
# HIV "HOT-SPOT" MAPPING

## *Of two transport corridors in Mozambique*

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Norad Sida

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**Cover Page Picture**
"Hot Spot" (Mozambique-Zimbabwe Border)  (Photo: Nhamatanda)

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# FOREWORD

In the spirit of actions taken to prevent and fight against HIV/AIDS, the transportation and communications sector approved its strategic plan on HIV/AIDS in October 2006 for the period 2006–2010. The plan is aimed at implementing the *Plano Estratégico Nacional de Combate às DTS/HIV/SIDA* II (2005–2009), with major focus on the transport corridors, where there is a high level of vulnerability and spread of this epidemic.

The policy on the fight against HIV/AIDS in the transportation and communication sectors was launched in June 2008. It sets out general guidelines and provides best practices for prevention and the fight against HIV/AIDS, requiring open communication between the leadership and employees of these sectors.

Other guiding tools such as awareness campaigns have been taking place in the sector – promoted at several levels – with intervention from the media, advertisements, training and refresher seminars for activists and employees of the sector. However, intervention results are still not encouraging as many workers, truck drivers, community leaders and their dependants are still dying on a daily basis, leaving behind families and children without support. The high number of deaths has also lead to a labour deficit in the transport and communication sector, where training of new workers is very costly.

The HIV-infection rate continues to be a major concern among employees of the transport sector, causing a reduction in productivity in the workplace due to HIV-related illnesses, thus compromising the goals that were set for economic development and the fight against poverty.

It is well known that most new HIV infections are due to unprotected sex with several partners. This is especially relevant along the transportation corridors, where truck drivers are a specific target market for sex workers, as truckers are known to spend weeks or even months away from their families and regular partners.

In the face of this disastrous scenario, there is an urgent need to stop new infections and to protect the health of the employees of the sector and their families. There needs to be a change of attitude and behaviour towards sex in order to prevent the spread of HIV/AIDS in the workplace, in the communities along transport corridors and in the families of those working in the transport industry.

In order for this to happen, there is the need for greater awareness among all employees of the dangers of HIV. Furthermore, tangible strategies that are targeted at the most vulnerable groups need to be implemented and monitored to ensure the best use of support from national and foreign partners in the prevention and fight against HIV/AIDS.

Mr. Olívio Pinto,

**General Inspector and Senior Technician**
**Ministry of Transport and Communication**

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# 1. ACRONYMS

| | |
|---|---|
| **ADPP** | Ajuda de Desenvolvimento de Povo para Povo (Member of Humana People To People) |
| **AIDS** | Acquired immune deficiency syndrome |
| **BP** | British Petroleum |
| **CNCS** | Conselho Nacional de Combate ao HIV/SIDA (National AIDS Council) |
| **CSPro** | Census and Survey Processing System |
| **DPS** | Direcção Provincial de Saúde (Provincial Directorate of Health) |
| **FGD** | Focus-group discussion |
| **FHI** | Family Health International |
| **GIS** | Geographic Information System |
| **GPS** | Global Positioning System |
| **HF** | Health Facility |
| **HIV** | Human immunodeficiency virus |
| **IOM** | International Organization for Migration |
| **KABP** | Knowledge, attitude, behaviour and practice |
| **KULA** | Estudos e Pesquisas Aplicadas Lda |
| **MISAU** | Ministério da Saúde (Ministry of Health) |
| **MT** | Metical |
| **N1** | National Road No. 1 |
| **N6** | National Road No. 6 |
| **NGO** | Non-governmental organization |
| **NHS** | National Health Service |
| **PHAMSA** | Partnership on HIV and Mobility in Southern Africa |
| **PSI** | Population Services International |
| **SADC** | Southern African Development Community |
| **STI** | Sexually Transmitted Infection |
| **SW** | Sex worker |
| **TCE** | Total Control of the Epidemic |
| **UATS** | Unidade de Atendimento e Testagem em Saúde (Health Testing and Counselling) |
| **UEM** | Universidade Eduardo Mondlane (Eduardo Mondlane University) |
| **UN** | United Nations |
| **UNAIDS** | Joint United Nations Programme on HIV/AIDS |
| **USAID** | United States Agency for International Development |
| **USD** | United States Dollars |

## 2. GLOSSARY

| Term | Meaning | Language |
|---|---|---|
| ***Barracas*** | Tavern or stall, typically at markets, providing food and drink, and sometimes accommodation | Portuguese |
| ***Chinde*** | Term used to refer to a lover | Ndau |
| ***Concurrent Partnership*** | Persons who have concurrent sexual partnerships are those who report at least two partners for which first sex was reported six months or longer ago, and the most recent sex is reported as less than or equal to six months ago. | English |
| **Enzoy** | Energy drink that claims to strengthen and maintain sexual desire of men and women | Portuguese |
| **Health services: public/private/ traditional** | Historically, in Mozambique health services were run by the state (public health sector). However, since 1990 services have been open to other providers.<br>Private health-service providers are concentrated in the provincial/ national capitals. In the areas covered by the study health services are mostly public, with the exception of a few (legalized) private pharmacies.<br>Traditional health services are usually provided in areas far from the road, in identified huts in rural areas. | English |
| **Hot spot** | A confined geographical space in which levels of casual or transactional sex is concentrated | English |
| **Irregular migrant** | Someone who, owing to illegal entry or the expiry of his or her visa, lacks legal status in a transit or host country (IOM, 2007) | English |
| **Migrant worker** | According to International Migration Law a migrant worker is a person who is to be engaged, is engaged or has been engaged in a remunerated activity in a state of which he or she is not a national (Art. 2.1, *International Convention on the Protection of the Rights of all Migrant Workers and Members of their Families*, 1990). However, within southern Africa, internal and cross-border migrants have similar vulnerabilities and within the scope of the IOM migration health programme no distinction is made between cross-border and internal labour migrants. | English |
| **Mobile worker** | A worker who is forced by the nature of his or her job to move. Sectors that employ such persons include transport (e.g. truck drivers), fisheries, informal cross-border trade and the government (e.g. state officials, including military personnel and immigration officials). | English |
| **Non-regular partner/ casual partner** | A non-marital and non-cohabiting sexual partner; often called a "casual" partner | English |
| **"Rapidinha" (Quickie)** | A sexual practice that consists of having sex very quickly (for a short time) | Portuguese (Slang) |
| **Regular Partner** | A marital and/or cohabiting sexual partner; opposite of "casual" partner | English |

| Term | Meaning | Language |
|---|---|---|
| **Sex worker** | Female, male and transgender adults and young people who receive money or goods in exchange for sexual services, either regularly or occasionally, and who may or may not consciously define such activity as income generating (UNAIDS, 2002) | English |
| **"Short-time" = rapidinha** | A term used by Zimbabwean Sex workers to refer to a sexual practice that consists of having sex very quickly | English (slang) |
| **Spaces of vulnerability** | Spaces of vulnerability are locations where people's health is at high risk. Health vulnerability stems not only from individual but also a range of environmental factors specific to the unique conditions of a location, including the relationship dynamics among mobile and sedentary populations. These factors must be taken into consideration when addressing migration health concerns and interventions must consider and target both migrants/mobile populations as well as the communities with which they interact, such as families in migrant-sending communities. Spaces of vulnerability are those areas where migrants and mobile populations live, work, pass through or originate from and may include the following: land border posts, ports, truck stops or hot spots along transport corridors, construction sites, commercial farms, fishing communities, mines, migrant communities and urban informal settlements, migrant-sending sites, detention centres and emergency settlements. | English |
| **Transport corridor** | A (generally linear) tract of land in which at least one main line for transport (road, rail or canal) has been built | English |
| **Treatment stalls** | Ad hoc first-aid stops, normally found in market places, which avoid people having to go to registered government centres | English |
| **Truckers** | This term refers to both truck drivers and their assistants | English |


© IOM 2010 - Rural hospital in Nhamatanda.

# 3. EXECUTIVE SUMMARY

The International Organization for Migration (IOM) commissioned this study to obtain information on the trucking sector, sex work, and HIV through an analysis of social and behavioural patterns at 14 pre-selected sites along the Beira and Tete transport corridors in Mozambique. This study is intended to help government and partners to develop customized HIV prevention, treatment, care and support programmes for communities along the main transport corridors. In addition, the findings will be used in advocacy with key national and regional decision-makers to strengthen interventions in this sector.

### Methodology

The methodology combined qualitative and quantitative methods. The quantitative instruments include: a truck census; inventory of health facilities, bars and lodges; and a survey questionnaire assessing health-seeking behaviours of trucker drivers and their assistants. Qualitative techniques included semi-structured interviews, focus-group discussions (FGDs), sex-worker diaries and direct observation by researchers.

Geographical coordinates of the main reference points in each risk area were also mapped. With the exception of data from the truck census and local HIV programmes, data collected were coded and processed in a database for analysis. Data entry was done using the statistical package CSPro (Census and Survey Processing System).

### Quantitative Research

- The truck census, included as part of the 7 week field work (February – April 2010), counted 1,889 trucks, 773 in the Beira corridor and 1,116 in the Tete Corridor

- A total of 18 health facilities in the 14 hot spots were identified. Among these, 17 were public health centres and one was a public–private partnership (an evening clinic).

- Survey data indicate the existence of at least one public health facility, pharmacy or medicine dealer and at least one outreach activity on STI/HIV and AIDS in each "hot spot".

- A total of 598 drivers participated in the health-seeking behaviour survey – 289 in the Beira corridor and 309 in the Tete corridor. There was only one female driver in the sample. Seventy per cent of the sample was made up of truck drivers and 30 per cent were truck driver assistants.

- A total of 188 bars and lodges were included in the bar and lodging census. Most of the bars were located along the Tete corridor, although the single "hot spot" with the largest number of bars and lodges is the city of Beira, on the Beira corridor.

- Seventy per cent of bars offer bar-only services, and 28 per cent offer both bar and accommodation services.

- A total of 271 sex-worker diaries were completed and used in the analysis.

### Discussion

This study confirms that heterosexual commercial sex is common along the Beira and Tete corridors, where both local and migrant women sell sex. Clients are not limited to truck-drivers. They include members of local communities, truckers, migrant workers, immigration officers, border officials, police officers and healthcare workers (doctors and nurses). Those engaging in commercial sex risk STI and HIV infection because condom use is inconsistent. The reasons that condom use is inconsistent include: the level of trust between partners; more money can be earned having sex without a condom; the quest for intimacy and/or physical pleasure; the search for a regular partner.

### Other findings which merit further research include:

The notion of a 'non-regular partner' and the notion of 'risk' are fluid. Participants in this study consistently report that condom use is linked to whether a partner is considered 'casual' or 'regular' and display more consistent condom use with 'casual' partners than with 'regular' partners. Since people

engage in several 'regular' sexual partnerships at any one time, these can be considered "concurrent" partnerships. This concurs with other studies which indicate that 'concurrent' partners tend to be considered 'regular' partners, and therefore people do not use condoms in concurrent partnerships.

- In the context of high levels of labour migration, people engage in several 'regular' relationships at the same time over a specific period, often because of their volume of travel. This places them and their (regular) partners, and their partners' (regular) partners at risk. This is due to the combination of 1) low condom use, 2) several sex partners, 3) higher infectiousness during the "window period' after HIV exposure, and 4) linking otherwise disparate sexual networks.

- STIs are present, both among sex workers and truckers. Although some hot spots have seen an increase in users of health facilities, stigma about STIs still exists, and this can be a barrier to people seeking treatment.

- As reported in similar studies, truck drivers tend to blame their risk behaviour on the women (sex workers) that approach them when they stop to rest. This connotes a problematic gender bias concerning the ability (for a man) to control himself and avoid risk behaviors.

### Conclusion

Environmental and structural factors – including food and accommodation, gender norms - are often overlooked components of on-the-ground HIV prevention programmes. Reducing HIV risk along transport corridors in Mozambique requires implementation at the structural and environmental levels, as well as through on-the-ground prevention interventions such as condoms and male circumcision. Programmes which address negative gender norms and values should be implemented in tandem with condom distribution to sex workers and their clients.

Below is a list of the key recommendations stemming from this research. A more comprehensive list can be found in Section 9 of this report.

## Box 1: Key recommendations

**Overall:**

It is important to ensure that governmental, private sector and NGO interventions are targeted not only at transport workers and sex workers but also those people with whom they interact.

**Regional policy-related recommendations:**

1. **Cross-border dialogue on access to health services**: Regional stakeholders should advocate for cross-border dialogue on the development of government policies and programmes that would facilitate and support access to health services while transport and other mobile and migrant workers are away from home. For instance, the development of a regional "Health Passport" for transport workers and other migrants should be strongly considered.

**National policy-related recommendations:**

2. **Develop HIV policy for the transport sector**: Government of Mozambique needs to develop a sector-wide transport policy that would guide and monitor a coordinated response to HIV, TB, STIs and other health issues in the transport sector in Mozambique. The policy should focus on transport workers, but also address specific interventions for communities affected by transport.
3. **Gather statistical data on Sex Workers, transport workers and HIV**: Quantitative data relating to sex workers and transport workers and the communities with which they interact should be gathered. This should be done through site-specific research (e.g. biological behavioural surveillance studies) and also within the Government's statistical studies – such as the National Survey on Prevalence, Behavioral Risks and Information about HIV and AIDS in Mozambique (INSIDA)

4. **Strengthen border management**: The Government of Mozambique should work at the central and decentralized levels to improve border management including immigration procedures and customs/revenue services. This would facilitate reduced waiting time for transport workers in border areas.
5. **Conduct HIV and gender impact assessments when planning major construction projects.** HIV and Gender social impact assessments should be done in the planning stages of all major infrastructural developments such as bridges, mines and roads. This will enable plans to incorporate the heightened vulnerabilities of increased migration in the formal and informal sectors, including transport workers and sex workers.

**Programme-related recommendations:**

6. **A holistic approach to prevention programming – moving away from 'MARPs'**: Sex workers and transport workers interact with a variety of different actors such as guards, police, airtime vendors, truck loaders, traders, bar clients and others, all of whom should be included in holistic programmes. Referring to "Most at-risk populations" has the potential to stigmatise entire groups on the basis of their profession, and this can be counter-productive when it comes to HIV prevention programming. For these reasons, a holistic approach should be used in the development of any type of prevention intervention in hot spots as this will help to develop more inclusive HIV programmes, lessen the stigma attached to 'MARPs', and strengthen social change communications programmes on-the-ground.
7. **Improve access to integrated health services**: Governmental, non-governmental and private sector stakeholders should provide transport workers with access to integrated health services with a particular emphasis on location (close to the places where truckers park overnight), operating hours (late night), and tailored services, preferably at multiple locations and facilities along the corridors. These facilities should also be open to the community at large.

**Research-related recommendations:**

8. **Strengthen understanding of how sexual behaviour changes according to partnership definition**, e.g. "non-regular partner" vs. "regular partner", "concurrent partnerships" vs. "multiple partnerships", and how migration effects these relationships.
9. **Conduct bio-behavioural research in 'spaces of vulnerability' rather than with "MARPs" (i.e. sample defined by geographic area rather than 'target group')**: Government and other stakeholders should conduct more in-depth research in hot spots in order to understand and pinpoint the factors that result in these sites becoming "spaces of vulnerability". This means moving away from MARPs language, towards a more human-rights-based approach which does not stigmatise people on the basis of their profession.

© IOM 2010 - One of the "Hot Spot" in Tete.

# 4. INTRODUCTION

Throughout southern Africa, people are involved in various forms of mobility. In situations of economic and environmental uncertainty, and political instability in some countries, demand for income-generating opportunities in different locations and economic sectors is a logical risk-management strategy. Increasingly, livelihoods depend on mobility.

To respond to health-related challenges that migration presents, the International Organization for Migration (IOM) developed and implemented a regional programme called The Partnership on HIV and Mobility in Southern Africa (PHAMSA), that aims to reduce the vulnerability of mobile and migrant populations' to HIV and AIDS in the SADC region. The programme ran from March 2007 to October 2010. As a research component of the programme, IOM contracted KULA (Estudos e Pesquisas Aplicadas Lda.) to conduct a mapping of hot spots along the Beira and Tete transport corridors in Mozambique.

## 4.1 HIV and Transport within Southern Africa

The road transport sector in southern Africa is greatly affected by HIV and AIDS. Long-distance truck drivers as well as other workers in the transport sector continue to be vulnerable to HIV infection and experience high morbidity and mortality (Evian, 2000; Center for Communicable Diseases Control, 2005).

There are a number of interrelated factors that increase HIV vulnerability in the road-transport sector at structural, environmental and individual levels. Broader structural factors such as the regional, national and sector-specific policies on labour, migration and health have an overall impact on the HIV epidemic, primarily by determining the conditions under which the sector operates (World Bank, 2006). Environmental factors are the immediate socio-economic conditions in which users and communities around transport corridors find themselves. These include a lack of comprehensive workplace programmes for workers in the road transport sector and issues such as health-promotion materials and the provision/availability of appropriate accommodation and resting time. In addition, limited access to appropriate health services at key points along corridors, particularly for mobile populations, is a common challenge.

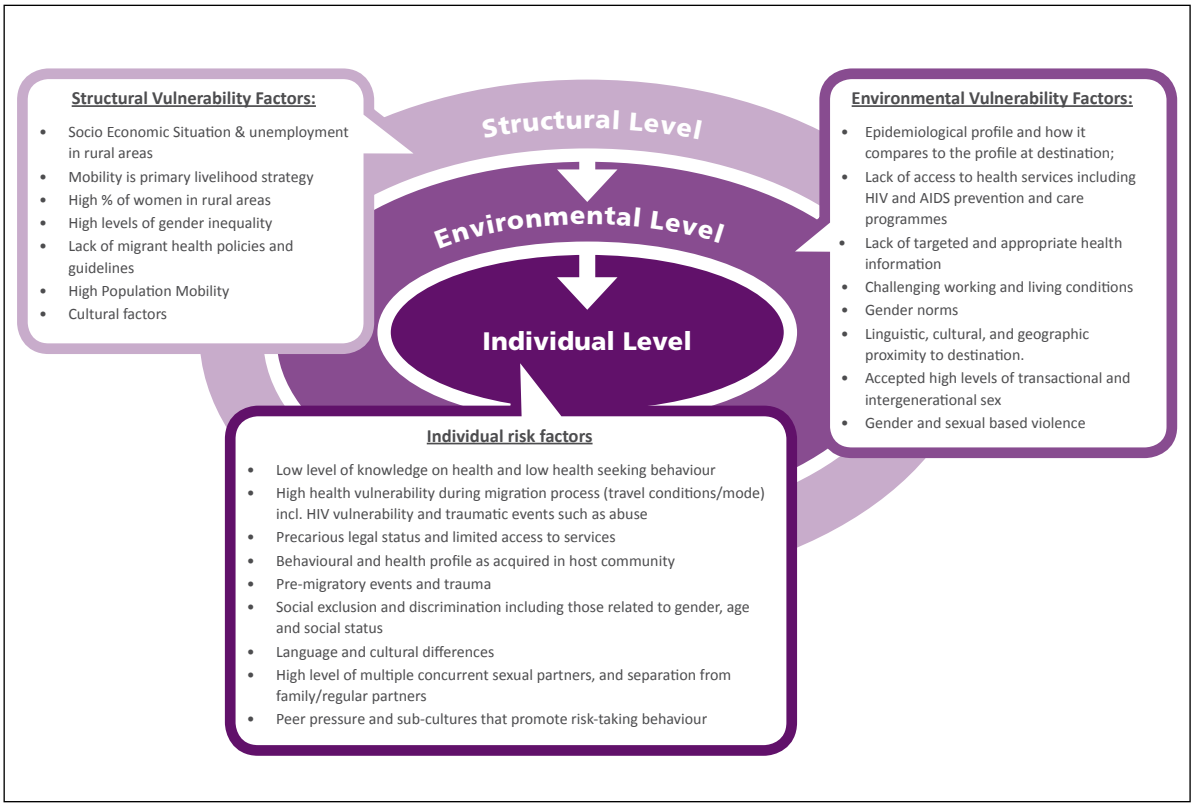
Some of the individual behavioural practices which increase the risk of HIV include high levels of unprotected sex and low risk perceptions. As truck drivers become aware of the risk of engaging in unprotected casual sex, some have opted to have semi-regular sexual partners along transport routes. Since this involves some level of trust and relationship-building, there is an erroneous assumption that sexual encounters in such a context are less risky, meaning people are less likely to use condoms in these relationships (Bwayo, 1991). In general, stopover towns often contain a high proportion of young women and men from surrounding rural areas attracted by economic opportunities. Young girls and female informal traders may exchange sexual services with truckers for free transportation, negotiating in advance, or offering sexual services at their destination (Anarfi et al., 1997).

Some studies have also established that a significant number of workers in the road transport sector have continued to engage in unprotected sex despite being aware of its dangers. One suggestion put forward to explain this behaviour is 'fatalism', a result of dangerous working environments (Wilson et al., 1994).

In southern Africa, where there are various cross-border transport routes, truck drivers frequently experience long delays and stopovers at borders and checkpoints due to the limited harmonization of migration and customs procedures in the region. Lack of affordable accommodation leads many to sleep in their trucks, or to sleep at the home of a sex worker, as the only affordable sources of accommodation (FHI and USAID, 2000).

