

Road safety and other policies : conflict or integration ?

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Introduction

It is now widely recognized that road safety management should be organized on a multisectoral basis, involving a large number of actors, both from the public and the private sectors. However, putting this principle into practice implies deep organizational changes which are not easy to implement. A major problem is the degree of involvement of key actors and the integration of road safety priorities and activities in their current workload. The paper discusses this issue with regards to Health, Security, Urban Planning, and Road and Transport Policies.

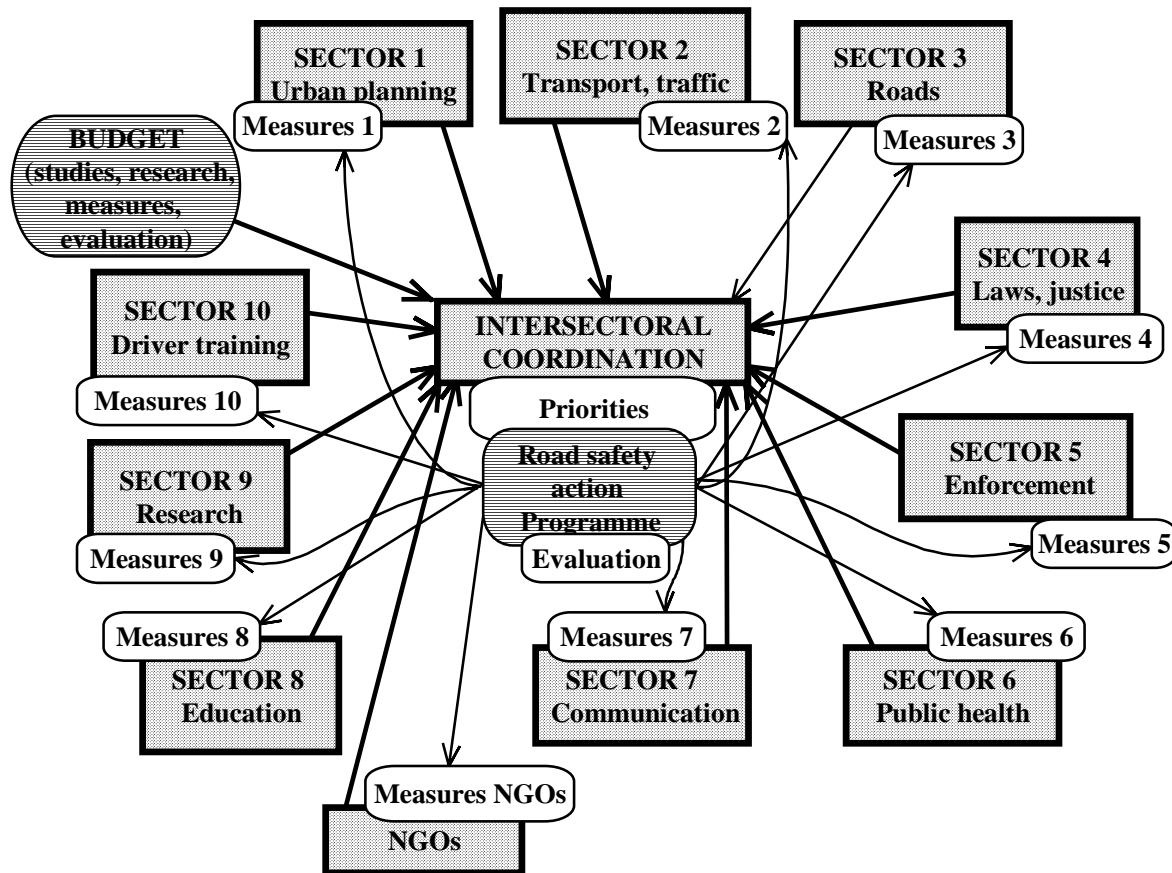
Intersectoral organisation of road safety and its requirements

Road accidents are the end product of complex processes involving either of the components of the road transport system (infrastructure and its environment, vehicles and traffic, the road users) and their interactions. Improving the road safety situation or avoiding to generate more injury-producing crashes through ill-advised infrastructure or transport projects necessarily involves intersectoral action and a programme integrating complementary interventions. In order to manage such integrated road safety programmes (whether targetted or not) and to make substantial progress in road safety, a coordination structure needs to be set up within the decision-making chain (Muhlrاد, 2001, 2005).

