

## STRENGTHENING SENEGAL'S ROAD SAFETY MANAGEMENT CAPACITY

The World Health Organisation estimates that 1.24 million people die on the world's roads each year. Road traffic injury is the leading cause of death worldwide for 15-24 year olds, and the second leading cause of death for 25-39 year olds behind HIV/AIDS. Africa is experiencing the highest per capita rate of road fatalities currently in the world at a rate of 24 fatalities per 100,000 population.<sup>1</sup>

Increasing population, motorisation and economic growth mean this problem is set to worsen. Road fatalities in sub-Saharan Africa are projected by WHO to increase by 112%, from approximately 243,000 in 2015 to 514,000 in 2030, making road traffic injury a major development issue for Africa. Road fatalities per capita are projected to increase by 51% over the period 2015-2030, at the same time fatalities per capita is projected to decline for both HIV/AIDS (-18%) and malaria (-24%).<sup>2</sup>

### Road trauma in Senegal

As part of its international leadership role in road safety WHO reported in 2009 and in 2013 on key road safety data for countries throughout the world. Some of the data collected for Senegal is set out in Table 1 below.

**Table 1 Key Road Safety Data for Senegal 2007 and 2010**

	<b>2007</b>	<b>2010</b>
Population	12,378,532	12,433,728
Gross National Income per Capita	US\$820	US\$1080
National Income Level	Low	Middle
(Senegal) Reported Road Fatalities	345	277
(WHO) Estimated Road Fatalities	4023	2421
Estimated Fatalities per 100,000 population	32.5	19.5
Registered Vehicles	280,594	326,352

Source: World Health Organisation, "Global Status Report on Road Safety 2009", and "Global Status Report on Road Safety 2013."

The discrepancy between Senegalese reported fatalities and WHO estimated fatalities reflects the current state of data systems in many African countries. For example, Senegalese data captures only fatalities when the victim died at the scene, whereas the international standard for fatality data is when the victim dies within 30 days of the crash. The Senegalese data is therefore likely to significantly underestimate the country's current level of road trauma. It should also be noted that the WHO methodology was revised between the 2007 and 2010 surveys, which may account for some or all of the change in this figure.

<sup>1</sup> Global Status Report on Road Safety 2013, World Health Organisation, Geneva.

<sup>2</sup> Source: World Health Organisation 2013, *Projections of Mortality and Causes of Death 2015 and 2030* (retrieved March 2014 [http://www.who.int/healthinfo/global\\_burden\\_disease/projections/en](http://www.who.int/healthinfo/global_burden_disease/projections/en)).

The reported increase in motorisation and income are likely to create upward pressure on road trauma within Senegal, as has been reported recently in Middle East and North Africa countries.<sup>3</sup> With a steady 2.5% increase in population each year and recent economic expansion of 2-6% each year forecast to continue, Senegal's road safety problem is set to worsen not improve unless substantial action is taken.

The first recommendation of the World Health Organisation for countries to address the growing crisis in road traffic injury is to nominate a lead agency within government to mobilise support and action to address the problem.<sup>4</sup> However, experience in Africa is that even when a lead agency has been nominated, it needs to be substantially strengthened over time. The Ministry of Transport is the nominated lead agency for road safety in Senegal, and has engaged with the Africa Transport Policy Program (SSATP) regarding options for strengthening road safety management capacity.

### **Stakeholder Workshop**

SSATP and the Ministry of Transport jointly hosted a workshop in Dakar in December 2013 at which various road safety stakeholders were invited to discuss options for strengthening the road safety management function within Senegal. Workshop participants recommended that:

- a steering committee be established to support the preparation of technical advice to the Government of Senegal regarding the establishment of an autonomous lead agency for road safety
- a coordinator is appointed within the Road Transport Directorate to lead this process, including the development of a work programme, and the various processes and tasks that may be required to establish the agency
- a seminar to validate the work of the steering committee is held by the end of 2014, and the conclusions of the seminar are submitted to the Minister of Transport.

The workshop recommendations were approved by the Minister of Infrastructure and Transport, and formalised by Ministerial Order.

### **Establishment of Steering Committee**

The Ministerial Order created a Steering Committee and charged it with the initial establishment of the lead agency. The Committee is also responsible for:

- directing, coordinating and validating all documents relating to the project proposed by the Coordinator

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<sup>3</sup> Dahdah S, Bose D, 2013, "Road Traffic Injuries: A Public Health Crisis in the Middle East and North Africa". Transport Notes TRN-45. World Bank, Washington.

<sup>4</sup> Peden M, Scurfield R, Sleet D, Mohan D, Hyder A, Jarawan E, Mathers C, eds (2004). *World Report on Road Traffic Injury Prevention*, World Health Organisation, Geneva.

- preparing the regulations, organisational structure and procedure manuals
- setting out the methods and sources of funding body
- organising study trips, and
- making sure the body is created by legislation.

The Steering Committee comprises:

Chairperson	The Secretary General of the Ministry of Infrastructure and Transport
Vice-Chair	The Director of Road Transport
Executive Secretary	The Coordinator
Members	Technical Adviser to the Minister of Infrastructure and Transport The Director General of CETUD The Director of Roads The Director General of Ageroute The Head of CCTVA The Director of DCEF The Director of the National Police High Commander of the Gendarmerie The Head of the Bureau of Organization and Method The Director General of Insurances The Director of SAMU (emergency care) The Administrator of FERA The Director of Justice The Director of the National Education The Director of Local Governments NGO representatives

The funding of activities and operations of the steering committee and the Coordinator is provided by the Autonomous Road Maintenance Fund (FERA).

### **Technical Assistance to Steering Committee**

SSATP has previously provided member countries with technical assistance and advice regarding other institutional matters of concern regarding transport in Africa, such as the establishment of specific road agencies, and funding systems to promote effective management and maintenance of road networks. As attention focuses increasingly on the capacity of its membership to respond effectively to the worsening road safety crisis in Africa, SSATP anticipates that more direct institutional capacity building for road safety is necessary.