Such conditions faced by truck drivers provide the opportunity to find sexual partners along major transportation corridors, giving rise to the number of concurrent sexual partnerships. Sexual networks of truck drivers include wives, girlfriends, sex workers, adolescent girls, assistants and casual acquaintances (Wilson et al., 1994; Ramjee and Gouws, 2000; Wilson, 2000). Truck drivers have different partners at different stops along their route which provides them with a social network when they are away form home, and for whom they help to support financially (Marcus, 1996; Laukamn-Josten, 2000). The wives that are left behind by the truck drivers may also have other sex partners in their husbands' absence. In this way, the transport sector links together many disparate communities: rural homes of truck drivers, stopover towns along major routes and cross-border communities (Mwizaruba, 1994; Mukodzani, 1999; Mupembo, 1999). HIV responses in the transport sector must therefore address the structural, environmental and individual factors that put people at risk if they are to be successful.

**Figure 1: Multi-level approach that looks at reducing individual risks by addressing individual and environmental factors and taking into account structural issues that increase HIV vulnerability.**




## 4.2 HIV and the Road Transport Sector in Mozambique

Mozambique's integration into the regional economy has led to improvements in road and rail infrastructure. The establishment of the Maputo, Beira and Nacala corridors is expanding the transport sector and connecting Mozambique to its neighbours. For example, at Komatipoort–Ressano Garcia (the South Africa–Mozambique border post) approximately 2,200 trucks cross the border monthly and about 20 trucks park at the border overnight (FHI, 2001: 29–52). The transit periods are long and crossing the border between Mozambique and South Africa can take an entire day (SADC, 2007: 11).

A knowledge, attitude, behaviour and practice (KABP) survey carried out in 2004[1] among 300 truck drivers (including Mozambicans, South Africans, Zimbabweans, Malawians and Zambians) during 30 days found that:

- more than 50 per cent were away from home for between one to three weeks per month;
- 13.7 per cent were away for more than three weeks per month;
- between 80 and 90 per cent reported having one to two partners (during the period they were away);
- more than 52 per cent reported intercourse with at least one partner with whom sex was exchanged for money;

In addition, the survey found that:

- the majority of the drivers using Mozambican highways are from neighbouring countries who speak English;
- most were between 30 and 50 years of age;
- nearly half of them had been driving for more than 10 years;
- although many of the drivers had at least some secondary schooling, 36 per cent were functionally illiterate.

## 4.3 Objectives of the Study

The main purpose of this study was to obtain information on the trucking sector, sex work, and HIV through an analysis of social and behavioural patterns at 14 pre-selected sites along the two corridors.

**Specific objectives of the study:**

1) Examine perceptions and practices of truck drivers and sex workers in seeking healthcare;
2) Identify the social and demographic structure of sex workers' clients;
3) Assess the mechanisms of how entertainment (bars) and accommodation (lodges) operate, and related practices at these venues;
4) Map health services available in each "hot spot";
5) Assess the level of uptake by risk groups (i.e. truckers and sex workers) to existing health services;
6) Assess the behavioural dynamics involving all stakeholders present in the hot spots (truckers, SWs, migration officers, owners of diners and other venues).

**Formative research:**

Prior to the start of the research, IOM held consultations with representatives of transport unions, the Ministry of Transport and Communications, UN agencies and other stakeholders to refine the parameters of the study and identify the most appropriate locations along the two corridors. The 14 "hot spot" locations were chosen in collaboration with both the transport unions and the Ministry of Transport and Communications.

The study protocol was approved by the Bio-ethics Committee of the Ministry of Health prior to the commencement of the research (See the annex for a copy of this approval).

The tools and methodologies used in this study borrowed aspects from research already conducted in East Africa. Several "hot-spot" mapping assessments have been conducted in Kenya, Uganda and Somalia, and the lessons learned were incorporated into this study (for example, see Ferguson and Morris, 2007). The lessons learned from this study will strengthen the knowledge of health risks and challenges that exist along major transport routes in East and southern Africa.

1 Experiences and lessons from the GTZ/EU project on action to combat HIV/AIDS in the road transportation sector. Austral Consultoria e Projectos, March 2004.

# 5. METHODOLOGY

The methodology combined qualitative and quantitative methods. The quantitative instruments include: a truck census; inventory of health facilities, bars and lodges; and a survey questionnaire assessing health-seeking behaviours of trucker drivers and their assistants. Qualitative techniques included semi-structured interviews, focus-group discussions (FGDs), sex-worker diaries and direct observation by researchers.

Geographical coordinates of the main reference points in each risk area were also mapped, with the exception of data from the truck census and local HIV programmes. Collected data was coded and processed in a database for analysis. Data analysis was done using the statistical package CSPro (Census and Survey Processing System).

The table below summarizes the techniques used and the information collected:

### Table 1: Methods and tools

| METHOD/TOOL | INFORMATION COLLECTED | TYPE OF DATA |
|---|---|---|
| Sex-worker diaries | Number of partners, sexual acts, client profile and occupation, condom use, mobility, sex during menstruation period | Qualitative |
| Truckers' health-seeking behaviour survey | Number and types of partners, condom use, self-reported STIs, alcohol and drug use, health-seeking behaviour and perception of health facilities | Quantitative |
| Mapping of bars and lodges | Type and capacity of venues, profile of patrons, alcohol sales and condom sales | Quantitative |
| Focus-group discussions (with truckers and sex workers) | Contextual issues, condom availability and usage, preference for stops and exposure to HIV interventions | Qualitative |
| Truck census | Number of trucks per stop | Quantitative |
| Health facilities inventory | Type and capacity of facilities, types of services provided, profile of clients, prices for treatment, availability of condoms and STI drugs | Quantitative |
| Pharmacy and drug stores inventory | Availability of condoms, STI drugs and educational materials | Quantitative |
| GIS | Visualizing local and regional mapping, spatial analysis of service availability and networks of actors involved | Spatial |

The fieldwork took place over seven weeks, from 15 February to 5 April 2010, with approximately one week at each of the 14 hot spots.

In the Beira corridor, data collection was conducted in the city of Beira, in the districts of Dondo, Nhamatanda, Caia and Gorongosa, in the city of Chimoio, and in Inchope.

Along the Tete corridor data collection was conducted in Machipanda, Manica, Catandica, Guro, Changara, Tete and Moatize.

Two strategies were used to establish and maintain contact with sex workers (SWs). The first strategy included contacting bar and accommodation owners and workers from other entertainment venues, who

introduced the research team to SWs and others who could access SWs. These first few contacts then led the research team to additional sources of information and persons of interest, resulting in snowball sampling.

The second strategy consisted of contacting SWs in their workplace. After making contact the first day with general introductions, the team identified them the following day and the purpose of the study was explained. In many places, this strategy proved to be effective as other SWs (those who had not been identified directly by the research team) contacted the team and asked for a diary, claiming that their friend(s) had received one and they would also like to participate in the study. For the self-referred candidates, a short assessment of their eligibility for the study was undertaken in order to guarantee that only SWs took part in the study. The assessment was made through a short discussion with the person, confirmation with other workers at the "hot spot", and a one-day observation of their working routine.

SWs were contacted at night in places like bars, in the *barracas* and on the street (near the parked trucks). This first contact consisted of scheduling an appointment for the following day, and finding out where the SWs' residences were, so as to have an alternative contact point to telephone numbers. The research team opted for this approach after having found phone contact to be ineffective since some SWs did not own mobile phones and even those who had mobile phones were not easily reachable (the phone was often switched off or another person answered the call).

Contact with truckers was made at the truck stop or truck parking lots. After explaining the purpose of the study many truckers immediately expressed their wish to participate, saying they were fully aware of the benefits this study could bring to them. Approaching truckers throughout the research process was easy as they were found in their vehicles. There were no instances of truckers refusing to participate in the study.

FGDs with truckers and SWs were conducted with participants separated by language spoken. In the Tete corridor there were more truckers fluent in Shona, Matewe, Nyungue and Portuguese, while in the Beira corridor Sena, Ndau and Portuguese languages were predominant. Selection and invitation of the SWs for the FGDs was done simultaneously as the diaries for SWs were being negotiated. Truckers were invited to participate in the FGDs from the line of trucks at the truck parking lots.

The FGDs with the truckers were conducted in quiet venues close to the truck parking lots. In all hot spots, truckers showed willingness to engage, and on many occasions asked for condoms, which the research team provided upon request.

With respect to bars, lodgings/accommodations and pharmacies, there were minor problems in working with the owners and managers of these establishments. Some of them did not complete the survey, claiming they did not have enough time. Of the 188 bars and lodgings surveyed 39 (20.7%) did not return the last page, and those that were returned often were incomplete, particularly the section relating to client count.

Along both corridors bar and lodging employees were interviewed as key informants, and asked about the dynamics of hot spots and the location of SWs. Semi-structured interviews with additional community members were also conducted and included community leaders, teachers, housewives, owners of *barracas*, nurses, activists and pre-paid phone airtime vendors (in Tete airtime vendors work at night in areas where SWs are present).

In terms of healthcare providers, the managers of health facilities were available for informal discussions; however, bureaucratic constraints arose as many managers indicated they could not grant interviews or provide data without a formal credential letter addressed to the health facility, signed by the district health director or district head doctor. The research team faced this problem in two locations – Beira and Dondo. For the remaining sites this challenge was overcome by making contact with the local administrative and health authorities. At health facilities the target respondent for completing the survey was the person responsible for treating STIs, be that at the district level or the clinic level (health post); often this was the head doctor or head nurse.

## Table 2: Sample Sizes[2]

| Hot spot | Sex workers | | | | Truck drivers | | | | | | Community | | Bars and lodgings | | Health serv. prov. | | Drugstores/ harm. | | HIV programmes | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Assigned diaries | | FGD | | Questionnaires | | FGD | | No. trucks | | Interviews | | Forms | | Forms | | Forms | | No. of programmes | |
| | SS | R | SS | R | SS | R | SS | R | SS | R | SS | R | SS | R | SS | R | SS | R | SS | R |
| Beira corridor (SS+ Sample size R= Reached) | | | | | | | | | | | | | | | | | | | | |
| Beira | 30 | 22 | 1 | 1 | 52 | 59 | 1 | 1 | Average | 12.5 | 7 | 7 | Census | 39 | Census | 2 | Census | 13 | Census | 21 |
| Dondo | 19 | 18 | 1 | 1 | 32 | 25 | 1 | 1 | Average | 9.4 | 4 | 4 | Census | 11 | Census | 1 | Census | 1 | Census | 8 |
| Caia | 24 | 6 | 1 | 1 | 42 | 24 | 1 | 1 | Average | 11 | 5 | 5 | Census | 10 | Census | 1 | Census | 0 | Census | 17 |
| Inchope | 24 | 26 | 1 | 1 | 42 | 64 | 1 | 1 | Average | 36.4 | 5 | 4 | Census | 10 | Census | 1 | Census | 0 | Census | 4 |
| Nhamatanda | 19 | 18 | 1 | 1 | 32 | 35 | 1 | 1 | Average | 10.6 | 4 | 4 | Census | 8 | Census | 1 | Census | 0 | Census | 24 |
| Gorongosa | 11 | 13 | 1 | 1 | 20 | 18 | 1 | 1 | Average | 3 | 3 | 3 | Census | 5 | Census | 1 | Census | 0 | Census | 7 |
| Chimoio | 30 | 26 | 1 | 1 | 52 | 66 | 1 | 1 | Average | 32,6 | 7 | 7 | Census | 5 | Census | 2 | Census | 4 | Census | 17 |
| **Total** | **157** | **129** | **7** | **7** | **272** | **291** | **7** | **7** | **Average** | **_** | **35** | **34** | **Census** | **88** | **Census** | **9** | **Census** | **18** | **Census** | **98** |
| Tete corridor (SS+ Sample size R= Reached) | | | | | | | | | | | | | | | | | | | | |
| Machipanda | 24 | 24 | 1 | 1 | 42 | 51 | 1 | 1 | Average | 54.8 | 5 | 9 | Census | 12 | Census | 1 | Census | 2 | Census | 4 |
| **Manica** | 11 | 12 | 1 | 1 | 20 | 29 | 1 | 1 | Average | 10.2 | 3 | 7 | Census | 11 | Census | 1 | Census | 5 | Census | 11 |
| **Catandica** | 19 | 22 | 1 | 1 | 32 | 40 | 1 | 1 | Average | 10.1 | 4 | 8 | Census | 15 | Census | 1 | Census | 8 | Census | 9 |
| Guro | 11 | 11 | 1 | 2 | 20 | 28 | 1 | 1 | Average | 8.6 | 3 | 3 | Census | 12 | Census | 1 | Census | 2 | Census | 7 |
| Changara | 24 | 24 | 1 | 1 | 42 | 50 | 1 | 1 | Average | 22 | 5 | 7 | Census | 6 | Census | 1 | Census | 1 | Census | 5 |
| Tete city | 30 | 27 | 1 | 1 | 52 | 60 | 1 | 0 | Average | 73,1 | 7 | 10 | Census | 23 | Census | 2 | Census | 6 | Census | 4 |
| Moatize | 24 | 25 | 1 | 1 | 42 | 51 | 1 | 1 | Average | 15.7 | 5 | 7 | Census | 21 | Census | 2 | Census | 2 | Census | 5 |
| **Total** | **143** | **145** | **7** | **8** | **250** | **309** | **7** | **6** | **Average** | **_** | **32** | **51** | **Census** | **100** | **Census** | **9** | **Census** | **26** | **Census** | **45** |
| **Total Beira and Tete corridors** | **300** | **274** | **14** | **15** | **522** | **600** | **14** | **13** | **Average** | **_** | **67** | **85** | **Census** | **188** | **Census** | **18** | **Census** | **44** | **Census** | **143** |

2 Table 2 "SS" refers to desired sample size as per the study protocol, in comparison with the sample size reached in study implementation. Not all tools reached the desired sample size such as the census components of the methodology, which included all bars/lodgings, health service providers, drugstores/pharmacies and HIV programmes in the "hot-spot".

## Data analysis

With the exception of the truck census data and local HIV programmes, data collected were coded and processed in a database for analysis. The analysis was done using the statistical package CSPro (Census and Survey Processing System), a programme developed by the United States Census Bureau for processing census and survey data, which enables the control of consistency of errors during data entry.

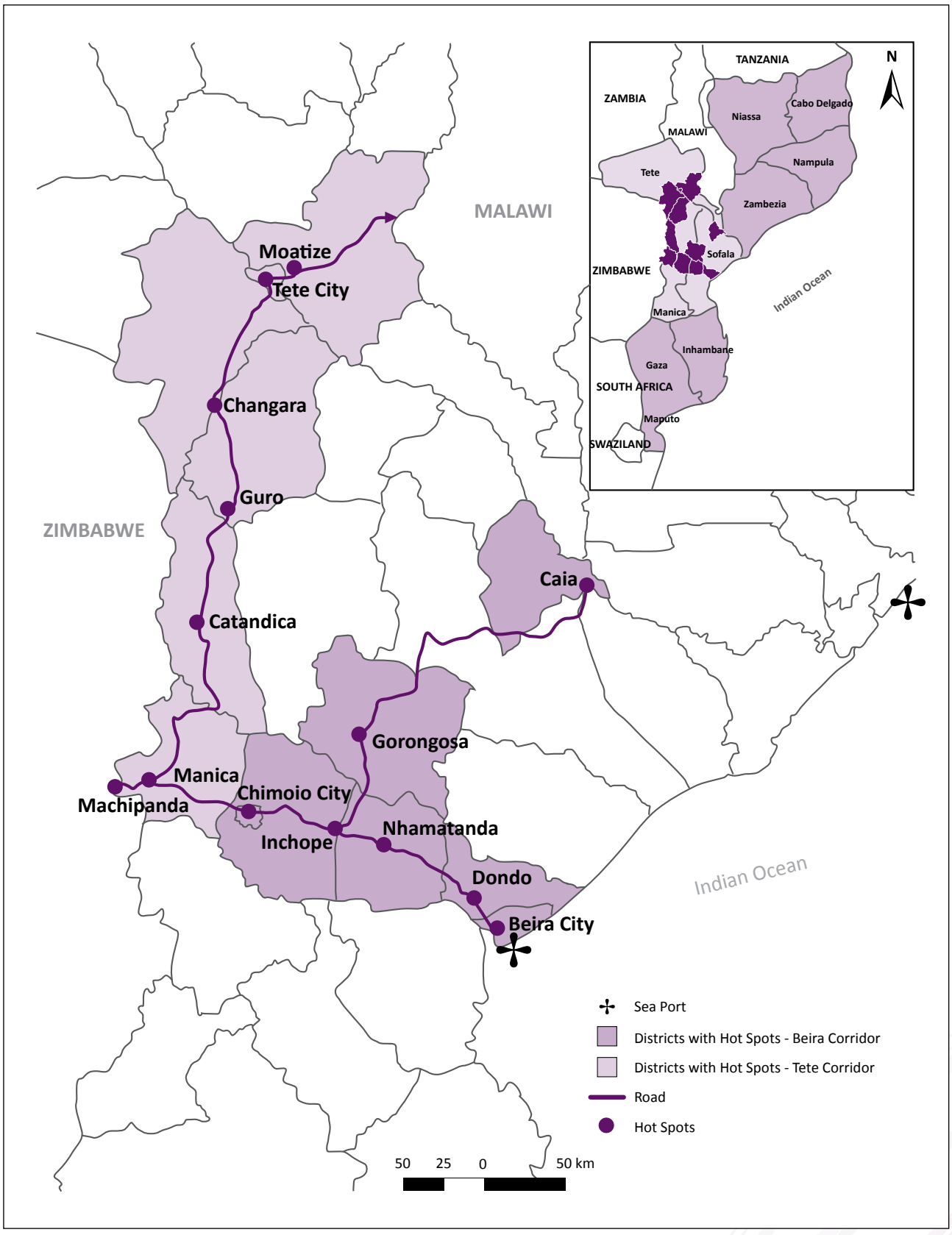
Data entry was completed in just over a month, throughout data collection, and after completion. To ensure quality, two different clerks entered data in separate databases. The two resulting databases were then compared and inconsistencies resolved by consulting the questionnaires. Data were then imported into SPSS format for the final cleaning and analysis. Transcripts from qualitative data were transcribed, coded using a predefined structure and then analysed.

Triangulation of data permitted the compilation, analysis and interpretation of data from multiple sources. Quantitative and qualitative data, in conjunction with the literature review (see Annex – Literature Review), provide a comprehensive overview of the interconnections between population mobility and the risk of HIV infection in this setting.

In addition to the direct observation taken into account at all levels of data analysis, the overall data analysis process can be summarized as follows:

- Truck census – Triangulation of quantitative data from the truck census and information obtained from FGDs with truckers to ascertain volume of truckers at each "hot spot".
- Health facilities inventory – Triangulation of number of health facilities, quantitative data from the health facilities inventory and qualitative data from semi-structured interviews with key informants from health clinics to establish availability and quality of health facilities in the hot spots.
- Truckers' health-seeking behaviour survey – Triangulation of quantitative data from the truckers' survey and qualitative data from FGDs with truckers to establish health problems and health-seeking behaviour of truckers, focusing on sexual health.
- Bar and lodging census – Triangulation of number of existing facilities and quantitative data from structured questionnaires with bar and lodging owners to establish the volume of entertainment venues at hot spots.
- Sex-worker diaries – Triangulation of quantitative data from diaries and FGDs with SWs to estimate volumes of transactional sex and obtain data on high-risk behaviour including numbers of sex acts, condom use and days of menses.
- Mapping of points of interests – Triangulation of geographical coordinates of the hot spots collected using GPS and qualitative data from FGDs with truckers. The geographical coordinates were analysed in the programme ArcGis. Using these data cartographic representations of the hot spots were created.

## Map 1: Geographical coverage of the study



# 6. CENSUS DATA

## 6.1 Truck Census and Hot-Spot Descriptions

In the truck census 1,889 trucks were counted, with 773 in the Beira corridor and 1,116 in the Tete corridor. Table 3 illustrates the daily average number of trucks that stop overnight in each "hot spot".

Summary of findings:

- Large differences exist in the average number of trucks parked overnight in the hot spots. Overall the Tete corridor has a higher average number of trucks parked overnight, with the two most populated truck stops at the city of Tete (73.1) and Machipanda (54.8). Along the Beira corridor the two most populated truck stops are Inchope (36.4) and city of Chimoio (32.6).

- Discussions with truck drivers and interviews with community members revealed that some hot spots that once had higher volumes of trucks are currently experiencing lower numbers, particularly in the case of Gorongosa and Caia along the Beira corridor. The informants also mentioned that this change might be related to construction, such as the new bridge over the Zambezi river, resulting in a better flow of traffic and therefore reducing the need for trucks to stop before crossing the river.

- Reasons for selecting certain hot spots as locations to park overnight, as indicated by truck drivers in the FGDs, included safety, proximity to borders or main cities and relative ease of finding women with whom they can spend the night.

- Many of the truck drivers complained that at many hot spots there is a lack of public toilets in the parking lots where they spend the night. This was especially underlined by truck drivers in Manica and Machipanda.

© IOM 2010 - Interviews with truck drivers.

