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Minimize Road Fatalities by Constructing Better Quality Road

How The Poor Quality Road Causes Accidents.

4

Don't blame us for accidents: Haryana police

TIMES NEWS NETWORK

Gurgaon: The Haryana police on Sunday blamed bad road condition and faulty road engineering for the increasing number of road accidents in the state.

Haryana director general of police (DGP) R S Dalal, at a state level function at Ambala, said that though there is a general perception that most of the road accidents are caused due to carelessness of police, the truth is that "last year 80 per cent of accidents that took place happened due to engineering faults of roads. In Haryana alone, 4,553 people lost their lives in separate road accidents in 2009," the DGP said.

He added that an effective action plan is being prepared by the state police to minimize road accidents in Haryana. Dalal said that officials of public works department (PWD), transport department, besides police department will be roped in to prepare this plan.

The DGP was speaking on the occasion of World Commemoration Day, which is observed in the memory of victims of road accidents.

This is for the first time, any state police has officially identified poor road engineering as one of the major reasons behind the road mishaps. For years, road safety experts have been highlighting how road-owning agencies have little technical expertise to build roads, which would reduce accidents and fatalities as well.

"We have been pressing for the need to build forgiving roads. The road transport and the highways ministry have come out with a guideline which all state PWDs should follow to put brakes on the road accidents," said K K Kapila, president of International Road Federation.

President of Institute of Road Traffic Education (IRTE) Rohit Baluja said that there are neither traffic engineering centers nor the science of traffic engineering are being practiced. "Road authorities either depend upon consultancies or use traditionally outdated control systems. Until we have traffic engineering wings in the agencies building roads, we can achieve the target of building safe roads," Baluja added.

Many experts, however, don't agree with the police version. 'The callous attitude at the Expressway is a classic example. Despite the ban, two-wheelers, three-wheelers and all types of slow moving vehicles crowd the expressway, making the stretch extremely accident-prone.

With police being rarely present on this 28 km stretch of the expressway and even if they are there, they hardly nab the traffic offenders drivers of slow moving vehicles flout the traffic norms and enter the high speed corridor.

The three players, whose responsibility is to keep the traffic offenders in check the private concessionaire DSC Ltd, traffic police and NHAI pass the blame on each other.

The NHAI feels it has done enough by ensuring that the entry and exit points have huge signage, which clearly prohibits the entry of all slow moving vehicles. Barring the stretch between Rajokri and RTR crossing section of the expressway, the slow moving vehicles should not use the main expressway. They have been exempted from making toll payment, simply because they are supposed to use the service road only. Traffic police in both Delhi and Gurgaon and the concessionaire have to implement the rule, said a senior NHAI official. DSC Ltd, the developer and operator of the expressway project, claims that it is doing its bit by deploying enough number of traffic marshals, who don't have any legitimate power to prevail upon the violators.

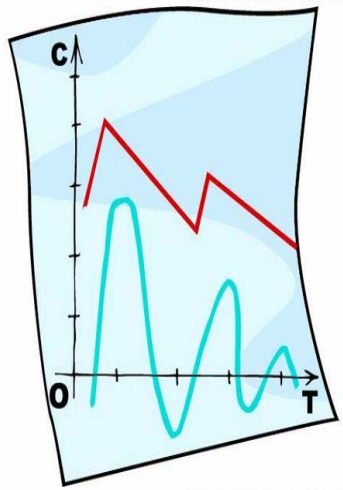
Road Accident Statistics

- More than 1.2 million people are killed in Road Accidents, worldwide every year i.e. around 3,000 deaths daily.
- In India at least 13 people are dying every hour in road accident.

