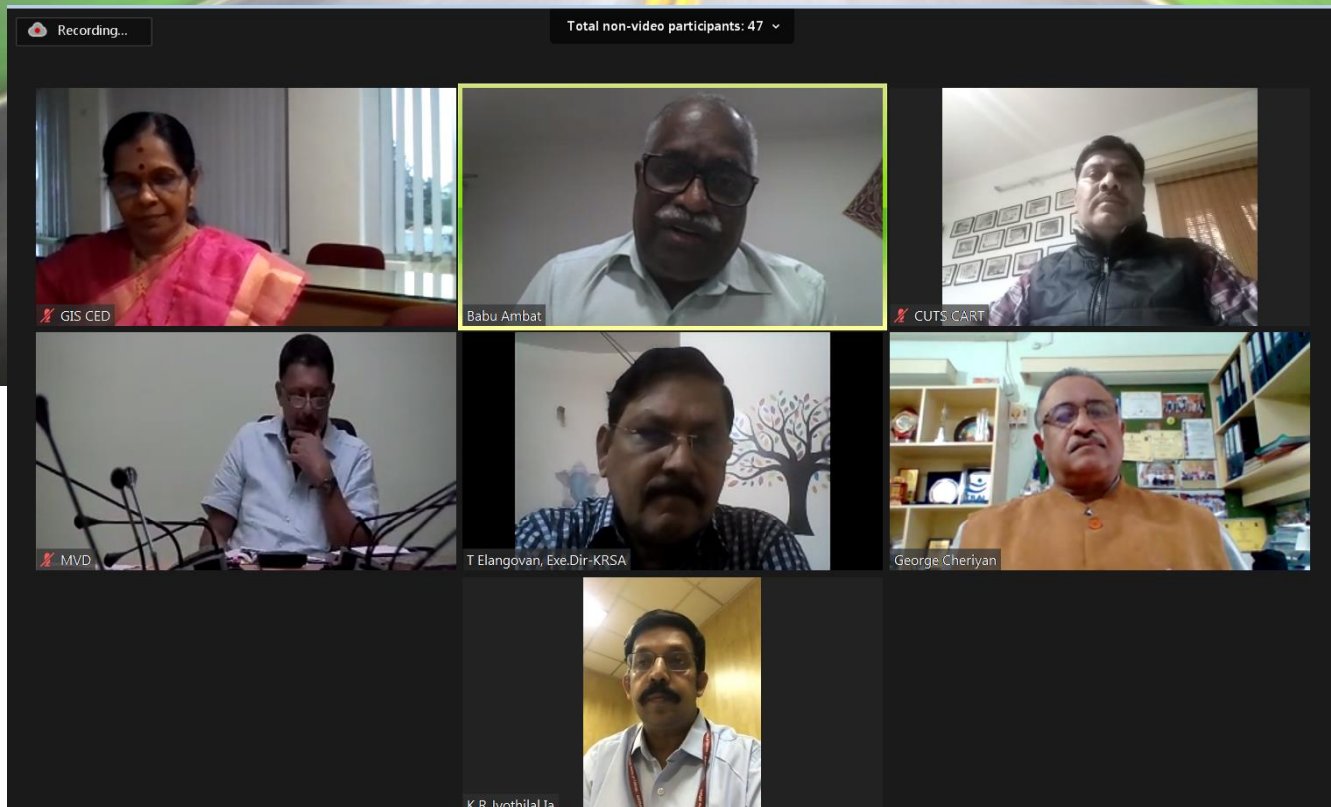


Webinar Report

Ensuring Renewed Focus of Government of Kerala on Road Safety in 2021 *Opportunities and Challenges*

12 January
2021
Tuesday
4:00-5:30 PM IST



Organised by



In Association with



CENTRE FOR ENVIRONMENT AND DEVELOPMENT
THIRUVANANTHAPURAM

BACKGROUND

Road accidents are now globally recognised as a serious public health problem. As we know, In India, more than 1.5 lakh people, mostly youths, lose their valuable and productive life in road accidents every year. In Kerala alone around 4,440 people died and 6,055 people got injured in around 41,111 accidents in 2019. In the first six months of 2020, Kerala has shown good improvement and was able to save around 1,045 lives in comparison to 2019. In the year of 2020, two striking factors were present from road safety point of view. One was implementation of the MVA Act, 2019 and second was the pandemic situation.