The main actors represented in the road safety coordinating institution include the pilot sectors that are the motors of road safety action or assume responsibilities (Roads, Transport, Regulations and Enforcement, Health, Urban Planning), other contributing sectors (Education, Justice, Industry and Trade, Communication, Research), and possibly representatives of the stakeholders in the civil society (unions, associations, lobbies, sponsors, etc.). Each of these actors participate in the debates and the decision, but are also expected to get their ministry or organization to implement the decisions taken by the coordinating institution (Muhlrاد, 2006).

The coordination structure thus requests studies and diagnoses of the road safety situation, identifies priorities, sets targets for action, examines the safety impact of on-going wider-scoped projects, prepares integrated programmes and, hopefully, obtains the corresponding implementation budget. Whatever measures or activities have been agreed upon then go back to the original sectors or organizations where getting them onboard may radically alter the usual priority system (Fig.1).

Fig. 1. Once the decision taken, the basic have to implement the measures according to plans



From : Muhlrاد, 2006

Each different sector or organization playing an active part in road safety has thus to re-think the place given to road crash and injury prevention activities within its current activities and to reorganize in order to accommodate the changes. We will here consider four of the main actors.

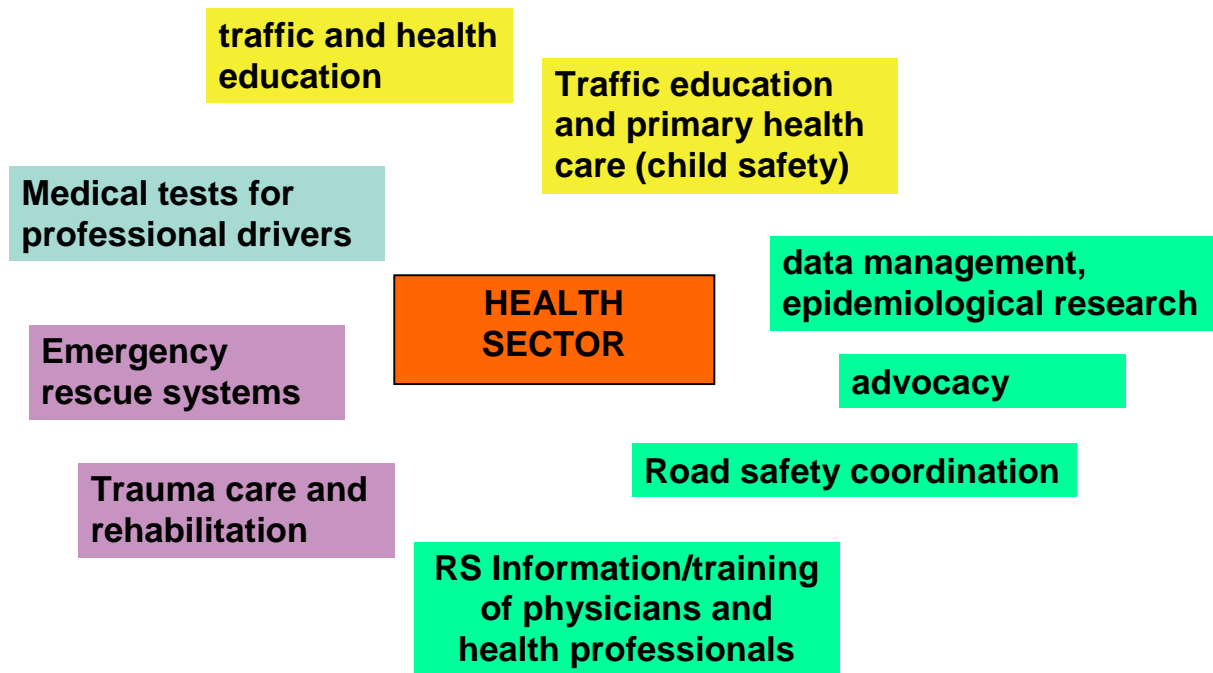
Public Health and road safety

Trauma resulting from road traffic accidents are a major public health problem, in the world (WHO, 2004) and at country level. Recognizing this has switched the emphasis in the health sector from care to crash victims to prevention, which implies new links with other sectors, partners in prevention.