Table 3 Road traffic fatalities in India

Year	Fatalities	Population (million)	Fatalities/million persons
1997	77,000	955	81
1998	79,900	971	82
1999	82,000	987	83
2000	78,900	1,002	79
2001	80,900	1,027	79
2002	84,059	1,051	80
2003	84,430	1,068	79
2004	91,376	1,086	84
2005	98,254	1,103	89
2006	105,725	1,120	94
2007	114,590	1,136	101

Source: National Crime Records Bureau, Delhi



Road Accidents and Indian Economy

Total Annual economic loss of India due to road accidents is more than Rs. **3,00,000 crs**.

i.e. more than **TWO** times the annual defense budget Rs. **1,41,703** Crs. for FY 2009-10

3 to **4** % of Gross National Product is lost in Road Accidents.

'Overloading of trucks causing grave damage to national, state highways'

- Due to ongoing deterioration of road assets, the country is losing Rs 80,000 cr every year
- "Not only truck operators but negligent authorities are equally responsible," said S Gangopadhyay, Director, Central Road Research Institute, New Delhi

■ The Hitavada Team


Satish Raut

THIS can be attributed to spiraling fuel prices or the indifferent attitude of the local administrations. The heavy commercial vehicles are carrying loads much more than the permissible limits, thereby causing grave damage to road network.

Freight traffic by road has increased from 595 billion tonne-km in 2003 to a whopping 766 billion tonne-km in recent times. Moreover, a detailed survey in this regard reveals road transport sector turnover of Rs 700 billion per year and it is likely to increase further.

Director, Central Road Research Institute (New Delhi) S Gangopadhyay, who is in the city to participate in the Indian Road Congress, said, "Heavy axle loads in heavy vehicles is responsible for causing extensive damage and pre-mature deterioration of roads, particularly the National Highways."

The result: Only 20% of National and State Highways across the country are in good shape. Indian roads are designed for a lift to support predetermined repetitions of an axle load of 8.16 tonne, but overloading of trucks to the extent of 100 to 150% has drastically brought down the life of already poorly surfaced roads. It is estimated that about 80% of trucks plying on Indian roads are overloaded.

The effects are worse. Statistics reveal that the number of road accidents due to bad roads is high and rising. Truck overloading is making a huge dent on the Indian economy in terms of increased maintenance cost, vehicle operating cost, travel time and deteriorated environment, Gangopadhyay pointed out.

The country is losing Rs 80,000 crore every year due to increased vehicle operating cost. This illegitimate overloading is benefiting only a section in the society - transporters and those who are allowing the overloaded vehicles to ply on road taking facilitation money.

Moreover, overloading of vehicles adversely reduces the engine efficiency and results in substantial tail-pipe emission. "The mischief carried out by a very few is causing a major damage to the society and needs to be curbed," Gangopadhyay said.

The truck operators resort to this overloading for minimising the total transportation cost per tonne-km by carrying maximum pay load in least number trips. Researches have shown that an axle carrying double the legal load, may cause damage equivalent upto 60 times that of a legal axle load. "Not only truck operators but negligent authorities and truck authorities are equally responsible for overloading," Gangopadhyay lamented.

"Law enforcement agencies should take stringent actions against truck operators. Offenders should be heavily penalised commensurate with the extent of damage done to the pavement instead of the present penalty of only Rs 500. Alternatively, transporters may be asked to offload the additional load at identified sites with high daily charges for the period of off-loaded items are kept at the sites," Gangopadhyay pointed out. Moreover, axle loads can also be controlled through concessionaires who would be encouraged to have a system wherein overloaded vehicles are heavily tolled. The additional fund so generated can be used for maintenance of infrastructure exclusively.

There is also a need to establish Vehicle Overloading Management System (VOMS), since its aim is to maintain vigil on the damage to the road, thereby optimising the funds available for road construction and maintenance. "No amount of resources will be able to sustain the roads in a good level of serviceability if the devil is constantly working against it," Gangopadhyay added.

