THIRD AFRICAN ROAD SAFETY CONGRESS

Pretoria, South Africa, April 14 - 17, 1997

FINANCING OF ROAD SAFETY ACTIONS

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Summary and Conclusions.

(i). Road accidents is a serious problem all over the world. However, while most countries in other continents have succeeded in checking and even reversing the number of road fatalities, current trends in Africa indicate that the carnage will increase with increasing motorization without effective remedial actions. However, one can not discuss financing of remedial activities without defining its objectives and goals, the type and amount of activities required, and without specifying responsibilities, suitable financing instruments, and how funds are to be managed to ensure the best value for money.

(ii). The government is ultimately responsibility for road safety policies. It need in that context to specify who in government is carrying that responsibility, and specify how its execution is to be allocated among the numerous agencies involved and how their activities are to be coordinated. It also need to specify policy objectives and targets.

(iii). The discussion on financing has been based on the view that road transport is an economic activity where management and financing of infrastructure and operations should be commercialized. The road sector should in principle cover all costs associated with the demand for infrastructure and other services, and compensate for any detrimental impact on environment and the rest of the society. The road users should following this concept, carry all costs associated with particular investments and services required to lower the risk for crashes, personal injury and fatalities in traffic to the desired level. As motorized vehicles by their mass and operating characteristics are causing the damage in conflict situations, it seems clear that they would have to carry the major part of if not all remedial costs, either as investments and services or through reduced mobility.

(iv). Demand for and use of road infrastructure by motor vehicles will following the commercialization concept, be paid for through a road tariff that may be levied through an annual fee and a fuel levy. This tariff should also cover any safety aspects like elimination of black spots. While the responsibility for licensing and control of drivers and vehicles may remain with a government agency, the costs associated with these licenses should be covered by separate licenses fees. Licensing could be contracted out to private entities. A novel idea is to leave licensing to insurance companies, tying licenses to compulsory third party liability insurance and provide incentives to keep standards.

(v). Other activities required to attain the desired level of road safety (e.g. information campaigns, boosting of traffic control) may be financed trough a levy on premiums for compulsory third party injury insurance as is done in Australia (State of Victoria) and Finland. A levy corresponding to an average $3 per vehicle may probably give a good start. A likely requirement for efficiency is management of the levy proceeds by an autonomous Board.

(vi). Multilateral lending institutions and donors will probably increase their attention to road safety, and might provide more assistance in the years ahead in a favorable environment. The key issues are demonstrated government commitment to sustainable policies, mobilization and effective use of domestic resources, and clear goals and targets.
FINANCING OF ROAD SAFETY ACTIONS.

Introduction.

The Safety Problem.

1. Road accidents is a serious problem throughout the world, in social, health and economic terms. It is said that road accidents commonly is the second largest cause of deaths for economically active people (5-44 years) in many countries, and is by the WHO considered to be of endemic proportions. Between 50 and 200 people are killed each year for each million inhabitants in most developed as well as developing countries.

Figure 1: Annual Road Accident Fatalities per Million People in African, American, Asian and European Countries (1992-94). Source: IRF (9)

Estimates of the total costs of road accidents including valuation of lives lost and losses in quality of life, often corresponds to 1-3 percent of GNP in the countries concerned.

2. The scale of the problem in developed countries is mainly due to a high degree of motorization, while the key factor in developing countries is the comparative lack of safety culture and features, and the correspondingly high accident rates. While Malawi as well as Denmark, Germany, and Canada, had all around 100 road deaths per million people per year in the early 1990ies, the annual road accident fatality rates per 10,000 vehicles in Malawi was around 100 times higher than in Canada, Denmark, and Germany.
While developed countries have in general succeeded in checking and even reversing the annual number of road accident fatalities, the number of fatalities in African countries have trebled between 1968 and 1990, and will, following current trends, continue to increase with growing motorization if no effective remedial actions are taken.
3. The increasing carnage on African roads has recently caught the attention of the international press as the influential news magazine the Economist had in their January 4 1997 issue, an article headlined “Another way to die in Africa”. The article describes the road traffic system in Sub-Saharan African countries as an environment dominated by poor and badly maintained roads, unqualified and reckless drivers, decrepit vehicles, and ignorant and corrupt police officers. A harsh wake up call?

