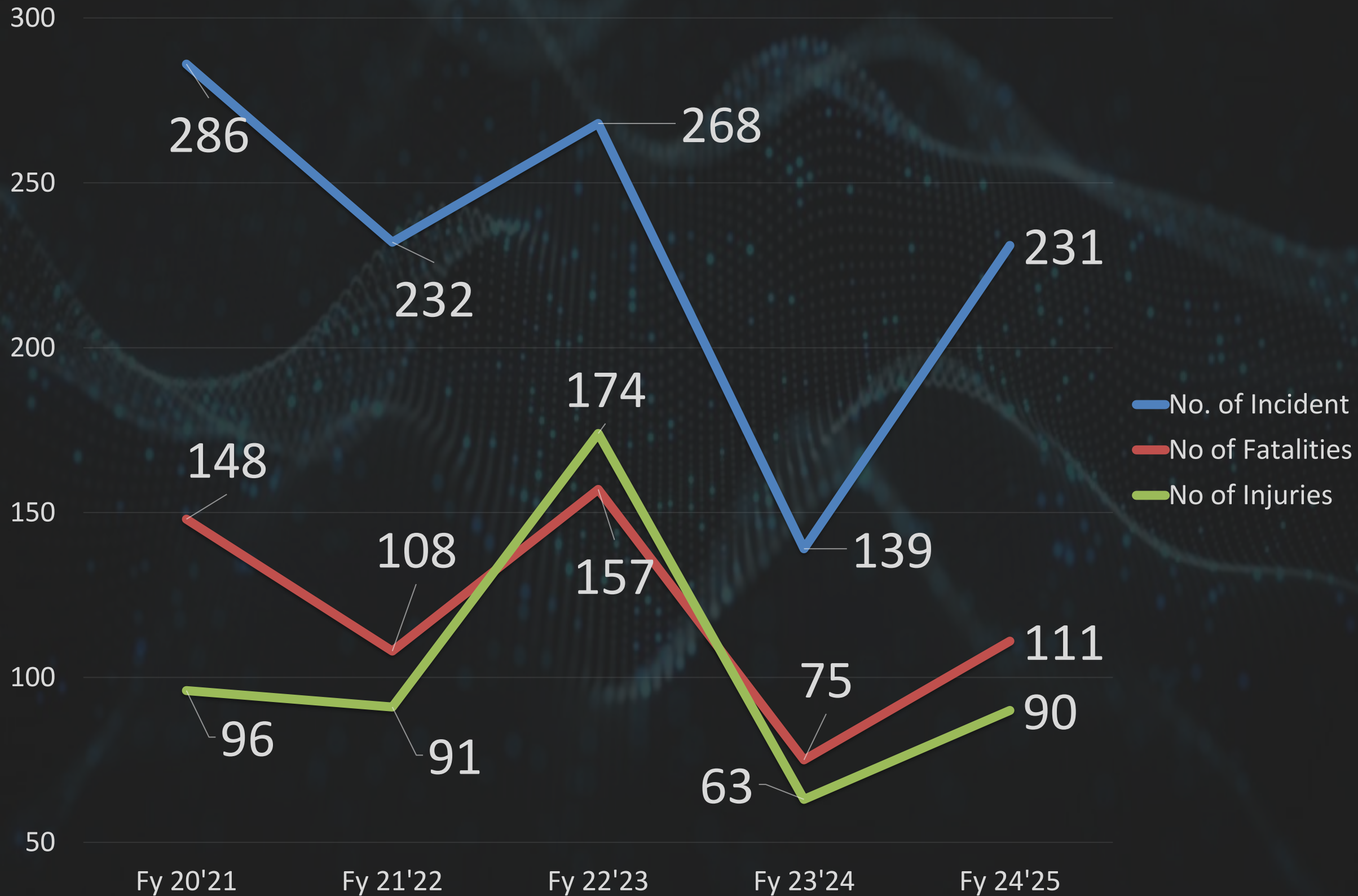


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# Road Incidents- Trends

# ROAD INCIDENTS - TREND

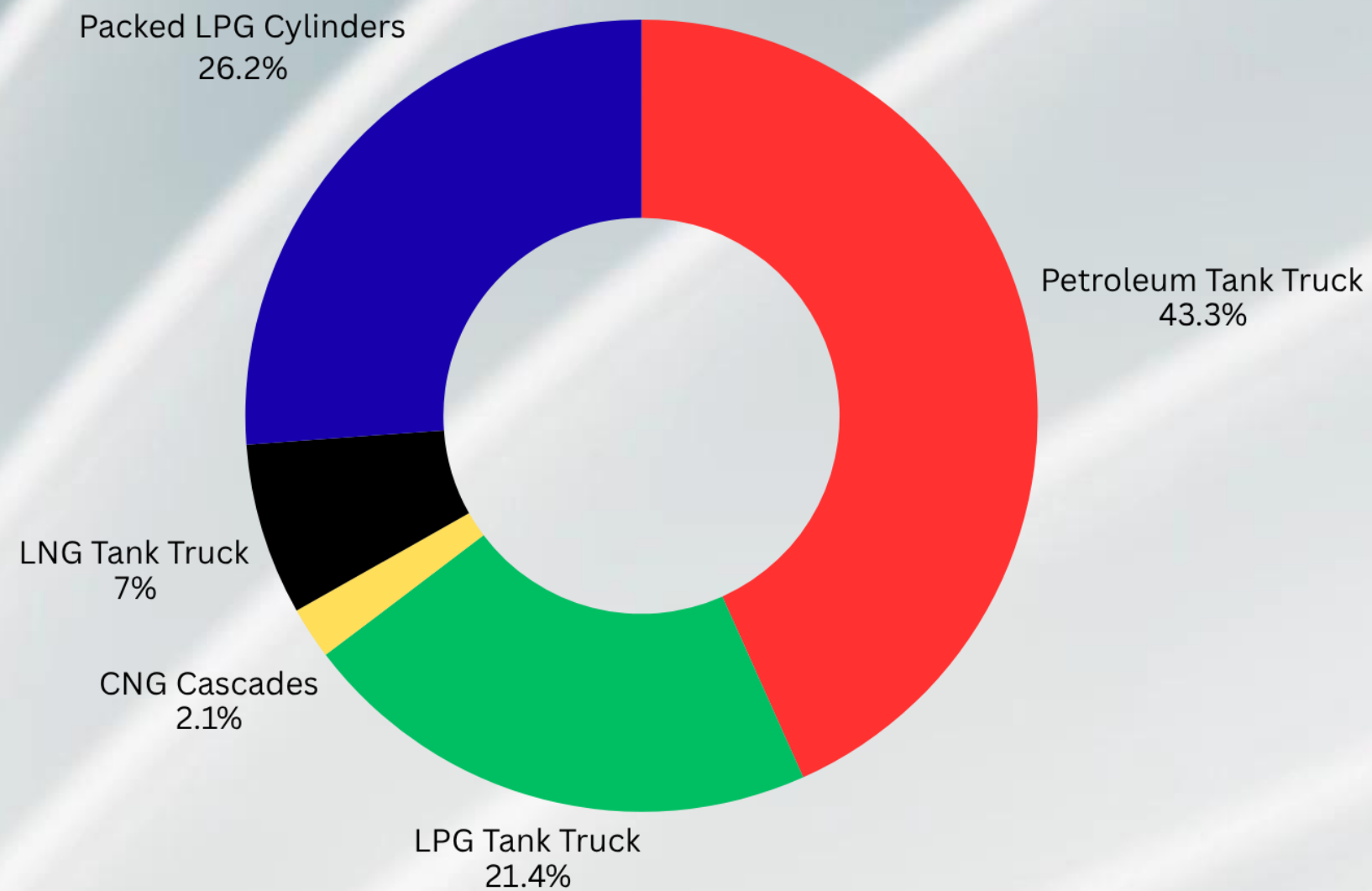


It is evident from the data that no. of road transportation incidents/fatalities/injuries is much higher compared to incidents in other fixed installations.

