

[MUSIC PLAYING]

AKMAL

Developing sustainable cities is one of the major concerns for planners around the world. Sustainable

ABDELATAH:

transportation systems add vital elements of a sustainable city. Transportation planners considered the [INAUDIBLE] for public transportation such as buses and light rail. And growth of private transportation, such as passenger cars and motorcycles as measures of the level of sustainability for a transportation system.

Developing countries that experience increases in income level are also witnessing high increase in population and vehicle registration rates. For example, in Malaysia there is an increase of about one passenger car and one motorcycle for each person added to the population. Such an increase in private transportation, is there a matching in rate of increase in public transportation system? In Malaysia, there have been no additions to the rail system over the past few years, and only a very small increase in bus registration over the same period.

For each 1000 persons increase in population, there is an increase of less than four buses, including private buses and public buses, about 1000 passenger cars and about 1000 motorcycles added to the road network.

So why should transportation planners worry about such a situation? Because there are several negative impacts, including, higher traffic congestion levels, more air pollution, greater noise levels, and increase in accident rates. The increase in accident rates often results in higher fatality rates, which is the focus of this presentation.

What is a fatality rate, and how it can be used? The traffic fatality rate represents the number of deaths due to traffic accidents put each 100,000 of population in any country. It's one of the major indicators used to measure the level of traffic safety on a road network.

Most developing countries have higher fatality rates than developed countries. Malaysia has set its goal to be among the developed countries by the year 2020. However, the current fatality rate in Malaysia is much higher than all developed countries. As shown in the illustration, the fatality rate in most of the developing countries is in the range of about three to seven deaths per 100,000 people. In Malaysia the rate jumps to approximately 25 deaths per 100,000 population.

Considering the countries around Malaysia, it's clear that some countries like Singapore, and Brunei have fatality rates that are within the same range as developed countries. On the other hand, as you can see here, the fatality rate in Malaysia is among the highest in Southeast Asia. In fact, the fatality rate in Malaysia is about five times the fatality rate in the closest neighboring country, Singapore.

So, taking a closer look at Malaysia's accidents, it shows that the percentage of motorcycles involved in accidents is about 1.5%, while the percentage of fatalities among motorcyclists is about 60% of the total fatalities. What might be some reasons for this high fatality rate among the motorcyclists?

One of the major problems with motorcyclists in developing countries is that they often do not follow traffic laws. They may ride between traffic lanes, a stop on pedestrian crossing area, or run a red light at intersections, as you can see from the video. Such a behavior is an indication of two main issues-- lack of enforcement, and lack of awareness.

So what do motorcyclists say when they are asked about their view regarding wearing safety helmets, and their perception of high rate of fatalities among motorcyclists? It appears from the presented information that most motorcyclists in Malaysia are not aware of traffic and safety regulations. However, according to a traffic safety expert, in Malaysia, the main causes of accidents are-- road user incompetence and driver fatigue. Road environment and vehicle conditions are also mentioned. The driver's awareness of traffic safety regulations are not given enough consideration in the expert's opinion.

**MOHAMED
SHAHARUDIN
BIN LADEN:**

During the implementation of a system, they found out that 50% of traffic offenders that are caught under the system couldn't be [INAUDIBLE]. So this 50% is serious loopholes in the implementation of the system. That's why, in November-- last November they tried to enforce the number of plates regulation to ensure that the ES system can work properly. AKMAL ABDELFAH: So, what are the efforts by the Malaysian government to reduce traffic accidents? According to one of the officials in the Malaysian Institute of Road Safety Research, MIROS, the following are examples of the studies to reduce traffic accidents over the past 10 years. Automated enforcement system implementation, such as using cameras at intersections to report traffic violations. Implementation of community based program on safety helmet. Implementation of road safety education in schools. New driver training curriculum based on learning outcomes.

However, these efforts to reduce traffic accidents and improve awareness have not been very successful at achieving their objectives. The last two Malaysian national plans, covering the period from 2006 to 2015, do emphasize the development of the public transportation system. However, these plans are still being implemented. Officials have indicated that there are studies regarding fatalities and some recommendations for reducing accidents, especially for motorcyclists. However, it seems that these recommendations have not had significant impact in reducing the motorcyclists fatality rate.

**MOHAMED
SHAHARUDIN
BIN LADEN:**

Why I changed my workplace probably because there's no public transport mode that can move me from home to my workplace, so that my personal experience why I'm changing mode of transport. As for right now, as speaking of our land transport especially in the big cities, I believe, yes, they do have buses, but most of public in big cities depends on-- and that the commuter.