**World Bank Involvement.**

4. Improving road safety has gradually become an integral element in World Bank and donor financed projects in the transport sector. After a 1981 review of road safety elements in its portfolio, the Bank in 1982 adopted some internal guidelines for increased attention to road safety in lending and related operational work. The latest review of the Bank’s portfolio in the road sector (1995), showed that 58% of lending projects since 1989 had identifiable traffic safety components or elements but that few projects had components specifically designed to generate traffic safety benefits. The traffic safety content in African projects reviewed (11) made up less than 3% of the loan portfolio; only the Urban Transport project in Ghana had a traffic safety component totaling more than US$ 2 mill. The Bank’s most comprehensive involvement with traffic safety so far was in recent projects in Central and Eastern Europe (CEE). These projects covered most aspects of road safety with lending of between US$ 7.6 and 15.0 million to each of the individual countries.

5. While the World Bank and the donor community have thus for a long time provided substantial technical and financial assistance towards improved traffic safety, they have also become increasingly frustrated by an impression that most efforts seem to have had little long-term impact, perhaps particularly in Africa. This apparent lack of success of previous attempts makes it desirable to review the experiences and lessons gained to date before further or more extensive assistance is committed. We need to be sure that what we are proposing or supporting is not something which has been tried and failed before, that we next time around know the main reasons for previous disappointments and what can be done to eliminate or mitigate these. We are in this context hopeful that the ongoing “Appraisal of Road Safety Initiatives in Selected Countries” by the Institute of Transport Economics (TOI), Norway, will provide us with some useful leads.

**Basic Approach to Financing.**

6. An increasing number of countries in Africa as elsewhere, are recognizing transport to be an economic and not a social service, and are adopting commercialization as the basic concept for managing and financing of the sector. Road traffic and transport should at least in principle, cover the costs resulting from their demand for infrastructure and services through user fees commensurate with the costs imposed, and further compensate for the detrimental impact road traffic have on the environment and the rest of society. The road users would on this basis be economically responsible for all particular investments and services required to attain the desired level of traffic safety.

7. A discussion on financing of road safety efforts will following the remarks above, need to be based on a critical review of the road safety environment, the basic approach to road safety, and
of road safety activities. Key issues are the core causes of road accidents and the attached responsibilities, appropriate objectives and goals of road safety efforts, and how road safety activities may best be organized, managed, and implemented.

**The Road Safety Environment.**

**The Road Transport System.**

8. The road transport system include three main physical components; *the road users* including pedestrians and drivers, *the vehicles* including bicycles as well as motorcycles, and *the roads* including their immediate environment. These components and their interaction through the movement and behavior of the road users, are influenced by and have an effect upon a variety of social, economic, and technological factors. Some factors such as vehicle licensing and inspection, land use in the immediate vicinity of the roads, and traffic legislation and its enforcement are directly related to the three components. Other more external factors such as education and medical services which are linked to other sectors of the economy, are still affected by and have an influence on the operation of the road transport system.

9. The purpose of the road transport system is to promote and improve the mobility of people and goods; good accessibility, mobility, and low transport costs are implicit objectives. Any changes in road conditions that improve accessibility, mobility, and transport costs for motorized transport, may not, however, necessarily yield any benefits to non-motorized traffic. It is more likely that these changes may increase the risk for and severity of conflicts between motor vehicles and other road users, unless these aspects are particularly addressed and provided for. Changes in road conditions can beside have an impact on other related factors such as noise, air and water pollution, and on land use, physical and social barriers, and the natural environment.

10. The determination of what actions should and can be undertaken to improve road safety is thus complicated by the conflicting interests of the various parties involved. An unsolved question is how gains in mobility and economic efficiency for some can be rated against loss in safety and social welfare for others; how many cars would have to save how many minutes to justify an intervention that results in a 50 percent increase in risk of accidents with serious injuries or death for pedestrians and non-motorized traffic?