**Table 3: Total number of trucks at each "hot spot"**

| Corridor | "Hot spot" | Total no. of trucks | Observation days | Average no. of trucks per day |
|---|---|---|---|---|
| Beira corridor | Beira city | 50 | 4 | 12.5 |
| | Dondo | 66 | 7 | 9.4 |
| | Caia | 33 | 3 | 11.0 |
| | Gorongosa | 12 | 4 | 3.0 |
| | Nhamatanda | 64 | 6 | 10.6 |
| | Inchope | 255 | 7 | 36.4 |
| | Chimoio | 293 | 9 | 32.6 |
| Tete corridor | Machipanda | 329 | 6 | 54.8 |
| | Manica | 71 | 7 | 10.2 |
| | Catandica | 71 | 7 | 10.1 |
| | Guro | 26 | 3 | 8.6 |
| | Changara | 88 | 4 | 22.0 |
| | Tete city | 436 | 6 | 73.1 |
| | Moatize | 94 | 6 | 15.7 |

### *6.1.1 Beira Corridor*

**Beira city**

The Beira city "hot spot" records a daily average of 12.5 trucks parked overnight (Table 3). Due to its complexity, the Beira city "hot spot" was divided into four distinct areas. These areas included the area of Chaimite, comprising part of the lower area of Beira city; the Munhava area; the Inhamízua area; and the Manga area. All four areas differed in terms of dynamics and diversity. In the Chaimite area there were two parking areas. On Fridays the number of trucks parked increased as truck drivers would rest after working for the entire week. The Munhava area is located by the entrance to the Beira port; there is no space to park trucks in this area. Many trucks entering and leaving the port use the Munhava area as a quick transit point, but do not spend the night. As such, during the data collection week in the Munhava area there was on average only one truck parked per day. The Inhamízua area absorbs a large number of trucks to and from the port of Beira. This area functions as a waiting point for the trucks that are headed to the port. This area includes two parking lots by the BP and Total petrol stations, described by many drivers as safe places to spend the night. Although greater truck movements occur in the Manga area, most of these trucks spent the nights in small private parks or private property, as opposed to truck stops, which is the case in the other hot spots.

**Dondo**

The Dondo area is located along the N6 highway and crossed by the Beira–Machipanda railway line. It records an average of 9.4 trucks per night (Table 3). In this district public parking of trucks is not allowed, therefore truckers use the cement factory nearby as an alternative parking area. Data collected in FGDs with truckers indicate that although they recognize that the park's cement factory is a pretty safe place, some prefer to park outside of it since it prohibits the entry of women into the parking lot.

**Nhamatanda**

The Nhamatanda "hot spot" is also located along the N6 highway and crossed by the Beira–Machipanda railway. Nhamatanda has an average 10.6 trucks parked overnight. According to the truckers it offers a larger and safer parking space than Dondo. Many truck drivers also said that they prefer to go to Nhamatanda because after leaving the port of Beira, they have to rest every 150 km and after 06h00 pm they can no longer continue with the trip (due to company regulations).

**Gorongosa**

The Gorongosa "hot spot" shows a lower average number of trucks parked overnight (3) than the average for the Beira corridor (12.5). Respondents indicated that previously in Gorongosa more trucks used to park overnight, and the drop in numbers is due to two incidents where loaded trucks accidentally slipped down an embankment and crashed into nearby homes. In one incident, all those in the house were killed. Since then, the city council has banned the parking of trucks during the night, except in special cases. As a result, many truck drivers carry on to Inchope, the next closest town, to stay the night.

**Caia**

At the Caia "hot spot" there is an average of 11 trucks parked per night. After the bridge across the Zambezi river was opened the number of trucks parking overnight has reduced and it is now a rapid transit point where trucks stop on average for one hour.

**Inchope**

The Inchope "hot spot", located at the crossroad of the N1 and N6 highways, records the highest number of truck movements, both in rapid transit and for overnight stays (36.4). In informal discussions and FGDs all the truck drivers said this is their preferred place to spend the night because it is safe and has sufficient parking space. It is also where truck drivers must obtain customs clearance for international routes, and it has easy access to different points such as Beira city, Chimoio, Gorongosa and southern Mozambique.

**Chimoio**

At the Chimoio "hot spot" there are also a high numbers of truck drivers spending the night, with an average of 32.6 a night, the second highest after Inchope. Some truck drivers in FGDs said they prefer to stop over in Chimoio because it is safe and easier than other towns to find people who can get them a visa at the border. They also indicated that it is easy to find a woman to spend the night with in Chimoio.

### *6.1.2 Tete Corridor*

**Machipanda**

Along the Tete corridor and Beira corridor, Machipanda "hot spot" is located in the administrative post of Machipanda at the border with Zimbabwe. Because of its position on the border, this location has a high concentration of truck drivers, moneychangers, merchants and travellers. There are many government employees in Machipanda, such as customs and border officers. Also, the number of trucks stopping overnight is high (54.8) due to the opening hours of

the border post to Zimbabwe, which closes at 18h30. A large number of trucks cannot pass through, especially on weekends, causing delays, as expressed in the following statement:

> "Many of us are on the road for one to two months and only stay at home for four days, because a lot of time is spent in the port and also in the borders [...] because clearing agents take a long time, sometimes we stay four to five days, and even a week." (Truck driver, FGD Machipanda)

### Manica

The Manica "hot spot," similarly linked to both the Beira and Tete corridors, is characterized by a concentration of people from various countries due to increased business opportunities related to the diamond and gold mines in the region. In Manica, there are Lebanese, Somalis, Nigerians, Zimbabweans and Mozambicans from the various provinces. These movements bring unique dynamics to the area, with ample entertainment venues and the presence of SWs. However, the average number of trucks parked overnight in the Manica "hot spot" is low, at only 10.2. Although there is a customs post that clears merchandise, many truck drivers, who do not have to clear customs, prefer to stay overnight elsewhere such as Chimoio or Machipanda.

### Catandica

The Catandica "hot spot" includes a growing mining community with the exploration of semiprecious stones, and has an active nightlife. A large number of businesses open late into the night seven days a week. The truck census found an average of 10.1 trucks staying overnight in Catandica. According to FGD, Catandica was once a popular overnight truck stop, especially during the upgrading of the Chimoio–Tete road. During FGD discussions, it was noted that Catandica had a reputation of fuel theft (FDG, Catandica).

### Guro

The Guro "hot spot" is en route to Tete and has the lowest average number of trucks parked overnight (8.6) along the Tete corridor. Nonetheless it has a strong, dynamic nightlife and some drivers mentioned in the FGD that Guro is one of their favourite stops because it is a safe place where they can have a meal. Direct observation showed that truckers stayed between ten minutes and a few hours when they needed to rest; however by 17h00 most trucks had left the "hot spot".

### Changara

The Changara "hot spot" is located at a village 50 km from the entry point to Zimbabwe and 90 km from the city of Tete. This convenient location results in a busy location frequented by truck drivers and SWs. This "hot spot" also has a dynamic nightlife, seven days a week. Changara records a daily average of 22 trucks overnight, due to the proximity of both the border and the city of Tete. Direct observation showed that this crossroads is an important meeting point for truck drivers from the various routes.

### Tete city

The Tete city "hot spot" comprises two distinct zones: Zone 1 includes the Tropical Nyungue bar up to Chingale, and Zone 2 comprises the Matundo neighbourhood (weighbridge area) to the Matema (crossroads to Zambia). On average 73.1 truckers stay overnight in the Tete "hot spot". Due to the reconstruction of the Samora Machel bridge linking the city and Matundo there are severe delays and it is common to see long lines of

trucks, sometimes up to 3–4 km during weekdays, due to (a) the high volumes of trucks and (b) the time the bridge closes (23h00) during weekdays. On weekends (Saturdays and Sundays) the bridge does not close. Therefore, less than 15 trucks are typically parked overnight in this "hot spot" on those days.

**Moatize**

The Moatize "hot spot" is in the coal-mining region and there is substantial population movement. On average, Moatize records a daily average of 15.7 truck drivers overnight. This is a preferred place to rest, as truck drivers can easily buy meals, access to a bath and entertainment in bars or lodges.

## 6.2 Health Facilities Inventory along the corridors

In both the Beira and Tete corridors the study identified a total of 18 health facilities in the 14 hot spots. Among these, 17 public health centres and one public–private partnerships (an evening clinic) were identified. Survey data indicates the existence of at least one public health facility, pharmacy or medicine dealer (which mainly sells softer medications, such as aspirin and bandages, and does not have a license to operate as an establishment) and at least one outreach activity on STIs/HIV and AIDS in each "hot spot".

Summary of findings:

- There is at least one public health unit in each "hot spot". Almost 90 per cent of these facilities provide STI consultations. In these facilities there is at least one physician, technician or nurse who specializes in STIs.

- Only Moatize along the Tete corridor and Inchope along the Beira corridor have a health programme for truck drivers and/or SWs. Moatize has the overnight Moatize clinic (which primarily targets truckers and SWs) and Inchope the 100% LIFE programme (which targets SWs).

- There is at least one pharmacy or medicine dealer in each "hot spot". Nearly three quarters of the 44 pharmacies surveyed sell condoms. Less than half of all pharmacies in the hot spots have HIV educational material available.

- Non-governmental organizations are present in a few of the hot spots, holding awareness-raising sessions and distributing condoms.

© IOM 2010 - Truck driver interview.

## Table 4: Number of health facilities per "hot spot"

| | Type of Health Facility | |
|---|---|---|
| "Hot spot" | Public | Private |
| Beira | 2 | 0 |
| Caia | 1 | 0 |
| Catandica | 1 | 0 |
| Changara | 1 | 0 |
| Chimoio | 2 | 0 |
| Dondo | 1 | 0 |
| Gorongosa | 1 | 0 |
| Guro | 1 | 0 |
| Inchope | 1 | 0 |
| Machipanda | 1 | 0 |
| Manica | 1 | 0 |
| Moatize | 1 | 1 |
| Nhamatanda | 1 | 0 |
| Tete | 2 | 0 |
| **Total** | **17** | **1** |

### Types of health facilities and services offered

Almost all of the 18 health facilities surveyed in the two corridors offer both curative and preventative services for all health conditions (89%). A small number indicated they only offer curative services (11%). There are no health facilities providing only preventative services. Almost all facilities indicated they provide STI consultations (89%). The most common diseases treated at the clinics are malaria, diarrhoeal diseases, STIs and HIV.

Along the Beira corridor, the Beira city "hot spot" is comprised of the Chaimite, Munhava, Manga and Inhamízua areas. The Chaimite area consists of several pharmacies (public) scattered in different areas of the downtown area. In the Munhava area (neighbourhood in Beira city), in addition to two pharmacies, there is the Munhava rural hospital, a public facility, where the health facilities inventory could not be administered due to bureaucratic issues. In Manga, two pharmacies and one health centre were identified.

Healthcare providers in the Dondo "hot spot" include a pharmacy and a health centre. According to the head doctor, in recent years the number of people who visit the health centres seeking treatment for STIs and HIV has been increasing. This increase is mainly the result of outreach campaigns by NGOs that sensitize people to come to health facilities for testing and treatment. The head doctor also reported that women are the main group that come for treatment of STIs and HIV. This is due to two programmes that target women: the prevention of mother-to-child transmission programme and the STI screening programme among pregnant women.

In Nhamatanda, only one health centre was identified. According to the head nurse, awareness campaigns for communities have contributed to the growing number of people seeking health counselling and testing, and treatment for STIs. A group of residents, including the head nurse himself, recognized that there are other people who receive

treatment in the "treatment stalls" operating in the local market and in private homes. In these stalls, people, especially young people, receive treatment for STIs, paying between 35.00 and 50.00 MT[3] (USD1.03 and USD1.47) per treatment.

In Inchope, there is one public health post. Unlike other sites studied, this health facility runs a health programme targeting SWs – the 100% LIFE programme (*Programa 100% VIDA*). According to the Director of the Inchope Health Post, the programme covers the costs of STI treatment for sex workers and documents those SWs accessing services. In addition to the STI treatment component, the 100% LIFE programme also includes an HIV-awareness raising campaign for sex workers. This component is run at the Health Testing and Counselling Centre, which has been recording increasing numbers of people who seek HIV testing and counselling. The programme also keeps records of SWs who come to the clinic after incidents of rape or situations when condoms break during sex.

At the Chimoio "hot spot" there are four pharmacies/medicine dealers selling medicine at the market/fair. In Chimoio, there are two public healthcare clinics.

In the seven hot spots along the Tete corridor (Machipanda, Manica, Catandica, Guro, Changara, Tete and Moatize) at least one public healthcare provider was identified at each "hot spot". However, these centres are not located along the road and the centres have to publicize their services using signs to indicate their location and services offered; for example, ATS (VCT) or UATS (Unidade de Atendimento e Testagem em Saúde, the Portuguese acronym for Health Testing and Counselling). The health centres along the Tete corridor are in good condition and provide treatment for STIs as well as condom distribution. These public health facilities provide 24-hour services, both maternity and/or intensive care units.

There is one clinic along this corridor that provides services specifically targeting truck drivers and SWs – the Moatize night clinic, a private health centre, partnering with public health services. In addition to consultations, it provides counselling services for SWs and other community members. The clinic distributes both male and female condoms, in addition to offering HIV testing. The clinic is located near the parking lot for trucks and the bars and lodges. The nurse responsible for the clinic said that SWs, more than truckers, visit the clinic, primarily to obtain condoms. This clinic is a partnership between the DPS Tete (Provincial Health Directorate), Tete DDS (District Health Directorate), Faculty of Medicine from Eduardo Mondlane (UEM) University and Ghent University.

### Number of staff at health clinics

The health facilities inventory shows the existence of at least one physician in most of the health facilities visited. Out of a total of 17 health facilities surveyed, only two (11.8%) do not have a doctor. In 11 health facilities there was at least one doctor (64.7%), and four health facilities (23.6%) have more than one doctor. In the health facilities, 84.6 per cent of the doctors have had STI-specific training.

There are 108 medical assistants – normally people without actual medical qualifications but who assist with basic medical issues – among the 17 health facilities visited. Of these, 61.1 per cent have had STI training. There are nurses in all health facilities, of which at least one in each facility is trained in STIs. The health workers use MOH guidelines/ protocols for the syndromic management of STIs.

### Pharmacies and medicine dealers

Pharmacies are licensed by the Ministry of Health. They stock a wide range of medicines. However, in some of the districts along the transport corridors, pharmacies are scarce, especially in the more remote towns, and so-called "medicine dealers" have come into operation. These "medicine dealers" mainly sell non-prescription medications (aspirin, bandages etc.) and do not have a license to operate as a pharmacy. They normally access medicines to sell from abroad or

3 All prices are stated in Meticais (MT) and United States Dollars (USD). Currency exchange used was 1USD = 34MT.

from pharmacies in larger towns. Medicine dealers are often linked to alternative/natural medicines.

The study identified 44 pharmacies and medicine dealers along the Beira and Tete corridors, with the city of Beira having the largest number of pharmacies (13), followed by Catandica (8) and Tete (6). Changara and Dondo are the two hot spots with only one pharmacy each. In Nhamatanda, Caia, Inchope and Gorongosa it was not possible to get data of the pharmacies (located inside the health facilities) but the researchers found active medicine dealers.

In most towns, such as Dondo, Chimoio, Manica, Tete and Moatize, it is possible to find private and public pharmacies. Drugs are also sold by informal traders, who do not have a wide variety of medications, particularly for treating STIs. There are also many informal vendors of drugs, with a wide variety of medicines, who sometimes administer injections.

> "People prefer to go to these places (informal vendors) because they are ashamed, so they prefer to pay more than 100.00 MT (2.94 USD) in comparison to 5.00 MT (0.15 USD) they would have to pay at the health centre" (Head Nurse, Dondo)

**Of the 44 pharmacies visited, 65.9% had no condoms during the data collection period.**

An examination of the most sold/distributed brands of condoms found "Jeito Clásico" to be the most popular in eight pharmacies, and "Kamasutra" to be the most popular in seven pharmacies.

### Table 5: Response by pharmacies indicating the top-selling condom brands

| Condom brand | N | % |
|---|---|---|
| Aiatech Health | 2 | 4.6 |
| Bulk Foiled Condoms | 1 | 2.3 |
| Condoms | 2 | 4.6 |
| Generic Condoms | 1 | 2.3 |
| Jeito Aromatizado | 3 | 6.8 |
| Jeito Clásico | 8 | 18.2 |
| Jeito Clinico | 1 | 2.3 |
| Jeito Confianca | 2 | 4.6 |
| Jeito Saliente | 3 | 6.8 |
| Kamasutra | 7 | 15.9 |
| Olá Vida | 1 | 2.3 |
| Protector | 1 | 2.3 |
| **Total** | **44** | **100.0** |

Less than half of all pharmacies (43.2%) in the hot spots have educational material available on HIV. However, of those that do, the Beira (6), Manica (3) and Chimoio (3) hot spots have the largest number of pharmacies with educational material available. The Tete and Catandica hot spots have a considerable number of pharmacies and informal medicine

dealers, but only one pharmacy in each "hot spot" has educational material.

The research also identified some organizations providing HIV-related education and condom distribution in the hot spots. In Machipanda, Manica, Catandica, Guro, Changara, Tete and Moatize there are NGOs actively working with the target groups. In Machipanda, Manica and Catandica, ADPP activists implement the Total Control of the Epidemic (TCE) programme and Population Services International (PSI) has an HIV education programme targeting truck drivers and SWs.

In Guro, Changara, Tete, Moatize Machipanda, Manica and Catandica adverts, murals, condoms and educational material on HIV and STIs were present in most bars. Both ADPP and PSI also operate in Dondo, Inchope and Chimoio.

## 6.3 Truckers' Health-seeking Behaviour Survey

A total of 598 truckers participated in the health-seeking behaviour survey: 289 in the Beira corridor and 309 in the Tete corridor. There was only one female driver included in the sample. The sample was composed of truck drivers (70 per cent) and truck driver assistants (30 per cent).

Summary of findings:

- More than two thirds of respondents were Mozambican, followed by Zimbabweans, Tanzanians and the remaining few from Malawi, South Africa and Swaziland.
- There were many similarities between the truckers surveyed in the two corridors.
- Truck drivers and their assistants tend to have different demographic characteristics and sexual behaviour.
- Truck drivers and assistants have an average of 1.5 'regular' sexual partners and 1.2 'casual' partners in the previous 30 days. Truck assistants consistently have higher numbers of sex partners than truck drivers.
- Condom use with non-regular partners was higher among all respondents (truck drivers and assistants) compared with regular partners.
- Two thirds of drivers and three quarters of truck assistants spent less than 40 days at home in the 12 months prior to the survey.
- Malaria, fever, fatigue, diarrhoea, and headaches were the most common reasons for seeking medical treatment. STIs were mentioned by less than 3 per cent of the respondents as a reason for medical treatment in the 12 months prior to the survey.
- Public-sector health facilities (85.1%), followed by pharmacies (32.1%), medicine shops or stalls (24.7%), private clinics (23.7%) and traditional medicine shops (14%) were the health facilities truckers used most frequently along the corridors.
- Level of knowledge of STI symptoms was higher amongst the Tete corridor truck drivers than among their peers on the Beira corridor, while truck drivers were more aware of STI symptoms than their assistants.
- Approximately half of the respondents said that they drank alcohol at least once in the past week.
- The practice of injecting narcotics was not reported to be common among truck drivers nor truck assistants.

### Demographic characteristics

Along the Beira corridor, there were more respondents in Chimoio and Inchope than other hot spots, whilst along the Tete corridor, Tete city had the highest number of respondents. This reflects, in part, the greater flow of trucks at these points as

compared to the others (Table 6). Moreover, in Nhamatanda, only 18 drivers were interviewed, corresponding to only 3 per cent of the total number of respondents.

**Table 6: Breakdown of number of truckers surveyed per corridor and "hot spot"**

| Corridor | "Hot spot" | Truckers | | Category (%) | |
|---|---|---|---|---|---|
| | | Number | % | Driver | Assistant |
| Beira | Beira | 50 | 8.4 | 70.0 | 30.0 |
| | Dondo | 32 | 5.4 | 78.1 | 21.9 |
| | Caia | 34 | 5.7 | 73.5 | 26.5 |
| | Gorongosa | 25 | 4.2 | 64.0 | 36.0 |
| | Nhamatanda | 18 | 3.0 | 72.2 | 27.8 |
| | Inchope | 64 | 10.7 | 71.9 | 28.1 |
| | Chimoio | 66 | 11.0 | 84.8 | 15.2 |
| | **Beira Corridor** | **289** | **48** | **74.7** | **25.3** |
| Tete | Machipanda | 51 | 8.5 | 82.4 | 17.6 |
| | Manica | 29 | 4.8 | 82.8 | 17.2 |
| | Catandica | 40 | 6.7 | 80.0 | 20.0 |
| | Guro | 28 | 4.7 | 85.7 | 14.3 |
| | Changara | 50 | 8.4 | 76.0 | 24.0 |
| | Tete city | 60 | 10.0 | 91.7 | 8.3 |
| | Moatize | 51 | 8.5 | 82.4 | 17.6 |
| | **Tete corridor** | **309** | **52** | **83.2** | **16.8** |
| **Total** | | **598** | **100.0** | **79.0** | **21.0** |

Almost 70 per cent of respondents are of Mozambican nationality (69.4%, n=415), followed by Zimbabweans (18.4%, n=110), Tanzanians (7.7%, n=46) and the remaining 4.5 per cent are from Malawi, South Africa and Swaziland. The drivers are on average nine years older than their assistants (37.6 versus 28.3), reflecting a higher concentration of drivers aged 30–34 years and assistants in the 25–29-year age group (Table 10). As expected, drivers are more educated than their assistants; slightly over 47.4 per cent of drivers had not gone beyond the primary level compared to over 84.8 per cent of the truck assistants. The overwhelming majority of respondents are Christians, particularly Catholic (29.4%) and Protestant (36.8%), followed by Muslims (7.9%); however, 17.2% said they did not belong to any religion.

Almost half of all respondents (49.3%), live in a de facto (common law) relationship, followed by almost the same percentage of single (22.6%) and married (22.4%) respondents. A higher percentage of truck drivers are married (26.2%) and in de facto relationships (52.2%) compared with truck assistants who are married (8%) and in de facto relationships (38.4%). Almost half of the assistants are single (48.8%) compared with only 15.6 per cent of truck drivers who are single. This is likely the result of the fact that the truck assistants are younger.