The [INAUDIBLE] commuter is, I believe it's overloaded. They cannot fulfill the public demands on it. So the demand is sped up. So the sped up choice, either mode of transport, and I believe that motorcyclists is some of the most very popular choice for motor transport among big cities commuter compared to [INAUDIBLE] of course.

**AKMAL
ABDELFAH:**

The following video shows part of an interview with the assistant director of the Road Safety Department for Malaysia, indicating some of the causes of accidents and suggested solutions.

**MOHAMED
SHAHARUDIN
BIN OSMIN:**

It's an offence for drivers under the influence of drugs to drive. Even to sit in the car is an offense. But there's a difference between when the police enforce it.

When the police find out that drivers driving under the influence of drugs, they will be charged under something related to drug possession. It's not road traffic offences, but it's related to drug offences. So it's a big difference in terms of enforcement. And currently, there's no region type of policy to tackle this thing. For example, we do have a continuous meeting with the Ministry of Works on the importance of having dedicated motorcycle lane to separate motorcyclists from other road users.

But the main issue, whenever it came to bid up the new dedicated motorcycle lane, it's lost. So whatever causes the obstacle, then it never can-- as we are the Road Safety Panel, so we cannot do anything, because it falls under the Ministry of Work jurisdiction that can build the dedicated motorcycle lane.

AKMAL The following are some short-term strategies that can reduce the number of traffic fatalities among the
ABDELFATAH: motorcyclists. Enforcing stricter licensing procedure for motorcycles-- for example, increasing the age of receiving a motorcycle driving license, canceling some of the old models of motorcycles, and increasing registration fees. Implementing higher levels of enforcement through the use of technology-- for example, by using automated systems at traffic signals and for speed control. Such systems can reduce the traffic violations shown in the videos in this presentation. Apply tougher penalties for traffic violations, especially for motorcyclists. improve awareness through campaigns that educate motorcyclists about traffic and safety regulations.

In addition to these short-term strategies targeted at reducing motorcycle fatalities, cities should also make a concerted effort to improve the public transportation infrastructure, to ensure long-term sustainability. What are the benefits of having a higher [INAUDIBLE] for public transportation? It can result in lower delays, less pollution, fewer accidents and fatalities, and a more sustainable transportation system. What are the main deficiencies in the public transportation system in Malaysia that deter people from using it? Primary drawbacks are the lack of connectivity, low frequency, and less flexibility as compared to motorcycles.

INTERVIEWER: If there is a good bus and rates that would provide reasonable flexibility and reasonably priced-- compared with the price [INAUDIBLE] would he use that? We know it's not there in JB now, but if that system would exist, would that change his mind, or would he use it?

INTERPRETER: [SPEAKING MALAYSIAN]

MAN ON STREET: [SPEAKING MALAYSIAN]

INTERPRETER: He would choose-- yes, he says if the system is there, he would just use that [INAUDIBLE] system.

INTERVIEWER: So what is the most important thing for him to see on that system to use? What would be his [INAUDIBLE] priority? Is it the cost or the flexibility? Is it the timing, the frequency? What is his most important element to use the public transport?

INTERPRETER: [SPEAKING MALAYSIAN]?

MAN ON STREET: [SPEAKING MALAYSIAN].

INTERPRETER: Time would be his most priority-- time.

INTERVIEWER: Thank you very much for that.

MAN ON STREET: Thank you.

INTERVIEWER: Appreciate it very much. Thank you.

MOHAMED Under the purview of [INAUDIBLE] area, which is under the jurisdiction of Ministry of Transport, Ministry of
SHAHARUDIN [INAUDIBLE], and also Land Public Transport Commission, there's a target of increasing the number of public
BIN OSMIN: transport in the market, where they are promoting increasing numbers of service-- for example, the taxi numbers, the drivers numbers, for example, this, for example.

Right now, the focus is increasing the service to meet the demand. Because right now, the challenge is that the public is eager. We believe that the public's are willing to use the public transport, but the option is not there.

AKMAL In light of that fact-- that the majority of traffic fatalities are occurring among motorcyclists-- what are some
ABDELATAH: possible long-term strategies that can increase the use of public transportation? Which, in turn, may reduce the fatality rate among the motorcyclists in Malaysia and other developing countries facing similar problems.
Providing sufficient funds can allow local authorities to develop the public transportation system, improving the connectivity, frequency, and punctuality of public transportation system. Utilizing intelligent transportation systems applications, such as transit signal priority, implementing an attractive and fair pricing system that can encourage people to use public transportation, considering transit oriented development concepts for new developments.

In conclusion, rapidly growing cities in developing countries have populations that are growing at a much higher rate than their public transportation infrastructure. This leads to an increase in the use of private transportation. In cases where the percentage of motorcycles is high, the cities witness a high traffic fatality rate. The proposal strategies in this presentation can benefit these cities.