**Causes of Road Accidents.**

11. It is generally acknowledged that human error is an underlying cause of almost all accidents; human error in observation, decisionmaking and response to the situation at hand. Research in several countries conclude that human error is involved in over 90 percent of all road accidents and that only a small proportion of accidents can be directly attributed to vehicle defects or faults in road design or maintenance.(see Fig 4) Careful analyses of accident, however, have made it clear that accidents often are the result of a critical combination of several factors, that it often is not correct to single out a single main cause. It may be more appropriate to use the concept of “accident contributing factors or risk increasing factors” to explain why an accident took place. If a drunken driver drives his car off the road in a sharp curve, hits a tree and is killed, one may say intoxication caused the accident. However, the accident may not have happened if the curve had
not been that sharp; the driver might have survived if the tree had not been that close to the road. A more analytical review of accidents may thus give more clues on how to improve safety than the obvious legalistic approach.

12. Some of the most important factors known to increase the risk of accidents and/or increase the severity of accidents can be listed as follows;

Road User Factors: Inexperienced, young, and reckless drivers, driving under the influence of alcohol and drugs, ignorance of traffic rules and regulations; and reluctance to use safety devices such as safety belts and helmets.

Vehicle factors: Worn tires, poor brakes, and non-functional lights; overloading of public service vehicles and trucks; use of unsuitable vehicles like pickups for transport of passengers; and poor crashworthiness design.

Road Factors: High or no speed limits and poor visual guidance; poorly controlled intersections and uncontrolled access; narrow roads, poor alignment standards, and poor maintenance of pavement and shoulders; and steep ditches and hard objects near the road.

Traffic and Environmental Factors: Mix of motorized and non-motorized vehicles and pedestrians; poor traffic management and enforcement of the traffic code; darkness and inclement weather conditions; and inadequate emergency medical services. Economic pressure factors have also become more important following the liberalization of road transport services, as intense competition for passengers have resulted in more speeding and reckless driving by drivers of public service vehicles.

Though all these factors contribute to higher accident risks and give a lead on where corrective actions may be taken, it is clear that any countermeasures need to be undertaken as a part of a comprehensive program to be effective.
The figure show that British and US in-depth studies have found that the road users alone were responsible for 65 and 57 percent of the crashes in Britain and US respectively; that the road environment alone could be held responsible for 2 and 3 percent respectively, and that the vehicles themselves were solely responsible for only 2 percent of the crashes. Road users and the road environment together were found to have caused 24/27 percent of the crashes respectively, the road users and the vehicle together for only 4/6 percent, and that errors by the road users were a contributing factor in 95 and 94 percent of the crashes respectively.

Safety Measures.

13. The road users is clearly the critical element in the system, their behavior has to be addressed if significant gains in safety are to be obtained. Key factors are a basic understanding of the traffic system, an ability to recognize and avoid danger, and to exercise safe behavior. Knowledge on the traffic system and how to behave in traffic, can primarily be improved through better education and publicity campaigns, and through better screening, training and testing of drivers. However, experience have shown time and again that knowledge and guidance alone is not enough; effective and visible traffic surveillance and enforcement are essential for compliance with laws and regulations.
14. A first requirement for a safe traffic system is a framework of appropriate traffic laws and regulations and guidelines for proper behavior, and adequate education and publicity campaigns targeted at all road users of all ages and modes of participation. It has to be stressed that a driving license is not a birth right but a qualification. Screening, training and testing of drivers should make sure that those licensed to operate motorized vehicles fulfill certain minimum requirements with respect to physical and mental capabilities and practical skills, in particular for operators of public transport. It is in this context important that the regulatory framework governing the transport industry, take account of the potentially negative impact of competition on traffic safety by instituting appropriate countermeasures. There is further a need for adequate regulations and testing of vehicles to ensure that they are properly designed, equipped, and maintained.

15. Roads should be designed, equipped, maintained, and operated in line with their function and the adopted economic, safety and environmental criteria. Key aspects to be considered are type of service to be facilitated (local access, collector/distributor, arterial) and type of road users to be accommodated. It is in this context important to take account of experience on users perceptual and behavioral performance, and facilitate easy acquisition of information and decision-making, and eliminate elements of surprise. It is further in recognition of the users as fallible and vulnerable human beings, important to provide for containment of damages due to potential errors, and to establish suitable emergency medical care services.