Given the importance of the lead agency function within African countries, SSATP offered further technical assistance for this work with the intention that if successful similar approaches could be replicated in other member countries. Specifically, SSATP offered to provide technical assistance on options (and recommendations) to:

- the *function* and activity of the lead agency, and its relations with other organizations
- the *form* and structure of the lead agency, and key personnel necessary
- the *funding* of the lead agency, and the first major projects to deliver

This report comprises the results of five days field work by an SSATP consultant, in collaboration with the Ministry of Transport. The consultant met with a number of key agencies to gain a greater appreciation for the Senegalese context. The road safety management guidelines prepared by the Global Road Safety Facility in 2009 and tested in a variety of low and middle income countries were used as a reference point for this work. This analysis requires discussion and validation from the various parties involved, and does not address all details. However, it is intended that this policy report can provide some direction and input as these matters are addressed through the offices of the Senegalese Ministry of Transport.

## THE FUNCTIONS OF THE LEAD AGENCY

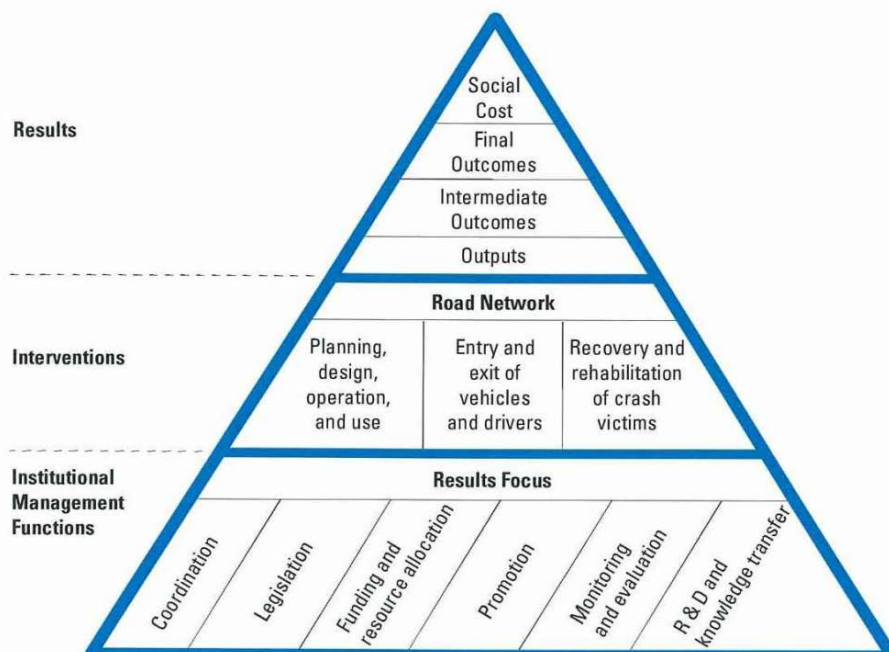
An institutional response by government to the growing road safety crisis can be expected to take a different form in different countries, and the form of any change in the lead agency in Senegal will be discussed in the next section. The functions of a road safety lead agency are however more universal, based on good practice models from around the world. These were first documented in the guidelines prepared by the Global Road Safety Facility in 2009, which set institutional management functions within an overall road safety management framework. While the immediate task that has been set in Senegal is to establish an autonomous Lead Agency, the longer term task is to develop a wider road safety management system which is capable of driving improved safety results for the people of Senegal.

### Road Safety Management Framework

Effective road safety management practice addresses road safety as a production process with three interrelated elements: *institutional management functions* that produce *interventions* that in turn produce *results*.<sup>5</sup>

A key feature of the road safety management framework prepared by GRSF (see Figure 1) is the specification of desired road safety results including not just final outcomes and social cost (casualties and their economic burden on society), but also intermediate outcomes which are tied to the delivery of outputs from evidence based interventions.

Figure 1 Road Safety Management Framework



Source: Bliss and Breen, building on the frameworks of Land Transport Safety Authority, 2000; Wegman, 2001; Koornstra et al, 2002; Bliss, 2004.

<sup>5</sup> Bliss T, and Breen J (2009). *Implementing the Recommendations of The World Report on Road Traffic Injury Prevention: Country guidelines for the conduct of road safety management capacity reviews and the related specification of lead agency reforms, investment strategies and safety programs and projects*, Global Road Safety Facility, World Bank, Washington.

Within this framework, interventions are considered in terms of the road network which grounds interventions in real terms. The road network is where crashes occur and injuries are suffered, where people travel, where vehicles are permitted to be used, and where emergency services must recover crash victims. Interventions can be designed to change the planning, design, operation and use of the road network, to control the entry and exit of vehicles and drivers, and to facilitate recovery and rehabilitation of crash victims. Each of these intervention sets can themselves be broken down into setting a higher quality of safety standards and rules, or achieving better compliance with those standards and rules.

A further key feature of the framework is that it is based on a series of institutional management functions (described in generic terms in Annex 2) which drive more effective interventions and better results. When given full effect, this comprehensive set of management functions provides direction on how cost-effective interventions are identified, prioritised, scoped, funded, targeted and delivered. They are also critical in building support for sustained road safety improvement and for building the human, financial and institutional capacity needed to sustain that support, and transform it into improved safety results within the community.

These functions are an essential reference point for a road safety lead agency, but are not the exclusive preserve of the lead agency. Any organisation that is seeking to significantly improve their contribution to road safety should consider the management systems they put in place, and apply this management analysis to their work. This analysis is applied for example in the new management standard published by the International Standards Organisation “ISO 39001 Road Traffic Safety Management Systems”.

