

NATIONAL ROAD SAFETY POLICY

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EXECUTIVE SUMMARY

PURPOSE

A National Road Safety Policy is a critical initiative in efforts to elevate road safety issues to a position of high priority on the national agenda. It provides the basis for working towards attaining the vision of a safe traffic environment. It will also assist in guiding and coordinating the actions of the relevant ministries and organisations toward the rational use of scarce resources and reducing duplication of effort. The policy provides the basis for the process of accountability, evaluation and research which can dictate the need for resetting objectives for the enhancement of programme impact. Finally, it creates the framework for the undertaking of corrective programme interventions and will facilitate steps to access funding.

VISION STATEMENT

Jamaica's vision is to have a safe traffic environment in accordance with internationally accepted standards. The policy seeks to guide all concerned actors in cooperating and sharing knowledge, expertise and resources towards achieving this vision.

GOALS

In pursuit of a safe, sustainable and efficient traffic environment we must:

1. Qualitative
Continually reduce the occurrence and severity of road accidents and consequently the level of fatalities and injuries in an efficient and professional manner.
2. Quantitative
Reduce occurrence of accidents as well as the rate of mortality and morbidity by at least 25% over the next five years.

FUNDING

In pursuit of the stated goals, expenditure on improving safety on the nation's roads should be seen and treated as an investment rather than as an expense. In support of this concept, the establishment of a road safety fund is of the highest priority. Urgent consideration should be given to the identification of funding for programmes from fees and licenses generated from activities related to the use of the road. Funding can also be sourced from private sector organizations with a vested interest in road safety.

Additionally, budgetary processes within the relevant ministries and agencies of Government must incorporate allocations to undertake activities developed under the policy.

PROBLEM

International Overview

Worldwide, nearly one million deaths and more than 10 million injuries occur per year. Although the Latin American-Caribbean region accounts for a small proportion of the world's GNP and motor vehicles, this area accounts for a more significant proportion of the world's road fatalities, mainly due to inadequate levels of investment in road safety promotion

National Situation

Although the number of fatalities has fallen during the last decade, provisional data indicates a 38.9% increase in persons attending accident and emergency units at Government hospitals as a result of motor vehicle accidents. Twelve thousand seven hundred (12,700) visits were made in 1999 and 9,467 in 1998. It is estimated that road traffic will grow considerably, which may result in the deterioration of road safety in the future if no committed and integrated efforts are put into action.

In 1996, the cost to the health sector was approximately J\$419 million. This cost represents 13.27% of the revised budgetary expenditure for secondary and tertiary care in 1996/1997. It also represents 7.87% of the revised budget of the Ministry of Health for 1996/1997 which was J\$5.33 billion.

Causes of Accidents

Preliminary data suggests that inappropriate human behaviour is the main cause of road accidents. One inference to be drawn from this observation is that the system of driver education, training and certification is an area which needs to be evaluated and strengthened.

Gender and Age Indicators

For the period 1991-2000, 81.50% of road fatalities involved males and 18.50% females (a ratio of 4:1) For the same period, of the number of drivers that died as a result of road accidents, 95% were male and 5% were female (a ratio of 19:1). The majority of the males were in their productive years.

Between 1997 and 1999, males accounted for 67% of the 32,827 persons attending the accident and emergency units as a result of motor vehicle accidents. The age cohort most affected was 20 – 29 with 26.8% of visits.

Special attention should also be given to children who, between the ages of 0-14, make up one-third of pedestrian fatalities. Pedestrians account for 30% of all road fatalities. The lack of green areas and sidewalks in areas where some children live, the inadequacy of the public transportation system, the high level of motorization, and the reduced tendency of the motoring public to show care for the safety of children have been identified as some of the critical problems. This situation is compounded by the reduction of parental/guardian responsibility in respect of our children.

Socio-economic Context

Road accidents now cost the global economy about US\$ 500 billion per year. Almost 70% of the 'years of life lost' by road accident victims are working years. At the beginning of 1990, the socio-economic costs to Jamaica were estimated in monetary terms to be about US\$ 40 million per year and take into consideration lost production, medical expenses, damage to property, administrative costs, pain, grief and suffering.

POLICY

The National Road Safety Policy has been developed in accordance with the five E's strategy for the reduction/prevention of accidents:

1. Engineering and Traffic Environment
2. Education and Information
3. Enforcement and Legislation
4. Emergency Response
5. Evaluation and other Comprehensive Actions

Engineering

- a) Adequate guidance and information to road users will be provided and maintained.
- b) Capacity requirements of all roadways will be reviewed on an ongoing basis.
- c) Transportation improvements must make adequate provisions for all categories of road users.
- d) An improved system of identification of locations with a high incidence of accidents will be implemented and corrective measures undertaken to reduce conflicts in the traffic environment.
- e) Modern equipment will be provided, maintained and upgraded when necessary for the inspection and examination of motor vehicles.
- f) Facilities will be provided and upgraded to give added protection to vulnerable road users.
- g) A system of training, certification and re-certification of drivers and certification of driving instructors will be implemented to improve efficiency and to minimize fraudulent activities.
- h) Street furniture will be designed, constructed and placed to ensure minimal risk to road users.
- i) Roadways will be designed, constructed and upgraded to minimise the potential for conflict in the traffic environment.

- j) The integrity of the road surface will be maintained and roads kept free of obstacles.
- k) Where possible, measures are to be implemented that will spread the travel demand and reduce stress on the transportation network.
- l) Regulations will be formulated to ensure conformity with vehicle specifications and standards.
- m) All vehicles that operate on the nation's roadways are to meet (local/international) safety standards.

Education and Information

- a) Road accident statistics, accident reporting and analysis system must be established and automated.
- b) Public education campaigns must be undertaken on a sustained basis.
- c) Special emphasis will be placed on integrating road safety education in the school curriculum

Enforcement and Legislation

- a) Adequate resources will be provided and mechanisms strengthened for the effective enforcement of the Road Traffic Act and Regulations.
- b) Video cameras will be used to control speeding and the breaking of traffic lights.
- c) Zero tolerance will be applied in relation to traffic violations.
- d) Legislation will be revised and formulated to promote good road safety

Emergency Response

- a) Standardised accident command systems will be developed and incorporated into the curricula of training institutions and procedures of all key response agencies.
- b) The Caribbean Mass Casualty Management system will be incorporated into the national disaster policy and plan as the agreed response strategy.
- c) Regulations under the National Emergency Act will incorporate the defined role of the key managers of the emergency response and mass casualty management systems.
- d) A systematic and coordinated approach to emergency response in traffic situations is to be employed. A legislative framework will be developed to regulate and control emergency medical services systems, training and providers.
- e) An integrated emergency services communications network and centre will be developed and maintained islandwide.