Responsibilities.

16. The preceding review has reflected the complexity of the road transport system and of the task of providing for its effective and safe operation. With traffic safety being such a multifaceted task, it is fair to ask who actually are responsible for traffic safety?

17. It is obvious that parent ministries of road agencies are responsible for provision and maintenance of safe roads, that the ministry of transport is responsible for traffic laws and regulations and for certification of vehicles and drivers. Enactment of laws and provision for their implementation must be the responsibility of the Ministry of Justice. Ministry of Education is responsible for education, Ministry of Interior for traffic management and control, Ministry of Health for emergency medical services, and Ministry of Finance for allocation of sufficient resources to the relevant agencies. But as accidents is a product of several risk generating factors, how can an agency’s individual responsibility be quantified and performance be monitored and appraised? And is it clear who is responsible for appropriate coordination of all complimentary measures to ensure maximum impact from the resources available?

A Framework for Road Safety Activities.

Objectives and Goals.

18. It seems generally accepted that road traffic will inevitably generate accidents resulting in injuries, fatalities, and property damage; that road safety activities can only aim at reducing the number and severity of accidents. Road traffic may in this respect be the only civil activity in recent times where so high risk factors are accepted that a significant number of severe injuries and
fatalities can be predicted and tolerated. Roads is the only transport system where safety is subordinated to mobility. Sweden seems so far to be the only country contemplating a “zero-option” as their official policy, i.e. that no serious injuries or fatalities are to be tolerated, that mobility will be subordinated to safety. Key factors for implementation of the “zero” option may be 30 km/h speed limits in cities and build up areas, and quality assurance on compliance with traffic laws and regulations for public transport and trucking.

19. A zero option may in the near term be an unsuitable target for road safety programs in African countries. But successive, achievable reductions in number of serious injuries and fatalities may as in Finland and a some other countries, serve well as a focal points of road safety programs. Published goals would help to demonstrate government commitment, and emphasize the responsibility and accountability of the key agencies concerned. Goals and specified incentives should increase motivation to carry out safety activities, provide direction on scope of work and coordination, and help in determining priorities. The key tools and measures to improve road safety are well known and to a large extent ready available to governments. The weak links are commitment and effective management.

Organization and Management.

20. Road safety work is a complex process involving different elements of the economy and the society. While the government is ultimately responsible for road safety, it is imperative that clear responsibility and authority are assigned to the various entities involved to ensure that all important aspects are adequately covered. It is equally important that there is a designated body with clear responsibility for coordination to ensure coherent programs and effective use of available resources.

21. Various types of management structures are in use to coordinate road safety work at the national level; e.g. a high-level unit or agency established for the purpose, a designated lead department (e.g. Department of Transport), or committees or councils as in Norway and Tanzania. While choice of structure depends on local conditions, a recent regional policy seminar for Central and Eastern European Countries forwarded recommendations on the practical organization of road safety at the national level which may be summarized as follows;

1. Designate a member of the cabinet to be responsible for overall road safety policy.
2. Assign the task to initiate and coordinate governments actions to a high level civil servant with rank of director or above.
3. Institute a permanent body to steer the actions; e.g. a National Road Safety Board. The body should be independent from organizations responsible for the actions, and have access to all ministries involved,
4. Provide for evaluation of the outcomes/impact of road safety actions.

For a permanent steering/coordinating body to be effective, it would need to be autonomous and in its structure and staffing include incentives to be effective and efficient. It should have access to own funds commensurate with assigned tasks, and be assigned the management of non-budgetary funds available for road safety work. It should in addition to horizontal coordination at the national level, be directed to develop vertical coordination with regional and local organizations.
22. Management of safety as management of any other tasks in the road sector; require a businesslike approach to be effective; clear objectives and goals and sound business practices with incentives to perform. Key tools are effective and transparent management information systems, commercial budgeting and accounting systems, and routine monitoring, auditing and research to learn how to be better.

Planning, Programming, and Implementation.