The Health sector thus plays a multiple part in road safety (Fig.2) :

- raising the priority level of road safety in public policies, by making it a health priority and publishing reliable data to support the issue : epidemiological data showing the true extent of the problem of road fatalities and injuries and their consequences, economic data showing the cost of road trauma for the health system ;

Fig.2. What the Health sector can do for road safety



- contributing to the diagnosis of the road safety situation through surveillance systems which complement the statistics produced by enforcement agencies and take into account, not only mortality but also morbidity from road accidents ;
- integrating traffic education and road safety information into health education programmes, particularly with regards to prominent accident factors related to health such as alcohol impairment, legal or illegal drug consumption, delaying the decrease of performances related to the ageing process, etc.
- integrating information and education in primary health care, with particular attention to child safety through information of families ;
- participating in other road safety measures related to health issues such as medical tests of professional drivers, assessment of driving abilities, improvement of working conditions of professional drivers, etc.
- participating in the organization of emergency rescue systems and providing emergency care, long term care and physical rehabilitation to road accident victims ;
- training physicians and health professionals to help them perform the new road safety tasks ;
- providing equitable access for all to the medical care facilities.

However, the Health sector is obviously ill-equipped to deal with prevention on a larger scale including infrastructures and mobility, although it may have the authority to stir the relevant sectors into action and even initiate intersectoral coordination at the national or the local level.

All these tasks are accomplished by the Health sector only in very few countries. Several levels of difficulties can be observed :

- developing prevention within a Health system which was previously mostly oriented towards the treatment of diseases requires a complete change of attitudes, some reorganization, and the entry of new professions, some of which are not usually health related (for instance to perform intersectoral communication and cooperation) ; moreover, making road safety, or more generally injury prevention, a priority means introducing a new "disease" for which specialists did not previously exist in the health system ;

- advocating for road safety and mobilizing other actors in order to make them partners in prevention implies that the health sector is recognized by other sectors as a major player (which should be easier now that the World Health Organization had put road safety on its agenda), and also that the health data provided on injuries is reliable and non-controversial;
- organizing emergency trauma treatment on a scale large enough to accommodate road traffic injuries involves multidisciplinary teams of physicians and health professionals within specialized hospital services distributed all over the country, which draws heavily on resources and may somewhat conflict with other hospital operations, both from the resource and the operational points of views ;
- participating in traffic education and road safety related information involves, not only hospital physicians and health professionals, but also family physicians, most of whom are not familiar with road safety issues and need to be trained ;
- making trauma care equally available to all accident victims involves negotiations with the government (social health or social security systems), employers organizations, private insurance companies, sometimes international organizations, and may be the object of a public debate before a procedure is found.

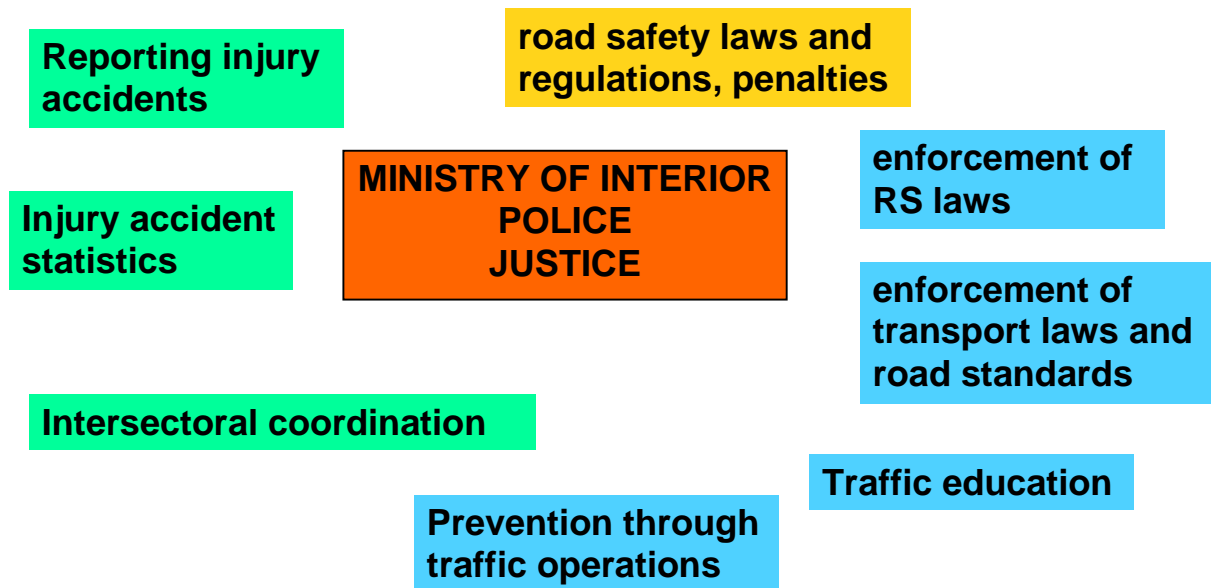
Public security and road safety enforcement

