



FATIGUE

Road Safety Conference

27 November 2018

Ali Pirlanti

Fatigue impacts you



Fatigue is a contributing factor in up to **20% of all fatal road traffic incidents**



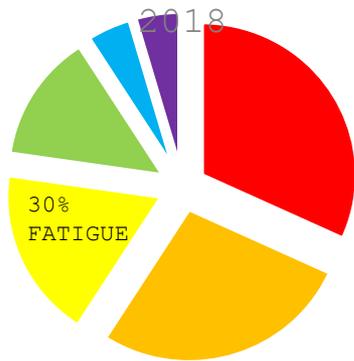
That is close to **250,000 that people** die on the roads each year because of **FATIGUE**



Fatigue is the lack of mental alertness, or drowsiness, arising from the lack of sleep.

WHY WE FOCUS ON FATIGUE

SMVI Root Causes from 2016 to May 2018



- 3rd Party Driving
- Defensive Driving
- Fatigue
- Life Saving Rules
- Mechanical Failure
- Subsidence



What we know Impact on Road Users



Reduced

- Concentration
- Vigilance
- Judgements
- Situational Awareness

Increased

- Reaction Time
- Lane deviation
- Harsh Breaking events
- Fuel usage
- Variable speed
- Likelihood of micro sleeps
- Napping behavior / taking rest breaks
- Caffeine consumption
- Crash rate

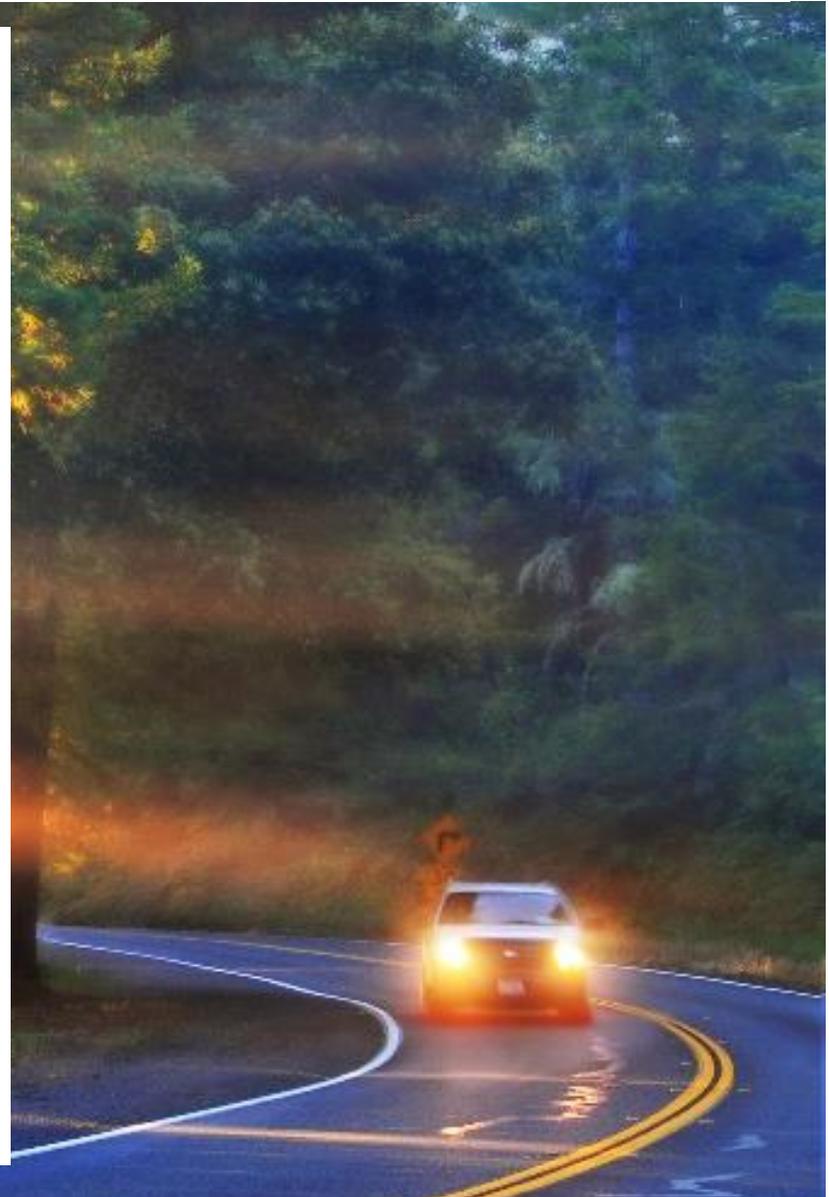
What we know Drivers

Events

- On long journeys on monotonous roads
- Between 2am and 6am
- Between 2pm and 4pm
- After having less sleep than normal
- After drinking alcohol
- If taking medicines that cause drowsiness
- After long working hours or on journeys home after long shifts, especially night shifts

Drivers most at risk

- Young males
- Shiftworkers
- Commercial vehicle drivers



What we know **Reducing Fatigue**

- Get at least 7 hours of good sleep every day
- Drivers to be well rested before a journey
- Plan regular rest breaks
- If necessary, plan an overnight stop
- Avoid a long drive after working a full day
- Avoid night and early hours driving
- Be extra careful during the post lunch dip period
- If sleepy - stop somewhere safe