### Sexual partners and condom use

Nearly all respondents (99.3%) reported that they are sexually active, with an average of 1.5 regular sexual partners in the previous 30 days (1.5 for drivers and 1.7 for assistants) and 1.2 non-regular partners (1.0 for drivers and 1.5 for assistants). When asked about regular partners, the majority of respondents reported only one regular partner over the previous 30 days (Beira drivers: 72.8%; Tete drivers: 66%; Beira assistants: 83%; Tete assistants: 50%) (Table 7).

## Table 7: Sex with regular partners in previous 30 days

| Corridor | Sex with a regular partner in the previous 30 days % | | No. of regular partners with whom had sex in the last 30 days % | | |
|---|---|---|---|---|---|
| | Driver | Assistant | Total partners | Driver | Assistant |
| Beira | 72.7 | 64.4 | 0 | 5.7 | 2.1 |
| | | | 1 | 72.8 | 83.0 |
| | | | 2–5 | 20.3 | 14.9 |
| | | | 6–10 | 0.0 | 0.0 |
| | | | Don't know | 1.3 | 0.0 |
| **Tete** | 40.6 | 35.3 | 0 | 0.9 | 0.0 |
| | | | 1 | 66.0 | 50.0 |
| | | | 2–5 | 22.6 | 16.7 |
| | | | 6–10 | 3.8 | 27.8 |
| | | | >10 | 0.9 | 0.0 |
| | | | Don't know | 5.7 | 5.6 |

Along both corridors, more truck drivers reported zero non-regular partners in the previous 30 days (Beira: 51.4%; Tete: 37.5%) compared with truck assistants (Table 12). Furthermore, truck assistants had slightly higher numbers of non-regular partners compared with truck drivers.

## Table 8: Sex with non-regular partners in last 30 days

| Corridor | No. of non-regular partners in the last 30 days % | | |
|---|---|---|---|
| | Total partners | Driver | Assistant |
| **Beira** | 0 | 51.4 | 39.7 |
| | 1 | 21.8 | 19.2 |
| | 2–5 | 19.9 | 32.8 |
| | 6–10 | 0.9 | 1.4 |
| | Don't know | 6.0 | 6.2 |
| Tete | 0 | 37.5 | 25.5 |
| | 1 | 19.5 | 31.4 |
| | 2–5 | 14.5 | 21.6 |
| | 6–10 | 3.5 | 9.8 |
| | >10 | 0.4 | 0.0 |
| | Don't know | 24.2 | 11.8 |

Condom use with non-regular partners was higher among both truck drivers and assistants compared with regular partners.

### Table 9: Condom use with casual and regular partners in last 30 days

| Corridor | Use of condoms with regular partner during the last sexual encounter % | | Use of condoms with non-regular partner during the last sexual encounter % | |
|---|---|---|---|---|
| | Driver | Assistant | Driver | Assistant |
| **Beira** | 37.9 | 36.1 | 41.7 | 54.8 |
| Tete | 46.2 | 50.0 | 69.5 | 80.4 |

Overall, alcohol consumption use was higher among assistants and along the Tete corridor (Table 14).

### Table 10: Consumption of alcohol with most-recent non-regular partner

| Corridor | Whether alcohol was consumed the last time you had sex with a non-regular partner % | |
|---|---|---|
| | Driver | Assistant |
| Beira | 10.6 | 17.8 |
| Tete | 32.8 | 21.6 |

Beira corridor:

In FGDs truck drivers in the Beira corridor recognize that they have many sexual partners, some of whom are SWs. At the same time, they do not consider themselves to be at risk of HIV infection because they report condom use with both their casual and regular partners. This, however, was not illustrated consistently in the health-seeking behaviour survey, where reported condom use with regular partners was at 46 per cent for drivers, and 50 per cent for assistants. Reported condom use is higher with non-regular partners at (70 per cent and 80 per cent, respectively).

Beira Corridor drivers mentioned the delays in loading trucks and the long days away from home as the main reasons for seeking female companions. Truckers aged over 50 feel they are too old to become involved with young girls as they consider this to be an attitude of "boys". They state that they remain faithful to their wives. In contrast, the younger drivers revealed that at each stop they have a woman, but do not get involved with any girls they meet on the street because of possible infections. So when they are near the border they call for their *chinde*.[4] On this subject a Malawian truck driver said:

> "When I'm approaching the border I call her and ask her to wait for me at the border post ... when I am here in Mozambique I am with her ... when the time comes for me to return, I take her to the border and then give her some money for her to catch transport home and then I go home ..." (Malawian trucker, Tete City)

4 Term used to refer to a lover.

With regard to sexual partners, all truck drivers said that during their time as truck drivers they have had at least one sexual partner. A Mozambican driver, for example, explained that he has partners in different locations where he stops and that when he arrives he finds them waiting. However, as another driver explained, sometimes he does not go to the location for a long time, and, in his absence, he does not know whether his partner takes on other lovers.

> "The time when we are away from home is what drives us to get involved with these girls. We feel desire for younger girls because we are men and appreciate it." (Truck driver, FGD Manica)

> "We always wear condoms with these ladies, but not at home. We buy condoms at the market; sometimes condoms are distributed by organizations, but the girls do not accept them." (Truck driver, FGD Manica)

Truck drivers in Changara said that when they stop, their purpose is to bathe, have a meal and a rest, not to get involved with SWs. However, they say, this rest is not always achieved as the SWs adopt a strategy of knocking on the truckers' door. This attitude – blaming the SWs for their infidelity or risk-taking – is common along many corridor studies (IOM, 2012a anb 2012b forthcoming).

Drivers tend to obtain condoms from the government health facilities (62.6% along the Beira corridor and 60.2% along the Tete corridor), followed by pharmacies (53.3% along the Beira corridor and 66.3% along the Tete corridor) and stalls selling medicines (54.7% along the Beira corridor and 45.3% along the Tete corridor).

### Tete corridor

In the Tete corridor, truck drivers similarly explain their involvement with SWs as a consequence of being away from home for long periods of time. They also report that they use condoms whenever they have sex with SWs:

### Days spent away from home

Because of the nature of their profession, truck drivers have to spend long periods of time away from their homes, sometimes spending more nights away throughout the year than at their own homes. This increases the likelihood that they will become involved with other partners, regular or casual. When asked to estimate the number of nights spent away in the last 12 months, 27.6 per cent of drivers and 44.1 per cent of assistants said they did not know for sure the number of days spent in their homes. Only a third of drivers and a quarter of assistants confirmed that they spent 40 days or more at home during the past 12 months (Table 15).

## Table 11: Nights truckers spent in their own homes in the previous 12 months

| No. of nights | Truck Drivers and Assistants | |
|---|---|---|
| | No | % |
| Less than 5 | 10 | 2% |
| 6–9 | 18 | 4% |
| 10–19 | 47 | 11% |
| 20–29 | 41 | 10% |
| 30–39 | 44 | 11% |
| 40 or more | 130 | 31% |
| Don't know | 125 | 30% |
| No information | 3 | 1% |
| **Total** | **418** | **100%** |

### Health conditions and health-seeking behaviour

With regard to major health problems faced by truckers, various responses were elicited including malaria, flu-like symptoms (fever, fatigue, headache etc.) and diarrhoeal diseases. With regard to seeking medical treatment, the following were the most common reasons: malaria (17.9%), fever (4.7%), fatigue (3.5%), diarrhoea (3.3%) and headaches (1.5%) (Table 15). STIs were mentioned by less than 3 per cent (n=14) of the respondents as a reason they sought medical treatment in the past 12 months.

## Table 12: Major health problems for which treatment was sought in the past 12 months

| Type of conditions mentioned by truckers that sought treatment | | |
|---|---|---|
| | No. | % |
| Malaria | 107 | 45% |
| TB | 5 | 2% |
| Fever | 28 | 12% |
| Fatigue | 21 | 9% |
| STI | 14 | 6% |
| Diarrhoea | 20 | 8% |
| Other | 44 | 18% |
| | 239 | 100% |

To assess the perception of the availability of healthcare services along the corridors, respondents were asked to indicate the main healthcare providers available. They demonstrated more knowledge of public-sector health facilities (85.1%), followed by pharmacies (32.1%), medicine dealers (24.7), private clinics (23.7%) and traditional medicine shops (14%) (Table 17). There were no large differences between responses of truck drivers and assistants regarding health facilities available on the road.

This knowledge of health facilities available could be an indication of their experience of using these providers, as almost 40 per cent of the respondents reported having sought some sort of healthcare provider during the last 12 months, particularly for malaria (45% of those that sought healthcare). Public-sector health facilities (68.6%) were the most frequented both for the treatment of common conditions as well as for the treatment of STIs, especially because they are cheaper and are available along the two corridors.

Malawian and Zimbabwean truck drivers said that when they fall ill they often go to clinics because their companies provide medical aid. Some truck drivers also said that when they get sick during their trip, they use the first-aid kits they have in the truck and get advice from their company's emergency teams.

### STIs and STI health-seeking behaviour

Although very few truck drivers mentioned having suffered from an STI, almost 60 per cent of respondents knew that urethral discharge and burning during urination are STI symptoms. These symptoms are more known among the Tete corridor truck drivers than among Beira corridor truck drivers. Also, drivers are more aware of the symptoms than their assistants.

In FGDs, truck drivers reported risky behaviour, but also indicated that they are aware of STIs and HIV.

> "In the past we used to go out with women, but now we cannot go out with women, because in the past it was normal to have sex and then take Kanamycin* but now it no longer exists. Now there is AIDS." (Trucker, Changara)

* Kanamycin is an antibiotic of the aminoglycoside family that inhibits translation into bacteria.

Older drivers believe their younger peers are at higher risk to infection as they have multiple sexual partners. Younger drivers, in turn, believe their older peers to be a high-risk group because, according to them, they do not like using condoms, even with casual sex partners.

When asked about the presence of STI symptoms in the past 12 months, the percentages are all 11 per cent or below, with the assistants reporting higher presence of all symptoms compared with the truck drivers, along both corridors (Table 18).

### Table 13: Self-reported STI symptoms during the last 12 months

| Corridor | Category | Had urethral discharge during the last 12 months. % | Had genital pains during the last 12 months. % | Total reporting STI symptoms during the last 12 months. % |
|---|---|---|---|---|
| Beira | Driver | 2.3 | 2.8 | 3.8 |
| | Assistant | 8.2 | 11 | 4.8 |
| | Total Beira corridor | 3.8 | 4.8 | 8.6 |
| Tete | Driver | 6.6 | 4.7 | 9.3 |
| | Assistant | 9.6 | 9.6 | 3.2 |
| | Total Tete Corridor | 7.1 | 5.5 | 12.6 |
| **Total** | | **5.5** | **5.2** | **10.7** |

As shown on Table 18, about 11 per cent of all respondents reported having had an STI symptom during the last 12 months with 5.5 per cent reporting urethral discharge and 5.2 % reporting having had a genital sore. More Truckers (12.6%) reported STI symptoms in the last 12 months in the Tete corridor than in the Beira corridor (8.6%).

In terms of treatment seeking behaviour, truckers felt the symptoms for an average of 3.8 days (3.6 for the drivers and 4.5 for the assistants) before seeking treatment, although all ended up seeking treatment either at a public health facility (61.9) or private health facility (15.6%). Slightly over 6 per cent (6.1%) sought treatment from a traditional healer. More than 80 per cent of the respondents in the two corridors who sought treatment at a health facility were prescribed medication, which most of them took until they felt better or completed the medication.

Of those who visited a health facility, 80% said that there were condoms at the facility they visited, and 65.4% reported there were counselling services on STIs covering various topics including prevention of HIV transmission.

The average cost of treating an STI was 79 MT (USD2.32); the truck drivers paid on average more than the assistants - 85 MT (USD2.50) compared with 58 MT (USD1.70). Most respondents considered the prices to be reasonable for treatment of STIs. The average waiting time for treatment is 30–60 minutes and the services provided were considered to be reasonable by more than 90 per cent of respondents, which is why over 90 per cent would recommend these health facilities to their friends.

FGDs indicate that there is still as strong belief amongst some truckers in using traditional medicines to treat certain conditions, especially STIs, as reported in the quotes below:

> "When it happens that we catch an STI we rush to hospitals or go to traditional healers, but in other countries we find traditional medicine on sale by street dealers." (Truck driver, FGD Manica)

> "When it's an STI, we go to a traditional doctor in Zambia; traditional medicine is sold by street vendors." (Truck driver, FGD Machipanda)

### Alcohol and drug use

Approximately half of the respondents said that they drank alcohol at least once in the past week (49%). In the Beira corridor, more assistants (50.7%) than drivers (37.5%) say they consume alcoholic beverages at least once a week, whereas on the Tete corridor, the recorded differences between drivers and their assistants is minimal – 26.8% and 21.2%, respectively. The type of beverage most consumed by both drivers and their assistants is beer. Some also consume traditional alcoholic beverages.

Only 8% (n=48) of respondents said they had taken some type of drug not prescribed by a health worker in the past 12 months, with marijuana being the most common drug taken in the two corridors (Beira: 32%, n=8; Tete: 82.1%, n=23, of those that took drugs). With regard to injecting drug use, 7.7% of respondents that used drugs (n=4) reported sharing needles or syringes in the past 12 months (<1% of total).

The study also identified consumption of energy drinks and aphrodisiacs to increase

sexual potency. The products mentioned were Gonazororo and Enzoy. Gonazororo is extracted from the baobab fruit (*malambe*) and Enzoy is an energy (powder) drink sold in small bags, which can be bought in bars and lodges along the Tete corridor.

## 6.4 Characteristics of Sex Work

Characteristics and the context of sex work were explored through FGDs, direct observation and informal discussions.

Summary of findings:

- Although nationality of the SWs was not included in the sex-worker diaries, researchers observed that most of the SWs along the Beira and Tete corridors were either Mozambican or Zimbabwean.
- Researchers observed that Zimbabwean SWs are able to exchange sex more openly than Mozambicans. Mozambican SWs, due to their close relationships with family and neighbourhoods nearby, often work in a more clandestine manner.
- The reported ages of sex workers across all hot spots varied from 13 to 35 years.
- SWs often perform other income-generating activities such as trading/ selling goods, braiding hair, and working in stalls.
- The practice of agreeing to have sex without a condom for a higher fee was said to be common.

### Demographic characteristics

In all of the hot spots the predominant nationalities of SWs are Mozambican and Zimbabwean. Reported ages ranged from 13 to 35 years.

### Locations and context of sex work

In some locations sex work is clandestine, such as in Gorongosa and Dondo. In these areas there are sex workers, but in smaller numbers compared with locations such as Beira, Tete and Moatize. Caia is the one location no Zimbabwean SWs were identified. Typically, Mozambicans do not conduct sex work as openly as Zimbabweans. Some hot spots, such as Manica, have locations where SWs are more easily identifiable, for example *Rua 25 de Setembro* is known locally as an area where Zimbabwean SWs work. In Machipanda, the following quote was given by a truck driver:

> "The number of sex workers is very small, which means that one SW serves more than ten truckers per night." (FGD truck drivers, Machipanda)

Informants in Catandica and Beira reported there are large numbers of SWs. In Machipanda and Changara SWs live in rented apartments or houses, where they have sex with their clients. In some locations, particularly in Beira and Inchope, sex workers from different places travel to the town on weekends, indicating mobility patterns. In Moatize, SWs travel to other places in search of customers or sometimes ride with one of their customers. According to the SWs, they travel to Tete, Cuchamano, Inchope, Malawi, Zimbabwe, Tanzania and Zambia.

Mozambican SWs indicate they are in this business because there is no other employment and they are looking for a serious relationship to 'escape'. Perhaps due to this motivation, some sex workers do not want to be defined as such:

"In addition to selling sex, we sell tomatoes so that we will not be considered whores." (Mozambican SW, Guro)

### Profile of clients

In many areas truckers are the main clients of SWs, but in some areas this is not the case. Client occupations also include teachers, government workers and employees from private companies. In Gorongosa clients include mineworkers and employees from the National Park. Civil servants, such as police officers and border police, were also mentioned as clients, as they often work in the area and leave their wives at home. In Catandica and Guro, SWs explained that some of their clients are healthcare workers (nurses, doctors).

### Income-generating activities

Many of the SWs are engaged in other types of income-generating activities, such as braiding hair and the sale of blankets purchased in Zimbabwe.

"In addition to commercial sex, we sell butter, braid hair, sometimes we take used clothing to sell in Zimbabwe. Commercial sex is no longer profitable, and because there are many of us the money is not enough." (SW, FGD Moatize)

### Health-seeking behaviour

Some SWs reported they are afraid of visiting the health facility because some of their clients are health workers, and they fear they might lose them as clients. This was the case in both Catandica and Guro.

### Cost per sex act

In Beira, sex could be exchanged for 50–250 MT (USD1.47–7.35). In Manica, prices were slightly higher, ranging from 200 to 500 MT (USD5.88–14.70) for a "short time" (quickie). In Tete the prices were the lowest, ranging from 30 MT to 100 MT (USD0.88–2.94).

### Condom use and health-seeking behaviour

Mozambican SWs report having one or two regular customers with whom they do not use condoms. Many say the decision is based on their analysis of the client's health status, which is based on physical appearance. These SWs say when possible they prefer condoms purchased at the stalls (from PSI-Jeito) to those distributed by the government, because the free condoms break easily. SWs in Changara dislike the condoms distributed at the government health facilities because they say they are poor quality, have a bad odour, and become hot during sex. As such, they prefer to buy the scented condoms at stalls. One group of sex workers reported going for HIV testing every three months.

The sex workers report risk-taking behaviours with regard to condom use:

"It is us women who suggest condom use. People often refuse to use condoms, preferring to pay 200 instead of 50 with a condom. Some of them ask us to suck them and then pay 200. So, it depends on us if we will accept or not." (SW, FGD Guro)

The following excerpts from FGDs illustrate how the work of SWs are impacted by issues such as pleasure, satisfaction for themselves and their customers and how these aspects relate to risk behaviours, specifically with failure to use condoms.

> "We don't always use condoms and not with all the customers because when we trust the person or when the person makes love well the condom gets forgotten under the pillow [...] others lie that they've used one but they are pretending, and because it is dark we cannot see; one only feels when he ejaculates." (SW, FGD Changara)

> "Those who pay more will not accept to use condoms but if we do not accept, others want us to suck them; we only suck them when business is low just to get some money for that day [...] others pretend that they've used condoms while they've already removed it. Look, when we are in business we do not want to be excited, we just want the money; we only want to get excited when we are with regular customers." (SW, FGD Tete)

The above stories demonstrate the fluidity of SW and client relationships and condom use. Although SWs may desire to protect themselves, they may also have relationships with particular clients (truck drivers or otherwise) that lead them to engage in more risky behaviour based on trust, desire for pleasure, or financial incentives.

**Physical abuse**

There were a few anecdotal stories of physical abuse and rape reported from hot spots, particularly from Zimbabwean SWs:

> "All of us have been raped, some have returned to Zimbabwe because of that. Some men carry knives and assault us, and they even ask us for money or take our mobile phones. These are the ones who infect us with diseases because they lock us in and do not even use condoms." (SW, FGD Machipanda)

> "Sometimes three police officers may come to you and they will all have sex with you and not pay you, and say that they will send you back." (SW, FGD Tete)

> "Often, the police force us because if we refuse they will deport us; and sometimes they force us to suck their penises." (SW, FGD Changara)

## 6.5 SW Diaries

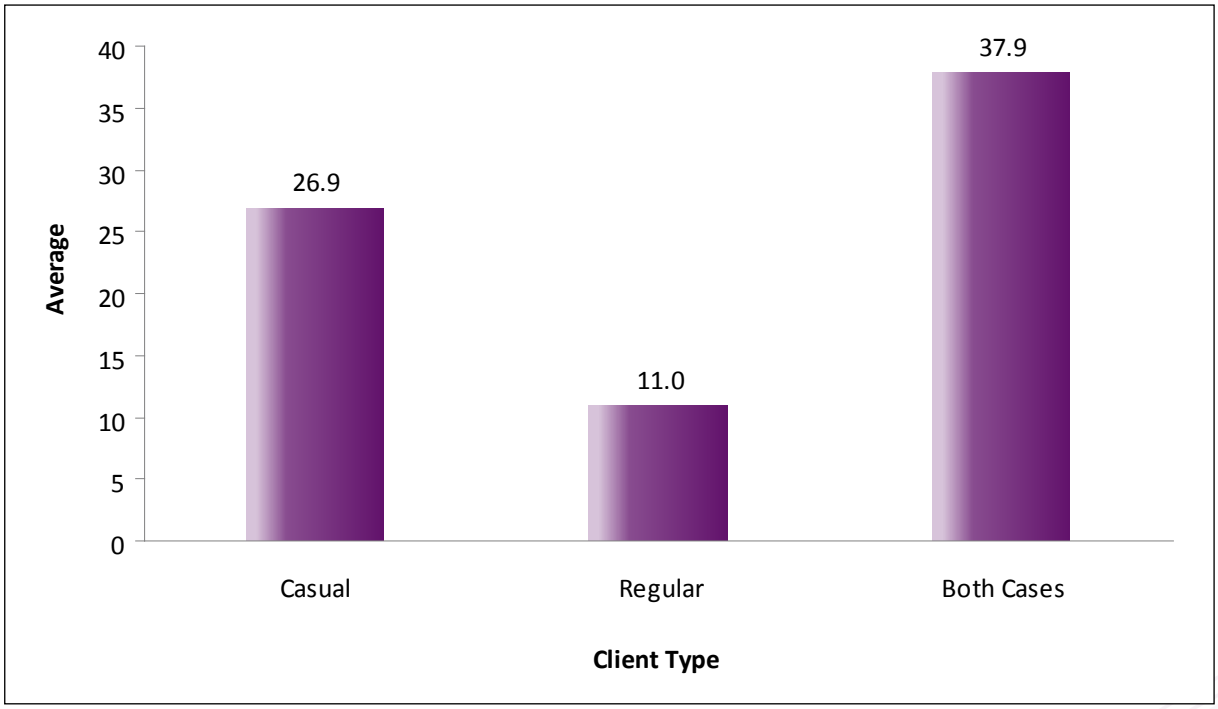
A total of 271 SW diaries were completed and used in the analysis.