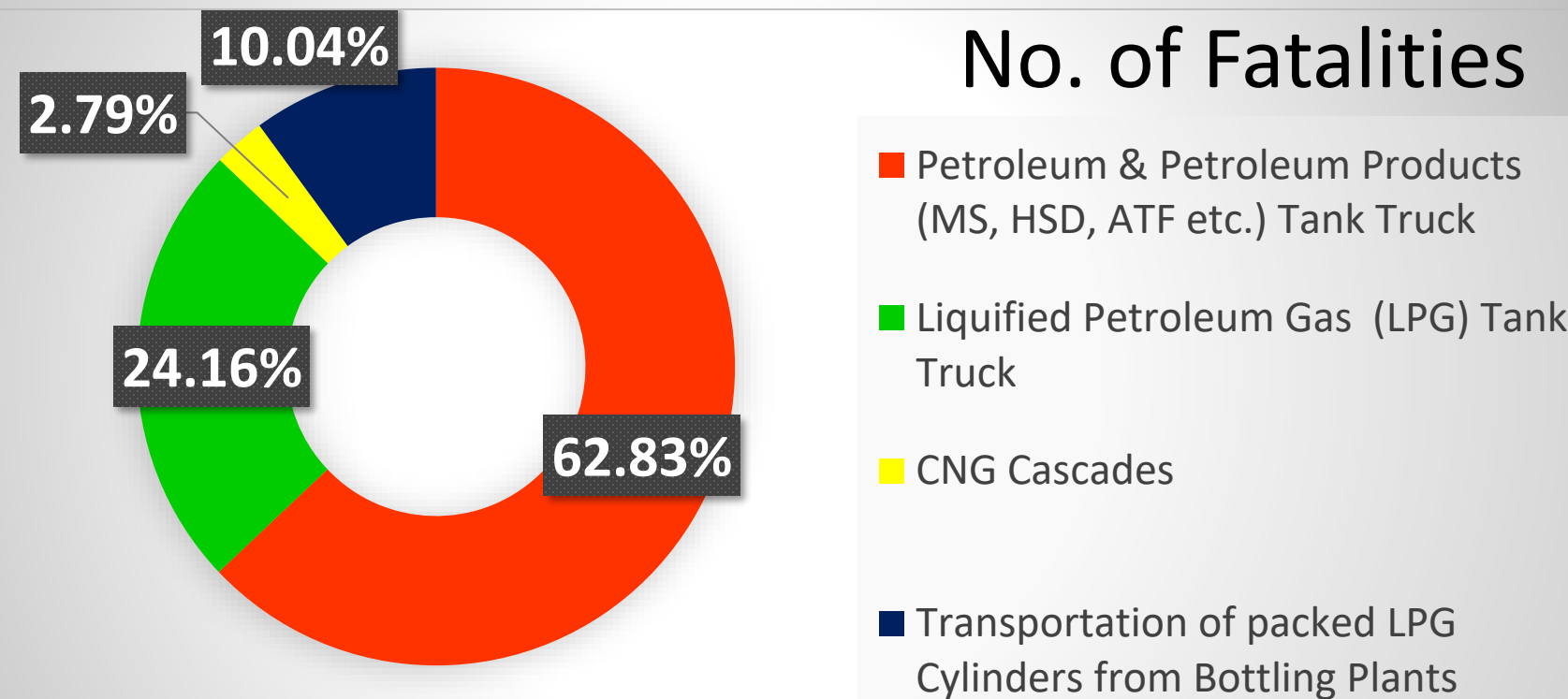
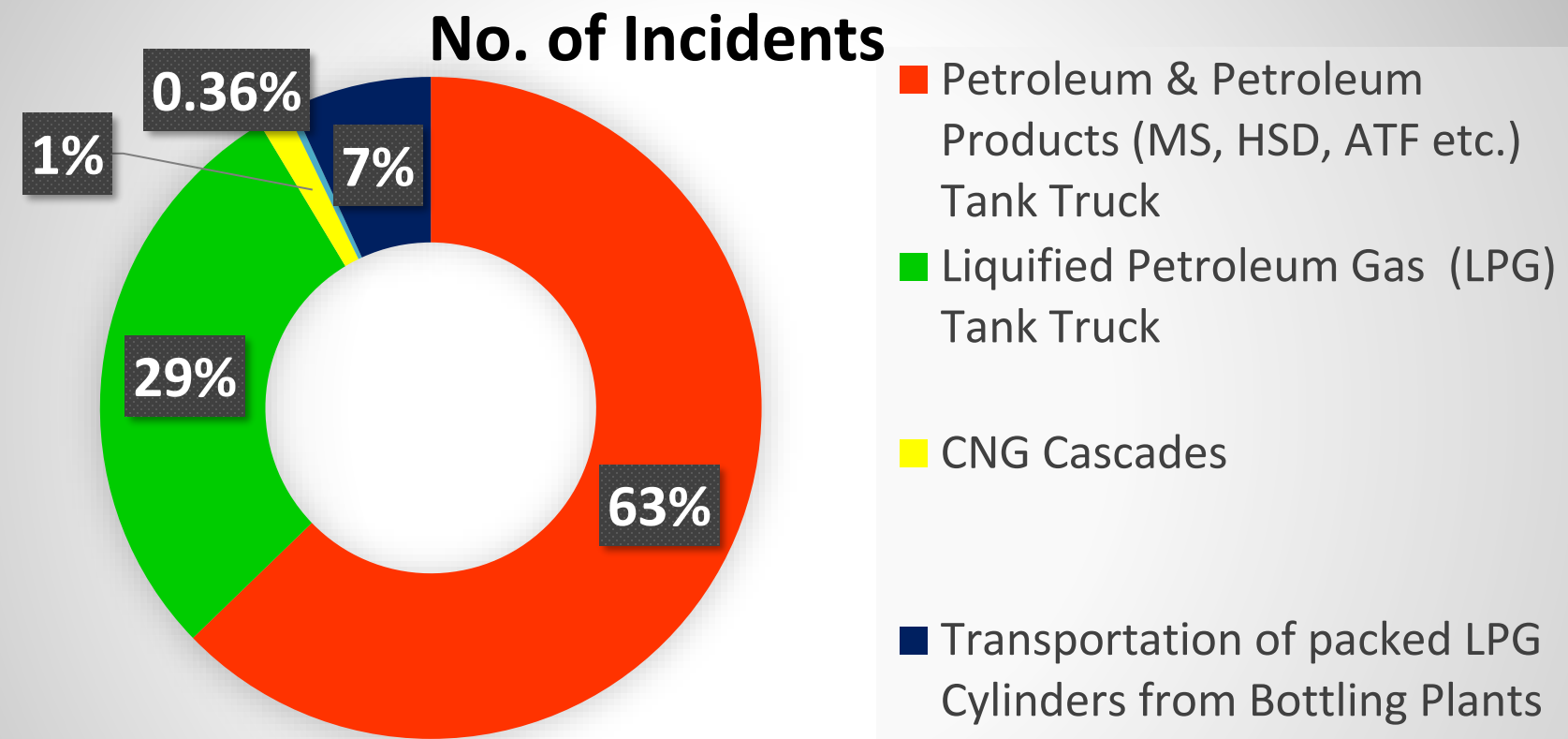
## Major Incidents- Fixed Installations