Democratic governments are responsible for citizens security, and this may be understood as including road safety, especially as road crashes generate far more fatalities and injuries than interpersonal violence (except, of course, in the case of wars or civil wars), even more than terrorist acts. However, traditional priorities of enforcement agencies usually focus on voluntary acts that should be repressed, and road accidents have long been considered out of this category. Only recently, drinking-and-driving, speeding and other behaviour inducing serious risk to others have started being treated as criminal. Implementing the enforcement strategies needed to improve road safety thus draws on human and other resources usually allocated to more "noble" security duties.

Ministries in charge of Security and Justice do play an important part in road trauma prevention through (Fig. 3) :

- regulations and enforcement addressing road user behaviour : specific laws need to be integrated into the justice system and penalties harmonized with the penal system addressing all forms of criminality or misdemeanour ; enforcement needs to be operated efficiently through strategies addressing the main accident factors at the right times and places, and must be equitable in order to remain acceptable to the public ;

Fig. 3. What the public security sector can do for road safety



- prevention through operational measures to regulate or divert traffic when an incident occurs or when the automatic regulation system fails ;
- recording and reporting on injury accidents, to provide means to assess responsibilities, and, more important for road safety, to provide information on accident and injury processes that will be of essential use for diagnoses, the identification of accident or injury factors and the design of road safety measures ;
- enforcement of regulations addressing compliance with the current road standards of major road construction or rehabilitation projects, or compliance of goods and passenger transport operators with the laws on professional driving or professional vehicle usage (maximum load, securing goods, etc.) ; it is to be noted, however, that these tasks may also be performed by ministries of Transport ;
- participating into intersectoral decision-making on road safety policies and programmes (even with a leader role in some countries).

In the Enforcement sector as in public Health, integration of road safety and other activities raises problems :

- allocating a high priority to road accident prevention in a system built to repress delinquency is, in some countries, a major switch which requires a social consensus and/or strong political will at the highest level ;
- on the contrary, changing attitudes towards road safety of enforcement decision-makers and officers, i.e. accepting that other factors than human error or violations can be responsible for accidents and corrected, is needed in countries where the Police has long had the leading role in road safety policies and coordination ;
- finding enough human and financial resources to ensure large scale, efficient and equitable enforcement of road safety regulations means investing more in the development of enforcement agencies, which usually conflicts in the national budget with other critical areas such as education or health ; a partial solution can be found in adopting automatic enforcement procedures for traffic violations which can be accurately observed or measured without human intervention (speeding, red-light running, etc.), but usually requires legal changes to be applicable (Muhlrad, 2006) ;

- ensuring adequate carrier development for police officers involved in road traffic related activities which have (too) long been considered as not requiring high skills ;
- training enforcement officers to carry out all their required tasks and to facilitate interactions of enforcement staff and other road safety actors.

Moreover, enforcement decision-makers, when taking a leading part in road safety policies, often tend to focus on human factors as the sole "cause" of traffic accidents and trauma, thus delaying action addressing the road environment : a change of attitudes needs to be operated through adequate information and communication policies inside the sector and at the intersectoral level.