### **Possible Functions**

Good governance practice suggests that the functions of the lead agency are set in legislation. Based on the institutional management functions codified by the GRSF, a possible set of legislated functions for the lead agency would be:

- Develop, implement and continually improve a road safety management system including a road safety vision, road safety targets, and interventions and management processes to achieve road safety targets
- Develop and oversee implementation of road safety strategies and plans to address key areas of road safety concern regarding the safety of roads, vehicles, users, and post-crash response
- Establish and manage mechanisms between government agencies, and community, industry and business interests as required, to coordinate the planning, delivery and management of road safety activity
- Review and advise on legislative and compliance mechanisms that have a significant impact on road safety, including planning design and use of road

- networks, regulation and compliance for motor vehicles motor vehicle drivers and commercial transport operators, and post crash recovery and treatment
- Develop and oversee implementation of multi-year and multi-agency road safety investment plans which support sustainable funding of road safety activity and the integration of safety within relevant government projects and programmes
  - Develop and implement programmes to promote effective road safety practices amongst government, community, industry and business interests, and to support specific road safety programmes
  - Develop and manage monitoring and evaluation mechanisms, including data management systems, that are necessary to report on and promote improvement in the delivery of road safety activity and programmes
  - Develop and implement road safety research programmes that support monitoring and improvement of road safety activity, and knowledge transfer programmes which promote greater road safety management capacity amongst government, community, industry and business interests.

The most effective lead agencies tend to have an outward-looking partnerships-based approach. Effective performance of these functions will therefore require the lead agency to engender a collaborative approach with all relevant government agencies, as well as community, industry and business interests.

If these are the possible functions of an autonomous road safety lead agency in Senegal, some critical activities for the autonomous road safety lead agency are discussed below. They should be considered within a partnerships context, as other agencies may need to make significant commitments in order for the activities to be delivered.

### **Results focus**

A 2011 study funded by the European Union on road safety in Senegal has been approved as the national road safety plan. It has the general objective of reducing deaths and serious injuries in Senegal by 35% by 2020. The study set out a road safety action plan which has been only partially implemented. A reason for this may be the level of investment firstly into road safety management capacity within Senegal to oversee implementation of a national plan.

Redrafting or reformulating lengthy strategic documents may not represent a good use of valuable resources. An option would be for the lead agency to prepare supplementary documents for approval by Government, which help to succinctly describe the road safety strategy. These could be:

- National policy statement – a short document, which articulates a vision for road safety, the need to strengthen road safety management capacity, the establishment functions and funding of the lead agency, and the coordinating mechanisms that will be established to support its leadership of road safety

- National road safety action plan – again, a short document which describes a small number of strategically oriented projects for delivery in 2015 and 2016 (being last two years of the three year funding cycle 2014-16), how they will be funded and which agency or agencies are responsible for delivering them.
- Results management framework – a performance focused document which set out the overall safety targets through to 2020, the intermediate targets which need to be met, and the key interventions regarding the road network, vehicles and users on that network, and post-crash response which will be delivered to achieve the targets.

## **Coordination**

The Steering Committee that has been established needs to meet on a monthly basis in its advisory capacity through until the establishment of the lead agency, and then continue to meet regularly over the 2014-16 period. This is essential for building support for the lead agency, and for increasing investment in road safety. This is a large group with 16 different agencies represented. Over time, once the agency is established this membership could change and more deliberately incorporate non-government interests, or it could be extended to include engagement with regional government.

The establishment of a smaller, decision focused, group should also be considered, focusing on providing direct decision making support for the Minister of Infrastructure and Transport. Ideally, this would have no more than 4 or 5 agency heads accountable for the core road safety delivery arms of government – for example, the heads of Ageroute, Senegal National Police, FERA, as well as senior staff within the Ministry such as the Secretary General and the Director Road Transport. This group would need to give more deliberate consideration of how the various agencies will be held accountable for road safety, and specifically for implementing the road safety action plan.

## **Legislation and compliance**

The lead agency should establish an ongoing work programme that evaluates the effectiveness of existing laws, institutional arrangements, standards and directives regulating roads, vehicles and road users, and propose safety improvements. This includes regularly commissioning studies on current legislation and the compliance and enforcement of the legislation. At least one major review could be undertaken each year, but as some reviews may take more than a year from this point to completion, a rolling program of work is proposed.

One important area for review is the legislative mandates and functions of key partner agencies regarding safety. For example, the establishment decree of FERA explicitly states that it may allocate funds for road safety, whereas the establishment decree of Ageroute does not explicitly address road safety. This is not to infer that road safety is more or less important for one agency or another, however the



legislated functions for an agency are set to provide government direction, and there is good reason to review that direction periodically.

Vehicle safety is also an important area for legislative review throughout Africa. Although an age limit has been set for the importation of used vehicles, it may be important for Senegal to review the safety standards and compliance mechanisms in its regulatory controls. The United Nations World Forum for Harmonization of Vehicle Regulations uses two Agreements from 1958 and 1998 to provide a legal framework that allows any UN Member State to apply voluntarily a wide range of motor vehicle standards. Generally, the Forum's most important safety regulations for light vehicles are regarded as:

- Seat belt anchorages - UN Reg. 14
- Safety belts and restraint systems - UN Reg. 16
- Occupant protection in frontal collision - UN Reg. 94
- Occupant protection in lateral collision - UN Reg. 95
- Electronic stability control – UN Reg. 13-H/GTR 8
- Pedestrian protection – UN Reg. 127/GTR 9

Consideration could be given to ratifying the UN Agreements, and applying these international construction regulations where they are not currently applied.

Finally, another option for consideration as a legislative project in 2015 and 2016 is the lack of effective legislative controls on drink driving, which are likely to impede any enforcement of this high risk behaviour. Good practice drink driving legislation sets the maximum alcohol level at no more than a blood alcohol concentration (BAC) of 0.05 g/dl (and lower for young and for commercial drivers), and provides mechanisms to support high visibility deterrence based testing by Police which is funded and delivered as part of an integrated Policing activity.