- f) Facilities for the access and passage of emergency vehicles will be included in development and approval plans where possible.
- g) An effective and efficient hospital-emergency-medical services response system will be developed and implemented according to Ministry of Health norms and standards.
- h) A national road-accident-emergency response system and plan will be developed and implemented.
- i) The system of emergency transportation services by land, air and water will be expanded and upgraded to optimal levels.
- j) Emergency service providers will be trained and certified in accordance with approved norms and standards.

Evaluation and other Comprehensive Actions

- a) A mechanism will be established to evaluate programmes developed under the policy to ensure that stated outcomes are achieved.
- b) The present system for the implementation and coordination of road safety work will be improved in order to maximise efficiency, increase impact, raise awareness and to create favourable conditions.
- c) An efficient system of data gathering, storage, retrieval, analysis and dissemination will be established.
- d) A Road Safety Fund and efforts to more distinctly prioritize road safety issues within the budget process will be put in place. Funding options for road safety activities will be examined and established. Partnership solutions will be strengthened.
- e) A Research and Development programme will be created, which will outline areas where contribution from science is especially important.

Priorities

1. Establishment of a road safety fund
2. Establishment of budgetary provisions, within relevant ministries and agencies of Government, for the undertaking of road safety projects.
3. Improvement in the traffic environment with an emphasis on the protection of pedestrians
4. Establishment of efficient means of driver certification, re-certification and certification of driving instructors
5. Establishment of efficient systems of motor vehicle fitness testing and certification.

6. Establishment of a Transport Centre in busy towns to alleviate parking problems
7. Control and elimination of street vending
8. Stray animal control
9. Public education campaigns
10. Improvement in the provision and maintenance of road signs, signals and markings
11. Adequate system of road maintenance
12. Black spot identification and reconstruction
13. Comprehensive road safety legislation and police enforcement
14. Efficient operation of emergency response systems
15. Improvement of ministerial and inter-agency coordination
16. Improvement and full automation of databases associated with road safety
17. Street lighting
18. Transportation of hazardous materials

SPECIAL CONSIDERATIONS

A Sustainable, Safe and Efficient Transport Policy

There needs to be an adequate and customer-friendly public transportation service. In light of this, the development of a national transportation plan has to be an integral part of the national road safety policy.

Stray Animals

The number of animals in the traffic environment, which cause accidents, is an increasing problem. These accidents often result in fatality, injury or property damage.

The two items of legislation which deal with stray animals, the Pound Act and the Keeping of Animals Act, are outdated and are being amended. The economics of the operation of pounds has to be revised in order to increase their sustainability and efficiency.

Adequate Financial and Human Resources

Financial resources must be in place for the proper promotion and execution of road safety activities. To this end, the establishment of a national road safety fund can be of vital importance to the success of programmes developed under a national road safety policy.

Gender, Youth, Aged and Disabled

The high incidence of male fatality, particularly those in their productive years, and the incidence of child, aged and disabled fatalities must all receive special consideration in any programme of activities, which evolves from a national road safety policy.

Environmental Initiatives go Hand in Hand with Road Safety

Activities to promote more environmentally friendly transport solutions are in most cases beneficial to road safety. Environmental activities, in particular emissions control should be integrated within road safety activities.

Public Awareness of the Road Safety Issue

Public acceptance and response to road safety measures introduced must be developed as far as possible to facilitate implementation and reduce the need for enforcement activities.

Transportation of Hazardous Materials

An updated system for the transportation of hazardous materials and measures for enforcing compliance must be put in place.

Street Vending

This problem continues to persist despite concerted efforts to remove/reduce its occurrence.

Markets need to be upgraded and maintained and enforcement activities need to be strengthened and sustained. Programme of municipal wardens is a crucial aspect of enforcement.

Parking Facilities

The construction of transportation centres in towns will alleviate this problem. Some centres have already been built and others are being designed. The planning and approval process for private parking needs also to be addressed.

NEXT STEPS

After the policy is tabled and approved, the Cabinet Road Safety Committee will be reconvened. Its first order of business will be the development of a programme and action plan for the promotion of road safety in support of this policy. The committee will also formulate mechanisms to ensure that activities developed in the action plan will be incorporated in the corporate plan and the schedule of activities for implementation by the relevant ministries/agencies.

The necessary budgetary allocations must be put in place to fund the scheduled activities to ensure that stated outcomes are achieved. A system of programme monitoring and evaluation must be formulated and implemented.

1. PURPOSE

The occurrence of traffic accidents is an enormous problem in Jamaica and has serious implications for mortality and morbidity. This results in a heavy call on the resources of the health sector, which is struggling to meet basic public health needs.

Road accidents are not inevitable. They can and should be prevented. The loss, both in social and economic terms, caused by traffic accidents can be counteracted by the development of a programme of activities which seeks to promote road safety. It is essential, however, that there is the political will to elevate road safety from a low to a high priority area where expenditure on such activities is seen as an investment rather than an expense.

To achieve this level of priority and to place road safety on the political as well as the national agenda, it is necessary to formulate a road safety policy. It is under such a policy that a comprehensive road safety programme, and the corrective intervention strategies, can be developed. The governing principle should not solely be the “celebration” of the establishment of a policy but, more importantly, its execution and maintenance. To ensure this, a policy evaluation framework should be adopted which allows for monitoring and resetting of objectives.

