SYSTEMS APPROACH TO THE ROAD SAFETY PROBLEM IN TANZANIA

by

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ABSTRACT

Road traffic accidents have been on the increase ever since in Tanzania, despite some considerable efforts to minimise the problem. Road safety management is widely used worldwide in various forms and at different levels of refinement to manage traffic safety. Safety Management System (SMS) incorporating system approach of problem solving technique and Road Safety Audit (RSA) approach is recommended for adoption in Tanzania. The Road Safety Programme (RSP) initiated in 1996 but not totally implemented to-date has most of SMS attributes and could easily be improved. Most of RSP component programmes and actions are at piloting or implementation stages, with an exception of those that require legislation changes. It is therefore, suggested to all relevant bodies to co-operate in the implementation of RSP. For long time measures for reducing traffic accidents in this country have been biased towards legislative direction without putting equal weight to engineering and education.

1. INTRODUCTION

Available data on reported traffic accidents in Tanzania clearly indicates an upward trend on both number and severity of road accidents for the past quarter century. This has stayed the same despite intensification of efforts to curb this upward trend. Several authors (Ministry of Works, 1996; Rwebangira et.al 1999; Bairi and Magesa, 1999; etc.) have raised concern over the issue of deteriorating road safety in the country. Comparison between road accidents in Tanzania and developed countries reveals that Tanzania like other developing countries experience higher accident rate.

Road traffic accidents are influenced by three factors namely: 1) human (driver, pedestrian, cyclist, etc.), 2) the road and its environment (width, alignment, roadside, pavement condition, etc.), and 3) vehicle (size, operating performance, etc.). A single or combination of these three factors is normally cited as the cause of any particular road accident. These factors are interrelated and therefore any motor vehicle accident countermeasure has to consider them together and not in isolation. In many developing countries, the concept of interaction between the three factors of road safety is not apparent. Chobya (1999) cited a study of road safety in some African countries, from which roadway, driver, and vehicle were not addressed as a single system responsible for road accidents. On the other hand, road accident countermeasure can take one or a combination of the following forms: 1) Engineering, 2) Enforcement, 3) Education, and 4) Emergency (response), commonly referred to as the 4E's of road safety.

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Any road accident reduction countermeasure proposed should be analysed critically to see what parallel steps in the remaining E's that could be applied together to form a combination of countermeasures that are effective. Failure to recognise the interaction between the three accident causation factors and applying the 4E's of road safety in isolation, may lead to road accident countermeasures formulation that are less effective.

This paper discusses and recommends the scientific methods that should be used to alleviate the road safety problem in the country. The scientific approach to road safety is widely recognised in developed countries as Transportation Research Laboratory (TRL) puts it in these words (TRL, 1990):

> *"For it has been found in road safety that it is all too possible to spend large sums of and get little or no reduction in accidents; conversely, a very cheap measure in the right place at the right time can sometimes be extremely effective in reducing accidents. Thus, to get value for money, a scientific approach to road safety has been increasingly adopted, both in analysing the problem and in evaluating remedial measures;…"*

2. EXTENT OF ROAD ACCIDENTS PROBLEM IN TANZANIA

The magnitude of road accidents problem can be comprehended by looking at the trend of accident rate or accident frequency over time, by comparing accident rates with other countries, and by comparing road accident fatalities with other causes of deaths in the society.

Figure 1 shows a trend of road accident frequencies and fatalities for the period from 1975 to 1998 in Tanzania using 1975 data as the base. Visual inspection of Figure 1 indicates an upward trend. A more objective analysis using regression analysis tools, fitting data sets with a straight line was done to supplement the visual inspection. The fits were satisfactory, resulting into R_square values of 0.82 and 0.85 for accident frequency and fatalities frequency respectively. To answer the question whether the trend is significant, the null hypothesis: that the slope of the line is zero, against the alternative hypothesis that the slope is not zero was performed. The results of the test indicate that slopes of both lines were significant different from zero at 95% confident level. This concludes and supports the visual observation on the graph that there has been an increase in both accident frequency and fatalities frequency for the period 1975 - 1998.

Whether accident severity has been on the increase parallel to the number of accidents and fatalities is shown on Figure 2. Regression analysis of linear fit was performed on the data set, yielding an R_square value of 0.00005 considered to be a poor fit, i.e., there is too much variations that are not explained by the fitted line. The test of hypothesis on the slope of the fitted line concludes that the fitted line is not significantly different from zero at 95% confidence level. It could be concluded that the severity of accidents has neither increased nor decreased, and that the increase in number of fatalities could be due to parallel increase of number of accidents.