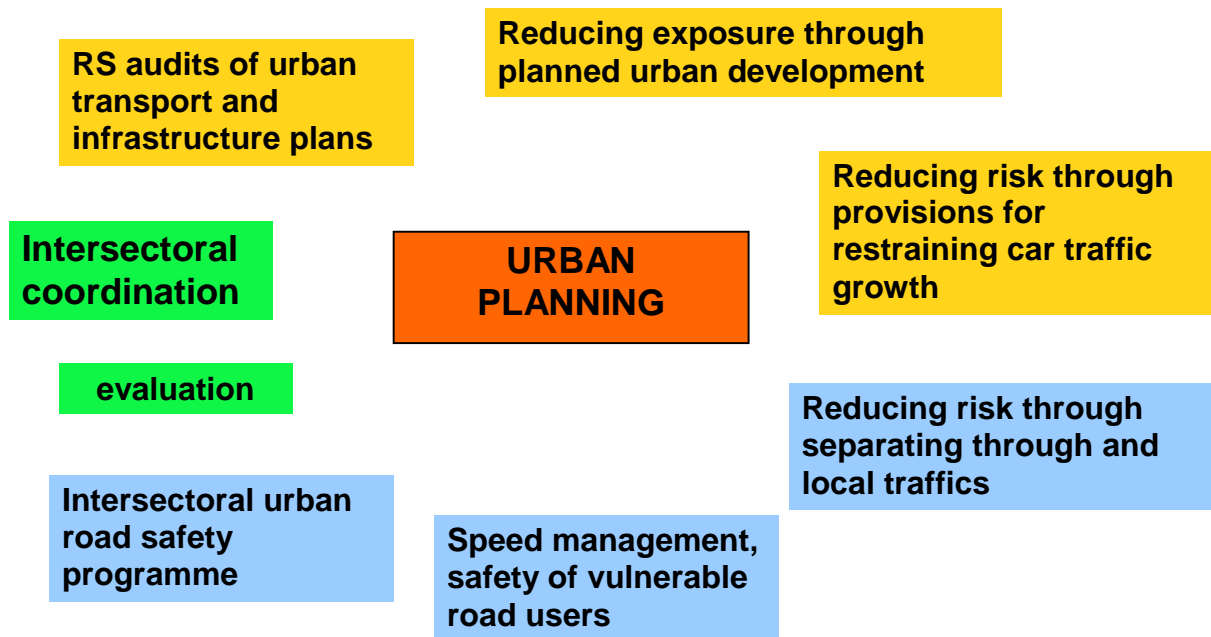
Urban planning and road safety

Urban planning plays a part in road safety, both at the macro-level as the spatial development and distribution of activities in a city governs the mobility patterns and thus exposure to risk from motorized traffic, and at the micro-level, as the location of services and the design of streets and public space determine the amount of conflicts between traffic functions (local or through traffic) and transport modes (public and individual, motorized and non-motorized).

Thus, road safety activities in urban planning include (from the macro to the micro level) (Fig.4) :

- reducing exposure to risk by reducing the length and number of daily trips on the urban road network through adequate planning methods, avoiding urban sprawl as much as possible and making the city denser, and also through proper location of the new services and public equipments ;
- reducing risk by restraining usage of motorized vehicles through adequate provisions for public transport as well as for walking and cycling, incentives for people to transfer for individual transport modes to collective ones or from motorized to non-motorized modes, incentives for people to live in car-free neighbourhoods, etc. (a framework law may be needed at the national level) ;
- audit all new transport or construction plans to assess their probable impact on road safety and correct some unwanted features if necessary ;
- reducing risk by separating through traffic from local road users through adequate design of the street network in new urban neighbourhoods or centres and through improvement of the already existing network to reach the same goal ;
- reducing risk, especially to unprotected road-users, through adequate speed management, including specially designed areas for self-enforcing lower speed limits ("urban yards", 30 km/h zones) ;
- designing intersectoral road safety programmes at the city level, including changes in the balance of road space allocation to provide better mobility conditions for pedestrians and cyclists, improvement of local safety facilities, area rehabilitation plans, rehabilitation of major thoroughfares, speed regulation measures, communication with the road users, education programmes, etc. ;
- following up the road safety performances in their city through data management and evaluation of the action undertaken.