In January 2020 to March 2020 period, the enforcement was made effective and as a result there was 17 per cent reduction in the fatalities whereas during the April to May, 2020 lockdown period, around 90 per cent reductions in fatalities was recorded. During May to June, 2020 lockdown period 75 per cent reduction in fatalities was reported. In unlock period, June to August 2020, 40 per cent fatalities were reduced in Kerala. In the post MVA Act, 2019 (September 2019 to August 2020), there was 30 per cent total reduction in the fatalities or a total of more than 1,000 lives have been saved and more than 12,000 injuries were avoided in the state, which saved lots of state resources, which were used in handling COVID-19 pandemic. In terms of electronic monitoring of the traffic violations, Kerala is far ahead of other states in the country.

Despite all the above sincere efforts and good results, the state is losing thousands of its resourceful people every year. So how the precious lives of these people can be saved is the moot question. To deliberate on this big question of road safety and related issues, challenges and opportunities, Centre for Environment and Development (CED), jointly with CUTS International has organised a virtual zoom webinar on '*Ensuring Renewed Focus of Government of Kerala on Road Safety in 2021: Opportunities and Challenges*' on January 12, 2021.

The webinar discussed at length the details of the renewed focus of Government of Kerala about opportunities and challenges regarding Road Safety for the year 2021. This report provided the summary of the proceedings of the webinar and the way forward.

SUMMARY OF WEBINAR PROCEEDINGS

The meeting started as per the schedule, at 4 PM, with the welcome address by **Dr. Babu Ambat**, Executive director of CED. He introduced the organisers and welcomed all the guests, speakers and participants.

The opening address was delivered by **George Cheriyan, Director, CUTS International**. He explained the main objective and importance of the meeting. He also moderated the webinar.

George Cheriyan pointed out that as per MoRTH(Ministry of Road Transport and Highways) crash data 2019, Kerala ranks fourth among states in India for the road crashes and Kerala ranked fifth according to 2018 crash data. The population of Kerala is only 2.7 per cent of the entire country, but it accounts for 9.2 per cent of the total crashes. Around 3.2 per cent increase in fatalities occurred in 2019 compared to 2018 due to traffic crash injury in Kerala. This is a matter of major concern. More people are dying due to crashes every year compared to the deaths occurred due to COVID-19

pandemic. Therefore, drastic measures must be taken to address this matter. Idukki, Palakkad, Thiruvananthapuram, Pathanamthitta and Kozhikode have shown a decline in crashes but there is increase in fatalities, which indicates the severity of crashes. Dangerous driving and over speeding are the major cause of crashes according to MoRTH crash report 2019. Other risk factors identified were helmet and seatbelt compliance. Around 644 drivers and 1,207 passengers died as a result of not wearing helmet. The youngsters accounts for higher percentage road crash deaths, which includes 136 people with age below 18 years, 673 people between 18 and 25 and 588 people between 25 to 35 years. Around 34.7 per cent reduction in crashes and 14.1 per cent reduction in fatality is reported from January to September 2020 when compared to 2019 crash data. But this includes lockdown period also in addition to the enforcement of Motor Vehicle Act 2019 in the state.

Shri K R Jyothish IAS, Principal Secretary, Transport, Government of Kerala delivered the inaugural address.

He elaborated the initiatives of Government of Kerala after enacting the MVA 2019. The Motor Vehicle Act 2019 has been implemented but there are some amendments, which are under consideration and are in the final stage. The stakeholders involved in the road safety are Police, Motor Vehicle Department, Education Department, Trauma care by Health Department, PWD, NHAI and so on. Road Safety Commissioner is responsible for the coordinating among all the stakeholders.