Summary of findings:

- Most clients of SWs (70.3%) are non-regular partners and it is with this group of clients SWs are more likely to use condoms (92.5%).
- Regarding the variation in the number of sex acts throughout the week, there is no noticeable fluctuation, which suggests that the busy movement of trucks in these hot spots provides a high demand for commercial sex every day of the week.
- Regarding the occupation of their clients, SWs reported truckers to be the highest group (23.9%), followed by teachers, doctors and nurses (12.6%).
- Condoms were reportedly used in almost 90 per cent of the sex acts and the greater use was with non-regular partners (74.9%) compared with regular partners (25.3%).

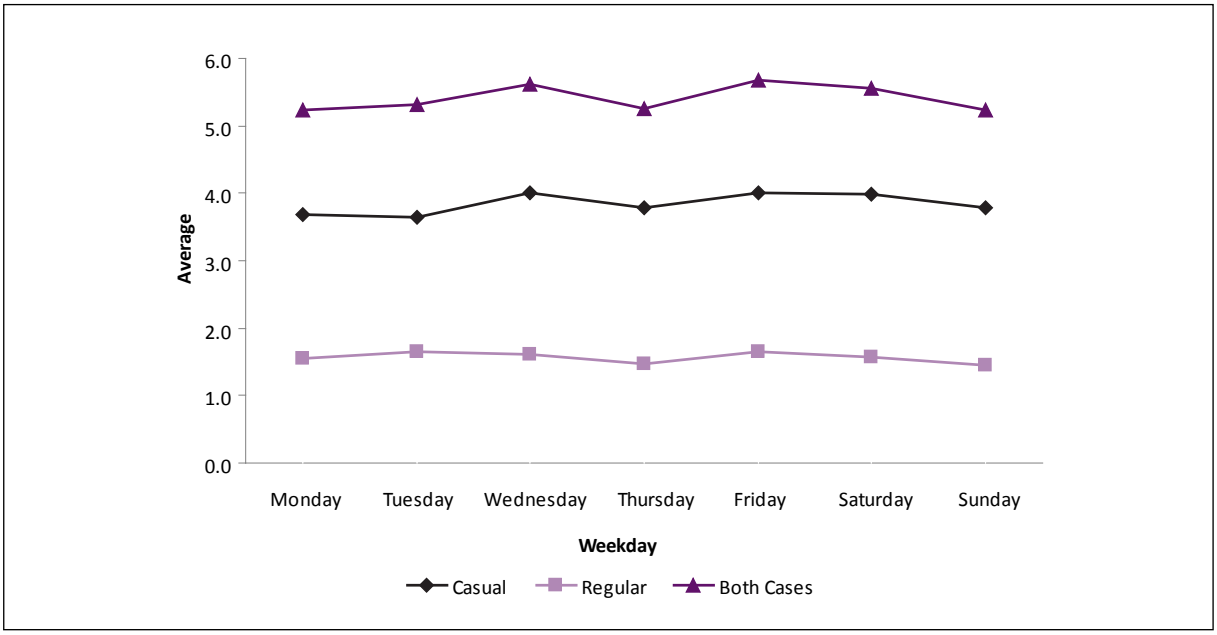
During the four weeks of observation, the sex workers had a total of 10,272 sexual encounters, of which 70.3 per cent (n=7,225) were with casual clients and 29 per cent (n=2,977) with regular clients. Each SW had on average 37.9 sexual acts over 30 days, 26.9 acts with casual clients and 11 acts with regular customers (Graph 1).

**Graph 1: Average number of sex acts per month**



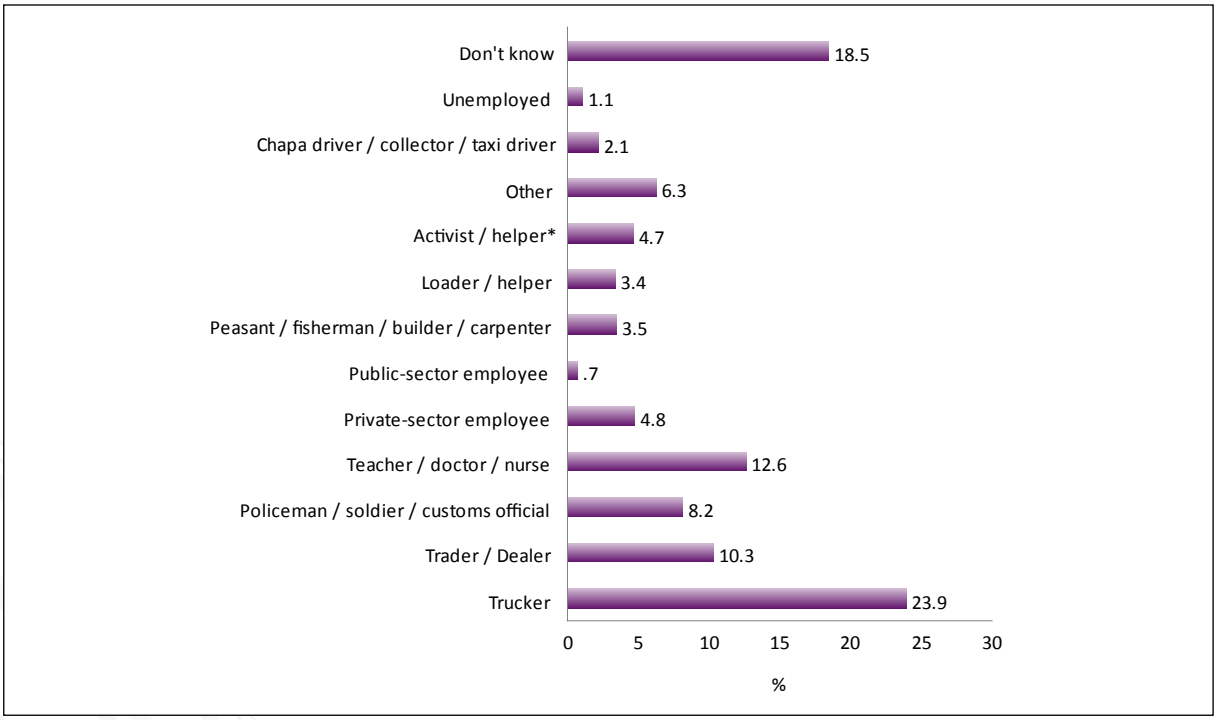

The analysis of the average sexual acts by day of week shows little fluctuation, which suggests that the busy movement of trucks in these hot spots provides a high demand for commercial sex every day of the week (Graph 2).

## Graph 2: Average number of sexual acts per weekday




Sex workers were also asked to write down the daily occupation or profession of each of their clients during the observation period. Of the more than 10,000 sexual encounters SWs recorded, 16.8 per cent (n=1,728) had no information about their customers' occupation, either because they did not know or could not recall. Analysis of the findings, however, shows that truckers, traders/businessmen, policemen/soldiers/customs officials and teachers/doctors/nurses were the main customers, totalling 55 per cent (n=5136) of customers (Graph 3).

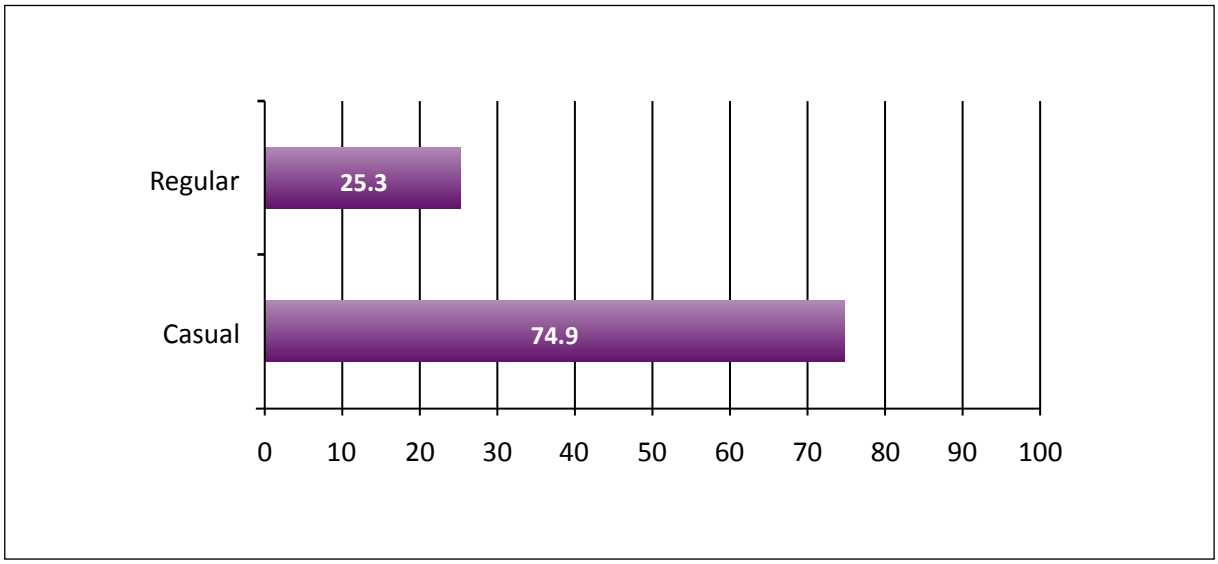
## Graph 3: Percentage breakdown of sex acts per type of client occupation




*Activist/helper: A commonly used term in Mozambique referring to volunteers or peer educators that help others.

Condoms were used in almost 90 per cent of the sex acts (87.6%); the greater use was with non-regular partners (74.9%) compared with regular partners (25.3%) (Graph 4).

**Graph 4: Percentile breakdown of partner types in cases of condom use during sex acts**




## 6.6 Bar and Lodging Census

A total of 188 bars and lodgings were included in the bar and lodging census. Most of the bars were located along the Tete corridor, while the Beira city "hot spot" has the largest number of bars and lodges of all the hot spots. Seventy percent) of the businesses surveyed only offer bar services, 27.7 percent offer both bar and accommodation services.

Summary of findings:

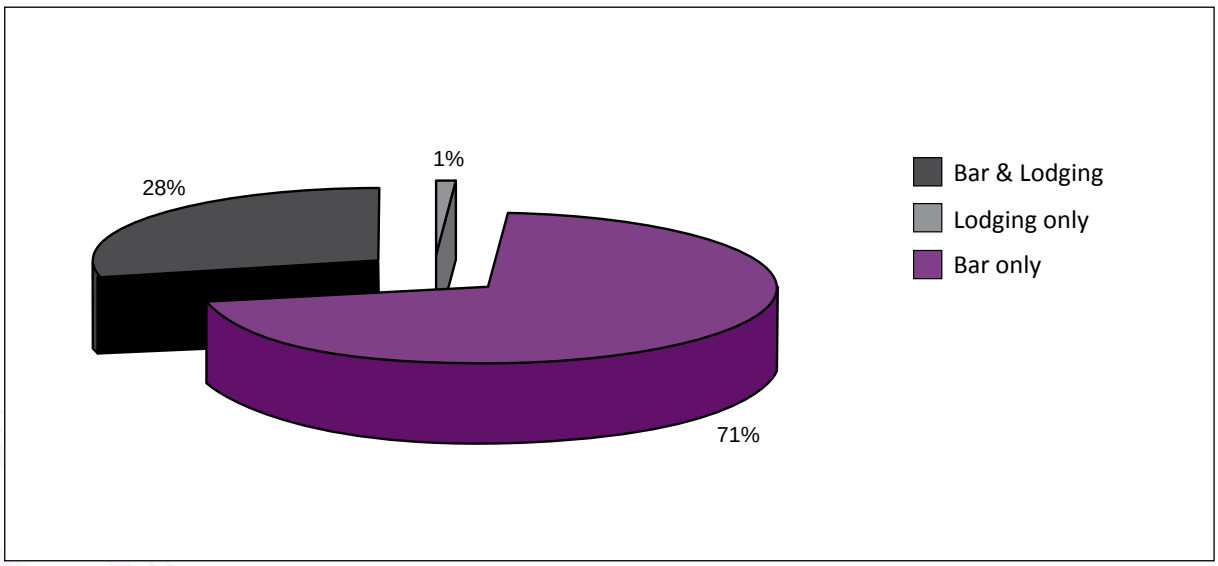
- Almost three quarters of the establishments located are bar-only establishments, and do not provide accommodation.
- Most bars and lodges have condoms available, although less than 20 per cent of venues distribute condoms for free; just over half of the bars and lodges said that they sold condoms.
- Reasons given for not selling condoms include insufficient space in the establishments, lack of free supplies from PSI, and the fact that they do not provide accommodation.
- The male clients of bars and lodges are mostly employees of public and private sectors, including teachers, nurses and police officers, followed by truckers.
- The SWs constituted the main female clients of bars and lodges, followed by employees of public and private sectors.

## Table 14: Bars and lodges visited in each corridor and "hot spot"

| Corridor | "Hot spot" | No. of bars and lodges |
|---|---|---|
| Beira | Beira | 39 |
| | Caia | 10 |
| | Chimoio | 5 |
| | Dondo | 11 |
| | Gorongosa | 5 |
| | Inchope | 10 |
| | Nhamatanda | 8 |
| **Total Beira** | | **88** |
| Tete | Catandica | 15 |
| | Changara | 6 |
| | Guro | 12 |
| | Machipanda | 12 |
| | Manica | 11 |
| | Moatize | 21 |
| | Tete | 23 |
| **Total Tete** | | **100** |
| **Total Bars Surveyed** | | **188** |

Figure 2 illustrates the proportion of bars and lodges in the hot spots along the two corridors.

## Figure 2: Venue distribution per category



In all of the hot spots, various types of restaurants, bars and lodgings can be found. The *barracas* (informal small bars) are usually found in the market and sell alcohol and food; a few provide basic accommodation. Many truckers use the *barracas* accommodation as the *barracas* are busy, the rooms can be hired by the hour and SWs are available. At *barracas* SWs typically do not need to hide, but can work relatively openly. Other types of accommodation mentioned include guesthouses, hotels and also a police canteen in Beira where truck drivers can stay and even bring women.

The cost of *barracas* and guest houses varies, anywhere between 35 and 50 MT (USD1.03–1.47) per hour or between 150 and 350 MT (USD4.41–10.29) a night. In some locations there was accommodation that was slightly more expensive, such as a bar and lodge located in Nhamatanda, excluded from the sample because it cost 900 MT (USD26.47) a night and serves other customers, particularly NGO staff members. In many of the hot spots the bars are concentrated around the market such as in Catandica; however, not all truckers congregate in bars, for example in Machipanda the truckers enjoy themselves around their trucks.

### Condom availability

In the hot spots studied, most bars and lodges have condoms available, although only 19.7% of venues distribute condoms for free, while 55% of the bars and lodges sell condoms. The most popular brand sold is Jeito Clásico (26.6%), followed by Jeito Aromatizado (scented) (14.9%). Of those not providing or selling condoms the reasons cited included not having space and no regular supply.

### Bar and lodging client profiles

Managers of bars and lodges were asked about their customers. In general, 35.3% of male customers were reported to be public- and private-sector employees – particularly teachers, nurses and police officers – followed by truckers (31%) and community members (6.4%). Table 20 shows that in the Beira corridor bar and lodging customers are predominantly public- and private-sector employees; however, in the Tete corridor the situation is different: the main customers are truckers, followed by public- and private-sector employees.

## Table 15: Male bar and lodging patrons

| "Hot spot" | Truck drivers | Public- and private-sector employees | Community members | Traders | Other | Total |
|---|---|---|---|---|---|---|
| Beira Corridor | 26% | 44% | 7% | 7% | 16% | 100% |
| Tete Corridor | 35% | 28% | 6% | 26% | 5% | 100% |
| Average in bars on Corridors | 31% | 35% | 6% | 17% | 10% | 100% |

As for female customers, managers reported that that sex workers were the main customers (34.4%), followed by public- and private-sector employees (17.7%). When looking at the data for each corridor individually, however, the situations differ. In the Tete corridor SWs are the predominant patrons of the venues followed by public- and private-sector employees; and in the Beira corridor the main patrons are women from the community such as young students and housewives (Table 21).

## Table 16: Female bar and lodging patrons

| "Hot spot" | SWs | Public- and private-sector employees | Community members | Traders | Other | Total |
|---|---|---|---|---|---|---|
| Beira Corridor | 20% | 16% | 29% | 20% | 15% | **100%** |
| Tete Corridor | 47% | 19% | 7% | 15% | 12% | **100%** |
| Average in bars on Corridors | 34% | 18% | 17% | 17% | 13% | **100%** |


© IOM 2010 - A bar in one of the "Hot Spots".

# 7. SUMMARY OF KEY FINDINGS

## 1. Perceptions and practices of truck drivers and sex workers in seeking healthcare;

- The long periods truckers spend away from home can lead them to engage in concurrent sexual relationships. Similar to findings of studies in the corridors of Nacala and Maputo (Selvester, 2006), a large portion of truckers have at least one "regular" concurrent partner – either to keep them company on specific routes or to spend a few nights in their houses along the road.

- Condom use is not widespread among truckers: only about 40 per cent of the drivers and assistants report using a condom in their most recent sexual encounter with a regular partner, and 57 per cent of the drivers and 65 per cent of the assistants used one with a non-regular partner (who may or may not be SWs).

- Even though truck drivers tend not to use a condom with regular partners at different locations along their transport routes, they admit to being unsure of whether their girlfriends have had other sexual partners in their absence – nor do they have any guarantee that she used protection.

- Nationality of employer may influence ability to access healthcare services: truck drivers from Malawi and Zimbabwe report having fewer problems accessing healthcare because their companies provide medication and medical aid that allows them to access private clinics.

- Some studies have shown SWs' fear of visiting health facilities; this study confirms the sense of shame and fear of stigma or loss of customers that interferes with SWs accessing STI treatment (Cunha et al., 1996; IOM and CARE, 2003). In more than one of the hot spots studied it was observed that some SWs avoid going to health facilities for fear of being served by their own customers and, depending on the result, of being stigmatized.

## 2. The social and demographic structure of sex workers' clients

- This study found that the clients of sex workers include members of local communities, truckers, migrant workers, immigration officers, border officials, police officers and healthcare workers (doctors and nurses).

- Bar and lodge users are made up of different groups depending on the specific site: in the Beira corridor bar and lodging customers are predominantly public- and private-sector employees; however, in the Tete corridor the main customers are truckers, followed by public- and private-sector employees.

- Unlike studies that indicate sex workers' age range along the transport corridors to be between late teens and late twenties (Lucy et al., 2001; IOM, 2003; Owuor-Omondi et al., 2003), this study recorded the existence of SWs as young as 13, a statistic verified by a study conducted in Namaacha border town (Selvester, 2009).

## 3. The parameters of how entertainment (bars) and accommodation (lodges) operates, and related practices at these venues;

- Entertainment and accommodation vary according to geographical location and type of venue. The *barracas* are usually found in the market and sell alcohol and food; a few provide basic accommodation. In *barracas* rooms can be hired by the hour and SWs are available. Other types of accommodation include guesthouses,

hotels and also a police canteen in Beira where truck drivers can stay and bring women.

- In many of the hot spots the bars are concentrated around the market such as in Catandica; however, not all truckers congregate in bars, for example in Machipanda the truckers spend time around their trucks.

## 4. Mapping of health services available in each "hot spot";

- The study identified a total of 18 health facilities in the 14 hot spots. Among these, 17 were public health centres and one a public–private partnership (an evening clinic). There is at least one public health unit in each "hot spot" and almost 90 per cent of these facilities provide STI consultations. In these facilities there is at least one physician, technician or nurse who specializes in STIs.

- Only Moatize along the Tete corridor and Inchope along the Beira corridor have a health programme specifically for truck drivers and/or SWs. Nearly three quarters of the 44 pharmacies surveyed sell condoms, though less than half of all pharmacies in the hot spots have HIV educational material available.

## 5. Analysis of the level of uptake by most at-risk groups (truckers and sex workers) to existing health services;

- This study indicates that knowledge of symptoms of STIs among truckers is high, with urethral discharge and burning during urination being the most common symptoms known by the truckers surveyed. This position is also mentioned in a study of 300 long-haul truckers along the Nampula, Tete and Zambezia routes (Polaine-Brown, 2004), thus contradicting the study by Morr and Barradas (2001), which claimed that long-distance truck drivers in Mozambique were among those with less knowledge of STIs.

- The literature also indicates the limited use of health services by truck drivers and their assistants. According to Polaine-Brown (2004), only 15 per cent of truckers in Nampula, Tete and Zambezia with symptoms of STIs sought treatment within 72 hours of being aware of the symptoms. Unlike other studies that conclude that the workload and long distances travelled are a barrier to seeking healthcare and treatment of STIs (Polaine-Brown, 2004; Selvester, 2006), this study has indicated that most of the 598 truckers use public healthcare facilities when needed. The study shows that among the truckers who have had an STI, some sought treatment at a public healthcare facility (62%) or a private healthcare facility (16%) and a few from traditional healers (6%). As in some studies (Liquela et al., 1998), this study found that both the truckers and the SWs reported the use of traditional medicine as an alternative means for the treatment of STIs.

- The findings of this study show that along the two corridors, SWs are the female group that has the greatest demand for STI consultation and treatment in health facilities (35.3%).

## 6. The behavioural dynamics of all stakeholders present in the hot spots (truckers, SWs, immigration officers, owners of diners and other venues).