Fig.4. What urban planners can do for road safety



From the content of these tasks, it can be seen that urban planners have to include in their teams at least some professionals with awareness and a good knowledge of accident generating processes and promising road safety measures. But communication with the public and the local lobbies is another important issue as some planning choices which are beneficial to road safety (and usually also for environmental protection, energy saving, etc.) may be highly unpopular, at least before sufficient information is conveyed to convince a majority of the city residents. In particular, planners usually find it difficult to promote planning orientations involving constraints (restraints on use of private vehicles, on parking, low speed limits, etc.), and are not especially motivated to push the issues as long as their main objectives are to respond to the public demand on mobility and accessibility, and to a lesser extent on environmental amenities. Fortunately, policies of sustainable development, the need to reduce CO₂ emissions, and perspectives of scarcer and more expensive petrol should help to support the approaches most promising for future urban safety conditions.

Other difficulties are of a more technical order :

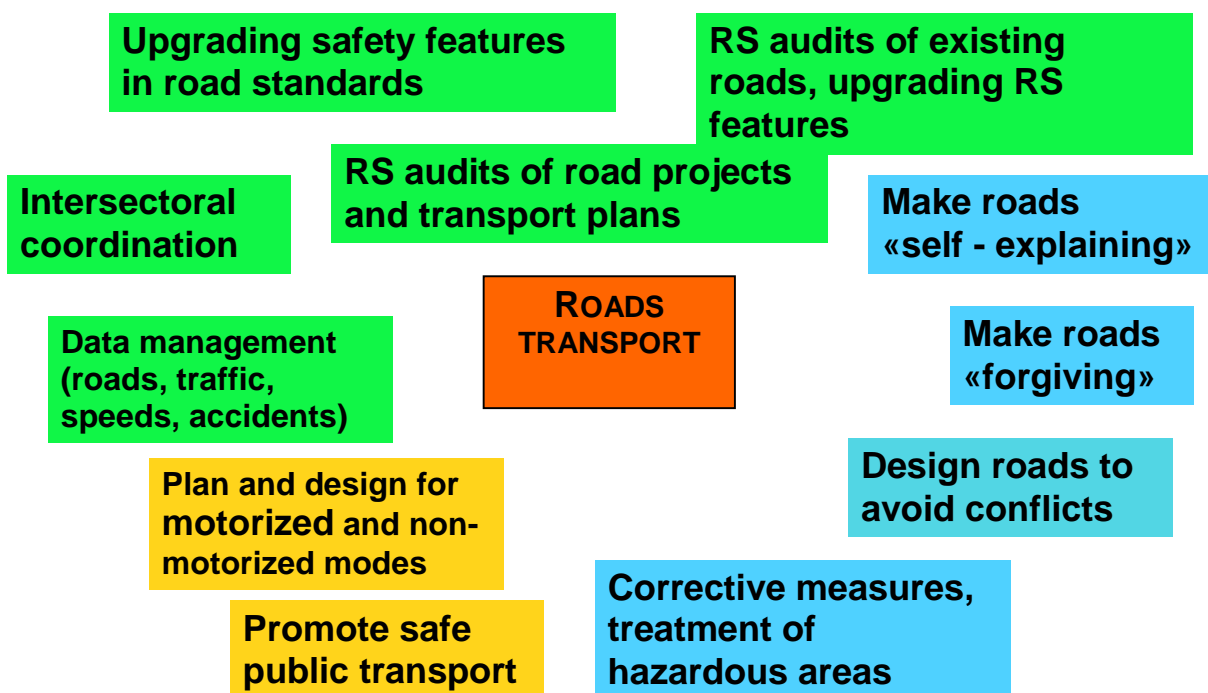
- there is a great need of road safety training for the local professionals and managers, in their own area of urban planning as well as to facilitate cooperation with other actors, especially to implement urban road safety programmes including such features as education, safety campaigns or road safety facilities ;
- part of the measures to implement are new and some may even go against the old standards or regulations that may still be currently in use (for example, when designing streets with priority to pedestrians, implementing speed humps, chicanes, etc.), and there is often no regulatory framework to test experimental designs or implement demonstration plans ; solutions to this problem have been found as, for example in France, creating a local working group involving the main local actors to design an innovative plan, so that risk-taking, if any, is collective and solidarity between the decision-makers will prevent any future legal action...
- even at the local levels, potential road safety actors with different training and professions may not easily communicate ; there is a need therefore for intersectoral management structures at city level, which unlike the working groups organized around a projects, should be sustainable ; this calls for institutional building and for additional management resources, but should ensure that road safety is not ignored in the major urban projects.