SAFE KERALA project was implemented across the state for almost a year with the help of Police and Motor Vehicle Department. Kerala is one of the top states to attach GPS trackers in public transport vehicles, which has been made mandatory from January 1, 2021. The control room, which is capable of tracking up to two lakh vehicle monitors the system. Violations are fined. A plan is being made to suspend the licence of repeated offenders. A system for monitoring the driver behaviour needs to be developed.

The engineering measures include road safety certification, Black spot rectification. In case of Education measures, apart from the awareness programmes, it is recommended to make road safety a part of the curriculum in schools and colleges.

SAFE CORRIDOR project has been taken up by KSTP (Kerala State Transport Project), in which one of the components is to set up trauma care centers along with ambulances in government hospitals and private hospitals so that crash victims can be taken to hospitals without delay. In the new Motor Vehicle Act, there is provision for cashless treatment for crash victims. Also, effort is being made to link the ambulance with the hospital such that the crash victims get immediate care upon arrival.

The width of roads in Kerala is comparatively less due higher population density and various other factors and the vehicle population is also high. All these issues need to be addressed. Kerala aims to have 50 per cent reduction in crashes within a year. The policies that will be suggested for crash reduction are stricter policies for obtaining licence, monitoring driver behaviour, effective use of vehicle tracking systems and common command centre for all departments including Police and Motor Vehicle Department.

Shri Shibu K Itty, Asst. Transport Commissioner and Enforcement Coordinator, M.V.D. Kerala provided the details of initiative for enforcement of the Act in Kerala.

Even though Kerala ranks fourth in India for the number of crashes, it ranks only 16th in case of number of fatalities. According to MoRTH 2019 crash report, persons killed in road crashes per 1,000 crashes is 10.8, persons killed per 10,000 vehicles in road crashes is 3.3, persons killed per 10,000 km of road in road crashes is 167.4, road crash death per month is 370 and road crash death per day is 12.

In 2018 SAFE KERALA project was launched funded by Kerala Road Safety Authority (KRSA). This project was developed from Sabarimala safe zone project, which was found to be highly effective in reducing crashes. The training of officials for this project was completed in December 2020 and about 50 per cent infrastructure development is completed as of now. It comprises one state control room and 14 district control rooms headed by RTOs and 85 dedicated enforcement squads. 262 new officers were recruited for road safety alone. It was headed by Joint Transport Commissioner Enforcement. Road Safety is a complex matrix, which requires a multi prolonged approach, for which enforcement is an important component. This enforcement is driven by data, research and cutting-edge technology. The local inputs are taken and a central evaluation is carried out. Short term targets are shaped in order to achieve long term goals. There exists a close association with media, which supports the enforcement intent. The Safe Kerala project is a resounding success. There was a reduction of crashes, injuries and fatalities by 30 per cent and the fatality reduction is evident from September 2019. Around 15-20 per cent reduction of crashes has occurred even after discounting COVID-19 effect.

Kerala is the first state in India to invest 65 electric vehicles for enforcement purpose, which was funded by KRSA. Automation of the enforcement system was carried out. Advanced technologies like machine learning, machine vision, artificial intelligence and deep learning to built algorithms and detection models to identify traffic violations (no helmets and seatbelts, usage of mobile phones, non-standard number plates) are being used in Kerala. Contactless checking with E Challan is already implemented by MVD (Motor Vehicle Department) and they were the first to do so. Blacklisting of repeated offenders was incorporated with VahanSarathi managed by NIC (National Informatic Centres), which has enabled in collecting fine without delay. Fourteen fully equipped interceptors were launched through the state. The cameras in the interceptors are connected with the VahanSarathi software, which helps in identifying traffic violations and blacklisted vehicles in 700m radius of the interceptor. Dedicated wireless communication system for MVD will be launched soon. A comprehensive action plan for reduction of crashes and fatalities is being formulated. The year 2019 will be taken as the base year. About 10 to 15 per cent reduction is expected to be achieved in the year 2021. The implementation of the action plan will be from January 2021 with intermediate targets. The first, second and third review will be on March, June and September of 2021 respectively. The results of 2021 will be reviewed on December 2021.