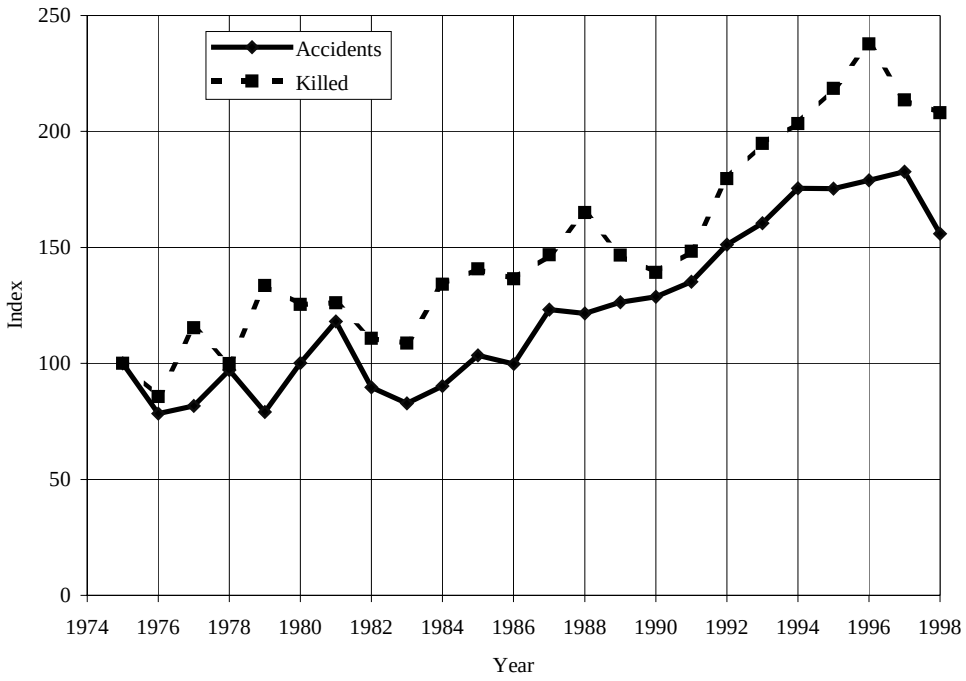

Figure 1: Trend of Traffic Road Accidents in Tanzania (1975 - 1998)
Source: Traffic Police Records