### **Funding and Resource Allocation**

A subsequent section of this paper specifically addresses funding issues, but it is important to note that the allocation of road funding to road safety is a significant issue to be addressed, at three levels:

- the lead agency needs to be funded through a sustainable source – a combination of government budget allocation, and fuel levy appears the most obvious option
- significant lead agency activity and projects need additional funding beyond that simply required to employ, accommodate and equip staff to deliver the most basic functions
- major safety focused projects for other agencies – for example, a major corridor safety project managed by Ageroute – need substantial and possibly externally supported funding.

The lead agency needs to be integrated into the significant decision making systems regarding all road transport investment decisions. For example, formal review processes are ideally established to ensure that the lead agency assesses the alignment of major Ageroute investment proposals, or major new expenditures in the National Senegal Police, to the national road safety policy/strategy and the capacity of the proposals to support significantly improved safety.

### **Promotion**

The lead agency needs to establish priorities and implement programs for promoting road traffic safety. This should focus initially on professional education, on building awareness amongst key influencers and decision makers throughout Senegal who are capable themselves of improving the safety of others.

Once the overall safety imperative has been established through decision makers throughout the public and private sector, attention can be given to planning public participation, and mass media promotion which directly supports new initiatives in the safety of the road network, the vehicles or the enforcement of traffic law.

### **Monitoring and Evaluation**

The lead agency is responsible for monitoring, evaluating and reporting on strategy and program implementation by government agencies, and for analysing and publishing road traffic crash and injury data.

Therefore they require good crash data management systems, and the use of internationally accepted definitions of a fatality (death within 30 days of an incident, rather than as currently which is death at the scene) and of a serious injury (whether using typical Police or Health reports).

The lead agency needs to develop a reporting template, based on the results framework that has been agreed, and processes for receiving and reporting on results from partner agencies. A full public report needs to be published and reported preferably every quarter.

A full outcomes based review of road safety performance may be advisable in 2016, or at the beginning of the next three year funding cycle.

### **Research and Development and Knowledge Transfer**

The lead agency for road safety is responsible for supporting research and development activity, and undertaking road traffic safety studies to allow better decision making in the future. It is also responsible for best practice road safety knowledge transfer to those in a position to improve the safety of others.

Funding needs to be allocated to undertake quantitative research surveys to develop greater understanding of the results that are being achieved.

## The “Safe System” approach

Finally, it is important that the lead agency not only promotes road safety, but modern effective approaches to road safety. Good practice road safety management works from a series of safety principles, which were first articulated by the Organisation for Economic Cooperation and Development, inspired by the reframing of road safety as a societal health issue in the Netherlands and Sweden. The OECD characterised “Safe System” approaches as:

- aiming to develop a road transport system better able to *accommodate human error*, commonly achieved through better management of crash energy, so that no individual road user is exposed to crash forces likely to result in death or serious injury.
- incorporating many strategies for *better management of crash forces*, with a key strategy being road network improvement in conjunction with posted speed limits set in response to the level of protection offered by the road infrastructure.
- relying on strong *economic analyses* to understand the scale of the trauma problem, and *direct investment* into those programs and locations where the greatest potential benefit to society exists.
- (being) underpinned by *comprehensive management and communication structures* incorporating all key government agencies and other organisations which have a role in determining the safe functioning of the transport system.
- *aligning safety management decision making* with broader economic goals and human and environmental health goals, and create a commercial environment that generates demand for and benefits the providers of safe road transport products and services.
- embracing the *ethos of “shared responsibility”* for road safety among the various actors of the road transport system, such that there is a shared vision amongst citizens, public, private and not for profit organisations *regarding the ultimate safety ambition*, and how to achieve it.

These principles are not set in stone, but represent a marked contrast to largely discredited approaches of the past which have sought to perfect human behaviour rather than protect humans when they use the road transport system.

## THE FORM OF THE LEAD AGENCY

The Road Transport Directorate within the Ministry of Transport is nominated as the lead agency for road safety in Senegal. However, the Directorate does not have a senior appointee who is solely responsible for road safety, and does not have capacity to effectively lead the national road safety effort. This situation is not unique to Senegal. Some low and middle income countries have not yet nominated a lead agency for road safety. Many countries have nominated a lead agency, but the agency requires considerable strengthening in order to be effective.

Some steps have been undertaken regarding road safety, such as the preparation of a national road safety plan. The plan is broadly aligned with the United Nations Decade of Action on Road Safety, and an action plan was prepared to support implementation. Implementation has proven difficult without a strong road safety lead agency, and various stakeholders recognise that insufficient attention is being given to the safety of road users in Senegal.

Again, this is consistent with experience in many other countries, and illustrates why WHO recommended that the establishment and strengthening of a lead agency is the critical first step in addressing a country's road safety problem. Without this first step, which begins the process of establishing institutional accountability for road safety, it is more difficult for various initiatives and activities to be effective.

### Options

Notwithstanding the move towards an autonomous lead agency, this technical assistance project considered a wider set of options for strengthening road safety management capacity in Senegal:

1. Establish a substantial dedicated road safety management unit of the Road Transport Directorate within the Ministry of Transport
2. Establish a substantial dedicated road safety management unit within Ageroute
3. Establish a fully autonomous road safety agency within the Ministry of Transport, reporting to the Minister of Transport, the Prime Minister or President.

Assuming that each of these would be supported by a legislative mandate, a simple set of criteria were considered for evaluating the three options. That is, the effect of the option on four tasks:

- Engaging with Ministers on key safety decisions
- Developing road safety partnerships with other agencies
- Lifting the profile of road safety as a national issue
- Making and executing administrative decisions.

Option 1 is a slightly amended version of the current situation, which a number of stakeholders clearly consider is insufficient. It does provide for easy engagement with the Minister for Infrastructure and Transport, which may assist itself in developing road safety partnerships. However, this closeness would restrict administrative autonomy, and may also limit the capacity of the lead agency to be a road safety champion.

Option 2 would require a person to be appointed who reported directly to the Director General of Ageroute and was mandated to engage directly with the Minister on road safety matters. The established nature of Ageroute could facilitate quick establishment of the unit in an administrative sense. Given the level of potential influence that Ageroute has on road safety, it may be more difficult for the unit to develop effective partnerships with other agencies, such as the Ministries of the Interior or Health. The need to champion road safety may also be constrained by the wider and well established corporate interests of the agency.