Roads, Transport and road safety

Even though traffic safety is or should be a key issue for the Health, Security and Urban Planning sectors, it is clearly mobility that generates road traffic trauma. Transport systems, including infrastructures, vehicles, and traffic and transport organization, should logically be designed so as to avoid any foreseeable injury accident, given the current knowledge available on crash and injury factors. Road safety audits should ensure that such knowledge is correctly embedded in any infrastructure or transport plan as part of "good practice" : how can it be ever be acceptable for the public as road-users (consumers !) to develop road transport systems in which some design features or components are known to generate accidents and victims ?

However, road safety may not have got the required attention in the past and, moreover, roads and transport systems have evolved since times when road safety knowledge was poor, so that injury accidents do occur, and a road safety diagnosis ususally shows that some of them at least could have been avoided : it is then obviously the responsibility of the systems' managers to correct the defects leading to road accidents and injuries (Fig. 5) . Ignoring for an instant the problem of finding adequate resources for costly changes in infrastructure design or in transport operations, here lies perhaps the greatest difficulty in making road safety a priority of the road transport sector : correcting accident factors suggests that designers and engineers that built the system could have done a better job, so that road safety measures or programmes reflect badly on the professionals of the sector ! One can understand such feelings and such resistance, and thorough information, communication, and training policies are needed to update road safety knowledge and induce more positive attitudes. One particular area in which attitudes have had to evolve is the role and place of the non-motorized transport modes and the shift of balance between a complete priority given to individual cars, which usually happens at periods when a majority of the population gain access to car ownership, and a more equitable treatment of the mobility needs and safety of individual motorized and non-motorized transport modes and of public transport.

Fig.5. What the Roads and Transport sectors should do for road safety



Upgrading road standards on the basis of available safety knowledge to ensure that future developments of the road transport system will not generate safety problems calling for expensive corrective action is also difficult as economic calculations do not easily take into account road safety benefits (or road safety costs) for lack of appropriate methodologies, and because changing standards is a lengthy process involving experts and often some legal action, and strong political as well as pressure from other sectors will be needed to launch such an effort.

Over a national territory, road and transport operations mobilize a large network of professionals and, especially in highly decentralized countries, it is not easy to develop a common philosophy for the provision of safe transport conditions, which is, however, necessary to ensure that road users will encounter consistent conditions and will be able to adapt their behaviour as needed. To reach some homogeneity, particularly in road design, equipment and maintenance, both common policies and regular training of the road engineers and technicians involved are needed. Developing systematic road safety policies requires surveillance systems producing data on mobility demand, traffic, transport operations and road maintenance needs as well as performing regular diagnosis of the road safety problems.

In addition to performing their own duties (as just described), the Roads and, more often, the Transport sectors are called upon to play a leading part in road safety intersectoral coordination. Such additional task calls for adaptation of the management structure inside the sectors, strengthening capabilities, and institutional building.

All this calls for large amounts of resources which the government budget may be somewhat reluctant to provide as paying for changes in roads or transport operations which the tax payer has already financed is not a welcome idea. Resources for road safety simply compete with those needed for other purposes and do not always win as it is tempting to believe, despite all signs to the contrary, that road users can adapt to all situations and are therefore ultimately responsible for their own safety. The need to find additional and sustainable sources of funding is thus strongly felt, especially in medium or low income countries, and vehicle drivers and owners as well as industries generating large flows of motorized traffic are often targeted to contribute funding for road safety on the same ground as polluters are expected to pay some of the money needed to repair a damaged environment (Muhlrad, 2005).

Conclusion

Road safety management problems are not simply solved by creating national coordinating institutions and developing intersectoral decision-making processes and action programmes: implementing road safety interventions within an intersectoral approach involves altering the priorities in most of the sectors taking part in the action, developing new ways of thinking and new attitudes, creating new professions, generalizing training, reorganizing carrier development, changing decision-making patterns and structures, and taking the responsibility for road injury prevention seriously enough to attack difficult operational problems. It is not surprising, therefore, that road safety policies develop slowly.

Any decision taken on road safety programmes or measures has to take into account the whole implementation process it will generate in order to allocate adequate resources and take steps to alleviate foreseeable difficulties. Awareness of how actors work in each sector is thus needed to develop realistic action programmes, ensure full effectiveness of road safety measures and help in bringing about the institutional, social and psychological changes that will increase road safety performances.

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