Specifically, a national road safety policy is necessary to:

1. provide the basis for working towards attaining the vision of a society with a safe traffic environment
2. place the matter of road safety promotion high on the national agenda
3. provide a framework for the undertaking of corrective programme interventions
4. guide and coordinate the actions of the relevant ministries and organisations
5. provide the basis for the process of accountability, evaluation and research which can dictate the need for resetting of objectives for the enhancement of programme impact
6. rationalize the use of the scarce resources, reduce duplication of effort, and
7. provide the basis for accessing funding

This paper outlines a comprehensive road safety policy -- with goals, priorities and policies for different programme interventions. Information is presented on the road safety problem and an international perspective is included. To give the necessary framework for the policy, a description is also given on current activities and special considerations are highlighted.

In the absence of a comprehensive database, this policy has been formulated with the data available and the solid input of all the relevant players and stakeholders. Over time, as the data develops a more scientific base and lends itself to greater analysis, the policy should be reviewed at three-year intervals to achieve greater focus and to provide the opportunity to incorporate more accurate information.

2. VISION STATEMENT

The vision is for Jamaica to have a safe traffic environment in accordance with internationally accepted standards. The policy will seek to embrace and incorporate the political, legislative, enforcement, financial, scientific, physical, socio-economic and organisational structures required to achieve the set vision. The underlying aim is that all

concerned actors in society should work in harmony by cooperating and sharing knowledge, expertise and resources to reduce road accidents.

An extremely critical element of road-safety promotion will be the need for efficient organisational coordination and an integrated planned approach, due to its multi-disciplinary nature and the number of agencies involved. The effective operation of a Cabinet Sub-Committee on Road Safety -- which acts as a decision-making forum -- is, therefore, a prerequisite for effective and sustained action.

3. GOALS

Efficient road safety work requires the setting of clear objectives. Clear and focused objectives are also prerequisites for accountability and evaluation. To reach the overall objective of a safe, sustainable and efficient transportation system, the following text outlines qualitative and quantitative road safety goals. In the future, with improved statistics and better knowledge about expected effects from different counter-measures, these goals may be revised.

Qualitative Goal

To continually reduce the occurrence and severity of road accidents and consequently the level of fatality and injury in an efficient and professional manner.

This goal requires commitment and dedicated, continued actions to reduce the number of road accidents and its consequences. Additionally, it means that road safety work should be performed in a well-organised way through development programmes, strategic action plans and by the monitoring of activities in close partnership with the different stakeholders to ensure optimal efficiency.

Quantitative Goal

To reduce accidents as well as the rate of mortality and morbidity by at least 25% over the next five years.

With anticipated annual growth in road traffic, this will necessitate a strong commitment to the improvement of the present situation.

In order to put these goals into a focused policy with priorities and a clear action plan, the succeeding sections set out the road safety problem and describe current activities as well as some special considerations that will affect road safety.

4. FUNDING

The formulation and implementation of a road safety policy has a crucial role to play in our efforts to develop as a nation both economically and socially. If this concept is understood, then it should follow that expenditure on road safety work should be seen as an investment rather than as an expense.

For a national road safety policy, and the activities developed thereunder, to have the envisaged effect, it must have the necessary financial backing. If not, it will not succeed. It is hoped that the vision will exist to recognise that a dollar spent on promoting road safety today will prevent multiples of that dollar being spent tomorrow on health sector costs and corrective interventions.

Consequently, the establishment of a national road safety fund is of vital importance to the success of programmes developed under a national road safety policy. Priority should therefore be given to the identification of such funds from sources such as traffic violation fines, fees for drivers and vehicle license, tolls, examination fees and custom duties from vehicle importation. Private sector organisations with a vested interest in road safety should be influenced to subscribe to this fund. A mechanism must be established for the administration and use of this fund.

Government is ultimately responsible for funding road safety policies. However, road work projects should, in principle, cover all costs associated with the demand for infrastructure and other measures required to lower the risk of accidents, personal injuries and fatalities in traffic. This means that Government has, according to sound international policy, the potential to be repaid through a road tariff that may be levied through an annual fee or a fuel levy.

Additionally, the budgetary processes within the relevant ministries and agencies of Government must incorporate financial allocations to undertake activities developed under this policy.

Partnerships have been at the heart of the road safety successes in several developed countries. Private sector organisations, companies and associations have, in many countries, both sponsored campaigns or other initiatives and have participated with Government in undertaking activities. Generally, in these cases, Government retains a regulatory role in the technical areas while the private sector participates in activities. If properly undertaken, these partnerships can be very successful “win-win” solutions for all concerned players. It is, therefore, important to further strengthen partnerships for road safety.