Option 3 would itself lift the profile of road safety, and provide the Minister with a direct line of advice and support in the area. While more autonomous decision making would be facilitated, it may take some time for legal, administrative and funding matters to be formalised – the appointment of an establishment Director General and an establishment Board would be needed to drive this process and begin to deliver on initial activity. The Director General would be well placed to engage with key agencies on a peer-to-peer basis.

### **Effective governance**

This simple analysis supports what appears to be a broad consensus amongst stakeholders on the need to establish an autonomous agency responsible for leading Senegal's road safety effort. It would be a mistake to assume that the establishment of a new agency is a precondition for strengthening road safety management capacity within Senegal, or that the establishment of such an agency will in itself lead to improved safety results.

Effective governance does not require the establishment of many different agencies. There is however a clear gap between the levels of road trauma currently suffered (and projected increases in that suffering) in Senegal, and the capacity of government institutions to respond to and reduce that suffering. The establishment of an autonomous lead agency for road safety, along with more direct safety accountabilities for existing agencies, may be an important step in promoting road safety within government and mobilising efforts throughout Senegalese society.

Establishment of an autonomous road safety lead agency in Senegal would clearly require the support of Ministers, the Prime Minister and the President. It also requires the support of agencies involved in the delivery of essential road safety functions:

- designing and managing safe road infrastructure – Ageroute
- setting rules and regulations regarding the use of that infrastructure by vehicles, people and commercial transport operators – the Ministry of Infrastructure and Transport
- the enforcement of these rules and regulations – Senegal National Police, and the Gendarmerie
- post-crash recovery and treatment of road crash victims – SAMU.

The lead agency will need to be established in such a form that provides it with the mandate to engage and negotiate directly with established government agencies to bring a significant additional focus to the safety of the Senegalese people on the road.

Whatever option is developed or progressed, the lead agency function needs to be outlined in legislation. Specific reference needs to be given to its leadership and coordination functions within Senegal and with other arms of government which deliver road safety services. Reference is also required to the funding of the agency, and the accountability of the agency head to the Minister of Transport and/or the Prime Minister. The establishment and the initial term of the agency should be led by someone with the technical capacity and mandate to generate support for and implement significant change in the climate for road safety in Senegal.

### **A phased approach**

It may be instructive to see the strengthening of the lead agency function in Senegal in three phases over successive years:

1. Phase one would focus on the establishment of an autonomous lead agency which is accountable to Ministers, and works in partnership with other agencies in order to succeed (2014)
2. Phase two would focus on the establishment of various management directions and systems within the lead agency, and the identification of related directions and systems within partner agencies (2015)
3. Phase three would be the implementation of major demonstration projects which bring the various partner agencies together to focus on systematic interventions, ideally focused on key parts of the road network (2016).

This report focuses on phase one, but as a picture emerges of the function and funding of the lead agency, this report projects forward to an environment where all three phases are implemented.

### **A possible structure for the lead agency**

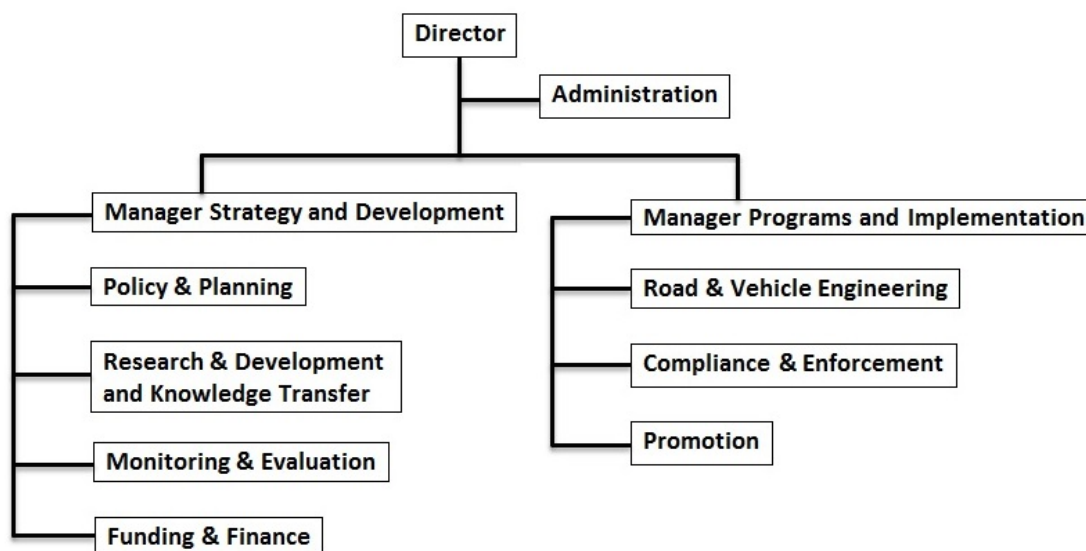
A new agency requires a staffing structure to support the functions of the agency, and a possible structure is set out below, which follows largely the functional responsibilities of the agency discussed above. The structure needs to be considered in the context of the final set of functions which the agency is mandated to deliver,

and also in the context of the development plan for road safety. It may be that a rapid injection of institutional resources is favoured, in which case the whole structure may be implemented in very short order. It may be that the structure evolves as major activities are developed and implemented through the lead agency.

The proposed structure and function focuses on developing and maintaining a strategic capability within the Office to:

- lead engagement with government agencies and other partners involved in road safety towards achievement of Senegal’s road safety goals
- lead the analysis and provide program direction for critical road safety management functions, and road safety interventions.