Dr Santhosh Kumar, Deputy Superintendent, Government Medical College, Thiruvananthapuram has explained the accident and trauma care related aspects of Road Safety in Kerala and the achievements after implementation of MVA 2019.

A slight decrease in severity was observed in the period after the implementation of Motor Vehicle Amendment Act 2019. Around 4 per cent reduction in crashes and 17 per cent reduction in fatalities were observed. It can be said lesser vehicles and stricter enforcements can lead to reduction of crashes. The work from home method, online schooling, online shopping, restrictions in public functions (marriages, funerals, marches) have also contributed to this reduction. The level 1 hospital

in the Government sector have state of art medical facilities including trauma care. In case of level 2 and level 3 hospitals do not seem to be up to the mark. There is need for more hospitals and more facilities including X ray facilities, lab facilities, trauma surgeons and nurse. A reluctance to invest in human resource is observed, which is an issue that needs to be addressed. Dialing of 108 for ambulance is available but no dedicated ambulance for traffic crashes is available. Even though the number of ambulances is designed for trauma as a major factor, it is being used for all emergencies including non-trauma. In order to achieve a robust system, there may be a need to actually double the number of ambulances. Basic Life Support skills provided to the public have helped a lot in saving lives. More infrastructure and other facilities are required in Level 2, 3 hospitals and Level 4 ambulances. Insurance system has to be slightly modified so that private sector can also bring in more resources. The pandemic has shown people a new method to deal with old practices.

Dr B G Sreedevi, Former Chief Scientist & Director of NATPAC talked about the Road safety engineering aspects.

Road safety engineering (RSE) involves managing and reducing the risk of fatalities/injuries to road users. The RSE applies engineering principles to improve the safety of the road environment and reduce the total cost of road crashes to the community. RSE aims at crash prevention, behavior modification and injury control. The engineering measures include road safety audit, scientific crash data management, safety of vulnerable road users, vehicle safety, speed management, scientific crash investigation and reconstruction, identification and rectification of crash black spots, identification and rectification of crash prone road corridors, monitoring and evaluation of counter measures and applications of intelligent transportation system.

Road Safety Audit is a formal, systematic and detailed examination of a road project by an independent and qualified team of auditors that leads to a report of potential safety concerns in the project. The five stages of auditing a road project includes feasibility stage/preliminary design stage, detailed design stage, construction stage, pre-opening stage, safety audit of existing roads. It is a proactive approach. Scientific Crash Data Management involves collection of crash data by trained professionals and developing a Database Management System. Safety of Vulnerable Road Users includes provision of pedestrian sidewalks and pedestrian crossing, provision of pedestrian over bridge or pedestrian underpass, provision of cycle tracks, exclusive two-wheeler lanes, provision of grade separated crossing for two-wheelers, exclusive pedestrian timings at intersections and so on. Speed Management includes safe operating speed for roads in Kerala, traffic calming measures, speed control from access roads, intelligent speed adaptation, speed enforcement cameras and speed limit signs and markings. A scientific Crash Investigation & Reconstruction aspect is a reactive approach. Road Crash Investigation helps road agencies to detect the gravity or extent of road infrastructure deficiencies that influence crash occurrence and to guide them in the implementation of appropriate improvement measures. Post-crash investigations determine how and why these failures occur and give additional answers to determine what can be done to prevent similar incidents. The purpose of crash reconstruction is to identify the critical factors involved in a road crash like pre-impact direction and velocities of colliding vehicles. The monitoring and evaluation must be carried out initially and periodically.

Kerala has done substantial work towards road safety. Scientific Crash Data Management, Scientific Crash Investigation and Reconstruction, Road Safety Audit, City Road Improvement Projects,

Identification and Rectification of Crash black spots, Identification and Rectification of Crash prone road corridors, Monitoring and Evaluation of Counter Measures and Applications of Intelligent Transportation System. The Scientific Crash Data Management has been planned since 2011 in Kerala. The Kerala SCRB(State Crime Record Bureau) have started using geo-cameras and their RAPID crash data platform is of great help. An Integrated Road Accident Database by IIT-M has been implemented Chennai, Karnataka, Madhya Pradesh, Maharashtra, Rajasthan and Uttar Pradesh. It is expected that Kerala will have an integrated database management system by the end of 2021. Kerala has come to a stage that every road project has a good Detailed Project Report with all the components as per the MoRTH specifications and IRC guidelines.