5. PROBLEM

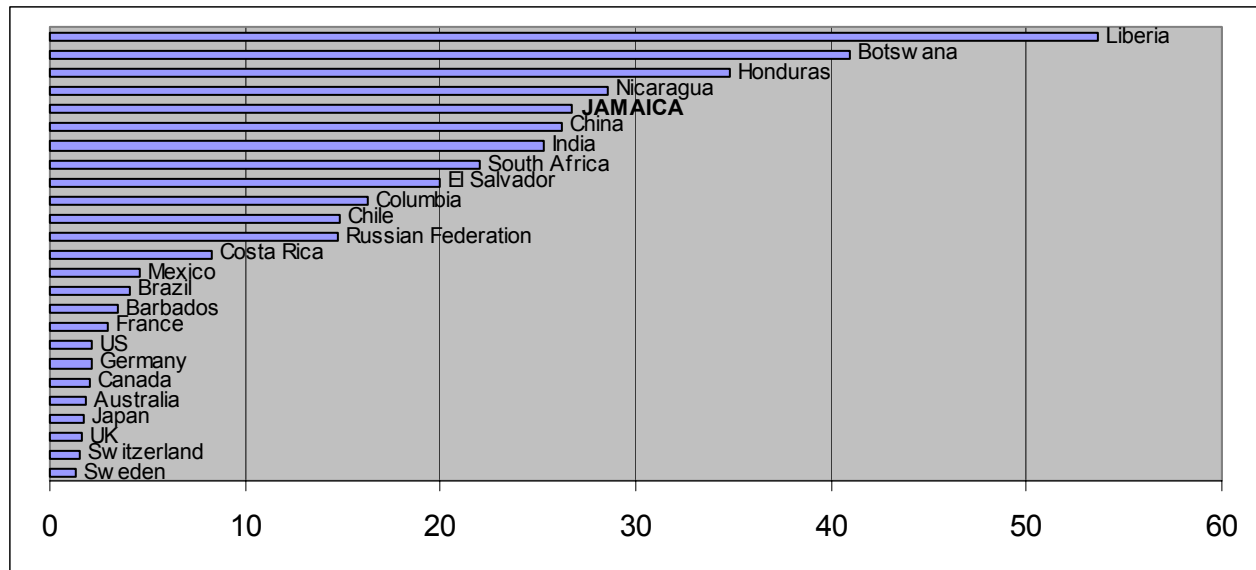
INTERNATIONAL OVERVIEW

The occurrence of road accidents is a global problem. Worldwide, nearly a million deaths and over 10 million injuries occur per year. In excess of 75% of these accidents occur in developing and transition countries in spite of the fact that these countries account for only 32% of motor vehicles. For 15-44 year olds worldwide, it is the biggest cause of premature death for males. In the Latin American and Caribbean region, recent studies estimate that approximately one million people have died and approximately 10 million have been crippled or injured during the last ten years. The economic costs from road accidents are huge. It is estimated to be, at the national level, about 1-3 % of nation's Gross Domestic Product (GDP). However, the situation is quite different from country to country.

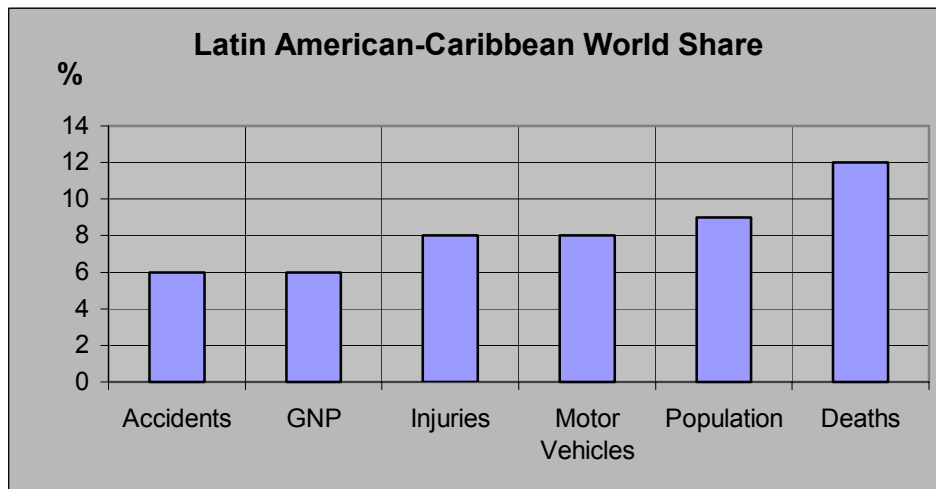
The following chart describes the situation in some countries at the beginning of 1990s. Since then, road safety has deteriorated even further in many developing countries.

Jamaica has shown some improvement, but this has to be sustained as there is still a far way to go.

Deaths/10,000 motor vehicles in some countries (1993-1994)



Another international perspective of the road safety situation is illustrated by the following chart. It shows that fatalities are clearly over represented in Latin American-Caribbean countries compared to, for instance, its proportion of vehicles or gross national product.



The difference in road safety between different parts of the world is partly related to the level of economic development and stage of motorisation. Closer analyses of international statistics reveal, however, that there are clear differences between countries as to how successfully they address the road safety issue. A significant related factor has to do with the level of investment in road safety promotion.

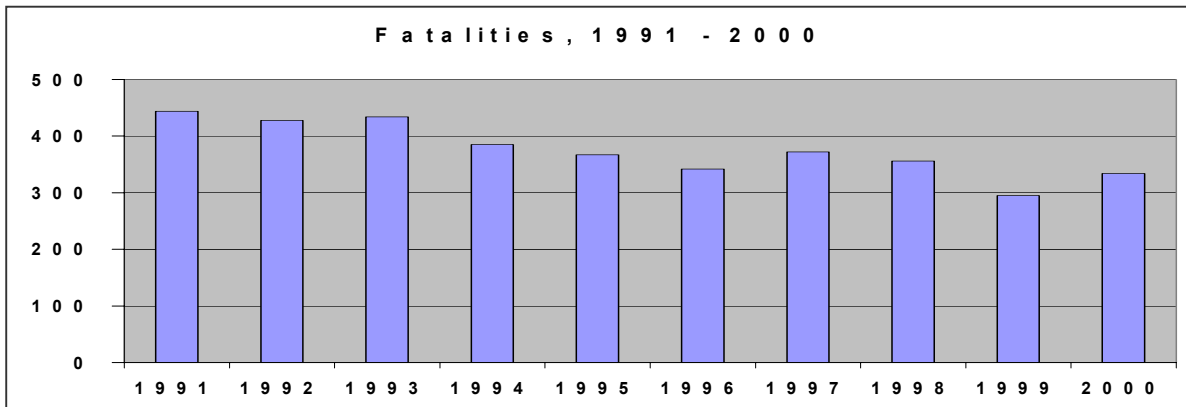
The following table shows Jamaica's position in relation to some countries in the region and to Sweden which has a very good road safety record. Lessons from countries with good road safety records show that with a coordinated approach, involving all the key players, a substantial reduction in deaths and injuries can be achieved. This indicates the potential for improvements in many countries.

1997 FATALITIES PER 100,000 INHABITANTS AND 10,000 VEHICLES

	Brazil	Chile	Jamaica	Sweden
Inhabitants	171,853,000	14,418,900	2,500,000	9,000,000
Vehicles	25,000,000	2,135,000	500,000	4,000,000
Fatalities	30,000	1,925	372	580
M. Veh./persons Killed	833.33	1,109.1	1,344	6,897
Killed/10000 inhabitants	1.75	1.33	1.49	0.64
Killed/100,000 inhabitants	17.5	13.3	14.9	6.4
Killed/10,000 vehicles	12	9.01	7.44	1.45

NATIONAL SITUATION

Although the road safety situation is of serious concern in Jamaica, there has been some improvement over the last few years. As the following graph illustrates, the number of fatalities has fallen during the last decade. During that time, a number of important and coordinated initiatives have been implemented to promote road safety. However, for the year 2000, the fatality rate was 334, and this figure tells the tale of the carnage on our roads.



