

IMPROVEMENT OF TRAFFIC MANAGEMENT ALONG TRANSPORT CORRIDORS IN THE SADC REGION: THE BEIRA CORRIDOR AS A CASE STUDY

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ABSTRACT

Various operational constraints have been experienced along the major SADC road links, with an ultimate negative impact on the economy. For instance, deaths, injuries and damage to infrastructure and motor vehicles resulting from road accidents are costing between 2 and 3 percent of GDP in countries such as Malawi. In addition, HIV/AIDS is changing the size and composition of the work force, as skilled and experienced, but young work force is prematurely falling sick and dying from AIDS. Also, delays at the SADC borders due to inefficient customs and immigration formalities are costing approximately US\$ 50 million a year in additional transport costs and reduction in the capacity of the existing transport fleet.

Having recognized these operational constraints, SADC has embarked on an integrated pilot project in the Beira Corridor, with the following major components: Improvement of Traffic Safety; Prevention and Control of HIV/AIDS; and Facilitation of Cross Border Traffic.

Each of the three components will terminate with a regional workshop, where the experience learned with the respective implementation would be shared and the way forward drawn. The implementation of the project has proved to be a widely supported initiative by both the transport operators and the local communities. A corridor performance monitoring system could be considered to facilitate the assessment of the project related activities and the overall operational trends along the Beira Corridor.

This paper brings in some of the key issues in traffic management in the transport corridors, while exploring the experience of the activities carried out in the Beira Corridor to address the same. To this end, the first section presents a brief description of the Beira Corridor and the problems that prompted the project design. The second part gives the project rationale and the respective components, while the third part analyses the implementation process. The paper ends with a brief overview on the way ahead.

1. DESCRIPTION OF THE BEIRA CORRIDOR AND THE PROJECT BACKGROUND

The Beira Corridor is an important transit corridor in the SADC region, serving various landlocked countries in the SADC region such as Malawi, Zambia, and Zimbabwe, in addition to Mozambique. The traffic to and from Zimbabwe (by far the main client) is mostly conveyed by rail, amounting to nearly 1 million tonnes per year. Imports/exports to and from Malawi and Zambia is basically transported by road and fluctuates a great deal, but in peak times can reach over 250,000 tonnes. There are also reports that an increasing portion of fuel imports for Zimbabwe are conveyed by tanker trucks, rather than the traditional pipeline. Furthermore, over 50 percent of the Malawian imports are from South Africa and cross the Nyamapanda/Cuchamano-Zobwe/Mwanza section of the Corridor. Passenger buses and cars also travel in considerable numbers on all the trunk sections

that constitute the Beira Corridor, which are Beira-Machipanda (EN 6); Vanduzi-Changara (EN 102); Nyamapanda-Zóbwè (EN 103); and Moatize-Cassacatiza (EN 222). In addition to these international links, the area is traversed by EN 1 over a length of approximately 570 km between Caia and Save, providing the main link between the northern and the southern parts of Mozambique.

Although the bulk of the road network in the Beira Corridor is in a reasonable state of repair, accidents due to various reasons are very frequent. Between 1998 and 2002, the total number of accidents in the Mozambican part of the Beira Corridor averaged 1 059 per year, with 200 fatalities, 1 256 injuries and 916 damage only accidents recorded on average per year over the same period.

HIV/AIDS is also beginning to take its toll in the SADC region, being the leading cause of death between the ages of 15 and 39 in countries such as Malawi, Zambia and Zimbabwe, which fall within the Beira Corridor influence zone. In Mozambique, the prevalence rate of the disease is estimated to be 16 percent, with 700 new infections occurring every day. Many of these infections occur on the Beira Corridor area, where the prevalence rate of the epidemic is the highest of the country at nearly 20 percent. Due to the nature of their work, which takes them away from home for long periods, long distance truck crews contribute greatly to the spread of the disease.

Delays at the borders within the Beira Corridor are very frequent. In most cases, the crossing times at these points are in excess of 24 hours. These delays are associated with cumbersome customs and immigration procedures, which differ from one country to other. As a result, transport costs increase, while the capacity of the transport fleet is minimised. In addition, as truck crews overnight at the border posts unnecessarily due to the lengthy crossing formalities, they tend to engage in extra-marital sexual activities, more often unprotected, thereby exacerbating the HIV/AIDS problem.