In practice

Shell Upstream Bulgaria

- DDT trainings for all dedicated drivers
- Road risk assessment for Sofia-Bourgas road and reduced speed limits for high risk locations
- JMP in place for any road transport activity more than 50 km out of main city centers
- IVMS in place to improve driver behaviours

Outcome : no single road transport accident (minor/major) in last two years operations



**Assessment conducted
2-3 December 2015**

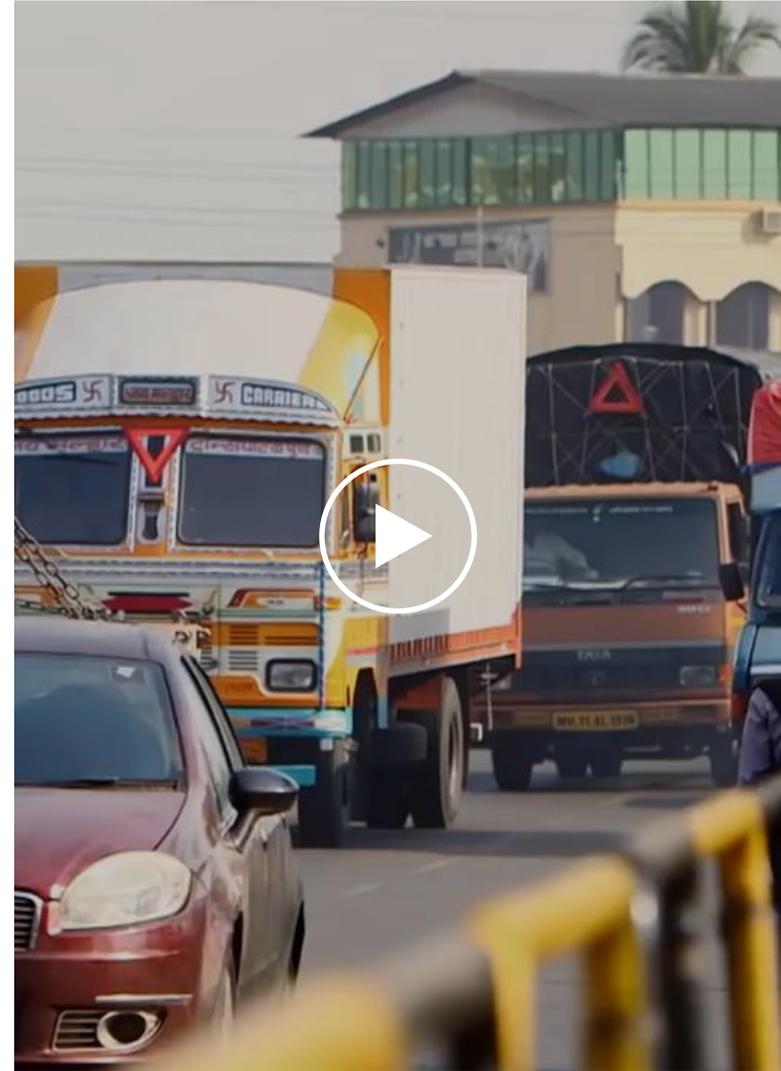
Shell			safety driving academy
52.7	Tunnel: bad lightening in the tunnel The tunnel appears immediately after the corner and if not looking at the signs can surprise you; Pay attention to the signs, slow down to 80km/h		
55.0	Risk of aquaplaning		
57.1	Risk of aquaplaning, left corner, one of the most dangerous places on the highway Slow down before the signs when raining		

In practice

Safer trucking in India

- Shell India has introduced a comprehensive safety programme for its truck drivers called HumRahee – a Hindi word meaning “travel companion in a long arduous journey”
- The programme includes defensive driving training sessions both in a simulator and a truck, but also focuses on drivers’ health and nutritional wellbeing

Outcome: Insights show that HumRahee graduates are nearly six times safer on the roads



In practice

Travelling Iraq's challenging roads

- Iraq has one of the highest road fatality rates (WHO)
- Basrah Gas Company (JV) introduced a defensive driving skills programme to help their 5,100 Iraqi employees commuting safely each day
- "Train the trainer" approach: local employees, trained to become qualified trainers, have rolled out defensive driving training to other drivers at BGC



In practice

Journey management in Qatar

- Journey management and In Vehicle Monitoring Systems (IVMS) in our vehicles have long been requirements in Qatar Shell
- As part of a new initiative, data from each journey is analysed in order to improve the next time

Outcome - this work has helped:

- Drivers to improve their driving behaviour
- Minimise the likelihood of accidents
- Reduce the number of journeys taken

Shell offers a range of awards to encourage and incentivise safe driving, including "Driver of the month"



In practice

Safety leadership in Russia

- The Sakhalin Energy* Road Safety Programme addresses road safety in an environment where driver behaviour, road and weather conditions as well as vehicle standards presented big challenges.
- All Sakhalin Energy and contractor vehicles contain an IVMS and must pass a series of simple checks before they can be used for company operations. They must also pass Defensive Driver training.

Outcome: Today, the Sakhalin Energy Road Safety Programme is recognised for its consistently high performance over many years in a challenging environment

* Shell is one of the shareholders in Sakhalin Energy

The Safety Rangers, a road safety monitoring team, work with the local police to patrol the most dangerous roads and conduct spot checks on Sakhalin Energy and contractor vehicles