Bumpy roads proving hazardous for health

- Backache, pain in neck, increasing in youths

■ By Vikas Vaidya

IN THE two previous Indian Roads Congress that were held, tall promises were made, resolutions were passed to improve the road conditions. In spite of the big talks, common man continues his journey on a bumpy road. These roads are proving hazardous for human health - be it ortho problem, ear pain, brain damage, psychological problems. Moreover, pregnant ladies may have early labour pains or even have miscariages due to bad roads, though it may be a reason.

Dr Sajal Mitra, Head, Department of Orthopaedics, Government Medical College and Hospital (GMCH), said, "A few years back, city roads were widened and were in good condition. Naturally, speed of vehicles knew no limits. Till date, the vehicles are running beyond speed limits. This is one of the factors that lead to spondylitis. Though, a person suffers spondylitis due to exaggerated ageing, we call it multifactorial means where more than one reasons are involved."

Dr Mitra pointed out that bad roads cause vibrations in the body. A sudden big jerky or shaky movements may cause acute internal injuries. Chances are more for two-wheeler riders as jerky movements may have chronic effects. Almost two decades ago, patients in the age group of 50s and 60s suffered back and neck pain. But today, the ailment is found even in the youths of 20s and 30s. Bad roads may also cause cervical pain, lumber pain, pain in neck and lower back."

According to Dr R Rajan, noted Orthopaedic Surgeon, "Bad roads make people suffer from back-related and neck problems. Early spondylitis is most common now. Number of patients suffering cervical spondylitis and lumber spondylitis are increasing, especially in two-wheeler riders. Reason is again the same, bad and bumpy roads. In the last few years, percentage of patients suffering from back and neck pain, has four times increased."

Dr Surendra Gawarle, Head, Department of ENT, GMCH, said, "There is no direct impact of bad roads on ear. If the person is already suffering from the problem, then he or she can suffer a serious problem. Ear has an organ labyrinth that maintains the balance of the body. For those who are suffering from labyrinth related problems, hard jerks or continious travelling on bad roads may make it severe.

When asked whether bad roads are hazardous in terms of psychological disorders, Dr Sudhir Bhave, noted Psychiatrist said, "Yes, to some extent. Driving on bumpy roads can irritate a stressed out person. We call it environmental stress. If we compare the one who travels on bad roads and another traveling on good roads, the difference can be seen."

Dr Ajay Kurve, noted Neurosurgeon pointed out that above all, bad roads affect spine. Basically spine disorders are common among elderly, but now being noticed in youths, too. Along with other reasons like lack of exercise, feeding on junk food, abnormal postures, bad and bumpy roads are important factor. This can have an impact on brain, too. Pain in hands and legs, frequent cramps, numbness, too, may be be signs of nervous problems.

Dr D N Buhariwala, noted senior Gynaecologist, warned that pregnant ladies should avoid night driving on bad roads. Sudden jerk, bad potholes can result in early labour pains, especially in the last few months of the pregnancy. Sudden jerk may result to severe problems and might lead to termination of pregnancy.

'Give priority to proper road maintenance'

■ Special Correspondent

INDIAN Road Congress (IRC) President Liansanga has urged the engineers to give more emphasis on proper maintenance of road. In his presidential speech, Liansanga said that due to top priority accorded for development of new roads, the maintenance has not received desired attention.

Liansanga addressing 1500 IRC delegates said that maintenance of road is equally important as creating of new assets. In fact, preservation of existing road system in proper condition is more important than adding new length and it gives better dividend for the country's economy. He said that country is sustaining huge loss due to poor condition of roads. The loss due to wear and tear of the vehicles, the time lost by the passengers and loss due to accidents on account of bad road condition is enormous. The turn around of commercial vehicles in the country is very low compared to other developed country due to bad roads. He said, turn around of commercial vehicles can easily be increased by proper maintenance of road surface.


Liansanga addressing IRC convention. (Pic by Satish Raut)

The poor maintenance of roads is attributed to financial constrains rather than to inadequate system and technique of maintenance of engineers. He said that road maintenance expenditure alone is only 16 per cent of total road sector revenue collected and the total expenditure on roads in the country is about 50 per cent of road sector related revenues. The Central Government and State Government should create awareness and realization of the importance of road maintenance.