2. RATIONALE AND COMPONENTS

As previously mentioned, the Beira Corridor infrastructure is relatively developed and in a reasonable condition. Nevertheless, little attention has been paid to the institutional side, including adequate training for a smooth operation that would, in turn, increase the gains from the other sectors that use the transport facilities. This includes a lack of enough dialogue and co-ordination of efforts among all the stakeholders involved in the sector, namely the Government institutions, the private sector and the public in general.

For instance, road safety can better be achieved if roads are correctly signalled and maintained by the relevant Government authorities. On the other hand, motor vehicle owners need to keep their vehicles in good mechanical condition so that they are not prone to preventable failures that may result in accidents. In turn, the relevant Government authorities periodically need to inspect all the vehicles in circulation and enforce the other traffic safety regulations. Drivers and pedestrians (from the childhood) need to be adequately trained on how to prudently drive or travel on the roads. Finally, infrastructure providers, regulators and users need to clearly understand each part's role for ensuring safer roads, including the need to work hand in hand.

The outreach of the challenge posed by HIV/AIDS has long eroded the idea that it was only a concern of the health related institutions. The nature of the work of the transport industry workers, particularly the long-distance truck and train crews has made this workers group into one of the most vulnerable to the epidemic. Due to the same reason, these workers are one of the leading groups that spread the disease throughout the region, particularly along the transport routes. The losses due to the epidemic are quite clear. Economically active and skilled workers are falling sick and prematurely die from AIDS, or take time to care for infected family members. Costs associated with absenteeism, health care and funerals are increasing. As a result, the vacancies left will

probably have to be taken by much younger, less trained and inexperienced workers. As one would agree, inexperienced drivers are more likely to get involved in road accidents than their experienced colleagues.

Likewise, the requirement of two stops at all the SADC border posts (one on each country's side of the border post) means that all the border crossers spend at least twice the time they would ideally need to complete the customs and immigration formalities while passing from one country to another. As a result, the turn-around time of commercial motor vehicles (trucks and buses) is increased, leading to the minimisation of their actual capacity. Further, the transported goods become more expensive, whereas the time utility of tourists and businessmen is considerably reduced. Clearly, there is a need for improved border crossing procedures that would decrease the transit times at these points.

Over more than two decades, SADC has demonstrated its commitment to regional integration by establishing a well-defined policy framework for developing integrated and efficient transport infrastructure and operations, in addition to fostering trade. On the other hand, the AfDB has been supporting transport related and other key projects in the SADC region for many years. It was under these circumstances that SADC has sought to solve the operational constraints mentioned above along the Beira Corridor as a pilot project. Therefore, the project activities are targeted on reducing the number of road accidents along the international transit routes as well as the incidence of HIV/AIDS along the route. Furthermore, efforts are also focused on drastically reducing the border post crossing times.

Consequently, the project activities are divided into three main components as follows:

- Improvement of Traffic Safety. This includes the support for driving testing and the enforcement of road traffic regulations; design of road safety programmes for inclusion in the core curriculum of primary and secondary schools; strengthening of the Mozambique National Roads Safety Council by developing its capacity to conduct regular training activities and public awareness campaigns; and study on low cost counter measures to be implemented at the road accidents black spots on the Beira Corridor.
- Prevention and Control of HIV/AIDS, with the following deliverables: selection of target groups; design of appropriate training programmes, including the training of peer educators in HIV/AIDS and STD prevention; design and distribution of information, education and communication material through appropriate channels such as mass media and inter-personal means; erection of billboards with HIV/AIDS prevention messages; and coordination with the existing government and NGO programmes directed to commercial sex workers, voluntary testing and counselling as well as sexually transmitted diseases (STDs).
- Facilitation of Cross Border Traffic that encompasses the development of training materials for the newly introduced customs documents and procedures at SADC border posts; delivery of the training at selected border posts on the Beira Corridor; production of guidelines and a manual of processes to be undertaken by the relevant governments and other parties for the establishment of one-stop border posts.