For example, Road Safety Audit for around 400 km of roads constructed/upgraded in Kerala under KIIFB (Kerala Infrastructure Investment Fund Board) is in progress by NATPAC (National Transportation Planning and Research Centre). DPR/Design stage audit of about 1,800 km of roads under KIIFB is in progress. M/S RITES is being involved in the road projects of KIIFB in different stages. DPR prepared by LSGD under Rebuild Kerala Initiative is being audited at design stage itself by a high-level technical committee. Designs under preparation must be audited by independent team to rectify the potential risk at design stage. By 2021, designs under construction must be audited by independent team to enhance safety of road users and construction workers. The agencies and government must take more initiative in auditing existing roads under National Highways Authority of India, PWD (NH), PWD (R&B), KRFB, LSGD.

One of the aims of Kerala with regards to road safety must be that all districts should have City Road Improvement Projects by 2021 and the Central Business districts of all districts must be bypassed. In Kerala, the research agencies like NATPAC with the help of KRSA (Kerala Road Safety Authority) have been doing the Scientific Crash Investigation & Reconstruction. From 2021 onwards, the crash investigation and reconstruction must be done for all crashes if possible. The black spots have been identified and prioritised since 2016. But it is a continuing process. So revised black spots needs to be identified and prioritised. As for the case of rectification of black spots, selected 75 crash black spots (SH & OR) is under investigation with the support of KRSA and implementation of measures is also under progress. From 2021 onwards, a calendar for black spot identification, investigation, preparation of improvement proposals and rectification should be made effective. The crash prone corridors have to be identified and rectified. The mapping of crash prone locations needs to be completed by 2021. Monitoring and evaluation of all roads in Kerala must be carried out for roads wherever the countermeasures are applied. iRAP (International Road Assessment Programme) can be used to evaluate the roads. Intelligent Transport Management System (ITMS) was implemented in Kochi. This must be replicated in all corridors of Kerala.

Shri. T. Elangovan, Former Director, Kerala Road Safety Authority explained the initiatives of Kerala Road Safety Authority (KRSA) to reduce road accidents and casualties.

The KRSA has sanctioned Road Safety Fund for 'provision of school zone treatment' across the state along main highways, where schools/educational institutions are located. Also, installation of crash barriers on roads in hilly areas, hazardous locations, and water bodies need a phased manner implementation. Adequate funds are earmarked to PWD (Roads). Due to concerted efforts, road fatalities or injuries have come down by 33.5 per cent during the year 2020 in Kerala. Total of 1,488 lives and 15,500 injuries lesser in 2020 year as compared to previous year. Normalising the effect of

COVID-19, overall reduction of 25 per cent road deaths were recorded in 2020 compared to same period last year.

Black spot management: From 2017 onwards, black spots management have been initiated in Kerala. But in the year 2018 and 2019, the target was not achieved. From 2021 onwards the black spot identification, prioritisation and rectification will be followed as per the MoRTH guidelines. In 2019, 235 black spots were identified as high-risk locations. About 80 per cent of these were addressed by providing short term measures. The implementation plan of long-term measures are under consideration by KRSA in collaboration with NATPAC. By March 2021, they will be implemented. From 2021 onwards Kerala will follow black spot management protocol set by the Ministry. By February 2021, the black spots will be identified, by April 2021 short term measures will be implemented and by September 2021 all black spots will be addressed and permanently rectified.

School Zone Treatment: Around 150 schools located in the high-risk locations in highways have been identified. School zone treatment will be provided. Apart from these schools located in the corridors having WWF projects will undergo school zone treatment. This will be achieved in phased manner in three to four years.

An initiative for installing crash barriers in hilly areas, vulnerable spots and water-logged areas in Kerala is going on. PWD (R&B) Public Work Department proposed to install crash barriers at all accident black spots, hazardous locations, hilly areas and water bodies.