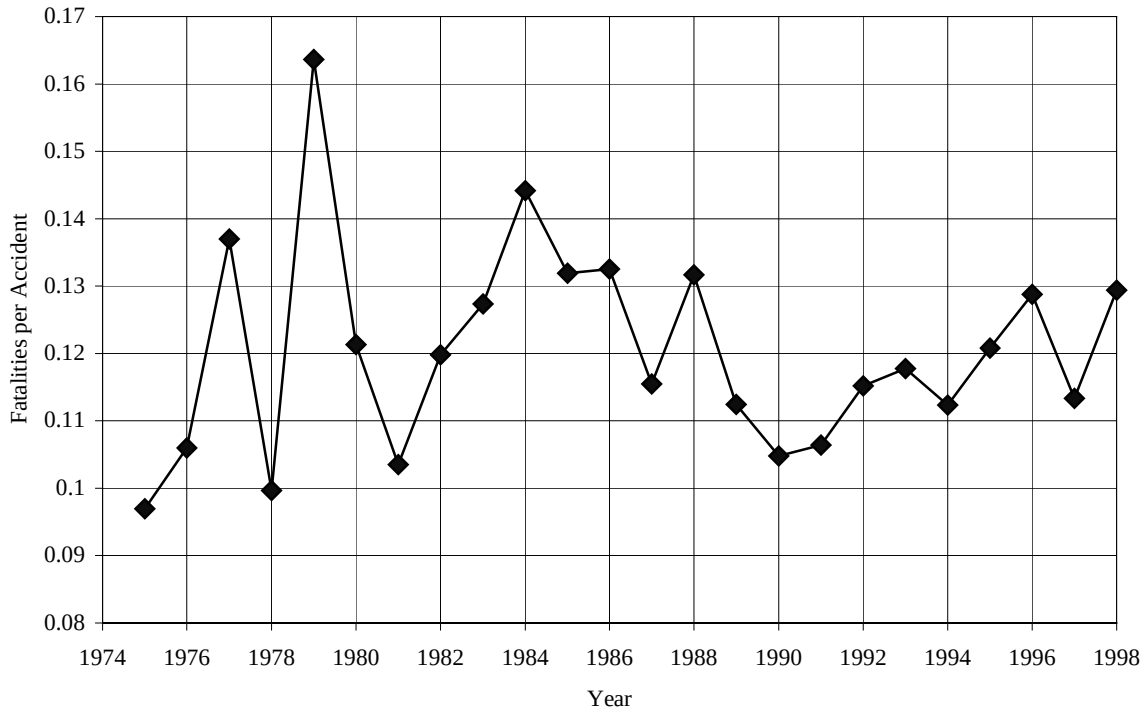

Figure 2: Trend of Traffic Road Accidents Fatality Rate in Tanzania (1975-1998)
Source: Traffic Police Records

Figure 3 compares the fatality rate resulting from traffic accidents per 10,000 registered vehicles for the year 1992 for different countries. It seems that in 1992, Tanzania experienced highest traffic accident fatality rate of about 107 fatalities per 10,000 registered vehicles than all countries shown on this chart. For the last quarter century, the rate in Tanzania ranged between 50 to 70 fatalities per 10,000 registered vehicles (Ministry of Works, 1996), still considered high. TRL conducted a study for the year 1999 and revealed that 86% of fatalities due to road accidents occurred in low income transitional nations where only 40% of the world's motor vehicles are located (DFID, 2000).

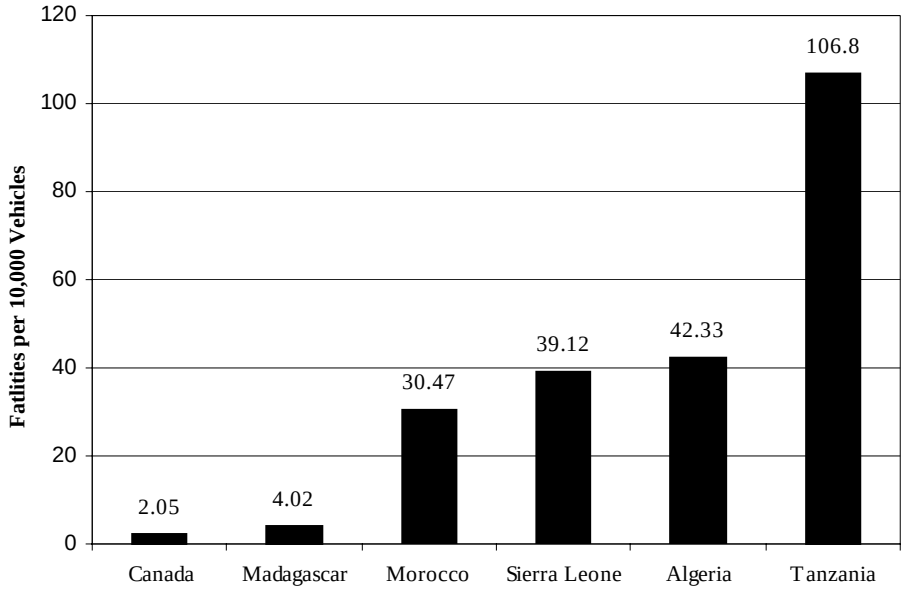

Figure 3: 1992 Traffic Accident Fatality Rates in Different Countries.
Source: Chobya(1999)

Table 1 shows the summary of deaths caused by road traffic accidents in 1999 grouped by World Health Organisation (WHO) regions. Percent of deaths caused by traffic accidents in Africa was the second lowest to Europe and ranked 11th highest killer in the continent. Traffic accident as a single cause of death ranked lower in both Africa and Europe compared with other regions. However, in both regions traffic accident deaths claimed higher percentage of its population than other regions.