Liansanga said that design and construction of quality and safe highway infrastructure and efficient traffic management can lead to a massive reduction in road accidents. He said that vulnerable road users need to be considered as an integral part of road traffic in planning and design of road facilities. Retro-reflective and variable signages should be installed at appropriate locations to give sufficient information and caution about accident spots. He said, safely audit should also be carried out during design, construction and on completion of project before opening to traffic.

He suggested, re-orientation of design of intersections and zebra crossing in urban areas and on inter city roads to make them easily accessible for the physically challenged persons. He said, an international seminar on reducing carbon footprints in road construction in collaboration with the World Road Congress will be held in February 2011 at New Delhi.

Changer- reducing green house gas emission

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  On-site Impacts

  Pavement Construction Materials

  Materials Transport

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- Drastically increases the strength
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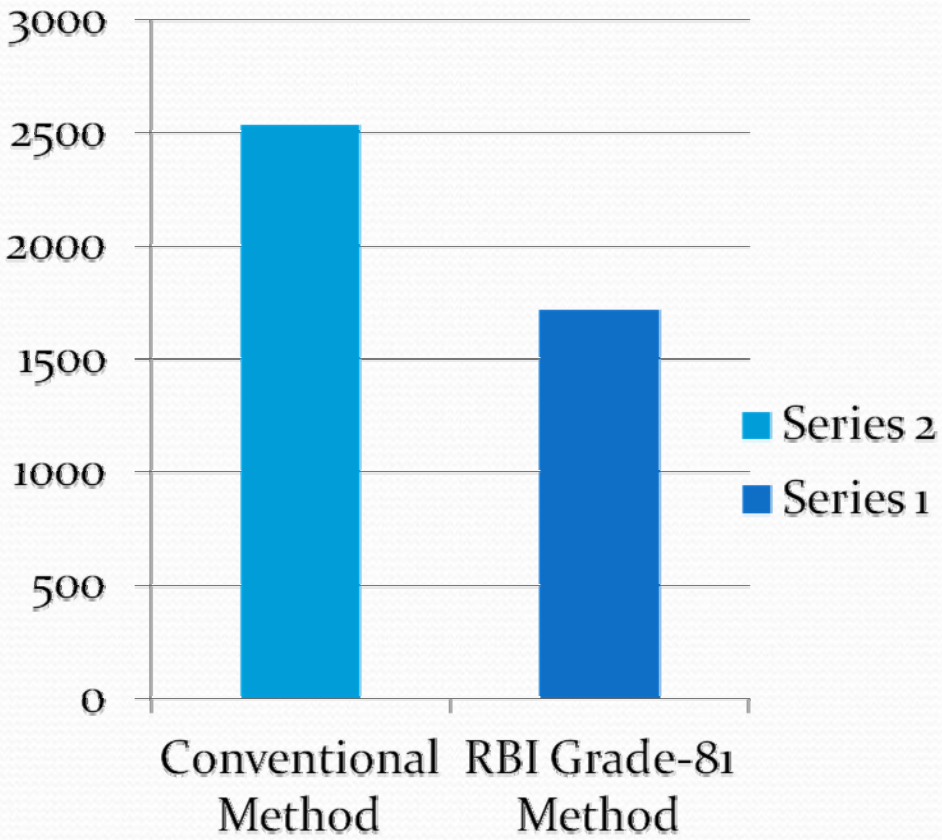
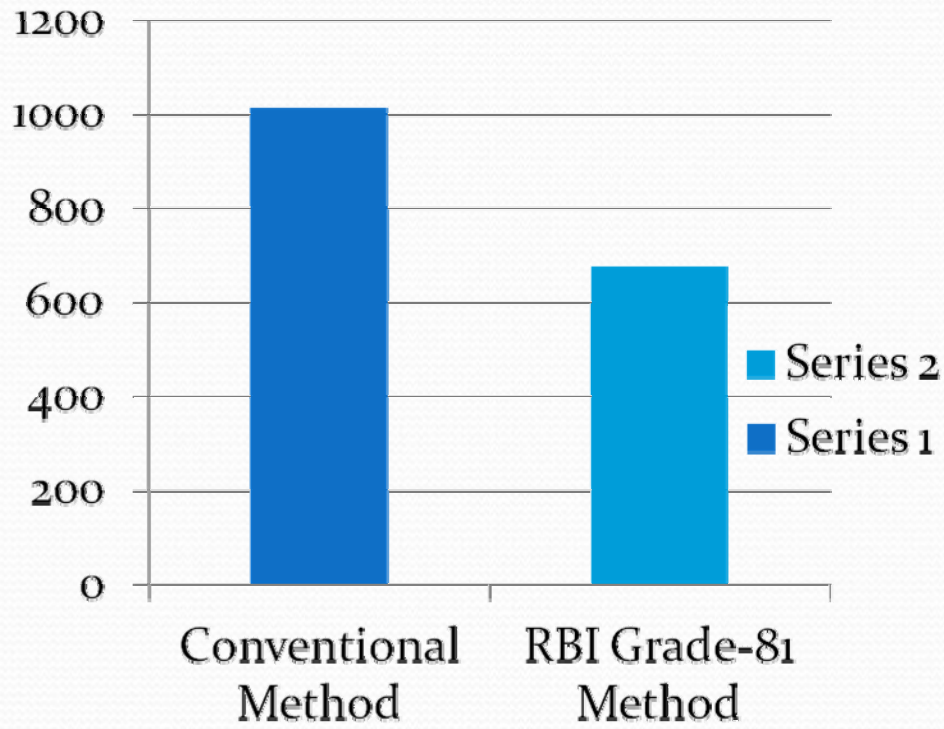
- Longer Durability
- Reduces Maintenance Cost