For the future it is estimated that road traffic will grow considerably. The number of vehicles in Jamaica is still low compared to more developed countries. In 1997 the number of vehicles per 1,000 people was about 50 while corresponding value for high income countries was about ten times more (554 vehicles per 1,000 persons). This indicates that road safety can deteriorate in the future if no committed and integrated efforts are put into action.

Intentional and unintentional injuries are major public health concerns. They are often disabling and contribute significantly to the disease burden – putting great demand on health services at all levels. In 1996, the cost to the health sector was approximately J\$419 million. This cost represents 13.27% of the revised budgetary expenditure for secondary and tertiary care in 1996/1997. It also represents 7.87% of the revised budget of the Ministry of Health for 1996/1997, which was J\$5.33 billion.

In 1999, the result of motor vehicle accidents was the number one cause for visits to Accident and Emergency Departments at Government hospitals. This reflected a 38.9% increase in clients seeking care due to motor vehicle accidents – 12,700 in 1999 and 9,467 in 1998.

The age cohort most affected were:

10-19	18.1%
20-29	26.8%
30-44	26.2%
45-64	13%

An examination of the gender disparity revealed that 65.4% males were involved.

CAUSES OF ACCIDENTS

To efficiently address the road safety problem, it is essential to know why accidents occur. As the following table illustrates there are many reasons why accidents happen. What makes it even more complicated is that in many cases there can be a combination of several factors that lead to an accident.

Statistics obtained from the Police, for 1997 to 2000, indicate that the category, **APPARENT ERROR OF JUDGEMENT/NEGLIGENCE**, accounts for approximately 22% of the causes of accidents. This category is too wide and the method of data collection needs to be revamped in order to afford a more comprehensive breakdown. It, however, seems to point to the fact that human behavior and, by extension, the system of driver education, training and certification are areas which need to be examined and strengthened.

CAUSES OF ACCIDENTS	1997		1998		1999		2000	
	ACCIDENTS	%	ACCIDENTS	%	ACCIDENTS	%	ACCIDENTS	%
Apparent error of judgment/ negligence	2,187	25.25	1,822	22.53	2,349	21.33	2,030	18.21
Following too closely	1,101	12.71	647	8.00	736	6.68	1,079	9.68
Turning without due care	971	11.21	587	7.26	698	6.34	713	6.40
Misjudging clearance/distance	621	7.17	564	6.98	876	6.96	869	7.80
Crossing heedlessly	315	3.64	560	6.93	579	5.26	384	3.45
Losing control	715	8.26	544	6.73	593	5.39	920	8.25
Failing to keep to near side	627	7.24	479	5.92	538	4.89	481	4.32
Excessive speed	324	3.74	478	5.91	678	6.16	597	5.36
Improper overtaking	679	7.84	415	5.13	654	5.94	491	4.41
Improper change of lane	290	3.35	379	4.69	764	6.94	677	6.07
Disobeying stop signs	125	1.44	346	4.28	567	5.15	698	6.26
Skidding	128	1.48	270	3.34	489	4.44	200	1.79
Disobeying traffic light	94	1.09	269	3.33	487	4.42	740	6.64
Defective vehicle	220	2.54	248	3.07	469	4.26	238	2.14
Under influence of alcohol	180	2.08	192	2.37	56	.51	66	.59
Road bad/not maintained	38	.44	126	1.56	369	3.35	280	2.51
Other factors	23	.003	116	1.43	59	.54	109	.98
Disobeying pedestrian Crossing	22	.25	44	.54	49	.44	573	5.14
TOTAL	8,660	100	8,086	100	11,010	100	11,145	100

Source: Police Traffic Headquarters

GENDER AND AGE INDICATORS

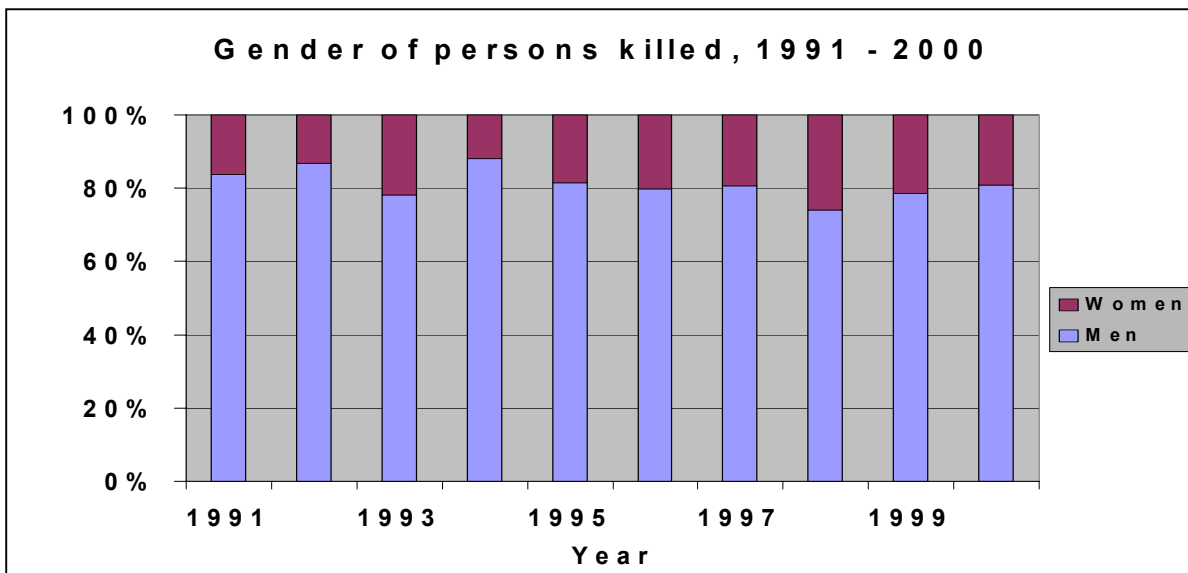
To effectively outline appropriate counter measures, it is important to study which groups in society are most vulnerable on the road. The statistics show that pedestrians account

for 30% of fatalities and, of that number, a third are children in the 0 - 14 age group. Pedestrians at the other end of the age spectrum, being vulnerable due to diminishing physical and mental capabilities, also form a significant percentage of the pedestrians killed.