Table 1 : Road Traffic Accident Deaths in WHO Regions (1999)

Region	**Ranking**	**Percent of total deaths**	**Percent of population**
Eastern Mediterranean	6	2.8	0.02
The Americas	7	2.6	0.02
South-East Asia	9	2.5	0.02
Western Pacific	10	2.4	0.02
Africa	***11***	***1.8***	***0.03***
Europe	12	1.4	0.03
All	*10*	*2.2*	*0.02*

Source: World Health Organisation

3. CONVENTIONAL ROAD TRAFFIC ACCIDENTS MITIGATION MEASURES IN TANZANIA

This section gives few examples to demonstrate the conventional mitigation measures that have been in use in the 4E's of road safety. They are termed conventional methods because starting mid 90's, there have been considerable change towards safety in areas of education and information. There have been no significant changes in the areas of engineering, enforcement and emergence response.

3.1 Legislation, Judiciary and Enforcement

For the past nearly three decades, legislatively, the road safety in Tanzania have been guided by the principal Road Traffic Act (No.30) of 1973. The Act was assented in 1963 but it was not operational until January 1974. The Act consists of eight parts and 118 sections. The Act repealed the Traffic Ordinance (cap.168) of 1933. Up to 1997, the Act has been amended more than13 times, but only three amendments having direct implication to road safety. The three amendments were made in 1990, 1991, and 1996. Appendix shows the summary of the Act amendments from 1973 to 1996 related to road safety. The Appendix does not include the law restricting inter-regional busses travelling at night after 10:00 PM. These amendments can be grouped into seven major classes. Those that:

1. gives more power to the enforcers (police and courts),
2. increase punishment and liabilities to the driver,
3. adapts current technology in enforcement equipment,
4. intends to decrease casualty rates,
5. address bus drivers' fatigue,
6. restrict young drivers, and
7. provide guidance on the use of road by different users at different situation.

Traffic laws are comprehensive by coverage, effective enforcement is the part that seem to be the missing link. Some researchers (Rwebangira, et al, 1999; Ministry of Works, 1996) have suggested in the past on how to improve traffic law enforcement in this country, but their suggestions has not yet put into practice.

3.2 Engineering

It is recalled that introduction of bumps and humps to limit speed of vehicles, started surfacing in Dar Es Salaam by late 1980's. There is no agreement among road safety community that high speed causes accidents, however, it is widely agreed that in the case of accident happening, the vehicle speed is proportional to the severity of the accident. Bumps are more recommended on private roads, and humps are recommended on residential streets (Smith and Giese, 1997). The use of humps/bumps on rural major arterial as those at Mikumi section along Morogoro - Iringa road, is not considered by authors as a good traffic engineering practice. A speed hump/bump on rural principal arterial where higher speeds are expected, might result into potentiality of drivers loosing vehicle control and vehicle damage. Institute of Transportation Engineers (ITE) conducted a comprehensive study looking into the research findings and experience on the use of road bumps. One of the major findings from that study was that there was a great consensus that road bumps should not be installed on any class of road above local streets (ITE, 1986).

Lack of consideration for non-motorised transport in urban areas is believed to be the source of high fatality rate to pedestrians caused by road accidents. Ministry of Works reported that of the five road user categories (pedestrians, motor cyclists, passengers, drivers, and bicyclists), pedestrians represented 65% of road accident fatalities between 1985 and 1994 (MoW, 1996). Although the above analysis lacks the "over-representation analysis" concept, it is still viewed by authors that pedestrian safety is a big problem in Dar Es Salaam and probably to other urban centres in the country. Major initiatives taken in the country in the recent years include Temeke and Morogoro town districts non-motorised pilot projects. These projects were executed in mid 90's and involved issues of traffic calming, provision of separate routes for pedestrians and cyclists, provision of raised crosswalks for pedestrians, etc. For these projects there was very limited time for evaluation at the end of the project, long-term evaluation is necessary before a conclusion on their effectiveness and hence a decision on its adoption is made.

The effect of engineering measures for road safety has been underestimated, at least judging from the number and size of road projects undertaken so far, that addresses safety significantly. The effectiveness of engineering measures to road safety at times could be promising. It was reported that in Bandung Indonesia, three black spots were treated with engineering measures from which 70% reduction in accidents were realised (DFID, 1999).

3.3 Education

Until 1994, education on traffic safety to the public used to be conducted during a one week (safety week) in a year when brochure and other information with safety messages are distributed to the public.

4. SCIENTIFIC APPROACH

Science is the word that was borrowed from a Latin *words scientia* that was derived from *the word scire*, meaning "to know". In its broadest term, science is used to denote systematised knowledge in any field. Scientific approach is the way of dealing with issues in a way that conforms to principles of science of systemised knowledge of thinking. Scientific approach of interest to this paper is of the problem solving and management nature.