23. Main aspects in planning for road safety are identification of the problems, determination of appropriate measures, and preparation of a well justified, prioritized, timed and coordinated program of selected activities. The usual requirements for effective planning are:

- reliable data and analysis to assess location, seriousness and nature of problems,
- information on potential measures that may mitigate or solve the problems, and their likely impact with/without various complementary activities
- approved tools/criteria for justifying resource use, appraisal of alternative measures, and prioritizing of selected activities.

Benefit-cost analyses following the same principles used in infrastructure planning is increasingly also used in planning road safety improvements even if valuation of life and quality of life is a contentious issue. Any of currently used valuation methods are better than none. A tricky issue is distribution of costs and benefits.

24. All activities with significant impact on road safety risk factors, need to be monitored and appraised at regular intervals to assess status, gain experience and knowledge, and provide basis for remedial actions as seen necessary. Important aspects are safety audits of road maintenance and construction programs, and monitoring of speeds and other traffic behavioral patterns to assess the sufficiency of traffic surveillance and control.

Financing.

25. The road users, following the commercialization concept, are in principle responsible for all specific investments and services required to attain the desired level of traffic safety, and should in principle pay for these through fees commensurate with the costs imposed. The key questions in this context are; (i) what are the specific investments and services that should be covered by fees levied on road users, and (ii) what direct and indirect instruments may be suitable to facilitate payment for these investments and services, and (iii) who is responsible for other less specific actions and services important to traffic safety, and how can these be assured adequate financing.

26. In Table 1 an attempt is made to aggregate the activities and services considered most important to road safety into a few groups, and to indicate their most likely financing following the commercialization concept. It is again stressed that individual road safety activities to be effective, should be undertaken as part of a comprehensive Road Safety Action Plan.
### Table 1. Road Safety Activities and Funding Sources: Examples

<table>
<thead>
<tr>
<th>Safety Activities</th>
<th>Funding Sources. (Categories may overlap)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Agency Budgets</td>
<td>User Fees</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Road User</td>
</tr>
<tr>
<td>Legislation &amp; Regulations</td>
<td>V</td>
<td></td>
</tr>
<tr>
<td>Safety Coordination</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Road Infrastructure</td>
<td>V</td>
<td>V</td>
</tr>
<tr>
<td>Traffic Management</td>
<td>V</td>
<td></td>
</tr>
<tr>
<td>Driver &amp; Vehicle Licensing</td>
<td></td>
<td>V</td>
</tr>
<tr>
<td>Education &amp; Information</td>
<td>V</td>
<td></td>
</tr>
<tr>
<td>Enforcement &amp; Inspection</td>
<td>V</td>
<td></td>
</tr>
<tr>
<td>Accident data &amp; Studies</td>
<td></td>
<td>V</td>
</tr>
<tr>
<td>Emergency &amp; Medical Care</td>
<td>V</td>
<td></td>
</tr>
</tbody>
</table>

#### The Treasury

27. All basic activities related to legislation and regulation and provision of basic road infrastructure, education, and enforcement to ensure compliance with laws and regulations, may be considered part of the basic government services and should as such be financed over the government budget. The same may be said for general emergency medical care, and collecting of basic accident data through public road agencies and the police. There is no obvious reasons, however, why governments should be involved with and have expenditures related to licensing of drivers and vehicles, except in a supervisory role.

#### User Fees.

28. The road users are at least in principle, obliged to cover all costs associated with use of road infrastructure and traffic management through user fees commensurate with the costs imposed. This concept may in context of road safety be applied as follows;

**Driver and Vehicle Licenses.** The costs associated with licensing of drivers and vehicles and periodic checks as required to maintain standards, should be covered by appropriate license fees. While responsibility for licensing of drivers and vehicles should remain with a government agency, the actual testing and licensing could be contracted out to suitable private sector entities. A novel idea is to leave it to the insurance companies as part of their insurance business; tying licensing to third party liability and comprehensive vehicle insurance. A competitive market should give the insurance companies the incentives to raise driver and vehicle standards to acceptable levels.
**Road User Tariff.** Road vehicles would through a “road tariff” for access to and use of the road network, finance at least maintenance and management of the road system and should increasingly also finance investments to accommodate increasing traffic volumes and demands for improved standards. This “tariff” (e.g. an annual fee and a fuel levy) should implicitly cover all expenditures necessary to maintain agreed road infrastructure safety standards, and increasingly investments to satisfy mandated safety requirements.