A ¹gender analysis of road fatalities indicates that:

- for the period 1991-2000, of the **number of persons** who died, 81.50% were males and 18.50% were females (ratio of over 4:1).
- for the period 1991-2000, of the **number of drivers** who died, 95% were males and 5% were females (ratio of 19:1).

It is instructive to note that the majority of these males are in the productive years of their lives.



Special attention should also be made of the accident situation involving children because of the following reasons:

- They are very vulnerable, having physical, mental and social limitations due to their age and size.
- The National Policy on Children requires all national policies to seek to protect the rights of children, as they are “an investment in future societal development and economic efficiency”.
- Related to the above point, in cases where children are road accident victims -- travelling as pedestrians or in vehicles -- there is need to pay stricter attention to the

¹ Compiled from data supplied by the Police Traffic Headquarters

United Nations Convention on the Rights of the Child and Traffic to which Jamaica is signatory. Specifically, in respect to the following articles:

- Article 6: the child's right to survival and development
- Article 18: the responsibility of parents to ensure the best possible development for the child
- Article 24: the child's right to the best possible health

The situation with children and accidents is that, as young as four years old, children are sent into the complex traffic environment for activities such as -- travel to and from school, purchases at nearby shops, or sale of items at makeshift sidewalk "shops" of adults in the home. The lack of green areas and sidewalks in areas where some children live result in them playing too close to traffic. The inadequacy of the public transportation system, the high level of motorisation and the reduced tendency of adults on the road to show caring for the safety of children also add to the problem. This is the socio-economic reality of Jamaica, which results in children assuming adultlike responsibilities prematurely.

STRAY ANIMALS

The number of animals causing accidents in the traffic environment, is an increasing problem. These accidents occur islandwide but some parishes seem to be of more concern than others. The parishes of Clarendon, St. Elizabeth, St. Catherine (particularly in the southern region), Westmoreland, St. Ann and St. Thomas are problematic areas -- and the main hazards are cows. The other parishes that are of concern are Kingston and St. Andrew, St. Thomas, St. Mary and Portland.

Many of the Parish Councils which have responsibility for impounding animals are unable to carry out this function for the following reasons:

- ◆ They have no vehicles.
- ◆ The pound is closed.
- ◆ There is inadequate capability to handle the impounding of large animals, particularly those unaccustomed to being tied. This often results in injury to the animal and reliance on the Jamaica Society for the Prevention of Cruelty to Animals to assist with the care of the injured animal.
- ◆ They are unable to get police protection in communities, which take an aggressive often life-threatening stance, when attempts are made to impound animals.

Financial constraints are often cited as the main cause for most of the above problems.

Over time, residential and industrial areas have increased in density in respect of population and motorization. In this scenario, the problem of animals in the traffic environment has worsened. Consequently, areas that were previously zoned to permit the keeping of animals now present problems in this regard due to the development that has taken place. This points to a need for rezoning in order to reduce/remove the competition of vehicles and animals for the use of the roadway.

SOCIO-ECONOMIC CONTEXT

To understand the need for dedicated actions to promote road safety, it is also important to grasp the huge socio-economic implications of road accidents. Road accidents now cost the global economy about US\$500 billion per year. This means that the number of accidents is not only a human disaster; it is also a disaster with severe economic consequences. Research has shown that the number of productive lives lost as a result of road accidents is higher than if lost from other causes of premature death. Almost 70% of the “years of life lost” to road accident victims are working years, hence developing countries like Jamaica lose the most economically active and productive lives of such persons. Victims tend to be children or young adults in their 30s with young families, so the loss of a bread winner can be particularly devastating for the families.

A significant indicator of the low level of safety on our roads is the resultant high socio-economic costs to the Jamaican society. These costs were, at the beginning of 1990, estimated to be about US \$40 million per year and took into consideration -- lost production, medical expenses, legal fees, vocational rehabilitation, insurance costs, damage to property, administrative costs, pain grief and suffering. Another indicator of low road safety levels, and correspondingly high cost, is the fact that several of the cases seen in hospitals are as a result of traffic accidents. These cases are usually categorized as trauma cases and, as such, are treated as emergencies -- often calling on the limited human and physical (medical) resources and displacing scheduled operations.

The costs to Jamaica are believed to be greatly understated as, where an attempt may be made to compute visible costs, many costs are hidden (e.g. pain and suffering, lost production) and difficult to accurately compute. Additionally, traffic accident costs are more readily related to mortality figures than to morbidity figures. The above approximated accident cost would, therefore, be much higher if costs could be put to accident injuries, where victims sustain physical and mental damage, and who are lost to the workforce and unable to support themselves and their families.

6. POLICY

Road safety is a multidisciplinary field that requires interventions in many areas. Its diverse nature requires strong collaboration both within agencies and with outside

organisations in order to facilitate an integrated and coherent approach to policy formulation and implementation.

This section outlines a comprehensive policy to efficiently promote road safety wherein different professional disciplines are required to work together.

POLICY

The following programme is formulated in accordance with the five 'E's strategy for the reduction/ prevention of accidents.

1. Engineering and Traffic Environment
2. Education and Information
3. Enforcement and Legislation
4. Emergency Response
5. Evaluation and other comprehensive actions

The policy has been outlined in item form under each strategy.

(1) ENGINEERING AND TRAFFIC ENVIRONMENT

- a) i) Adequate guidance and information to road users will be provided and maintained through road signs, signals and markings along all the nation's roadways.
- ii) The capacity requirements of all roadways will be reviewed on an ongoing basis and roadways upgraded accordingly, in keeping with the approved development plans.
- b) Where possible, measures are to be implemented that will spread the travel demand and reduce stress on the transportation network.
- c) An improved system of identification of locations with a high incidence of accidents will be implemented and corrective measures undertaken to reduce conflicts in the traffic environment.
- d) Transportation improvements must make adequate provisions for all categories of road users.
- e) Facilities will be provided and upgraded to give added protection to vulnerable road users. Street furniture will be designed, constructed and placed to ensure minimal risk to road users.
- f) i) Roadways will be designed, constructed and upgraded according to specifications in order to minimise the potential for conflict in the traffic

environment. Road construction activities must include proper slope stability measures (where applicable) and adequate drainage features.