4.1 Problem Solving

When a decision is required to be made in solving a problem, be where one component or multiple components are involved, the scientific approach demand the following steps to be recognised and followed systematically:

- problem identification,
- generation of alternative solutions,
- selection of alternative,
- implementation,
- evaluation.

Figure 4 depicts schematically the scientific problem solving process, commonly known as systems method. The process is considered continuous and iterative, updated often, based on the feedback from the evaluation sub task.

A system is a collection of component elements/subsystems that interact together to meet the objectives of the whole. *System* also refers to any collection or combination of programs, procedures, data, and equipment utilised in processing information: an accounting system, a billing system, a database management system, etc. are few examples of systems For the case of road accidents, the subsystems are human, vehicle, and road. Components of human subsystem may include law enforcement, driver license, legislatures, judiciary, education, etc. Because these elements work together in the production of an accident, the management of road accidents should look them together and not in isolation–safety management system.

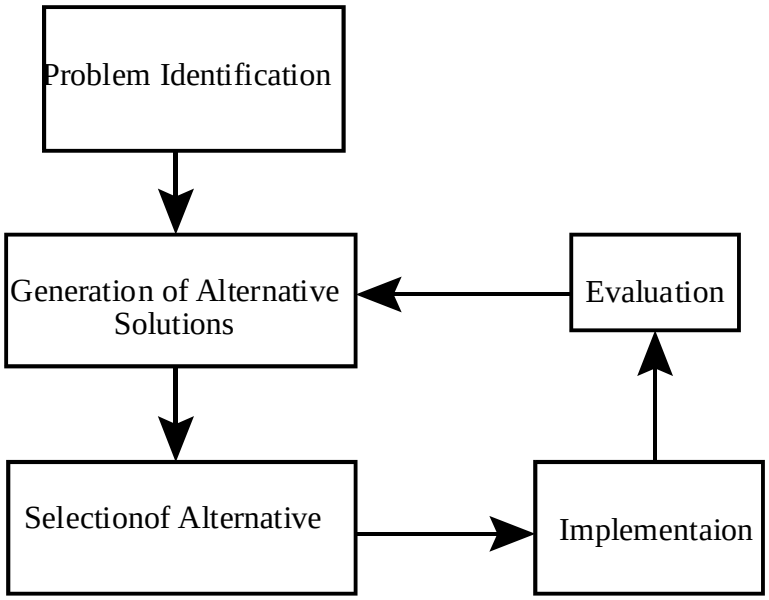

Figure 4: Scientific Approach Problem Solving Process

4.2 Problem Identification

A problem is identified by the perceived existing gap between present situation and desired situation or goal, with the path to the desired goal blocked by known or unknown obstacles. At this stage a clear understanding of the problem to be solved need to be developed before objectives and standards can be set. An important principle in defining a problem is that the number of possible solutions increases with the generality and comprehensiveness of the problem definition (Hutchinson 1974, p11). If this stage is not carefully done, it might result in unnecessary overestimation or underestimation of the problem that might lead to mis-allocation of society resources.

One of the key to success in problem identification is the quantity and quality of the data regardless of the sophistication of database technology in database management. The quantity is more important when advanced statistical methods need to applied in analysing the data.

Statisticians can easily find out whether the data quantity suffices the intended analysis. However, the data quality is trickier than data quantity because of difficulty of detecting the quality.

4.3 Generation of Alternative Solutions

This is a stage where all possible alternative solutions to attain the goals and objectives are identified and listed. One of the main processes at this stage of developing alternatives to achieve objectives and goal is data analysis

4.4 Selection of Alternative Solution

This is the decision making stage where a single alternative, among those generated in the generation of alternative solutions sub-process is selected to reach a desired goal. If the problem is of multidisciplinary nature, parallel solutions may be selected together to compose one multiple alternative solution. For the case of road accident reduction, an engineering solution might be accompanied with other solutions in enforcement, emergency response, and education areas. A good choice will be reflected by favourable results, while bad choice will be reflected by poor outcome.

4.5 Implementation

At this stage, the selected alternative solution is put into practice, and monitoring process instituted.

4.6 Evaluation

This is the sub process in which implemented solution is evaluated for its effectiveness using the criteria developed under problem identification stage. In most cases, evaluation of the solution implementation generally presents additional problems to be considered and addressed. The follow up task is to specify research needs and modify the solution in ways suggested by the evaluation process when objectives and standards set during problem identification phase were not met.