It assumes that the Director General will report to a Board, which is constituted in a manner similar to those Boards already constituted within the Ministry of Transport (such as Ageroute or CETUD), and that the Director General will develop a close direct relationship with the responsible Minister. The Director General would be responsible for leading the analysis and coordination processes necessary to effectively address key road safety issues in Senegal, and for representing and promoting road safety and the work of the lead agency across all aspects of Senegalese society. Key performance areas include implementation of Ministerial decisions and road safety management tasks, and facilitation of Council meetings, of the functions of the technical committees, and administration of the lead agency.



The Director would be supported by two experienced managers, capable of leading work programmes that are dependent on the involvement and support of outside partners for success:

- Manager, Strategy and Development – develops and leads road safety strategy and development activity, with a particular focus on institutional

management functions, and promoting effective action to achieve Senegal's road safety goals. Five staff:

- 2 x Policy and Planning Officers – responsible for analysis, advice, planning and oversight of national strategic plan, road safety policy, and annual road safety action plans
- Research and Development Officer – initiating and managing research and development projects, reviewing and disseminating relevant research findings through road safety partners, promoting professional development in road safety across all key government and non-government partners in a position to take action.
- Monitoring and Evaluation Officer – collating and analyzing relevant data from government agencies, preparing and publishing regular progress reports, initiating and leading projects to improve data quality
- Funding and Finance Officer – liaising with partners and donors to increase investment in road safety, and managing processes to allocate and account for effective use of funds deployed.
- Manager, Programs and Implementation – facilitates the development and implementation of high impact, targeted, and cost effective interventions to achieve Senegal's road safety goals. Four staff:
  - 2 x Engineering Officer – works with federal, city and regional road and transport authorities to shape and facilitate the implementation of high impact safety engineering interventions
  - Compliance and Enforcement Officer – works with federal, city and regional police and transport authorities to shape and facilitate the implementation of high impact legislative, compliance and enforcement interventions
  - Promotion Officer – develops and manages implementation of road safety promotion activity to increase awareness of key road safety issues and promote understanding of effective interventions to address these issues

All staff in such an organisation must be capable of effectively leading work programmes in their area of responsibility, and of working effectively through partnerships in order to achieve success. Further subcommittees of the Technical Committee may need to be established to support different projects in such a manner. The Office would need to be able to draw on sufficient funds to contract specialist or short-term contractors (for example, specialist research or statistical analyses) to meet programme objectives.



## **THE FUNDING OF THE LEAD AGENCY**

Road safety funding is clearly a significant factor that needs to be addressed. This needs to occur as part of a change to how road safety is managed institutionally, and how it is prioritised and integrated across government. This section looks first at some aspects of the current funding environment, then briefly reviews possible funding sources, and looks at the sequencing of a significant scaling up of safety focused activity within Senegal. The focus in this report is on funding policy and the institutional arrangements associated with this, and no attempt has been made to identify or analyse potential budget proposals in the future.

An important initial point needs to be made about funding policy. African Ministers of Transport have committed to the goal of allocating 5% of road maintenance funding to road safety, and 10% of road development funding to road safety. There are many different ways of examining operational and capital expenditures in road transport funding, but in Senegal this goal would see these proportions of maintenance and major investment funding allocated on the advice of the lead agency responsible for road safety. This is not to infer that all resources would be allocated to the lead agency, as there are many different road safety activities that need to be managed at any one time.

### **Current funding**

This discussion on current funding is developed for illustrative purposes only, and the first point of reference is FERA and the funds which it allocates. It is understood that FERA was established to provide operational funding for ongoing road transport demands which had previously been subject to regular re-negotiation with the Treasury. This was an important step, and is keeping with good practice throughout Africa, as the certainty it provided allowed transport managers to more effectively manage the available resources.

FERA allocates approximately XOF 51,000,000,000 each year, of which about XOF 26,000,000,000 comes from fuel levies and the remainder from a government budget allocation. The funds may be allocated for road maintenance, road safety, and ferries, and may not be used for road construction or rehabilitation. An estimated XOF 48 billion (94%) is allocated to road maintenance, XOF 2.4 billion (5%) is allocated to ferries, and XOF 580 million (1%) is allocated to road safety. A three year road safety action plan covering 2013-15 was costed at XOF 11.2 billion, an average of XOF 3.73 per annum, which means that FERA is currently contributing approximately 15% of the funds identified as necessary to fund the action plan.

This is not to suggest a lack of concern regarding safety on the part of FERA, which has allocated additional funds for the project to establish the autonomous lead agency. It is to simply highlight the significant additional funding constraints within which road safety is being managed, compared to other activities. There is some way to go for Senegal to meet the African wide goal of a 5% allocation of road maintenance funds to road safety.

Consideration is being given to other means of raising funds for allocation by FERA. They include: toll fees, vehicle inspections, axle loadings, fine revenue, a levy on new car imports and a levy on spare part imports. A levy on vehicle and/or injury insurance policies, and on vehicle registration could also be considered. However, whatever the level of additional revenue may be possible, more fundamental consideration of balancing funding towards road safety is justified.

This need to reconsider the balance of funding for road safety is highlighted when consideration is given to major project investments being managed through Ageroute. Current investment in the development of the road network is much higher than the annual allocation of funding to maintain the current network. Indeed, there appears to be something of a boom in infrastructure investment focussing on the major road transport corridors radiating out from Dakar. Ageroute is understood to have a large number of major road development projects in progress or in the development stage, with a total investment of approximately XOF 1248 billion, funded through for example loans from multilateral lending institutions and public-private partnerships.

Notwithstanding the need to consider and account for capital investments and ongoing operational expenditures differently, this scale of investment infers that the road safety funding problem in Senegal should not be considered solely in terms of the total road transport funding that is available. Similar considerations could be given to the funding of enforcement activities by the Senegal National Police and by the Gendarmerie. Significant additional resources are required for road safety, but more can be sought from major expenditures that are currently applied through related services in partner agencies.

### **Funding sources**

As noted previously, funding is needed to support the establishment and ongoing costs of an autonomous lead agency, including the delivery of programmes and projects by the agency, and the development of large scale safety investments through partner agencies as well as the lead agency. A mix of funding sources will be necessary, and they may need to be managed by or under the oversight of a single and separate entity such as FERA while the lead agency is initially established.