- Hot spots are places where diverse groups of people congregate. As well as the transport sector, these groups include construction, customs and security - all of which impact on the existence of hot spots.

- Overall, truck drivers and assistants have an average of 1.5 regular sexual partners over a 30 day period.

- Truck drivers and assistants tend to blame the SWs for their risky behaviour, rather than their own choices and actions, claiming that their primary concern enroute is food, lodging and security.

- The main reason behind girls and women engaging in transactional sex is economic. However, the need to find a long-term, stable partner also forms part of their expectations, as has been widely reported in other studies with the same target group (Baden, 1997; Perschler-Desai, 2001; IOM and CARE, 2003; Selvester, 2006, 2009; CNCS et al., 2009).

- The above fluidity of reasons behind transactional sex acts and the fluidity of "regular" and "irregular" partner categories, leads to conditional use of condoms that places various partners in a Hot-Spot at increased risk for STI and HIV infection.

### Study limitations

This study had some limitations. Completion of the SW diaries was a challenge. Firstly, the diaries are self reported and had to be completed daily, which required literate SWs or the presence of a researcher that could meet the SWs daily. The latter proved to be too challenging, however, given the erratic work hours and late evenings for many of the SWs. Thus, the limited information provided by the diaries.

This study did not include clients of sex workers as a target group, with the exception of truckers, who represent a group of potential customers. This information could have added more value to the overall findings of the research. However, this study intended to focus on the dynamics surrounding the SWs and a specifically mobile group (i.e. truckers) as a way of establishing links between HIV and mobility.

The study did not capture estimations of the number of SWs, although this was one of the original objectives. Focus was on the current attitudes, perceptions and practices of SWs in an attempt to determine the probable involvement of truckers. Therefore, a specific instrument to count the number of SWs present in each location was not developed. However, if such a tool existed, it would likely yield very inaccurate data given the high mobility that characterizes this group.

# 8. CONCLUSION

This field research confirms that heterosexual commercial sex is a common practice along the corridors of Beira and Tete. Both local and migrant women sell sex. Commercial sex is a livelihood strategy for many women, who often rely on other income-generating activities (e.g. informal trading and hairdressing) at the same time. Among their clients are members of local communities, truckers, migrant workers, immigration officers, border policemen, police officers, healthcare workers and others. This indicates that when developing prevention programmes for people who are most vulnerable to HIV, instead of targeting specific groups as defined by their profession (e.g. "MARPs"), it would be more effective to target specific geographical areas, or "hot-spots" so as not to discount the importance of non-mobile, or differently mobile, professional and community actors.

The risk of infection of STIs including HIV is high, since condom use is negotiated based on prices charged, level of trust between partners, the pursuit of intimacy and/or pleasure, and the search for a regular partner. The notion of a non-regular partner and, therefore, the notion of risk is quite fluid. For many truck drivers, for example, female partners who are visited regularly – at different points along the corridors - are not considered 'casual'. Therefore these relationships are not seen as risky, even though they lack knowledge of each others' other sexual partners, or the regularity of condom use in other partnerships.

STIs are common, both among sex workers and truck drivers. Although some hot spots have seen an increase in users of health facilities, stigma still exists related to seeking treatment for STIs in health facilities. Medicine and treatment are obtained in informal markets and from traditional healers. In Nhamatanda, for example, informal markets have "treatment stalls" where patients receive injections and other treatment.

Condoms are available in health facilities and pharmacies as well as in bars and lodges. Some truckers from Zambian and Zimbabwean companies carry condoms in the first-aid kits already provided by their employers.

Most entertainment venues and lodges around hot spots serve truckers and sex workers. Here there are bars and lodges dedicated to the sale of drinks (including alcohol) and food. A significant number of these have rooms for rent both per night and per hour, for commercial sex. Some of the bars also turn into nightclubs on weekends.




© IOM 2010 - Sign for bar and lodging in a "Hot Spot".

# 9. RECOMMENDATIONS

From the findings above, the following recommendations are proposed:

Given that these hot spots can be described as "spaces of vulnerability", it is important to ensure that government and NGO interventions are targeted not only at transport workers and sex workers but also those people with whom they interact.

**Regional policy-related recommendations:**

IOM and other regional stakeholders should advocate for cross-border dialogue on the development of government policies and programmes that would facilitate and support access to health services while transport and other mobile and migrant workers are away from home. For instance, the development of a "Health Passport" for transport workers and other migrants should be strongly considered. This would include the development of a network of service providers, government departments and other organizations working along the transport corridors so as to improve the coordination of responses along the corridors, both within Mozambique and across the SADC region.

IOM and other regional stakeholders should advocate for regional policies that are cognisant of the "spaces of vulnerability" approach. In particular, policies should move beyond targeting sectors (i.e. transport) and focus on communities of actors, and holistic interventions.

At the regional level, SADC should ratify the *SADC Draft Policy Framework on Population, Mobility and Communicable Diseases* (SADC, 2009).

**National policy-related recommendations:**

**Address environmental and structural factors**: Environmental and structural factors are often overlooked components of HIV programming. Reducing HIV risk behaviour along the transport corridors in Mozambique requires making changes at both structural and environmental levels, including working with authorities and making changes to government policy on issues relating to access to health services/ information by mobile populations and others in hot spots and along the transport corridors.

**Improve border and migration management**: The government should strengthen border management to reduce waiting time for trucks as well as unloading and customs clearing times.

**Develop comprehensive sector-specific HIV policy**: Government needs to develop a sector-wide transport policy that goes beyond traditional understandings of the relationship between the transport sector and the affected local populations. This policy would guide and monitor a coordinated response to HIV, TB, STIs and other health issues in communities that interact daily with workers in the transport sector.

**Realistic statistical data on SWs and migrant workers**: Within the government's statistical plans, the health needs of mobile workers and SWs along transport corridors and other "spaces of vulnerability" should be taken into consideration when allocating resources and developing health programmes in these areas.

**Programme-related recommendations:**

**A holistic approach to prevention programming – moving away from 'MARPs'**: Sex workers and transport workers interact with a variety of different actors such as guards, police, airtime vendors, truck loaders, traders, bar clients and others, all of whom should be included in holistic programmes. Moreover, not all SWs are self-identified as such, and many are mothers, sisters, vendors and general members of the community in which they live.

Referring to "Most at-risk populations" has the potential to stigmatise entire groups on the basis of their profession (or categorization) and this can be counter-productive when it comes to HIV prevention programming. For these reasons, a holistic approach should be used in the development of any type of prevention intervention in hot spots as

this will help to develop more inclusive HIV programmes, lessen the stigma attached to 'MARPs', and strengthen social change communications programmes on-the-ground.

**Access to targeted, integrated health services**: Government and other relevant stakeholders should provide transport workers with greater access to targeted and integrated health services, with particular emphasis on location (close to the places where truckers park overnight), operating hours (late night), and tailored services, preferably at multiple locations and facilities along the corridors. These facilities should also be open to the community at large. Incentives are needed for health staff to work in the facilities at night.

As most truck drivers interviewed stated that they prefer to use the public health facilities because they are cheaper and more evenly distributed along the transport corridors, the government should build the STI, HIV and AIDS-related capacity of these health facilities.

**Access to ablution facilities**: The study reveals lack of public toilets in truck parking areas. As a result, truck drivers often find girlfriends with houses/flats in these locations so that they can shower and clean up before getting back on the road.

The government should develop initiatives to build public toilets (pay for use model) in the hot spots as a way of improving sanitation and hygiene.

**Condom distribution and awareness-campaigns**: Research shows that the use of condoms in casual and regular relationships is not generalized among truckers or SWs. As such, government and NGOs should scale up existing awareness campaigns on STIs, HIV and AIDS (including how to use a male and female condom), using forums and community activities in public spaces. Further, scale up is needed in condom distribution at SWs' peak working times, including door-to-door campaigns during the day (hours of lower activity) and at truck parking lots (as this study showed that truck drivers do not move away from their trucks).

**Condoms in bars**: The study shows that almost half of the bars do not sell or distribute condoms. Reasons given include insufficient space in the establishments, lack of free supplies from PSI, and the fact that they do not provide accommodation. As such, government and NGOs should scale up condom distribution in bars, including those that do not offer accommodation. Bar owners should be encouraged to install condom dispensers for condoms to be sold, but also to distribute free condoms.

**Research-related recommendations:**

**Spaces of vulnerability**: Government and other stakeholders should conduct more in-depth research in these hot spots in order to understand and pinpoint the factors that result in these sites becoming "spaces of vulnerability". This will allow for more targeted and effective programme strategies to reverse and/or lessen the risk of HIV infection for truck drivers.

**Bio-behavioural survey**: Representative seroprevalence and behavioural data is a logical extension of the qualitative and quantitative data provided by this study. An integrated bio-behavioural surveillance survey is recommended in specific geographical areas, rather than solely amongst 'MARPs'.

**Population census**: Reliable population size estimates for SWs is necessary in order to programme for these populations accurately. This should be carried out jointly by government, key stakeholders and technical experts.

**Other research**: This study did not include clients of sex workers as a target group, with the exception of truckers who represent a group of potential customers. In future research projects it is recommended to include a tool and additional methodology to capture other clients of SWs as a target group.

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# 11. ANNEXES

## 11.1 Mapping of hot spots

Along the two corridors, the route is marked by obligatory rest, preferred rest and forced stops due to vehicle breakdown. Because of any of these three reasons, truckers are forced to stop at some point along the routes. In FGDs and informal conversations, truckers were unanimous in saying that they prefer to stop in places that provide security for the cargo they carry. According to the truckers, these places should offer accommodation where they can spend the night and have access to a bath, and preferably a small restaurant where they can have a good meal. Others also said that they prefer places where they can have fun, where there is not too much noise and where they can meet women with whom they can spend the night. This is illustrated in the quotes below:

> "The criteria for selection of the place to stop and spend the night include lighting, restaurants for dining and safety." (Truck driver, FGD Catandica)

> "We choose safe and illuminated places. We also look for good food, but not necessarily women, because women are everywhere." (Truck driver, FGD Guro)

Truckers stay near their trucks, very often cooking and drinking. It is common to see sex workers inside trucks, which could be an indication that sex occurs in the trucks. Many trucks have beds in the cabin.

Stoppage caused by a breakdown can occur anywhere. In such an event, truckers may end up spending a long time at the site of the breakdown. This provides an opportunity for greater involvement with sex workers and longer-term relationships.

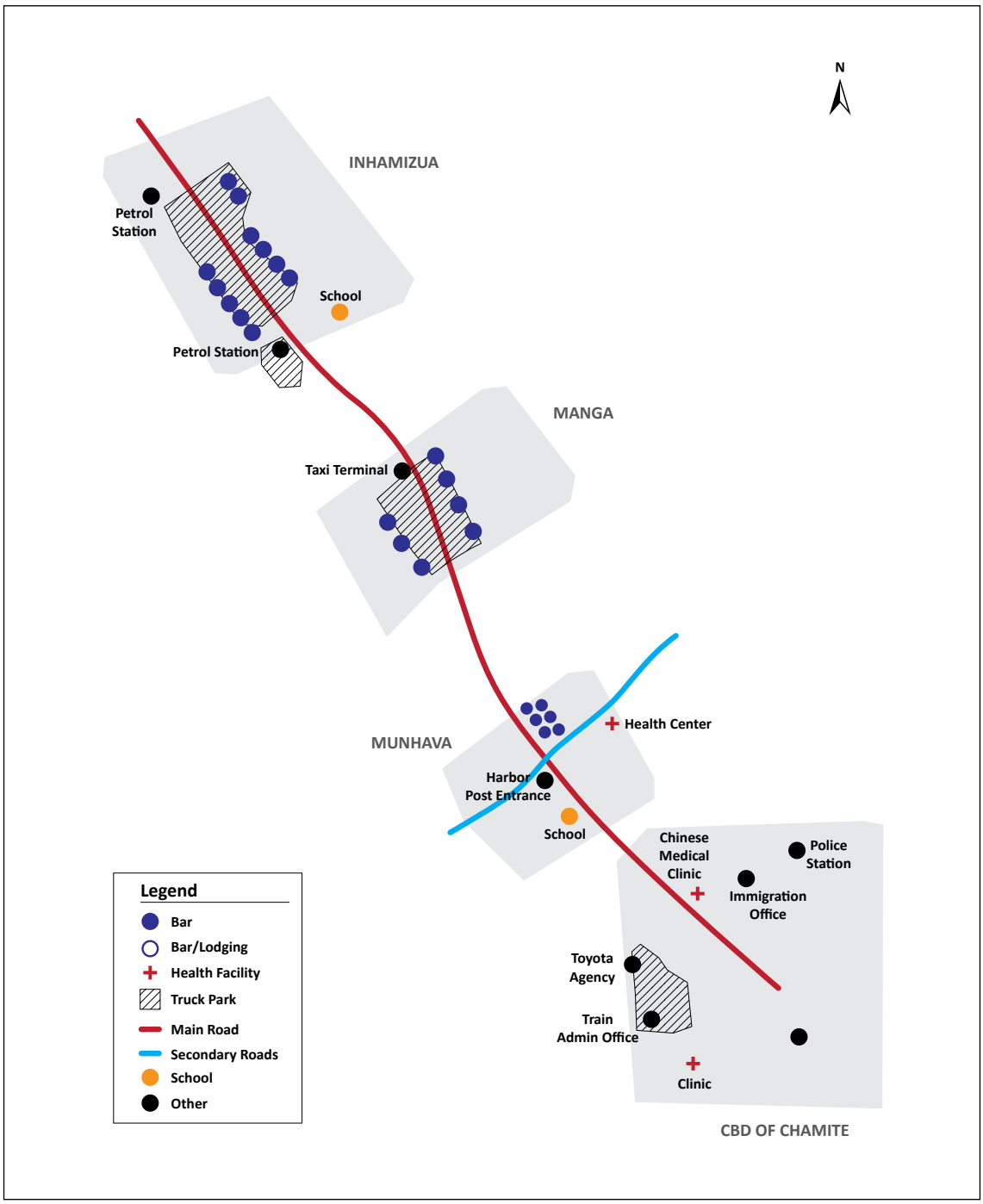
The following maps show the layout at each "Hot Spot" including relevant geographical points, health facilities, locations of bars, lodgings and restaurants, and other relevant features.

### *11.1.1 Beira Corridor*

**Beira city**

In the Beira city "hot spot", the Chaimite area has two areas where truckers spend the night: along the roadside near the Toyota petrol station and garage and an area opposite. Although the Munhava area is near the entrance to the port of Beira, there is no space to park trucks and hence it is considered a rapid transit point for trucks entering and leaving the port of Beira. Inhamízua is a preferred location to park trucks because there are two parking places, the BP and the Total petrol stations. Trucks are parked here for loading as well as before leaving the port of Beira. In the Manga area, many of the trucks are associated with the brewery, so some park in the factory yard and others park on private property. According to information obtained from informal conversations with truck drivers, the Manga area does not have a parking lot for trucks, so many of them prefer to use the two parking lots in the Munhava area.

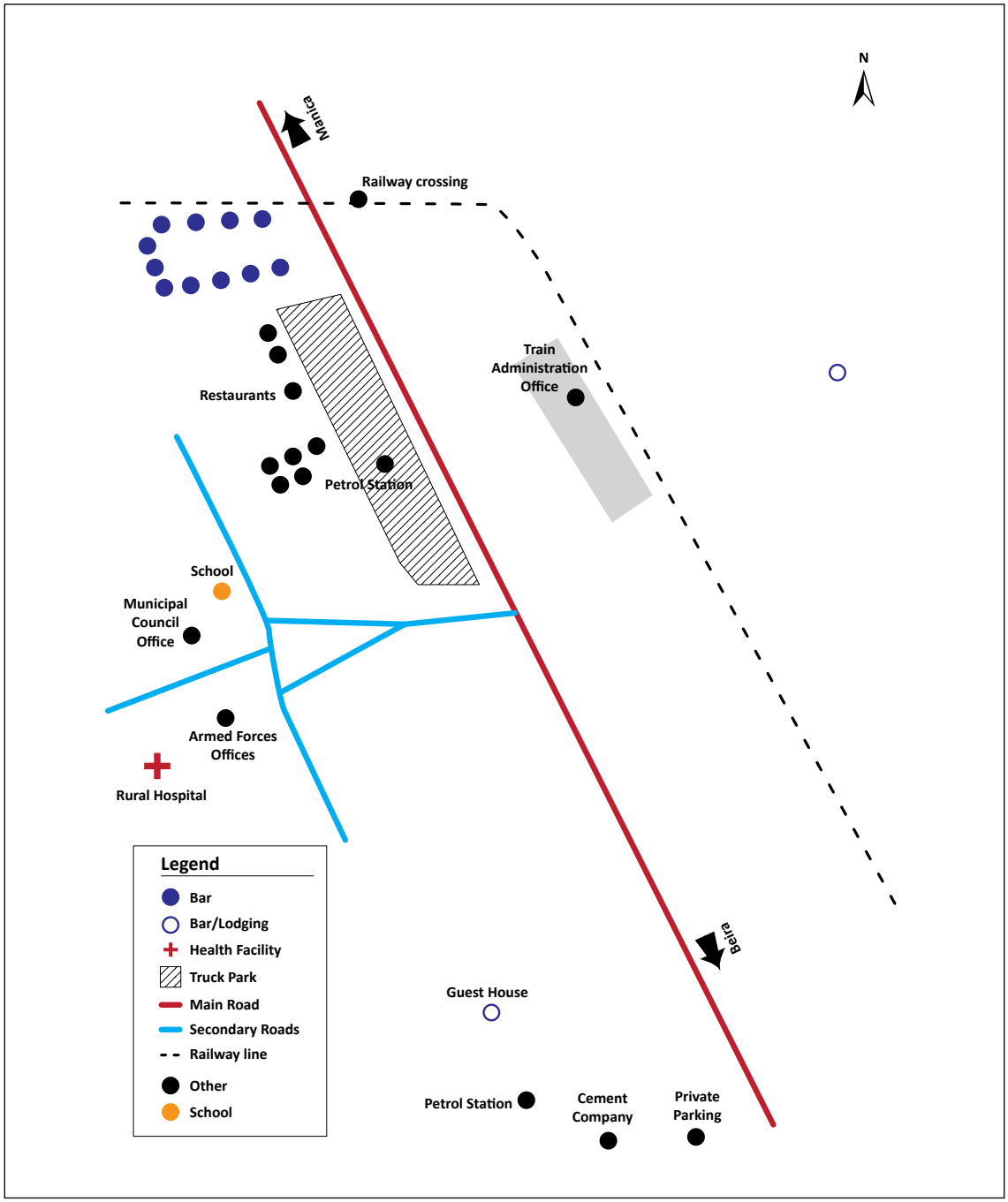
## Map 2: Beira city "hot spot"



### Dondo hot spot

The least number of trucks were observed at the Dondo "hot spot" as there are only two parking lots. The few trucks that stay overnight in Dondo either park inside the parking lot of the Cement Plant (which offers optimal security), or along the N6. Because women are not allowed on the parking lot premises, truck drivers prefer to park outside.

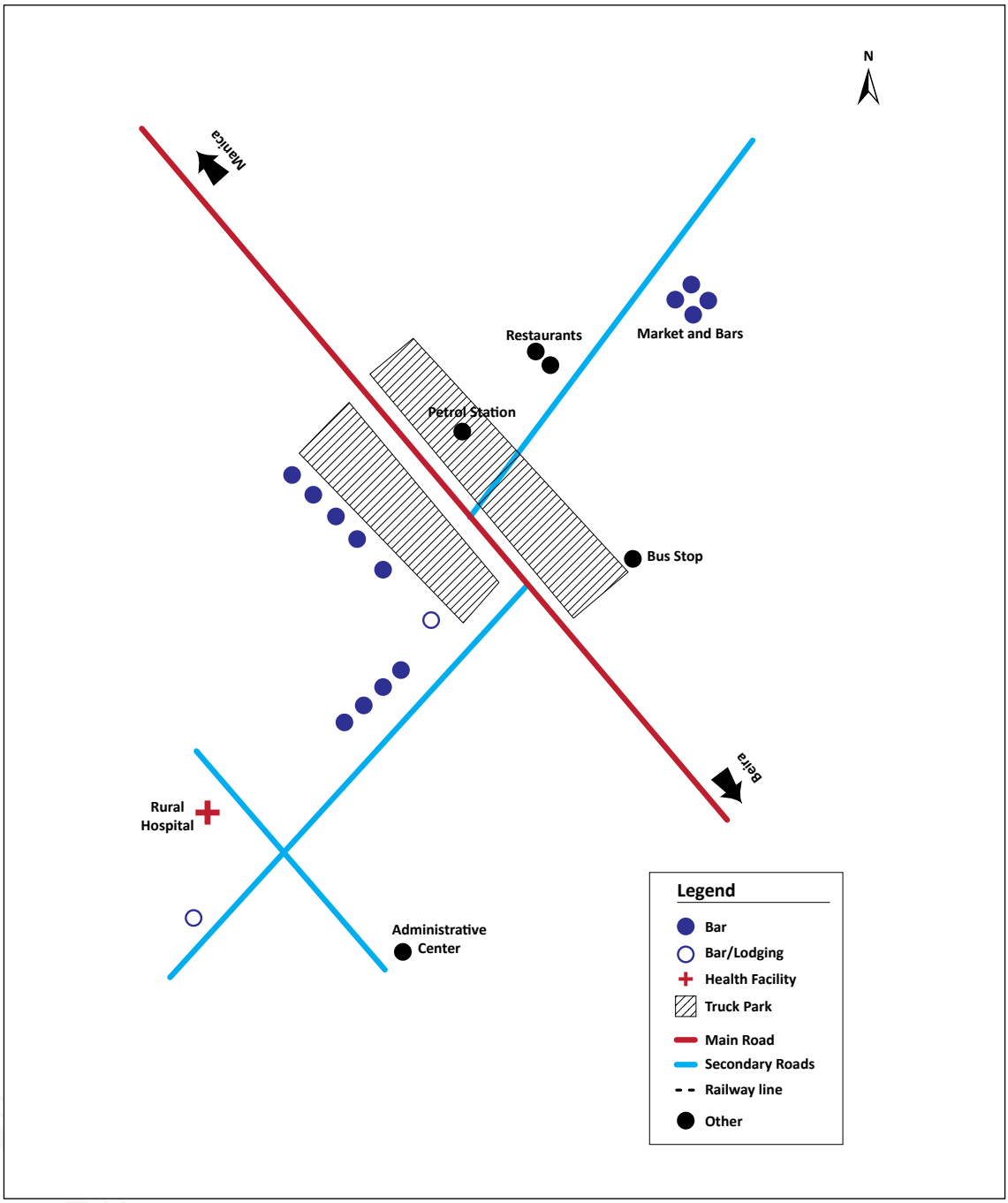
## Map 3: Dondo "hot spot"



### Nhamatanda hot spot

The Nhamatanda "hot spot" is a common overnight stop. The trucks park at the petrol station, which is considered to offer good security. In the past, it is reported that criminals used to cut the brake pads and steal cargo and fuel from the trucks; however, this situation has been overcome due to the presence of security guards.