**Fee on Third Party Insurance Premiums.**

29. A number of countries have introduced legislative requirements for insurers of compulsory third party injury liability, to invest in road safety. Finland, the Province of Quebec in Canada, and the State of Victoria in Australia are recognized as pioneers in this respect. However, as it is the vehicle owners that are obliged to take the insurance and pay the premiums including the additional tax or surcharge for road safety, the safety tax or surcharge may rather be seen as a proxy for a road user safety fee.

30. A road user safety fee levied through a surcharge on compulsory third party insurance premiums, seems to be an excellent idea in line with the commercialization concept. As the insurance and premiums are related to road accident costs, it makes sense to use a part of the premiums to improve road safety and thus facilitate lower total accident and insurance costs. As the insurance premium usually reflect the individual drivers risk profile, the premium and an ad on safety fee would carry an incentive to drive safely. However, a basic requirement for this concept to be effective and accepted by the road users, would be for the compulsory insurance to have no exceptions, no exception for government vehicles. The proceeds from a safety fee could finance coordination, information and awareness campaigns, initiatives to improve traffic safety for children and other special groups, and to strengthen other efforts when needed, e.g. traffic surveillance and management as public budgets often are far from sufficient.

31. A “Road Safety Fee” and a “Road Safety Fund” should be legalized through a parliamentary act. Important aspects to be included in an act are specifications of the “Fee’s” objectives and the “Fund’s” management structure. The recommended option is to leave management to an autonomous Board of stakeholder representatives.
Table 2: Funding by Fee on Third Party Insurance Premiums (TPIP). Examples

<table>
<thead>
<tr>
<th>Information Item</th>
<th>Victoria (Austr.)</th>
<th>Finland</th>
<th>Poland</th>
<th>Hungary</th>
<th>Czechia</th>
<th>Slovakia</th>
<th>South Africa</th>
<th>Zimbabwe</th>
<th>Tanzania</th>
<th>Kenya</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pop.(mill.)</td>
<td>4.5</td>
<td>5.12</td>
<td>38.2</td>
<td>10.35</td>
<td>10.36</td>
<td>5.3</td>
<td>41.7</td>
<td>10.4</td>
<td>25.9</td>
<td>25.7</td>
</tr>
<tr>
<td>GNP/Cap.$</td>
<td>15,000</td>
<td>21970</td>
<td>1690</td>
<td>2785</td>
<td>3140</td>
<td>3140</td>
<td>2546</td>
<td>567</td>
<td>99</td>
<td>310</td>
</tr>
<tr>
<td>Veh.(1,000's)</td>
<td>2,700</td>
<td>2240</td>
<td>7263</td>
<td>2400</td>
<td>3064</td>
<td>1574</td>
<td>6341</td>
<td>424</td>
<td>265</td>
<td>411</td>
</tr>
<tr>
<td>Veh./1000 pop.</td>
<td>600</td>
<td>437</td>
<td>190</td>
<td>231</td>
<td>296</td>
<td>297</td>
<td>152</td>
<td>41</td>
<td>10</td>
<td>16</td>
</tr>
<tr>
<td>Road Budg. $ mill.</td>
<td>282.-</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
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<tr>
<td>Mainten. Req. $ mill</td>
<td>66.-</td>
<td>45.-</td>
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<td></td>
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<tr>
<td>Road Accident per mill. pop</td>
<td>350, 441, 7901, 2120, 1624, 835, 10142, 1024, 1483, 2425</td>
<td></td>
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<td></td>
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<tr>
<td>Fatalities pr. 10,000 veh.</td>
<td>1.3</td>
<td>2</td>
<td>10.9</td>
<td>8.8</td>
<td>5.3</td>
<td>5.3</td>
<td>16</td>
<td>24</td>
<td>56</td>
<td>59</td>
</tr>
<tr>
<td>National in% of TPIP</td>
<td>10%</td>
<td>1%</td>
<td>8%</td>
<td>8%</td>
<td>8%</td>
<td>8%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Road Acc. $ mill/year</td>
<td>56.65</td>
<td>8</td>
<td>28.-</td>
<td>20.-</td>
<td>12.-</td>
<td>7.-</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Prev. Fund % of Maint. $/veh/year</td>
<td>21</td>
<td>3.57</td>
<td>3.85</td>
<td>8.33</td>
<td>3.92</td>
<td>4.45</td>
<td></td>
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</tr>
<tr>
<td>Annual at 1 $/veh.</td>
<td>6.34</td>
<td>0.42</td>
<td>0.27</td>
<td>0.41</td>
<td>19.02</td>
<td>1.27</td>
<td>0.81</td>
<td>1.23</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prev. Fund at 3 $/veh.</td>
<td>19.02</td>
<td>1.27</td>
<td>0.81</td>
<td>1.23</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Income if at 5 $/veh.</td>
<td>31.71</td>
<td>2.12</td>
<td>1.33</td>
<td>2.06</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Fee is: at 10 $/veh.</td>
<td>63.41</td>
<td>4.24</td>
<td>2.65</td>
<td>4.11</td>
<td></td>
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The Transport Accident Corporation (TAC) in Victoria, Australia, was created in 1987 to provide “no-fault” compulsory motor vehicle personal injury accident insurance, and to invest in road safety to reduce trauma and contain the spiraling costs of road accidents. The initial fee of 3% on the premiums was gradually increased to 10% as the reduction in claims outweighed the fee by 6.7 to 1, and amounted in 1993/94 to about $21 per vehicle. The reductions during the four years from 1989 to 1993, in annual fatalities by 44 percent and in total accident costs by 50 percent, is mainly attributed to the road safety programs targeting drunk driving and speeding. The total program has been estimated to have an annual benefit cost ratio of raising from 3.7:1 in 1989/90 to 5.1:1 in 1992/93.