Vehicle based charges may be the best opportunity to sustainably expand the revenue base, although their success depends in part on sufficient compliance measures being in place. Vehicle inspection fees form a key part of the funding for the National Road Safety Centre in Benin, which also undertakes the inspections. Annual registration or licensing charges for vehicles are a very common means for raising road transport revenues in high income countries, and they associate the fee with the access to the road network which it allows. Many countries link annual registration or licensing charges on vehicles with insurance payments – sometimes for third party property damage, most commonly for injury insurance as a result of a road crash. Again depending upon the compliance regime for importing new

vehicles or spare parts, a levy on either of these activities should provide a sustainable revenue stream.

Consideration could also be given to significant one-off funding measures to start up and run the lead agency for an initial period. In Argentina, the establishment of the National Road Safety Agency within the Ministry of Interior and the concurrent implementation of the Argentina Road Safety Project has become an important case study in how GRSF guidelines and multilateral loan facilities can be tailored to promote investment in road safety, and institutional capacity building.<sup>6</sup>

There are three main components to the project:

- Institutional capacity building, which financed specialist goods and services in strategy and planning, promotion and communication, emergency response, and traffic enforcement
- Demonstration Corridors and an Incentive Fund program to encourage national and provincial governments to apply effective, modern safety practice
- Road safety monitoring and evaluation system within a National Road Safety Observatory.

There are two project phases from 2010-2015 and then again to 2019, and financing for the second component is based on the establishment of demonstrable progress at an institutional level. While the future funding beyond 2019 is not set, the injection of road safety management capacity over the course of a decade is clearly designed to improve current road safety performance and create the opportunity for longer term funding mechanisms to be established.

It is proposed that the Steering Committee assess the cost implications of the new lead agency function, and model the implications of this cost. This would be the first step to determine the extent to which the costs are able to be absorbed from the current fuel levy, or a potential increase in fuel levy (which are sure sources of finance), and how much the cost would need to be met from general government expenditure. Whatever funding source is determined, it would be appropriate for the funding to be managed through FERA, at least in the first years of the organisation, as this will assist in providing Government with assurance about the what is being delivered for the investment that is being made.

### **Assisting investment in capacity building and safety improvement**

Funding clearly needs to be significantly increased for road safety in Senegal, and the establishment of a lead agency with a mandate to lead and promote this is a critical first step. There are two significant project options which Senegal use to assist continued investment in capacity building and safety improvement. The first of these is what is termed a road safety management capacity review.

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<sup>6</sup> Bliss T, and Raffo V (2013), *Improving Global Road Safety: Towards Equitable and Sustainable Development, Guidelines for Country Road Safety Engagement*, International Union for Health Promotion and Education.

The GRSF guidelines originally published in 2009 and revised in 2013 set out a methodology which it had developed and tested in a variety of low middle and high income countries for reviewing road safety management capacity in a country.<sup>7</sup> The methodology involves two key elements. The first is a full review of road safety management capacity within the country to highlight key areas for development. The second is the preparation of a road safety investment strategy along with high-impact safe system projects capable of marshalling the necessary resources and demonstrating the potential for sustained safety benefits within the community. These processes have been implemented in Uganda, Ethiopia, Nigeria, Sierra Leone, as well as many other low and middle income countries and jurisdictions in other parts of the world.

Most recently, SSATP commissioned a study on the safety management of regional trade road corridors in 2012. Recognising the vital economic development role that these corridors play, this study reviewed the literature and empirical evidence on the safety problems on regional trade road corridors, with a particular emphasis on Africa. As the third phase of this study SSATP published guidelines in 2013 for fully integrating safety into regional trade road corridor projects.<sup>8</sup> The guidelines used the GRSF framework to set out a process through which all aspects of road safety would be addressed and managed, with a particular focus on building road safety management capacity within the country or countries in which the project was undertaken.

Road safety needs to be fully integrated into regional road transport corridor projects, which continue to be a focus of major infrastructural and economic development investments throughout Africa, and as noted above are currently attracting considerable investment in Senegal. However, current implementation processes and practices in these major infrastructure investments which prioritise mobility over safety will likely see an increase in fatalities through these investments. As noted by the WHO head of injury prevention in the introduction to the SSATP guidelines “very often the improvements implemented under most trade and transport corridor projects in developing countries are compromised by increases in road traffic crash risks and casualties.”

Instead these investments need to incorporate modern safety principles to build critical road safety management capacity, and demonstrate the potential for success in bringing infrastructure, vehicle and behavioural safety programs to bear on Africa’s road safety crisis. The SSATP guidelines set out a method which is well aligned to major infrastructural investment and includes a number of terms of reference for technical assistance that can be used to develop and implement a project using the guidelines.

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<sup>7</sup> Bliss and Breen (2009) op.cit.

<sup>8</sup> Breen J, Humphreys MH, Melibaeva S, *Guidelines for Mainstreaming Road Safety in Regional Trade Road Corridors*, Working Paper No.97, SSATP Africa Transport Policy Program.

## SUMMARY AND RECOMMENDATIONS

This paper addresses the function, form and funding requirements of a lead agency for road safety for consideration by the Senegalese Ministry of Transport.

Based on good practice road safety management internationally, the following functions which are discussed in the paper are recommended for the lead agency:

- Develop, implement and continually improve a road safety management system including a road safety vision, road safety targets, and interventions and management processes to achieve road safety targets
- Develop and oversee implementation of road safety strategies and plans to address key areas of road safety concern regarding the safety of roads, vehicles, users, and post-crash response
- Establish and manage mechanisms between government agencies, and community, industry and business interests as required, to coordinate the planning, delivery and management of road safety activity
- Review and advise on legislative and compliance mechanisms that have a significant impact on road safety, including planning design and use of road networks, regulation and compliance for motor vehicles motor vehicle drivers and commercial transport operators, and post crash recovery and treatment
- Develop and oversee implementation of multi-year and multi-agency road safety investment plans which support sustainable funding of road safety activity and the integration of safety within relevant government projects and programmes
- Develop and implement programmes to promote effective road safety practices amongst government, community, industry and business interests, and to support specific road safety programmes
- Develop and manage monitoring and evaluation mechanisms, including data management systems, that are necessary to report on and promote improvement in the delivery of road safety activity and programmes
- Develop and implement road safety research programmes that support monitoring and improvement of road safety activity, and knowledge transfer programmes which promote greater road safety management capacity amongst government, community, industry and business interests.