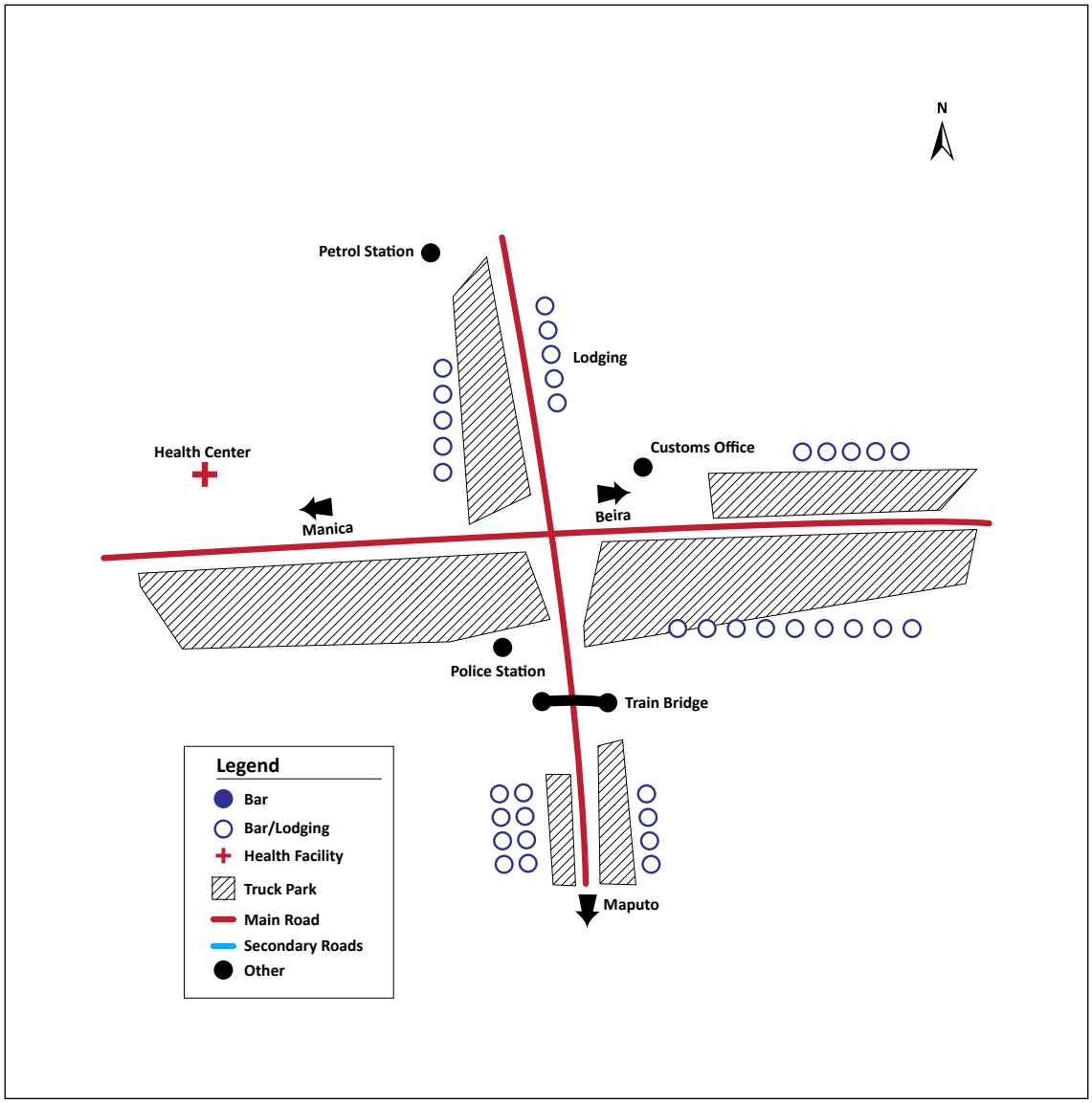
## Map 4: Nhamatanda "hot spot"



### Inchope hot spot

Inchope "hot spot" is considered a "mandatory" stop point by most truck drivers, mainly because it is where they must obtain customs clearance on international routes. Truck drivers report that Inchope offers cheap rooms and is a place where they can stop and rest, eat and have fun. Inchope is safe for trucks at night and it is easy to find a woman for sex at very low prices. All these factors contribute to the high number of vehicles and people spending their night in Inchope.

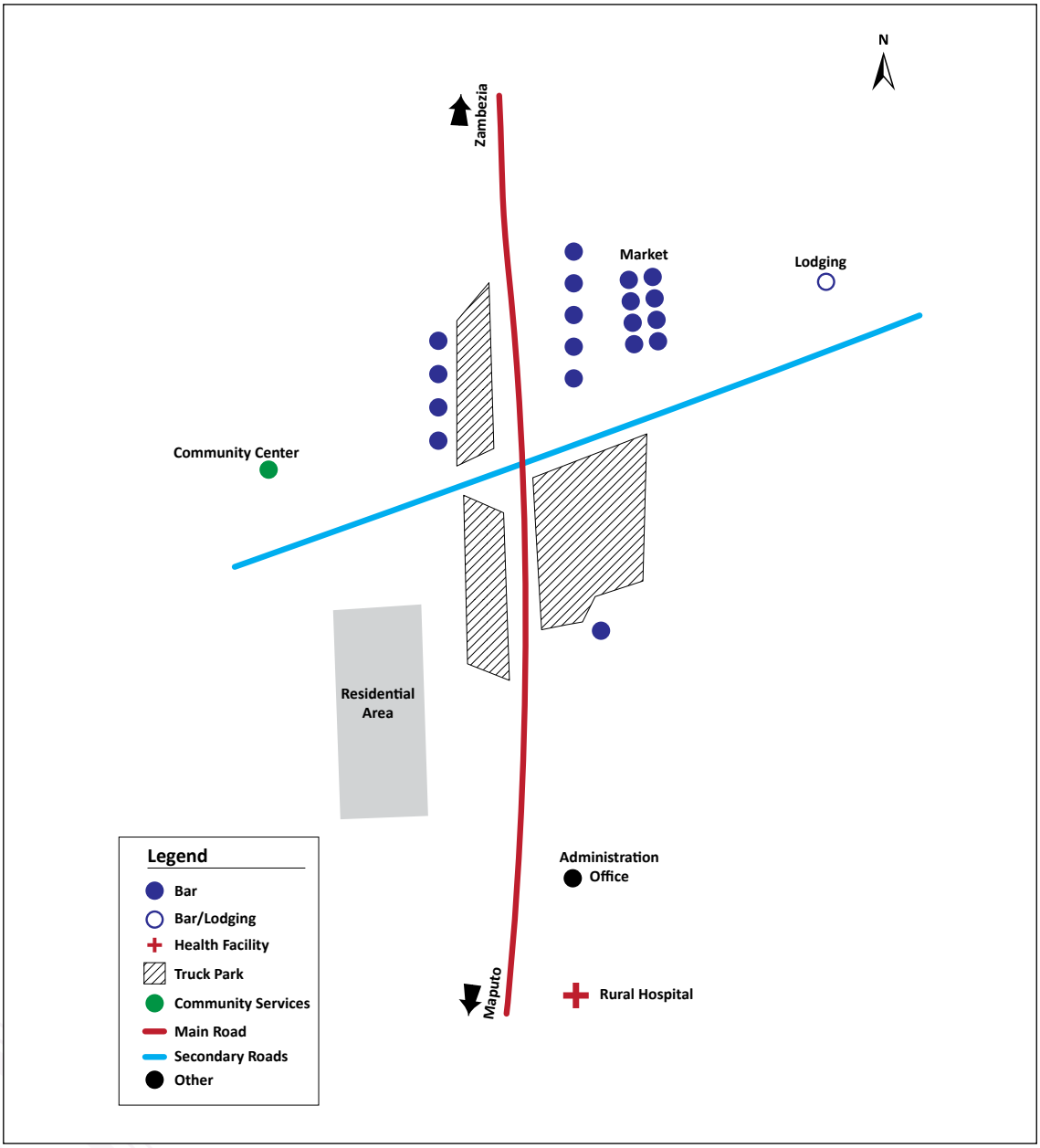
## Map 5: Inchope "hot spot"



### Gorongosa hot spot

In recent months, the number of trucks parking overnight in Gorongosa has declined. According to residents, this is due to two incidents that occurred within two months of each other: two loaded trucks slipped down an embankment and crashed into several houses, destroying the property and killing those inside. Some people linked these occurrences to witchcraft. Since then, the city council has banned the parking of trucks during the night, except in special cases. Other truckers said that the distance between Inchope and Gorongosa is fairly short, therefore their preference is to move on to Inchope.

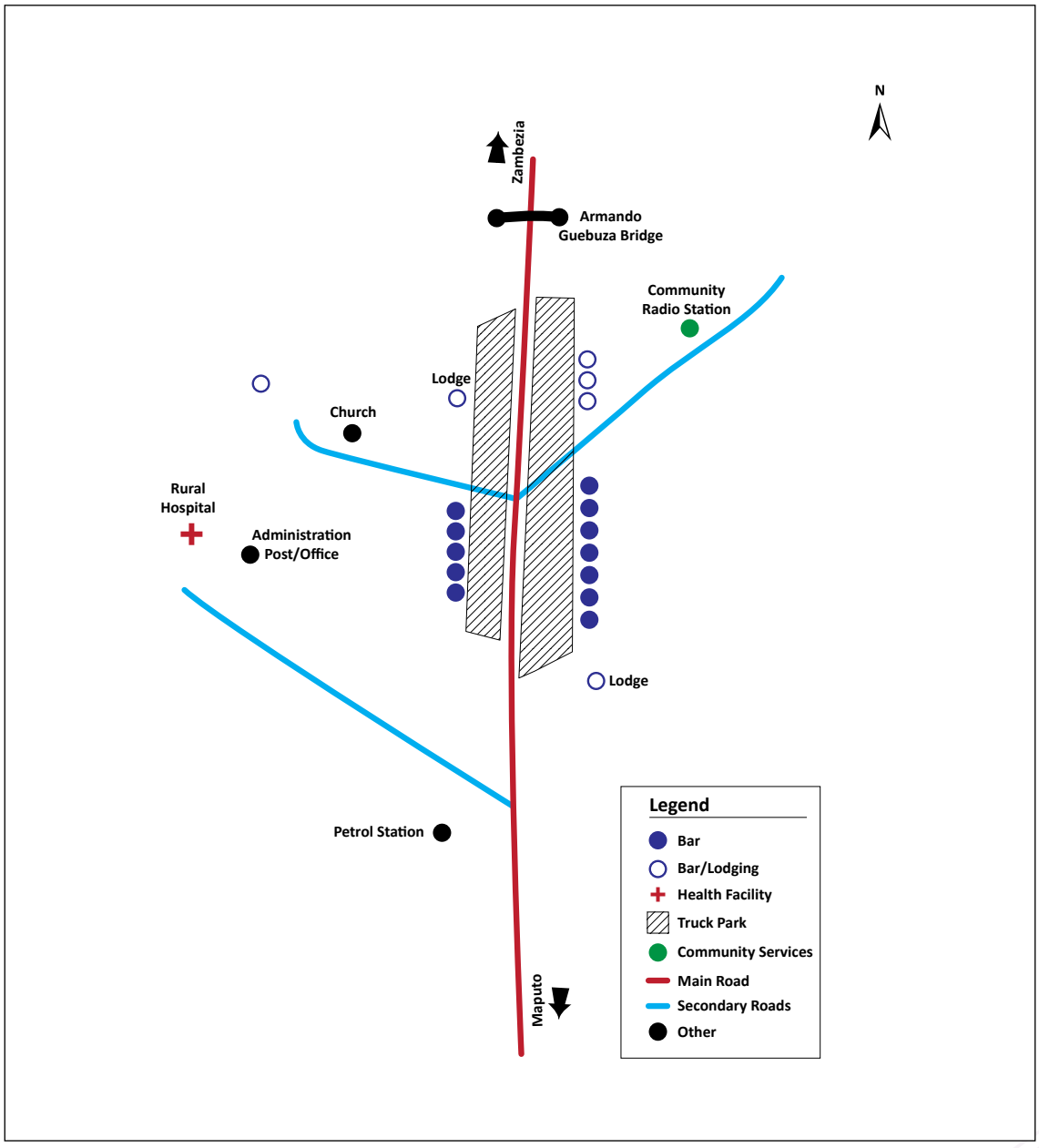
## Map 6: Gorongosa "hot spot"



### Caia hot spot

In Caia, residents report that the trucking situation has changed radically since the opening of the Zambezi river bridge. Before the opening, trucks used to stay on average three days on the side of Chimuara or Caia waiting for the ferry. With the opening of the new bridge, there are now very few trucks that spend the night.

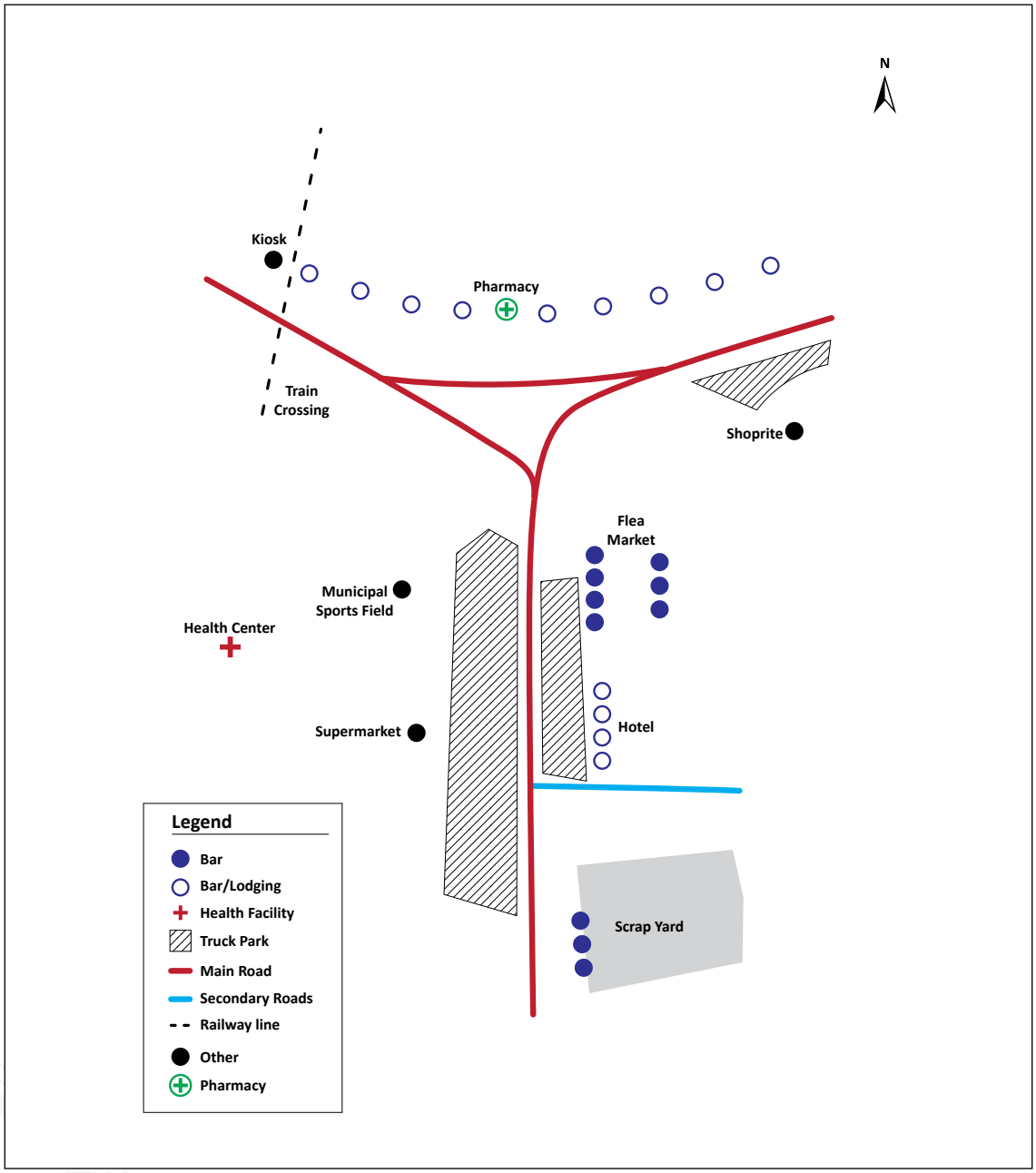
## Map 7: Caia "hot spot"



### Chimoio hot spot

Chimoio has similarities to Inchope, with large numbers of truckers staying overnight. Many truckers said they prefer to stop in Chimoio for many reasons including security and proximity to the Zimbabwean border, which makes it easy for them to organize visas. Many said they also prefer to stop in Chimoio to prevent cargo being stolen, which happens at the border. Informants indicated that they do not park trucks where sex workers are, but rather that it is the sex workers who come to the trucks.

## Map 8: Chimoio "hot spot"



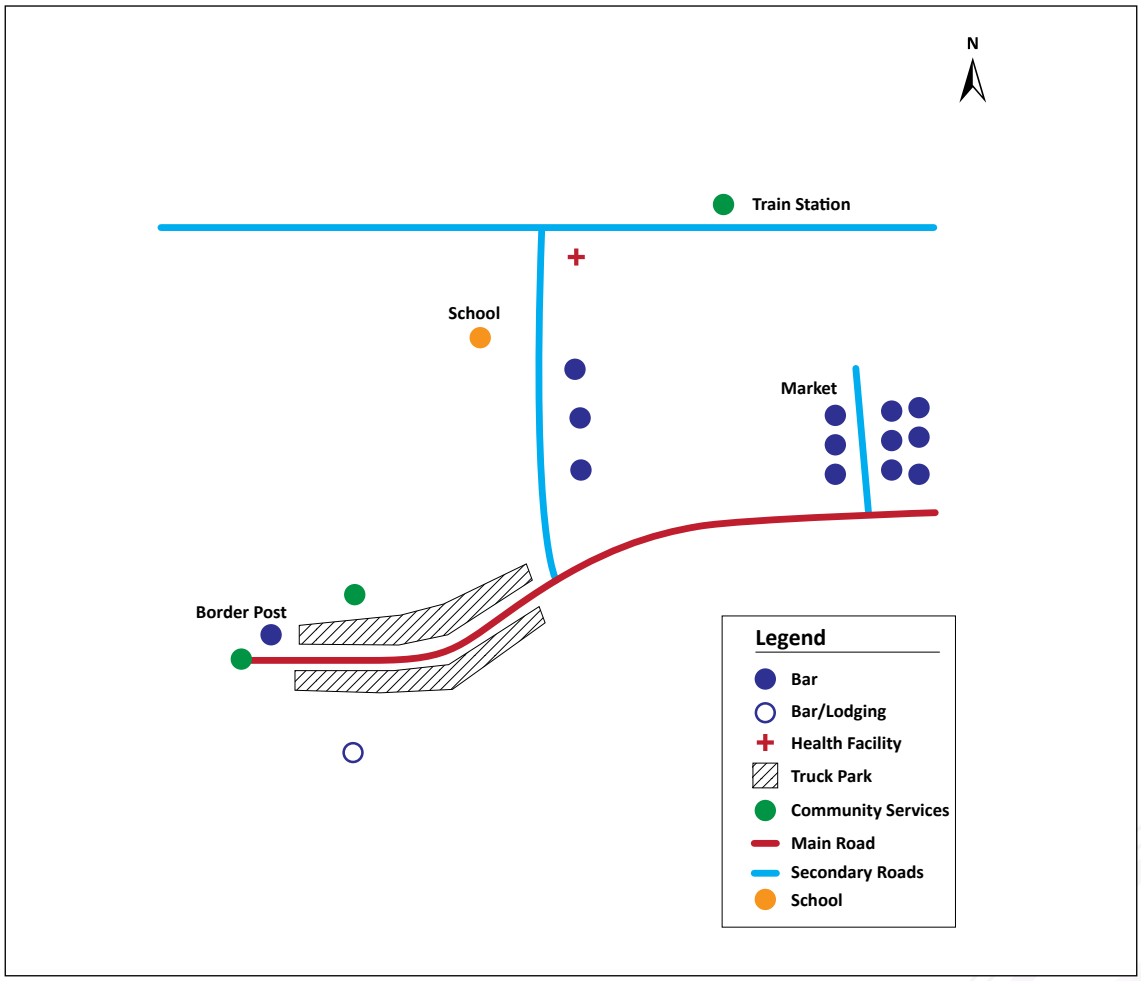
### 11.1.3 *Tete Corridor*

Along the Tete corridor many drivers park their trucks to rest in strategic places, determined by food, accommodation and entertainment. Obligatory rest occurs in the Machipanda, Manica and Tete hot spots. Due to processing of documentation, this may result in lengthy stays in both Machipanda and Manica, and in Tete during the week, when the bridge is not open 24 hours a day. As such, the preferred places to stay are Changara, Moatize, Guro and Catandica. Places for stopping are also dependent on the safety of the vehicles and goods.