Each of the project components ends with a regional thematic workshop, which bring together public and private stakeholders from the various SADC countries. Outputs and lessons learned in the course of the project execution are disseminated, while also discussing the steps to be taken thereafter.

3. IMPLEMENTATION

The implementation of the project began in 2002 with the launch of the first two components. The improvement of traffic safety was awarded to CSIR/BKS, while the prevention and control of HIV/AIDS was contracted to Austral/GTZ. The tender procedures for the Facilitation of Cross

Border Traffic are being finalised. As for the management, the project is run by a dedicated project co-ordination unit (PCU), composed by senior SADC officials and a field project officer based in Beira. The consultants report to the project officer, who interfaces with the SADC senior officials. In addition to closely monitoring and facilitate the work of the consultants, the project officer liaises with the various public and private stakeholders in the project area. The following are the main outputs of the project.

3.1 Improvement of Road Safety

The activities carried out under this component included:

- The development of training manuals for learner drivers, as well as for driving instructors and driving examiners;
- Training of driving instructors and examiners in Mozambique and in South Africa for Malawi, Zambia and Zimbabwe, using the newly developed manuals;
- Development of a manual on road traffic law enforcement;
- Training of law traffic enforcers in Mozambique;
- Development and distribution of a school curriculum on road safety;
- Carrying out a road safety awareness campaign, which included the printing and distribution of information and education campaign material;
- Development of road safety system, which included the design of a new accident reporting form which would form the basis in building a new accident information system;
- Carrying out a study on low cost countermeasures for the accident black spots along the Beira Corridor;
- Facilitating the regional thematic workshop.

The training manuals for learner drivers, driver instructors and examiners were originally developed by SATCC and the consultant undertook the upgrading task. The manuals are standardised for use in the entire SADC region. The training session for the Mozambican instructors and examiners afforded them a kind of refresher course, which they have never had since they were trained.

The manual for law traffic enforcers is a dynamic instrument. While it contains current laws and aspects that are well known by the traffic law enforcers, it allows for a periodic revision and acknowledgement of the importance of private stakeholders participation in the traffic law enforcement. In addition, the manual is ahead of the traffic law enforcement practices presently in use on some issues such as the endorsement of best practices to be followed by the low traffic enforcers.

The awareness campaign proved to be a very successful exercise in a way that it created a platform for the continuity of the spread of the road safety messages by the local public, private and community stakeholders. For instance, although the contract for displaying the posters on 10 buses of the Beira urban public bus company expired in February, the posters are still displayed after the contract expiration. The local combi-taxi operators have also been mobilised to display the road safety messages without any payment for over 4 months. In addition, community leader's participation in the radio debates on road safety proved that they are aware of the problems, the critical areas, as well as their own responsibilities to tackle the problems. The community leaders have committed themselves to post the pamphlets raising the road safety awareness in their constituencies without any financial or material reward, in addition to mobilising the local residents not to vandalise the road signs. Surely, this was a milestone achieved on establishing the project's sustainability.

Future projects will have to seek to boost the community leader's motivation by for instance rewarding them in-kind (such as offering them T-shirts and caps with road safety messages) and paying them small transport subsidies to facilitate their travelling within their constituencies. A stronger participation of the long distance truck and bus operators should also be sought. They

could for example take the responsibility of exposing their drivers and the other crew members to the route that they are expecting to travel through with video shows and detailed maps, so that they acquaint themselves with the critical zones on the route before each journey begins.

3.2 Prevention and Control of Hiv/Aids

The activities already executed or still to be executed under this component include:

- Development of training material and education aid;
- Selection of target groups for training;
- Delivery of training programmes for local trainers, long distance truck and train crews, as well as commercial sex workers;
- Design of awareness campaign material;
- Conduct focus groups discussion among long distance truck and train crews to evaluate the suitability of the awareness campaign material;
- Distribution of condoms at major truck stops along the corridor through a combination of social marketing and free distribution;
- Sponsoring institutions, schools or cultural groups to deliver HIV/AIDS messages through theatre plays and other cultural events;
- Supporting the roadside health and information units;
- Facilitation of a SADC thematic workshop.