Effective performance of these functions will require the lead agency to engender a collaborative approach with all relevant government agencies, as well as community, industry and business interests.

Effective governance does not require the establishment of many different agencies, but there is however a clear gap between the levels of road trauma currently suffered in Senegal, and the capacity of government institutions to reduce that suffering. The establishment of an autonomous lead agency for road safety is recommended, along with more direct safety accountabilities for existing agencies. It is recommended that the agency reside within the Ministry of Transport, and report to the Minister of Transport, the Prime Minister or President.

It is recommended that the strengthening and establishment of the lead agency function in Senegal is managed in three phases over successive years:

1. establishment of an autonomous lead agency which is accountable to Ministers, and works in partnership with other agencies in order to succeed (2014)
2. establishment of various management directions and systems within the lead agency, and within partner agencies (2015)
3. implementation of major demonstration projects which bring the various partner agencies together to focus on systematic interventions, focused on key parts of the road network (2016).

It is recommended that the costs associated with the establishment and ongoing operation of the lead agency are assessed and tested for the extent to which the costs are able to be absorbed from the fuel levy, and how much the cost would need to be met from general government expenditure. It is recommended that the ongoing funding allocated to the lead agency is managed through FERA, at least in the first three to five years of the organisation.

It is recommended that the Steering Committee consider commissioning a road safety management capacity review for Senegal in order to assess the full extent of the road safety management tasks in the early years of the lead agency, and develop a road safety investment strategy for the remainder of the decade. Noting the considerable investment in road infrastructure currently underway in Senegal, it is also recommended that a major road corridor project is identified for application of SSATP guidelines for mainstreaming road safety in regional trade road corridors.

## **Attachment: A possible results framework for road safety**

Best practice road safety management incorporates a results framework with three distinct components – final safety outcomes (the results being sought), intermediate safety outcomes (the intermediate results to assess progress), and institutional outputs (the deliverables implemented to affect the intermediate results).

A possible results framework for Senegal to work towards is set out below. Such a framework should be the subject of consideration by various institutional arms within the Government of Senegal. The data needs should then be considered for their ability to be collected and analysed, and then prioritised. A specific program of building the data needed for the framework is necessary and will need to be funded.

A results framework including current indicators could be populated now, and other indicators could be the initial focus of a research strategy. Ideally, specific targets are set for each measure. The goal over time is for a complete set of data that can be reported, even if some indicators (such as a safety star rating for infrastructure) are only revised periodically, such as every three years.

### **Final Safety Outcomes**

Final safety outcomes are the highest level results being sought, and comprise three main areas:

- reduced fatalities
- reduced serious injuries
- reduced social cost of road trauma.

Ideally the data can be analysed in the following manner:

- social cost and Injury data should be disaggregated by location, gender, age, user type, crash type, and road type
- final safety outcomes should be supported by critical exposure information – population, network length, kilometres travelled, and registered vehicles
- international comparison of road safety performance is typically assessed by the number of fatalities per 100,000 people.

### **Intermediate Safety Outcomes**

Intermediate safety outcomes are important to assess whether or not key indicators are improving or not. If these indicators improve, it can be said that the safety of the Senegalese population has improved.

- improved safety star rating of infrastructure (iRAP)
- lower average age of vehicle fleet
- lower average traffic speed (rural & urban)
- improved motor vehicle driver behaviours

- less drivers exceeding the legal speed limit
- less drivers exceeding the legal drink driving limit
- less drivers using mobile phones
- more use of seatbelts.

These intermediate safety outcome measures typically require scientifically conducted observational surveys.

### **Institutional Outputs**

Road safety is produced, and so a credible results management framework includes operational data that allows agencies to identify where specific effort is needed to address specific safety issues. These output indicators should logically connect with agreed intermediate safety outcome indicators – that is, increased quantity and quality of outputs will impact positively on the intermediate outcomes.

- kilometres of footpath and number of pedestrian crossing points constructed
- number of intersections and other road sites (including blackspots) treated for safety improvements
- number of driver licences issued/renewed, and number of licence sanctions applied to restrict the legal opportunity for offenders to drive
- number of vehicles inspected, and number of vehicle sanctions applied to remove unsafe vehicles from the road network
- number of commercial operator licences issued/renewed, number of operator sanctions applied to restrict the legal opportunity for offenders to offer services
- number of breath alcohol tests administered, and legal actions taken
- number of speeding tickets issued or other legal actions taken
- number of legal actions taken regarding use of mobile phones
- number of legal actions taken regarding unrestrained motor vehicle occupants.



## Attachment: People and organisations consulted

Person	Position	Organisation
Aubin Jules Marcel Sagna	General Secretary	Ministry of Infrastructure and Transport
Demba Sarr	Police Chief Superintendent	National Police, Ministry of Interior
Sagar Drame	Administrator	Road Maintenance Fund
Pierre Sene	Director Administration and Finance	Road Maintenance Fund
Aly Ba	Director Major Road and Construction Works	Ageroute
Ibrahima Ndiaye	Head	Bureau of Organisation and Method
		Ministry of Finance
Ndeye Awa Sarr	President	LASER International
Soudou Diagne	Transport Technical Advisor	Ministry of Infrastructure and Transport
Elhadji Seck NDiaye Wade	Director Road Transport	Ministry of Infrastructure and Transport
Modou Kane Diao	Head of Road Transport Policy and Planning	Ministry of Infrastructure and Transport