Period	Major	Fatalities	Injuries
FY 20-21	28	24	13
FY 21-22	35	22	73
FY 22-23	41	28	21
FY 23-24	55	34	36
FY 24-25	59	54	122

# OVERVIEW OF ROAD INCIDENTS – LAST 5 YEARS

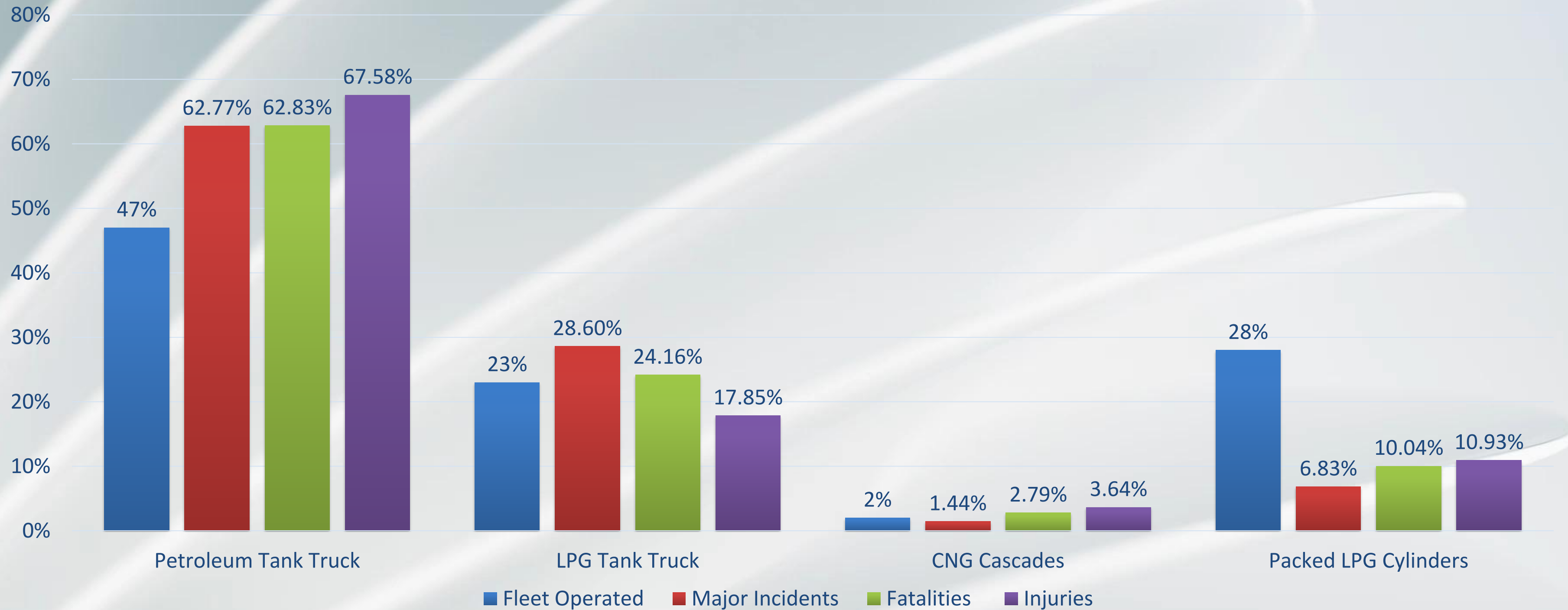


**Percentage distribution of fleet in various types of Transportation**



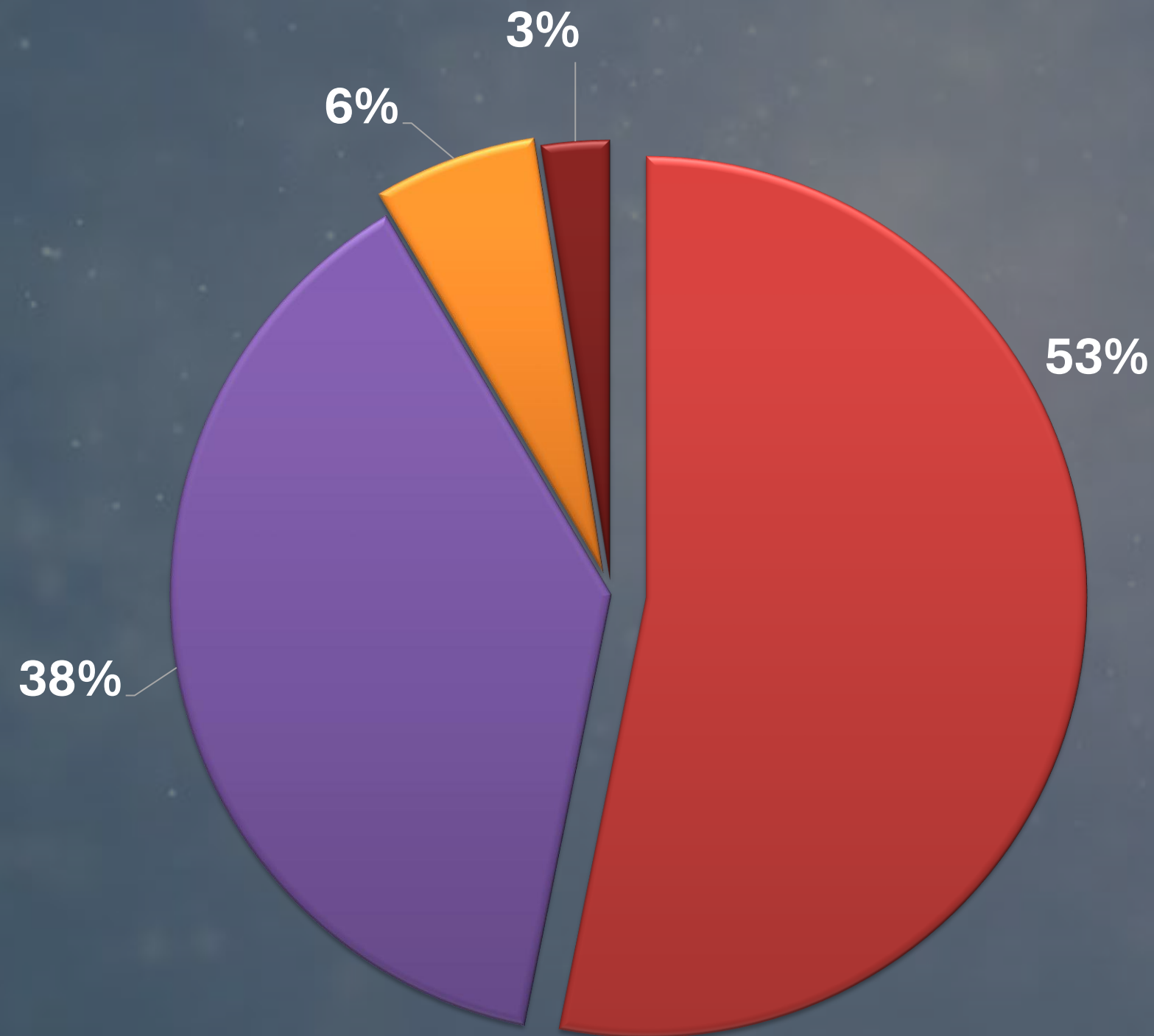
\*Source of data – As submitted by the Entities

# CUMULATIVE ROAD INCIDENTS CATEGORIZATION BASED ON TYPES OF TRANSPORTATION OVER THE LAST 5 YEARS



\*Source of data – As submitted by the Entities

# CRITICAL INDICATIONS FROM ROAD INCIDENTS OF MAJOR OMC'S IN THE PERIOD 01.01.2023 TO 31.12.2023



## Root Cause Analysis

- Negligence of drivers
- Third Party Fault
- Mechanical Failure/Poor Maintenance of TT
- Inclement weather condition

# CRITICAL INDICATIONS FROM ROAD INCIDENTS

01

In around ~ 70% of road incidents, no alternate driver or helper was available.