Road Safety Campaign and Awareness: Campaign and Road Safety Awareness through all India Radio and FM station have been done on a day-to-day basis. It is broadcasted during peak hours as well as lunch hour. Road Safety Education will be provided to students through school curriculum and handbook for school teachers from next academic year onwards.

At the end **Madhu Sudan Sharma, Senior Program Officer, CUTS International** has given a summary of webinar proceedings and expressed vote of thanks to all the participants.

The Webinar ended at 5.40 PM and was an exceptional success with the participation of 71 people from different states of India.

The webinar was arranged as per a detailed program schedule given below:

Zoom webinar on

'Ensuring Renewed Focus of Government of Kerala on Road Safety in 2021: Opportunities and Challenges'

January 12, 2021 at 4.00 pm

Tentative Schedule

4.00 pm to 4.05 pm	Welcome of delegates	Dr. Babu Ambat, Executive Director CED
4.05 pm to 4.12 pm	Opening remarks by webinar Moderator	George Cheriyan Director, CUTS international
4.12 pm to 4.27 pm	Inaugural Address	Shri K. R. Jyothilal IAS Principal Secretary, Transport Govt. of Kerala
4.27 pm to 4.40 pm	Implementation of MVA Act, 2019- Initiatives by Motor Vehicle Department Govt. of Kerala	Shri Shibu K Itty, Asst. Transport Commissioner and Enforcement Coordinator, M.V.D. Kerala, Thiruvananthapuram
4.40pm to 4.55 pm	Accident and trauma care related aspects of Road Safety in Kerala	Dr. Santhosh Kumar S S, Deputy superintendent, Government Medical College, Thiruvananthapuram
4.55 pm to 5.10 pm	Road Safety Engineering related aspects	Dr B G Sreedevi Former Chief Scientist and Director, NATPAC
5.10 pm to 5.25 pm	Achievements of Kerala Road Safety Authority: on implementation of MVAA, 2019	Mr. T. Elangovan Former, Executive Director, Kerala Road Safety Authority Govt. of Kerala
5.25 pm to 5.30 pm	Summing up and Vote of Thanks	Madhu Sudan Sharma Senior Program Officer CUTS International

THE WAY FORWARD

The CUTS international in collaboration with Centre for Environment Development has organised many programmes during the last two-three years in Kerala to discuss and evaluate the activities of Government of Kerala and provide suggestions and recommendations received from various stakeholders. We also conducted many training programmes for capacity building of the implementing officers.

The present webinar also discussed at length various measures taken by Kerala in the previous years. The measures that can be taken in the year 2021 and henceforth to reduce the number and severity of crashes were also discussed. The Safe Kerala project, which shows significant reduction in crashes must be continued. The driver behaviour is an important factor that contributes to the safety of roads; hence a system to monitor the driver behaviour needs to be developed. The width of roads in Kerala is comparatively less due to higher population density and various other factors and the vehicle population is also high. All these issues need to be addressed. The 4E's measures, that is, Enforcement, Engineering, Education and Emergency response must be properly implemented. The comprehensive action plan formulated must be implemented and reviewed without fail to achieve the goal of crash reduction. More Level 1 hospitals with good trauma care and ambulances must be deployed so that crash victims can get immediate medical care within the golden hour. The Road Safety Audit is mandatory and must be carried out for all road corridors. City Road Improvement Projects must be planned for all districts by 2021. Crash investigation and reconstruction must be done for as many crashes, which will provide a detail about the cause and occurrence of the crash. A Scientific Crash Data Collection and Database Management System must be developed to properly handle and analyse crash data. The Black spot management following proper protocol must be ensured so that the black spots can be identified, prioritised and rectified properly. The mitigation measures must be applied in accordance with the need of the location and should be monitored and evaluated subsequently. Road Safety must be made a part of school curriculum as the lessons taught at a younger age will have greater impact. The consolidated effort of all stakeholders will ensure that the target of reduction of road crashes will be achieved.