- ii) The integrity of the road surface will be maintained and the roads kept free of obstacles.
- g) Roadways and sidewalks must be kept free of vendors, derelict vehicles, unauthorised vehicles, debris and obstacles.
- h) A system of training, certification and re-certification of drivers and certification of driving instructors will be implemented to improve efficiency and to minimise fraudulent activities.
- i) Modern equipment will be provided, maintained and upgraded (when necessary) for the inspection and examination of motor vehicles.
- j) i) All vehicles, which operate on the nation's roadways, are to meet (local/international) safety standards.
ii) Regulations will be formulated to ensure conformity with vehicle specifications and standards.
- k) The speed limit system will be rationalised.
- l) Physical improvement of animal pounds must be undertaken.
- m) A programme of street lighting is to be implemented islandwide, with emphasis on rural roads.
- n) Transport Centres must be established in busy towns to alleviate the parking problem.
- o) Land use reform must be undertaken and the appropriate building regulations and encroachment laws amended. This must be supported by rigorous enforcement.

2) EDUCATION AND INFORMATION

- a) A system for the efficient collection, reporting and analysis of road accidents will be established. This system must be automated.
- b) Road safety research/studies will be undertaken.

- c) Public education campaigns must be undertaken on a sustained basis.
- d) Develop materials to promote road safety. Place special emphasis on integrating road safety education in the school curriculum.
- e) Undertake institutional strengthening of the National Road Safety Council.
- f) Computer system linkages and data access will be established between the motor vehicle inspectorate, central motor vehicle registry, police traffic headquarters, Collector of Taxes and court offices.
- g) Driver education and testing (which leads to certification) should expose learner drivers to the principles of road safety. These principles would include defensive driving; the role of speed, alcohol and drugs in accidents; the value of safety device use; road rage coping skills; night driving; the importance of route planning and time scheduling.

(3) ENFORCEMENT AND LEGISLATION

ENFORCEMENT

- a) i) Adequate resources will be provided and mechanisms strengthened for the effective enforcement of Road Traffic Act and Regulations.
- ii) A system for the use of video cameras, to control speeding and the disobeying of traffic lights, will be implemented.
- ii) Zero tolerance will be applied in relation to traffic violations.

LEGISLATION

- b) Legislation will be revised and formulated to protect road users.

(4) EMERGENCY RESPONSE

- a) Standardised incident command systems will be developed and incorporated into the curricula of training institutions and procedures of all key response agencies.
- b) The Caribbean mass casualty management system will be incorporated into the national disaster policy and plan as the agreed response strategy.
- c) Regulations under the National Emergency Act will incorporate the defined role of the key managers of the emergency response and mass casualty management systems.
- d) A systematic and coordinated approach to emergency response in traffic situations is to be employed. A legislative framework will be developed to regulate and control emergency medical service systems, training and providers.

- e) An integrated emergency services communications network and center will be developed and maintained islandwide.
- f) Facilities for the access and passage of emergency vehicles will be included in development and improvement plans where possible.
- g) A national road accident emergency response system and plan will be developed and implemented.
- h) Emergency service providers will be trained and certified in accordance with approved norms and standards.
- i) An effective and efficient hospital emergency medical service response system will be developed and implemented according to Ministry of Health norms and standards.
- j) The system of emergency transportation services by land, air and water will be expanded and upgraded to optimal levels

(5) EVALUATION AND OTHER COMPREHENSIVE ACTIONS

- a) A mechanism will be established to evaluate programmes developed under the policy to ensure that stated outcomes are achieved. The follow-up process will include regular reporting of achieved results, assessments of outcomes and possible adjustments of strategies and actions. This monitoring process will be facilitated by the development of measurable goals.

The present system for the implementation and coordination of road safety work will be improved in order to maximise efficiency, increase impact, raise awareness and create favorable conditions. The strategy to strengthen partnership and cost-effective solutions will involve all concerned stakeholders such as various agencies, organisations, the private sector and the community.

- b) A Road Safety Fund, and efforts to more distinctly prioritise road safety issues within the budget process, will be put in place. Funding options for road safety activities will be examined and established. Partnership solutions will be strengthened.
- c) A system will be formulated and implemented for the efficient collection, storage, retrieval, analysis and dissemination of data. Data and other information generated will be readily accessible to the relevant ministries and agencies involved in road safety work.
- d) A Research and Development programme will be established. The programme will outline areas where contribution from science is required. The programme will also promote domestic research and function as a catalogue of prospective research topics for students who are undertaking research at under/post graduate levels. Some of the topics required for urgent research are listed below:

- 1) Economic and Social Costs of Road Accidents
- 2) Effects of Road Accidents on the Children of Victims
- 3) Knowledge, Attitudes and Behavior of Young, Male Drivers
- 4) Assessment of the Driving While Intoxicated Programme and Recommended Alcohol/Breath Level Based on Correlation between Intoxication and Accident Levels
- 5) Road Accident Emergency Response Systems: An Assessment and Measures to Increase their Effectiveness

PRIORITIES

The extent of different possible options to promote road safety makes it necessary to set clear priorities and initiate the most urgent improvements -- improvements that can address known problems and identify effective solutions.