ADVANTAGES OF RBI Grade-81

- Reduces leaching and contamination of ground water
- Reduces use of bitumen.
- Reduces energy consumed in road construction
- Saves construction material like Aggregates, Good soil
- Saves non- renewable resources in construction process
- Reduces the Carbon Emission resulting into carbon credits

Number of Truck Trip Required





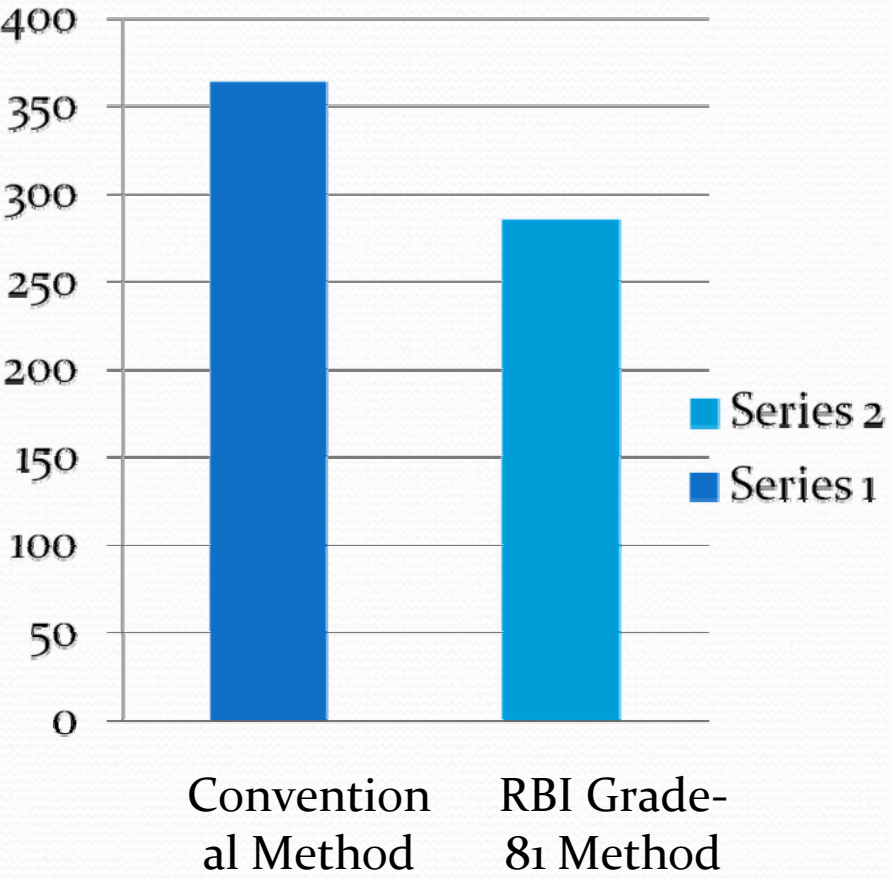
National Highway

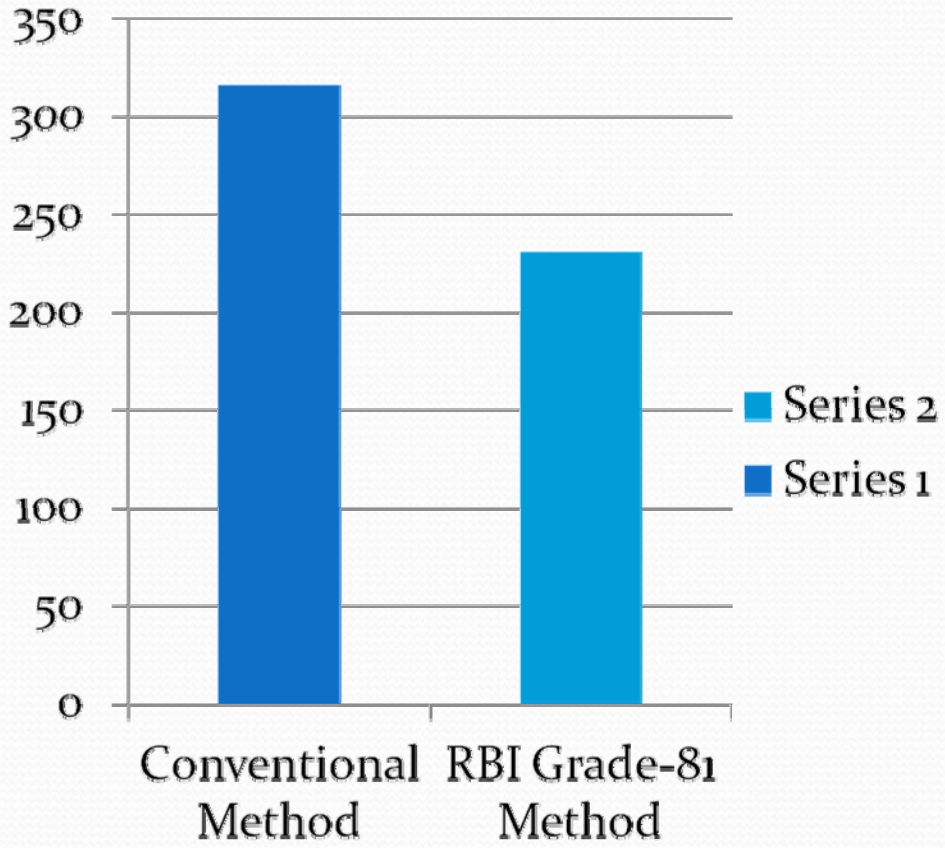
Saving 32.25 %

State Highway

Saving 33.3%

Number of Truck Trip Required





Rural Paved Road

Saving 21.49 %

Rural Unpaved Road

Saving 26.98 %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