02

Nearly ~12% of road accidents occur during night-time driving (23:00 – 05:00 hrs.)

03

Incidents occurred despite over 98% of drivers being endorsed and trained by the Entity to transport hazardous goods

04

Nearly 77% of road incidents occurred on State or National Highways



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Journey covered so far

# ROAD SAFETY EXISTING PROVISIONS IN PNGRB REGULATIONS



## Driver & Journey Management

**PNGRB  
POL T4S**

- **Qualification Training**
- **Duty Hours**
- **Journey Management**

## Design & Safety Features

**PNGRB POL, LPG &  
RO T4S**

- **Mandatory PESO License**
- **Testing & Inspection**
- **Replacement of IEFCV**

## Vehicle Safety

**PNGRB Refineries  
& Gas Plants T4S**

- **Parking & Permit System**
- **Signage & Defensive Driving**

## Emergency Handling

**PNGRB  
ERDMP  
Regulation**

- **TREM CARD**
- **Resource mobilisation for emergency**
- **Role of External Agencies for Emergency**

# OTHER EXISTING STATUTORY PROVISIONS



Petroleum Rules, 2002

SMPV Rules, 2016

Gas Cylinder Rules, 2016

CMVR: Central Motor Vehicle Rules, 1989

The Ministry of Home Affairs (MHA) has issued broad safety guidelines related to the **movement of goods**, including hazardous materials like **POL, LPG, and CNG**.