4.7 Safety Management System

Management of collection of elements/subsystems related to each other is referred to as system management. Management of multiple disciplines such as road accident is best achieved through system management. Management in the context of road safety refers to the act of handling or controlling road safety successfully. Road safety management system is practices in many countries in different forms and level of refinement, but not to the satisfactory level. Zogby et al (1998) observed that transportation specialists tend to work in isolation, as quoted here:

> *"An honest assessment of the "practice" of safety management is more realistically one of status quo. Traffic engineers practice their trade and apply and refine the tools that are traditional within their disciplines and only occasionally are involved with safety partners from other transportation disciplines. This is also true for other transportation disciplines such as traffic law enforcement, driver safety, vehicle safety, and injury prevention".*

The United States Federal Highway Administration (FHWA) also acknowledges the difficulty of making perfect decision in highway safety where the human factor plays a large part in providing high level of service of highway facility and at the same time it plays a bigger role in the problem

of achieving highway safety (FHWA, 1995). The basic premise in the system approach is that humans are fallible and errors are to be expected, even in the best organisations; and that errors are seen as consequences rather than causes. Road accidents countermeasures should be based on the assumption that though we cannot change the human condition, we can change the conditions under which humans work, by designing a highway that will as much as possible conform the expectation and desire of the road user. The future of SMS is promising, a World Bank program known as Global Road Safety Partnership by year 2000 was surveying several country practices on road safety management with an aim to disseminate the best practice (DFID, 2000), this is the hope of the future.

4.7.1 Characteristics of good SMS

Wallen (1993) identified seven characteristics that a good SMS should possess:

1. Should strive for total accident reduction in its goal, mission statement, and objectives both horizontally and vertically.
2. Should be able to break the chain of self-evaluation, and defensive thinking, and encourages outside input. In other words it should be flexible to respond to current demands such as innovation and creativity;
3. Should provide for periodic review, analysis and comment upon the safety performance of the agency;
4. Should require an annual reporting to legislative body and feedback to the agency;
5. Should encourage application of the rapidly evolving information and analysis technology;
6. Should require appropriate “after” studies to evaluate policies, practices, and standards;
7. Should incorporate some form of performance standard and periodic evaluation of skills and interest to ensure competent and interested staff/members.

4.7.2 Historical development of SMS in USA

USA is considered as the champion of highway safety management systems. The highway safety plan requested by the highway safety Acts of 1966 is considered to be the first SMS in the country. Subsequent Acts has progressively enhanced the planning approach. The turning point in SMS development came by Intermodal Surface Transportation Efficiency Act of 1991 known as ISTEA, in which integrated planning and implementation of highway safety initiatives were mandated. The current Act, Transportation Equity Act for the 21st century (TEA-21) continues this program approach and the necessary funding.

In 1998 the Committee on Transportation Safety Management refined the program by suggesting a framework for developing SMS, a tool to help jurisdictions set up and measure progress of an SMS. The framework addressed six areas of importance (Zogby et al, 1998):

1. Partnership of stakeholders in the highway safety community;
2. Stakeholders committee to develop and have common vision and mission;
3. Stakeholders to set goals that will take a mission statement to action plans;
4. Development of a structured decision-making process on the basis of appropriate highway safety information;
5. Development of performance-based action plans;
6. Development of a progress reporting system;

4.7.3 Historical development of SMS in Tanzania

SMS in Tanzania, to the best knowledge of authors dates back to 1973 with a creation of the National Road safety Council (NRSC) by the Road Traffic Act 1973. The objective for NRSC is to promote and co-ordinate road safety activities in the country. Ministry responsible for NRSC have changed from Prime Minister at the beginning to Ministry of Home Affairs at present through Act amendment, but its objectives and functions have remained the same.