For the first planning period, the following issues should be prioritized:

1. Establishment of a road safety fund
2. Establishment of budgetary provisions, within relevant ministries and agencies of Government, for the undertaking of road safety projects.
3. Improvement in the traffic environment for the protection of vulnerable road users with emphasis on pedestrians (particularly children, the elderly and the disabled) and the establishment of adequate pedestrian facilities in compliance with required standards
4. Establishment of an efficient means of driver education, testing, certification and re-certification. Driver education and testing (which leads to certification) should expose learner drivers to the principles of road safety. These principles should include defensive driving; the role of speed, alcohol and drugs in accidents; the value of safety device use; road-rage coping skills; night driving; the importance of route planning and time scheduling.
5. Establishment of an efficient system of motor vehicle fitness testing and certification
6. Establishment of a Transport Centre in busy towns to alleviate parking problems
7. A system for the control and elimination of street vending to be formulated and implemented
8. Control of stray animals and amendment of the Pound Act and Keeping of Animals Act.
9. Public education campaigns tailored to reach selected target groups (for example young male drivers)

10. Improvement in the provision and maintenance of road signs, signals and markings
11. Adequate system for the maintenance of roads to established standards.
12. Black spot identification and reconstruction to minimize or eliminate, as far as possible, conflicts in the road traffic environment which cause road accident fatalities and injuries
13. Comprehensive road safety legislation and police enforcement. Video camera use, to control speeding and the disobeying of traffic lights, is recommended to augment enforcement and reduce the strain on police manpower.
14. Efficient operation of emergency response systems and enhancement of the quality and availability of emergency response, services, care and rehabilitation
15. Improvement of ministerial and inter-agency coordination
16. Improvement and full automation of the database in, and interdepartmental access between key centres such as the Collectorate, the Courts, the Island Traffic Authority and the Police. The Police should have access to this data while in the field
17. Programme of street lighting requires implementation islandwide with emphasis on rural roads
18. Transportation of hazardous materials to be regulated.

7. SPECIAL CONSIDERATIONS

There are also a number of special considerations that should be taken into account when formulating a road safety policy. These considerations can impact on the success or failure of the road safety policy:

A sustainable, safe and efficient Transport Policy

The risk of accidents varies considerably between different types of transportation. Moreover, the way each type performs its services has important implications for road safety. Also, the development of properties and changes in land use are important factors which should not place undue stress on the transportation network.

One very important issue in this context is the need to develop an adequate and customer-friendly public transportation service. For a number of years the public transportation system in Jamaica was inadequate to meet the needs of the travelling public. This resulted in a dramatic increase in private motor vehicles and the attendant traffic congestion. The road network being incapable of accommodating the increase in

vehicular traffic, particularly in major cities and towns, resulted in competition for road space by all road users. This created conflicts which led to accidents, violations and a breakdown in road user behavior. In 1998, the Government began the phased implementation of a vastly improved public transportation system in the Kingston Metropolitan Transport Region. This replaced the previous system of 'one man' ownership of buses which resulted in buses jostling for passengers in a manner which compromised road safety.

The development of a national transportation plan, therefore, has to be an integral part of a road safety policy. Such a plan must make adequate provision for carriage of people as well as freight. Measures such as promoting more efficient transport solutions, introducing an Intelligent Transport System (ITS) and promoting alternative transport solutions can facilitate safer road travel.

Transportation safety cannot be examined within the scope of this document. On the other hand, a successful road safety policy cannot be formulated in isolation.

Stray animals

The number of animals in the traffic environment, which cause accidents, is an increasing problem. These accidents often result in fatality, injury or property damage. The two items of legislation which deal with stray animals, the Pound Act and the Keeping of Animals Act, are outdated and are being amended. The economics of the operation of pounds has to be revised in order to increase their sustainability and efficiency.

Gender, youth, aged and disabled into special consideration

Accident statistics indicate a high incidence of male fatality particularly of drivers in the productive years of their lives. This is an issue, which has to come in for high consideration in any programme of activities that evolves from a national road safety policy.

In addition, the passage on the roads of the youth, aged and disabled has to receive special consideration as their safety is often compromised. This fact is borne out in the statistics in the case of the youth and the aged. The statistics on the disabled are inadequate and may even be non-existent. What is known, however, is that there are no adequate provisions for the disabled. Additionally, the automation and analysis of road accident statistics should include information on the disabled.

Environmental initiatives often work hand in hand with road safety

The environmental problems from road traffic are being increasingly noticed world wide as a crucial issue. Hospitals report, for instance, that chest problems and other allergy conditions are on the increase. Various causative factors may be responsible here. The extent to which motor vehicle pollution is a factor has to be explored with a view to applying corrective measures.

The increase in traffic creates a carbon monoxide build-up when vehicle engines are 'idling' in long lines of traffic. There are also other dangerous gases that are emitted from vehicles. All road users are affected by these emissions. However, young children, due to their shorter stature, are at a lower height from the ground level than adults and are moreso affected.

Emission control will be necessary at various levels namely:

- a) formulation of specifications for vehicle importation
- b) granting of import license
- c) customs control
- d) certification at the motor vehicle inspectorate
- e) police enforcement

Activities to promote more environmentally friendly transport solutions are also, in most cases, beneficial to road safety. Environmental activities should, therefore, be integrated within road safety work.

Slope stability measures should be employed to reduce incidents of landslides and breakaways — two major factors in the road safety equation. Road construction personnel must be educated about these measures which should become mandatory in the road design process.

Create public awareness of the road safety issue

Abruptly introduced safety measures can be perceived as a restriction in personal freedom and therefore impair both credibility and acceptance of road safety work. In contrast, initiatives that are well prepared and founded on broad understanding strengthens the mission to promote road safety, facilitate implementation and reduce enforcement activities.

This points to the need to develop, as far as possible, public acceptance and response to road safety measures introduced. This calls for long term coordinated planning where different actions such as information and education are closely linked together with road safety reform.

Transportation of hazardous materials

An updated system for the transportation of hazardous materials and measures for enforcing compliance must be put in place.

Street Vending

This problem continues to persist despite concerted efforts to remove/reduce its occurrence.

Markets need to be upgraded and maintained and enforcement activities need to be strengthened and sustained. Programme of municipal wardens is a crucial aspect of enforcement.

Parking Facilities

The construction of transportation centres in towns will alleviate this problem. Some centres have already been built and others are being designed. The planning and approval process for private parking needs also to be addressed.

8. NEXT STEPS

Once the policy is tabled and approved in Parliament, it will form the basis for the development of a programme and action plan for the promotion of road safety. This will necessitate the reconvening of the Cabinet Road Safety Committee which will make the development of this programme and action plan its first order of business.

Activities developed in the action plan will be incorporated in the corporate plan and schedule of activities for implementation by the relevant ministries/agencies. The necessary budgetary allocations must be put in place to fund the scheduled activities.

To ensure that stated outcomes are achieved, a system of programme monitoring and evaluation must be formulated and implemented.