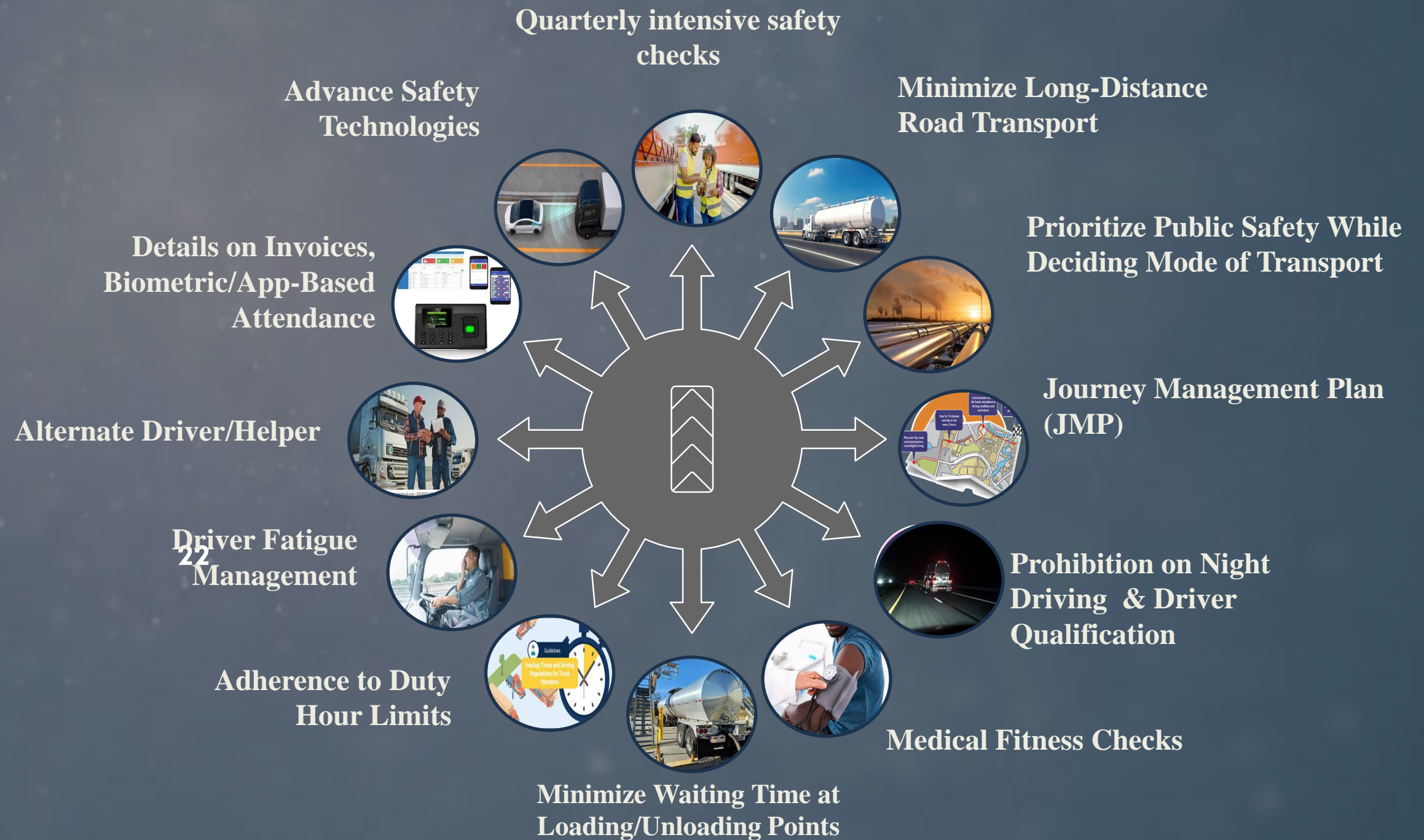
# HLEC RECOMMENDATIONS



# PNGRB ROAD TRANSPORTATION SAFETY GUIDELINES



**PNGRB issued  
“Guidelines for Road  
Transportation of  
Hazardous Petroleum  
Products, LPG, Natural  
Gas etc.” on 28.02.2025.  
Compliance of these  
guidelines is being  
monitored by PNGRB.**



# PNGRB ROAD TRANSPORTATION SAFETY GUIDELINES



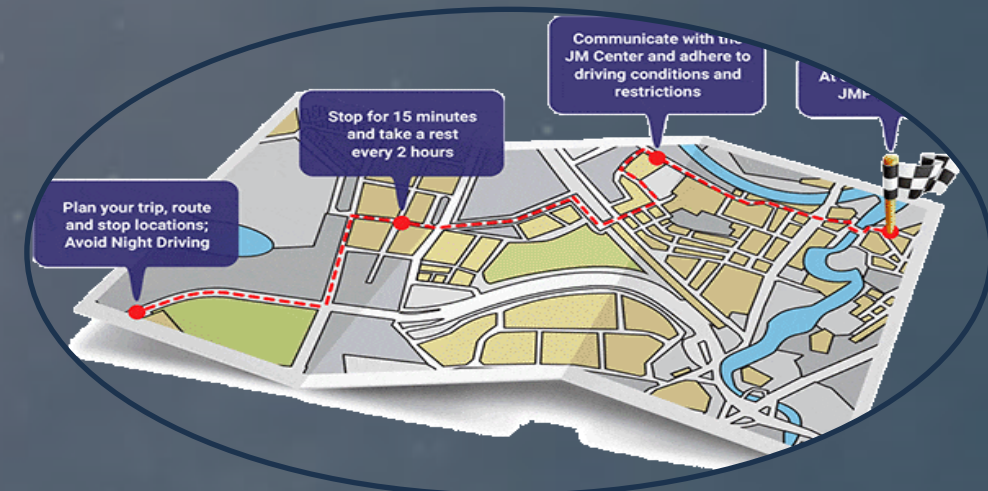
**Minimize Long-Distance Road Transport**