32. In Table 2 is presented some information on the income from the fees levied on insurance premiums in Finland and the State of Victoria in Australia, and estimates of the potential income from fees proposed for some Central European countries. The fee corresponds to an average $21 per vehicle per year in Victoria, about $3.60 in Finland, and would be between $3.80 and 8.50 per vehicle per year in the mentioned Central European countries if the proposals are adopted. A fee corresponding to an average $1 per vehicle per year would in Zimbabwe generate revenues comparable to the present budget for the Zimbabwe Road Safety Board, and would in Tanzania have generated an annual income corresponding to 1/4th of the total Tanzanian budget for road safety for 1994/95, but to 2 times the local contribution to that budget.

33. A Road Safety Fee corresponding to an average $3-5 per vehicle per year should at least in Sub-Saharan African countries, with effective management facilitate more aggressive efforts to improve road safety. These efforts will most likely over some time result in enough improvements in traffic safety to justify lower insurance premiums in competitive markets, and make the road safety fee a good investment for the insurance holders.

Private Sector Firms and Non-Government Organizations.

34. Private firms are contributing to road safety by donations in cash and kind to government led programs, and by support to non-government organizations. Suppliers to the sector such as oil
companies, vehicle dealers, insurance companies, and transport firms may promote traffic safety to their own financial gain. It is highly likely that there are untapped opportunities for support from the private sector, in particular in connection with promotional campaigns for their own products. While financial contributions from non-government organizations may be insignificant, they may often be able to excerpt significant political pressure and support for specific programs.

**Development Loans and Grants.**

35. The World Bank, other multilateral lending institutions, and the donors have in the past as indicated above, contributed to road safety through loans, grants, and technical assistance. Loans and grants have mainly been used to finance infrastructure and equipment, while technical assistance (TA) can cover all major aspects.

36. It is likely that the multilateral lending institutions and the donors will increase their attention to traffic safety, and be prepared to contribute more resources to this aspect in the years ahead. They may in particular be interested in safety measures targeting pedestrians and non-motorized transport. It is, however, highly likely that further assistance to a higher degree than before will be conditioned on the presence of an environment that facilitate significant and sustainable impact of any interventions. The key aspect would probably be demonstrated government commitment through stated policies and goals, a facilitating institutional framework including an effective coordinating body, and mobilization of local resources through sustainable instruments.
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