Continued deterioration of road safety perhaps would suggest the failure of the existing set up of road safety management system to meet its objectives. The Ministry of Works perceived the ineffectiveness of the existing SMS by late 1980's. Under the integrated Road Project (IRP) and the thrust from the co-operation among Southern Africa Development Co-ordination Conference (SADCC) countries, the Ministry of Works committed itself to the cause of improving road safety at the end of 1980's. In 1990 the Ministry of Works prepared a draft project document for the road safety programme followed by proposed action plan in 1991, and a study on Management of Road Safety and Vehicle Axle Load Control in 1992. The same year, the Ministry started the Road Safety Unity (RSU) an internal unit within the Ministry. The unit is in-charge of rod safety and co-operates with departments outside the Ministry of Works involved in road safety. In 1994 a research was conducted by the consultant to study road safety in the country. The study produced the Road Safety programme document in July 1996 (Ministry of Works, 1996). One of the major findings of the study was that the present SMS lacked a multi-disciplinary approach to a problem such as road safety of complex nature. The study suggested measures to be taken in the areas of road safety financing, organisational structure, and road safety programmes. Ten components for the programme were identified; most of those that do not require change of legislation have started. The ten components identified by the document include:

- Accident and traffic database.
- Road and traffic planning and engineering.
- Safety law and its enforcement.
- Road safety education (in schools).
- Road safety information (general public/road users).
- Driver training.
- Vehicle safety inspection and licensing.
- Medical.
- Vehicle and axle load control.
- Others – organisation and research.

4.7.4 SMS status in Tanzania

This sub-section looks at the current situation of road safety in Tanzania and initiatives taken/underway on programmes suggested and recommendations by the Road Safety Programme document. More emphasis is given for the period after the Road Safety Programme document was released in June 1996.

4.8 Accident and Traffic Database

The Ministry of Works is currently initiating setting up a database system that will handle all data related to operation of roads in Tanzania. Currently these data are stored separately in the ministry departments, institutions, and other ministries (Mbura, 1998).

At the beginning of 1990's, the Government carried out a pilot project in Dar Es Salaam on using

Microcomputer Accident Analysis Package (MAAP) for recording and analysing road accidents. As of March 2000, piloting of MAAP has been finished and moved to the implementation stage. Ten computers to be used for the purpose were installed in seven regions of Tanzania mainland (Odunga, 2000).

4.9Vehicle Safety Inspection and Licensing

Ministry of Works has prepared vehicle inspectors training manual, vehicle inspection system, and vehicle inspector handbook, motor vehicle Act, vehicle test station and motor vehicle regulations. This programme is moving slow because the two Ministries (Home Affairs and Works) have to agree to a common cause. A new system for vehicle registration is on the drafting board, spearheaded by the Ministry of Finance. The Ministry of Works is trying to see how it can be tied to the central vehicle database system recommended for implementation by the Ministry.

4.10 Vehicle Axle Load Control

Vehicle axle load control programme was already initiated even before the safety document was prepared. In 1998 the Ministry of Works started implementing a four-year vehicle axle load control programme with the goal of zero overloading to be attained at the end of the programme. New regulations on maximum weight of vehicles have been passed by the Government through the Government Notice No. 30 published on 9th February 2001. The Road Traffic (Maximum Weight of Vehicles) Regulations 2001. These regulations appear to be comprehensive although there are some areas that need improvement to make them more effective. Also modern computerised weighbridge has been constructed at Kibaha along Dar Es Salaam – Morogoro highway to enhance enforcement overloading regulations. Implementation of the programme is going on but the target of zero overloading within four-year period appears to be ambitious.

4.11 Traffic Engineering and Road Design

The Ministry has prepared two manuals on pavement & materials design, and bridge engineering. Road safety audit is nowadays considered an important tool and necessary for reducing accidents in many developed countries. At the moment the road safety unit is not implemented fully.

4.12 Driver Training and licensing

After 1998 the Government through the Ministry of Works in its bid to curb road accident has issued the manual for student drivers. The manual's objectives are to ensure that all drivers will undergo similar training and testing, and that all driving schools will teach the same thing (MoW,—). Alongside the driver's manual, the draft for driver instructor's manual has also been prepared. The Road Traffic Act. Amendment of 1996 required training of all drivers through driving schools. Since 1997 National Institute of Transport (NIT) with support of NRSC started a programme to improve skills for class C drivers especially for Busses and Trucks.

4.13 Enforcement

The Ministry of Works under IRP procured and handed to the Traffic Police speed radars, communication radios, and alcohol content analysers to enhance traffic laws enforcement (Odunga, 2000). The traffic police have also stepped up enforcement efforts including procurement of reflective jackets and flashing touch for guiding traffic at night.