**Prioritize Public Safety While Deciding Mode of Transport**



**Journey Management Plan (JMP)**



**Prohibition on Night Driving & Driver Qualification**



# PNGRB ROAD TRANSPORTATION SAFETY GUIDELINES



**Medical Fitness Checks**



**Minimize Waiting Time at Loading/Unloading Points**



**Adherence to Duty Hour Limits**



**Driver Fatigue Management on Night Driving & Driver Qualification**



# PNGRB ROAD TRANSPORTATION SAFETY GUIDELINES



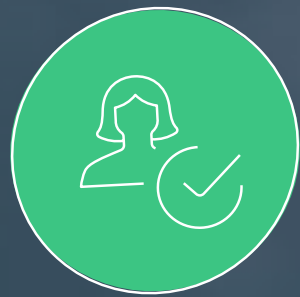
**Alternate Driver/Helper**



**Details on Invoices,  
Biometric/App-Based Attendance**



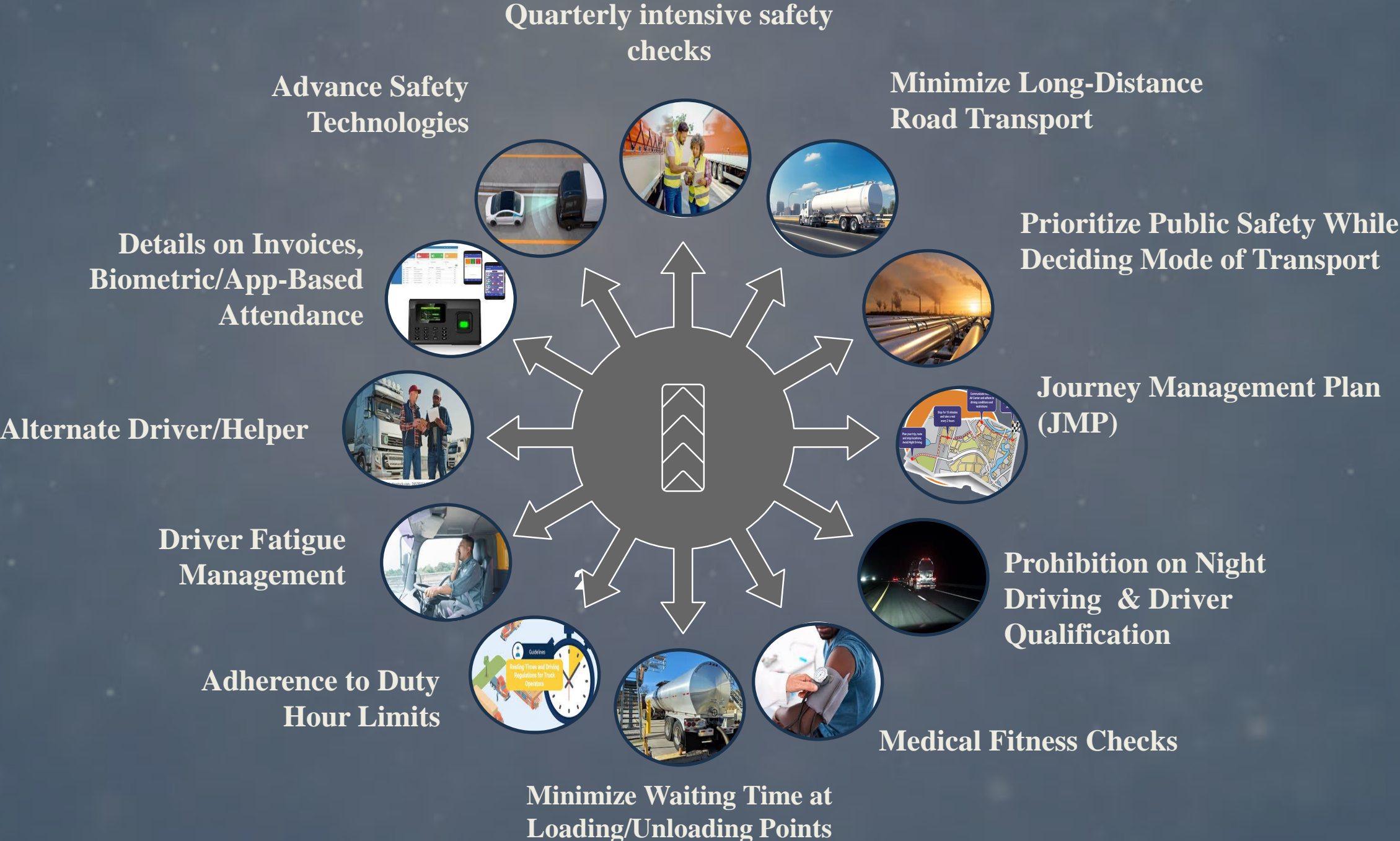
**Advance Safety Technologies**



**Quarterly intensive safety  
checks**



# PNGRB ROAD TRANSPORTATION SAFETY GUIDELINES





# Way Forward – Excellence in safety in Road Transportation



# DRAFT REGULATIONS ON ROAD TRANSPORTATION



□ Technical Committee is being formed for development of Regulation on Road Transportation Safety of Hazardous Petroleum Products, LPG, Natural Gas etc.

Technical Committee Formation

Formulation of Draft Regulations for Public Consultation

Development of Final Regulation Post Public Consultation and Open House

# INTENT/OBJECTIVE



TRAFFIC SAFETY

**Safe & Secure Transportation  
Petroleum Products  
LPG  
Natural Gas**



**To Prevent all kinds of incidents  
Spillage, Fire, Injuries, Fatalities,  
By Adoption of - Robust Design,  
Journey Management Plan &  
Advance Technology**



**Emergency Response, Handling &  
Restoration**



**To Strengthen  
Accountability of Entities &  
Transporter/ Fleet Owner**

# Enhancing Safety in Road Transport of Hazardous Petroleum Products, LPG, CNG etc.



## PNGRB & PESO

- Formulate Rules,
- Regulations, and
- compliance monitoring



## Role of Entities

- Adopt best practices
- Implement proven safety technologies
- Journey Management Plan (JMP)



## State Transport

- Implement at the grass root level with strict enforcement.
- Handle Emergency response,
- Imposing Restriction
- Hazardous goods transport endorsement



## NHAI/SRTA

- Monitor road condition,
- Traffic signals, signage,
- black spots
- Ensure road safety

"When the Road carries risks,  
it's our shared responsibility to  
make it safe"



**THANK YOU**