The trainer's manual on peer education was entirely developed by the consultant's specialist and it contains various topics on STDs and HIV/AIDS. The manual for the peer educators was developed in the course of the training of the trainers, so that their inputs were incorporated in the manual being used by the peer educators. While the core topics are the same, the manual for the peer educators accounts for terminology and illustrations that go in line with their general low educational level.

In general, the peer educators' work consists of informal talks with other commercial sex workers and truck crews. They encourage their peers and customers to contact the roadside clinics when they have symptoms of a STD or when they require further information on HIV/AIDS or sexual health in general. Further, they also promote safe sex practices, distribute male and female condoms and disseminate information and education material on HIV/AIDS and STDs.

One of the most interesting aspects of this project was that it supported the operations of the existing roadside health and information units located at two busy long distance truck-stopping places (Inchope and Moatize). The clinics are an alternative to the local medical services, as they are conveniently located in the centre of the truck stops and where the commercial sex workers tend to gather. The clinics offer treatment of STDs and general illnesses, in addition to serving as distribution points of male and female condoms, as well as information and education material. Further, these clinics also offer counselling on prevention of both HIV/AIDS and STDs. Each clinic is staffed by a nurse and a counsellor and operates from late afternoon to late evening.

While attempting to establish partnerships with the local private long distance truck companies, it was realised that the actual commitment of these transport operators in taking firm steps against the disease was minimal. In fact, out of 7 companies approached, only one had a specific programme on HIV/AIDS prevention. Most of them quoted the reason for this the lack of financial resources to put in place consistent anti-HIV/AIDS programmes, which is not quite a convincing argument, since all of them are doing very well. Clearly, future actions will need to focus on raising the long distance private transport operators' awareness about the danger that the disease poses to their own companies, and urge them to fund their internal anti-HIV/AIDS activities. This will be a step ahead in establishing the project's sustainability.

3.3 Facilitation of Cross Border Traffic

As was stated before, this project component has not yet commenced. However, final contract arrangements are being made for its launch.

The following activities are expected to be carried out under the contract:

- Development of training materials and designing customised training programmes for the SADC region border posts;
- Training of trainers for each border post along the Beira Corridor;
- Supervising, monitoring and advising the border post trainers as they carry out the training of the relevant stakeholders at their respective border posts;
- Design of guidelines and a manual of processes to be undertaken by concerned governments and other interested parties for the establishment of one-stop border post operations, using the existing information, as well as design of pilot projects for the transformation of two border posts as examples;
- Preparation of a SADC thematic workshop on facilitation of cross border traffic along the transport corridors.

4. WAY FORWARD

The level of support for the project by local public and private bodies, as well as by the local communities would lead one to conclude that the implementation of the project components already implemented was a worthwhile exercise. Nevertheless, the gains from most of the activities implemented under the project can only be accurately evaluated by applying a detailed and integrated corridor performance system.

The establishment of a corridor performance system requires a refined data base system and thus will take time to be fully operational given the information technology development context of a country like Mozambique. However, some lessons learned during the implementation of this project allow one to recommend its replication at least to cover the corridor areas not contemplated under the first phase.

Future projects of this nature could pay particular attention to incentives for the community leaders to allow them to carry out the project activities without the need to resorting to their own already constrained financial resources.

In addition, the private long distance truck and bus operators should be strongly mobilised on the need for them to financially support and carry out both the road safety-promoting as well as anti-HIV/AIDS activities within their firms. This kind of exercise will probably establish the foundations for a long-term sustainability of the project.

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BIOGRAPHY

Dr. Sarguene is one of the most versatile Mozambican economists. He has a long experience in transport issues regarding Southern Africa, having performed various works in this field. He held the position of Commercial Manager for Cornelder de Moçambique in the Port of Beira. Dr. Sarguene also held the Director position for the Local Development Agency of Sofala Province. He was the Branch Manager of the Austral Group of Companies in Beira and acted as the Local Consultant for the Africa America Institute. Since October 2002, Dr. Sarguene became the Project Officer for the SATCC project on the Beira Corridor that includes the Prevention and Control of HIV/AIDS in the transport industry, the improvement of road safety and facilitation of cross border traffic.