4.14 Education and Information

Curriculum for road safety education has been developed. Pilot project for testing the same started in October 1999 in three eastern zone regions of Dar Es Salaam, Coast and Morogoro. Efforts are underway to expand the spatial coverage (Odunga, 2000). A non-government organisation known as ROSEA has been established in the year 2000 with the main aim of promoting road safety education in the country. The major constraint facing the programme is lack of funding.

There has been a forty-five minutes radio program once a week since 1994/95 on road safety education. Starting year 2000, the Ministry of Works initiated awareness campaigns on road safety in Mtanzania newspaper every Tuesday. The NRSC every year organises a National Road Safety week campaign. Among the activities include competitions for primary school children in singing, drama, drawings, etc. on road safety issues.

4.14.1 Improving existing SMS in Tanzania

The existing SMS as spelled out in Road Safety Programme document is very comprehensive, and need only few adjustment/improvement to put it among good SMS group. The authors have the opinion that four issues need to be attended in that effect:

1. Plans and programmes that require legislative changes with regard to transfer of responsibilities have not been implemented because of reluctance of some organisations to accept the changes. It is recommended to work from the top - down (legislative body - Ministry), instead of down-top approach. Most of us would agree with the authors that a program to be successful need total commitment of the top management. A good example could be cited to the case of USA where improvement of their SMS has been starting from the Congress.
2. The SMS detailed in the Road Safety Programme document constitute only Government departments. This lacks the important characteristic of good SMS on networking all stakeholders. It is proposed that road safety stakeholders in Non Government Organisations (NGOs) should be included or appropriately represented in the SMS organisational structure. The importance of networking safety stake holders in Australia and New Zealand was appreciated by the United States as high-benefit payoff if included in their safety management systems (Bared, et al, 1995).
3. To introduce and develop annual reporting system.
4. Enhance the concept of scientific approach of problem solving, especially the stage of evaluation stage.

5. CONCLUSIONS AND SUGGESTIONS

- Road safety measures in this country have been biased towards legislation and enforcement for long time, with little efforts in other areas that affect road safety. Unfortunately this strategy has failed to address the problem of road safety worsening in this country.
- Road safety differs from other aspect of civil engineering in that a vast range of people is part of the problem; hence they should be part of the solution too.
- There is a need to improve the current SMS, and devise a top-down method for its official approval.
- The road safety programmes proposed by the safety document would be more effective if the proposed organisational structure is established hand in hand.

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Appendix: Summary of key safety related amendments to Road Traffic Act No.30 of 1973

Year	Amendments highlights
1990	power on suspension of driving license
	Objective measurement of blood alcohol content using laboratory instrument
	prescribed blood alcohol content defined as 80mg of alcohol in 100ml of blood
	permission of the use of speed radar to estimate vehicle speed
	Mandating use of seat belts for front seating persons
	mandating use of helmet for motor-cycle drivers
	Transfer of NRSC responsibilities from Prime Minister to Minister of Home Affairs
	Increase of punishment for traffic offences
	mandating driver to pay cost for sign replacement
1991	identified 32 traffic offences for punishment without prosecution
1996	Restrict driving license to youngsters
	courts given power to invalidate driving license
	Police empowered to temporarily suspend driving license
	Specifications on arrangement and securing load on a vehicle
	allow driver to carry passengers in the space reserved and designed for goods
	mandating use of light by motorcycles at all times
	mandating use of dipped headlights in certain situations
	increase punishment for driving under influence
	introduce punishment for providing (in any form) intoxication to the driver
	specific directive to driver on handling official motorcade
	restricting driving on footpaths
	lane and position assignment
	minimum speed limit on motor ways
	Specification of overtaking side and its exceptions
	overtaking and overtaken precautions
	specifications for driving on multi lane highways and lane change procedures
	priority of passenger service vehicles (psv) at bus stop locations
	prohibition of sudden braking unless for safety reasons
	specification of right-of-way at uncontrolled intersections
	specifications of turning procedure at intersections
	mandating speed governors on public service vehicles
	Minister empowered to prescribe speed limit for public service vehicles
	set of speed limit to 55 km/h in built-up areas; in un-built areas to be determined by chief engineer and regulated by signs
	restricting driving during poor visibility
	specifies sufficient following distance
	restricting road racing unless permitted
	parking regulations specified
	specification on pedestrian using highways, and driver behaviour at pedestrian crossing
	increase punishment for punishment without prosecution
	set precedence of traffic control devices
	road users required to comply with traffic control devices