#### Machipanda hot spot

The Machipanda "hot spot" is located on a border post with Zimbabwe and displays a high concentration of trucks. The border has limited hours of operation, causing long queues, particularly on weekends, and increasing the sale of drinks and meals and sex.

**Map 9: Machipanda "hot spot"**

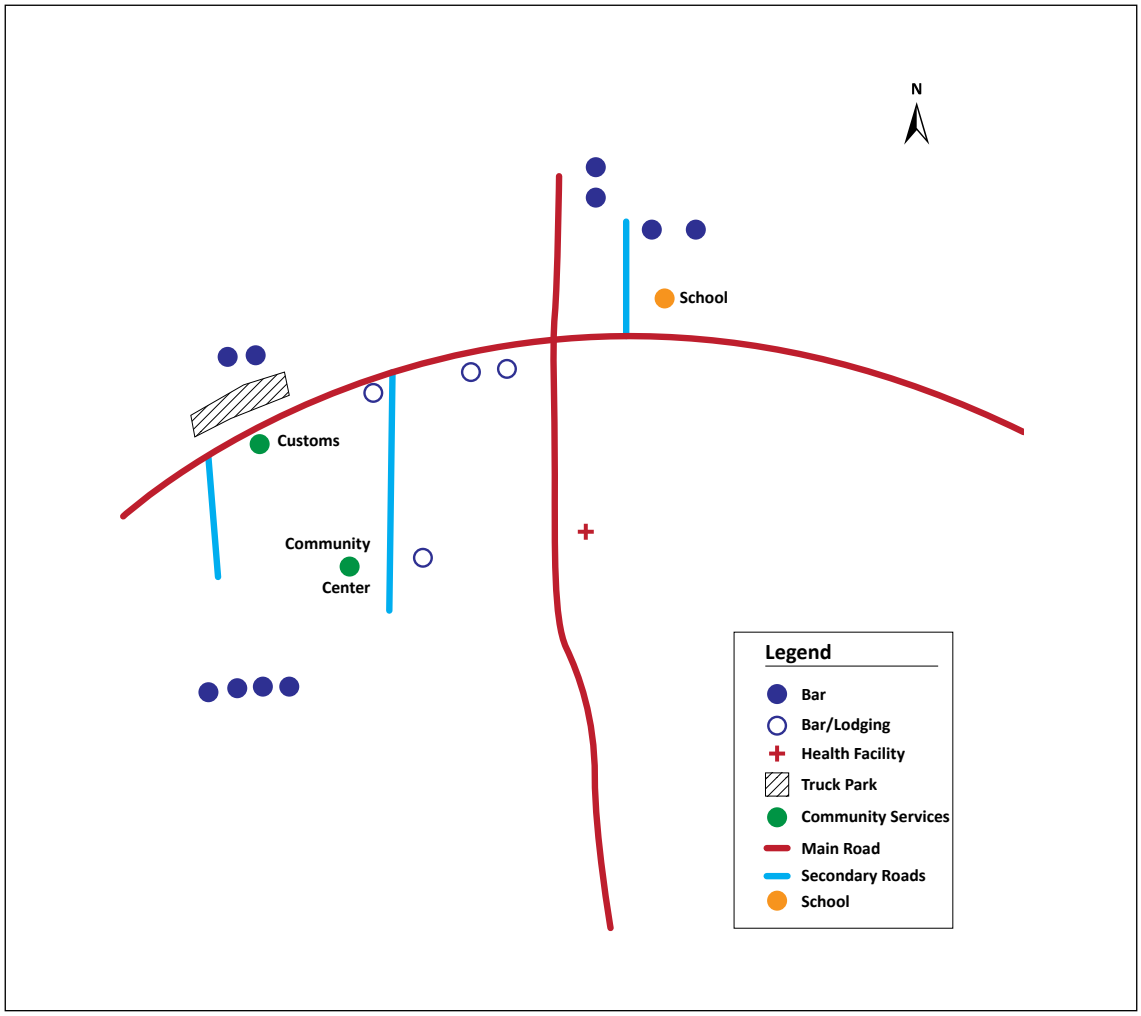


### Manica hot spot

The city of Manica was divided into two areas – one that includes Josina Machel and another that includes the city centre. In the first area many trucks congregate around the customs post while they wait for documentation.

Truckers prefer to spend the night in Machipanda (the border town itself) and Chimoio (the provincial capital), both places relatively close to the town of Manica. The dynamics of the "hot spot" of Manica are compounded by the concentration of people from several countries (Lebanese, Somalis, Nigerians and Zimbabweans) and from various provinces of Mozambique due to the ample business opportunities in diamond trade from Zimbabwe and gold mined in this region.

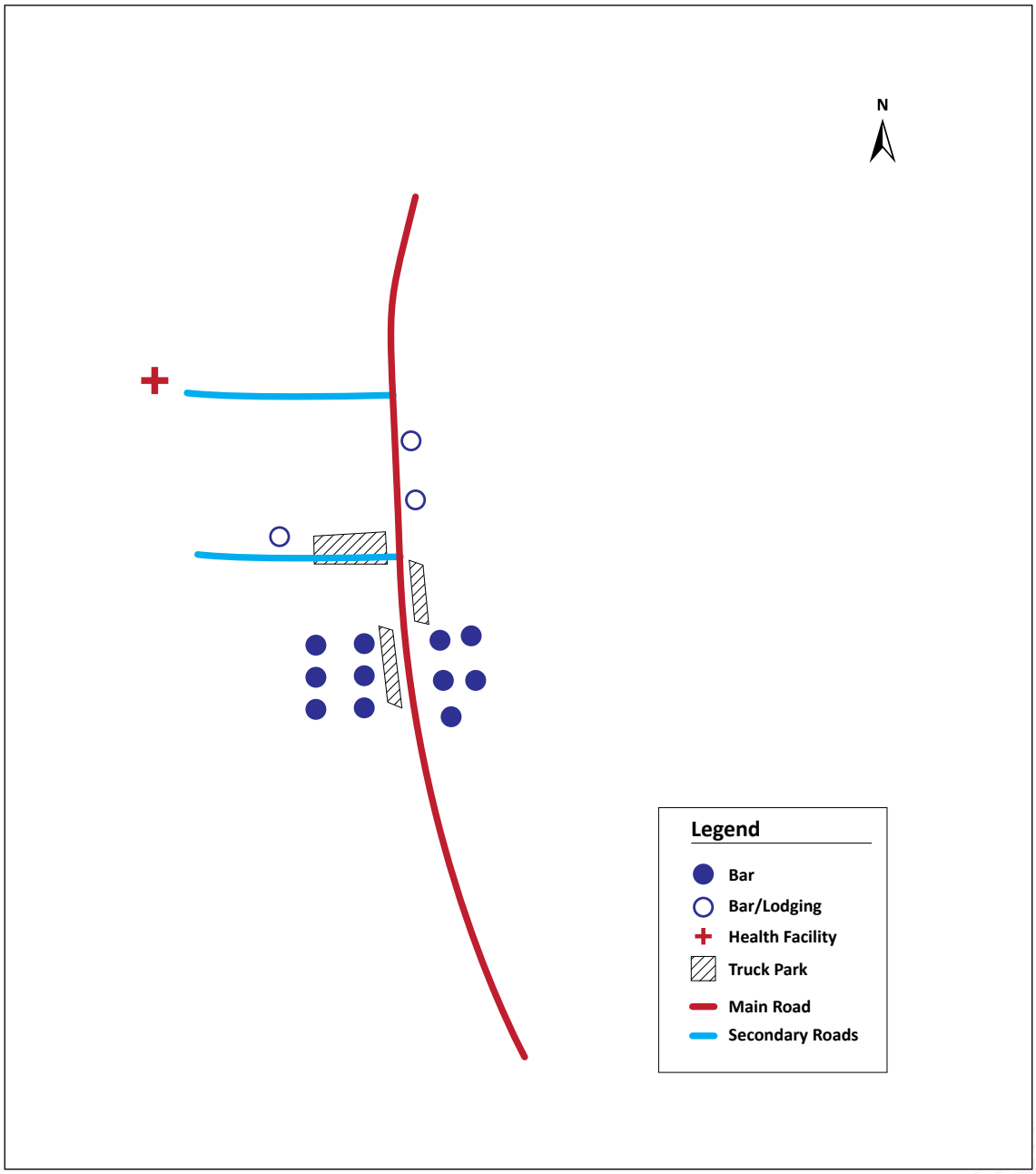
## Map 10: Manica "hot spot"



### Catandica hot spot

Catandica is a dynamic municipality with a vibrant nightlife, with a reported high number of sex workers, both in stalls and along the road. Most establishments are open till late in the night, seven days a week. Truckers stop for food and to rest and relax.

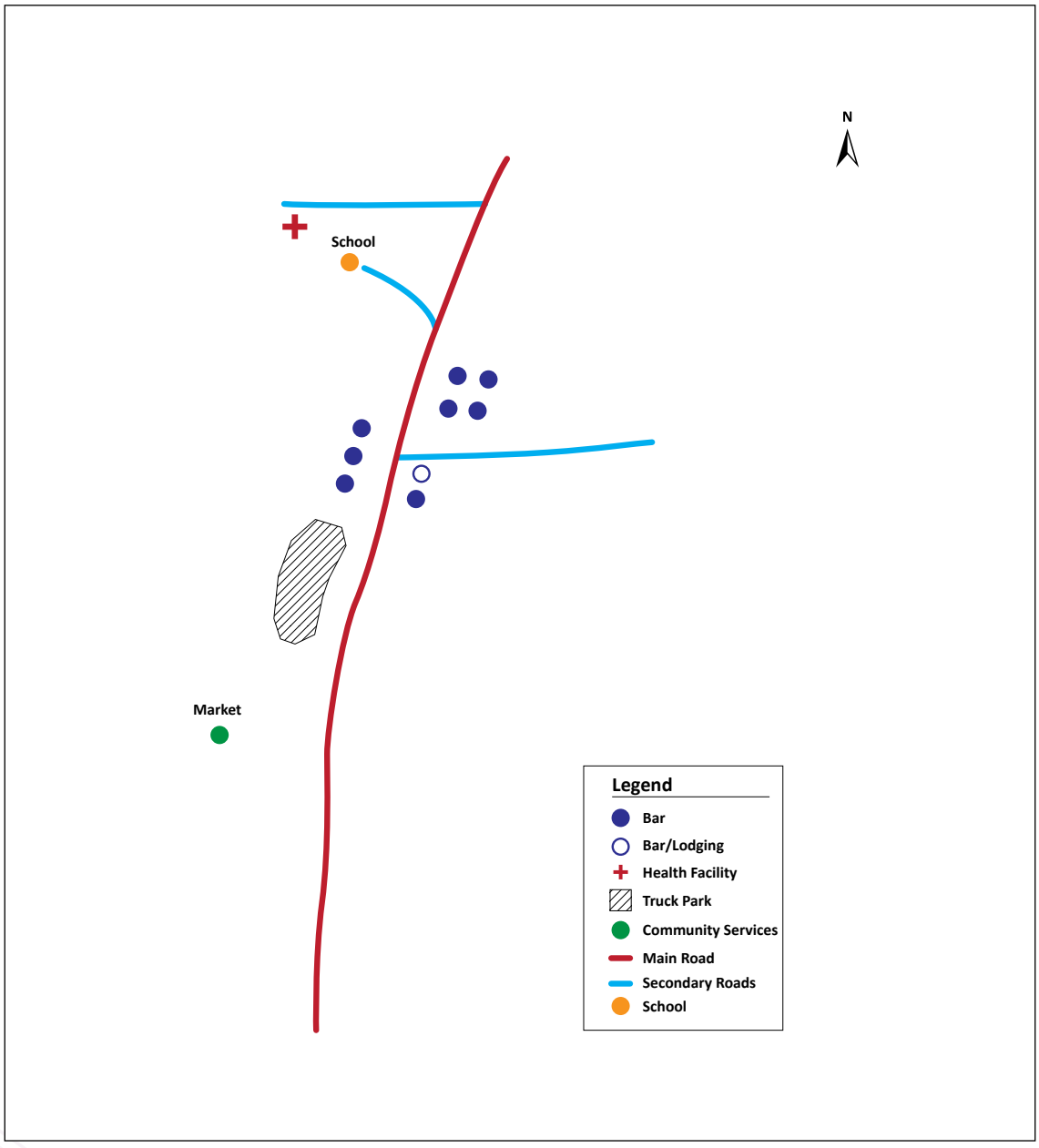
## Map 11: Catandica "hot spot"



### Guro hot spot

There are a significant number of truck drivers in the village centre of Guro both during the day – those who are in transit – and at night – where there is a dynamic nightlife. Although it does not register a high number of trucks that park overnight, Guro is considered a favourite spot for truckers because it is safe.

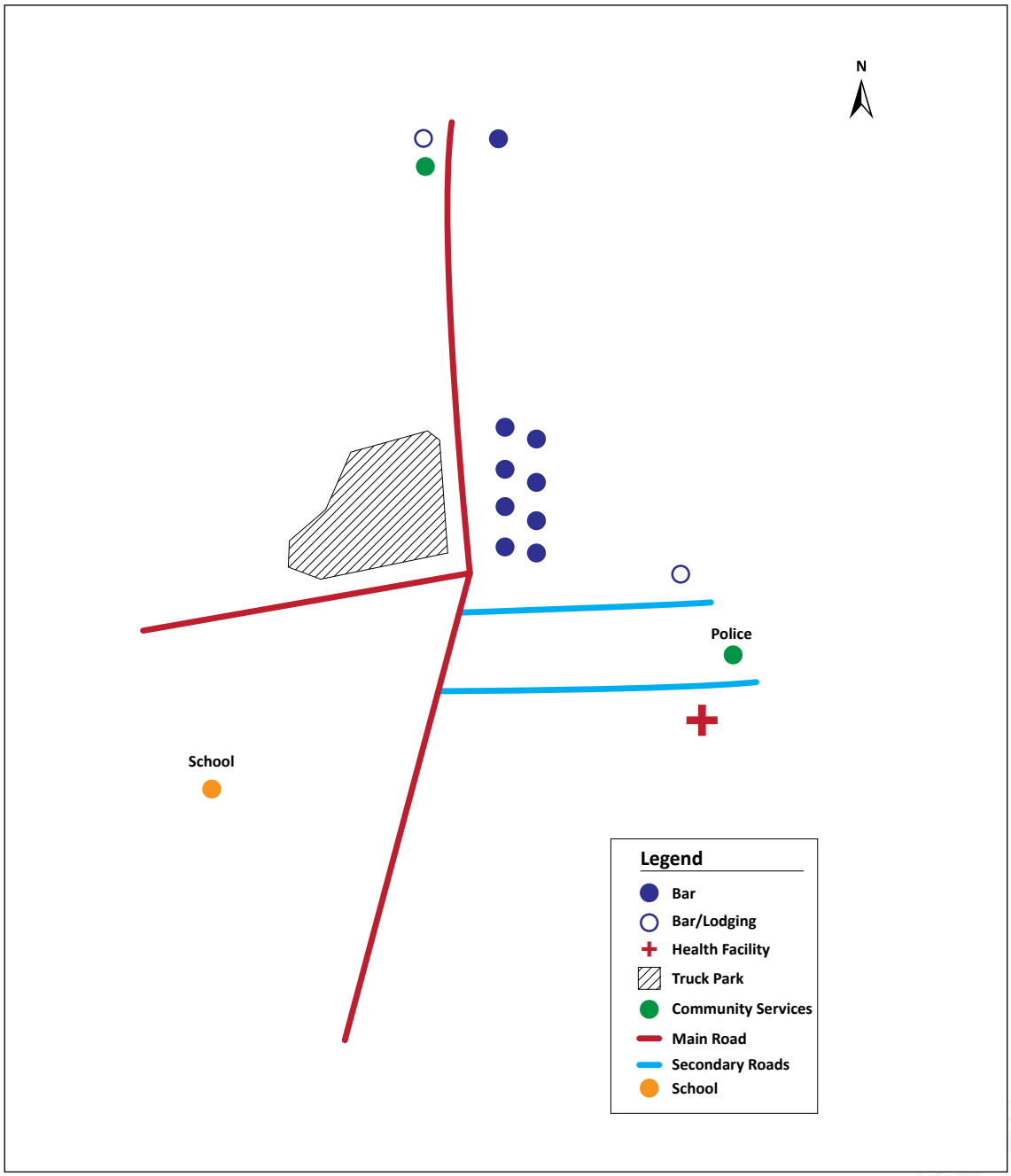
## Map 12: Guro "hot spot"



### Changara hot spot

The "hot spot" of Changara is close to the Zimbabwe border (50 km away) and is a gateway to the city of Tete (90 km away). For these reasons, Changara is considered an ideal location for truckers to rest and is characterized by a dynamic nightlife all week long.

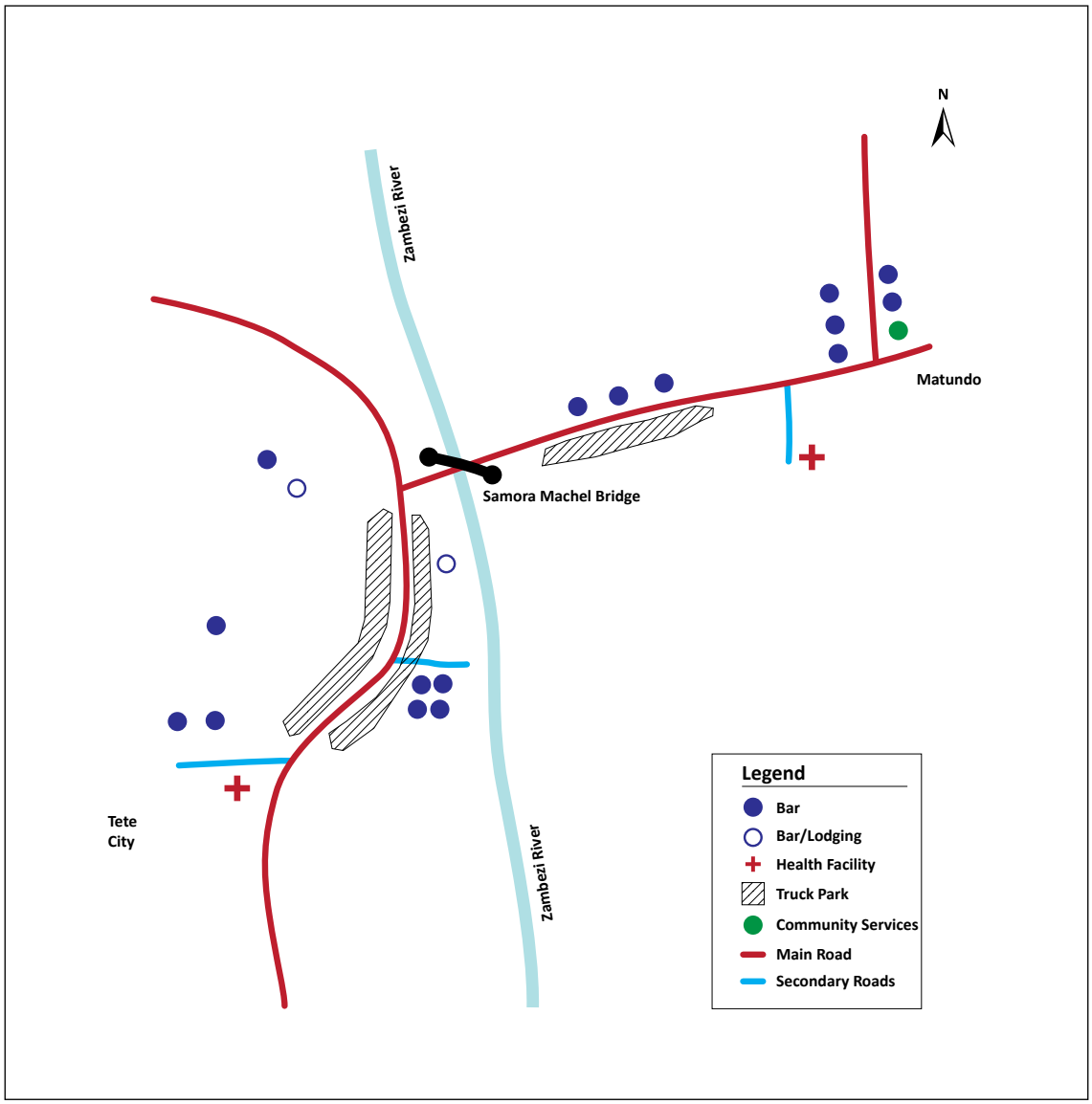
## Map 13: Changara "hot spot"



### Tete hot spot

The Tete "hot spot" was divided into two areas, the Tete city area and the Matundo area. Tete city has two parking spots for trucks. On the road to the Samora Machel bridge, which was being reconstructed during the study period, parking of trucks is restricted. However, along this road informal stalls offer services to truck drivers, and SWs can be seen openly soliciting business.

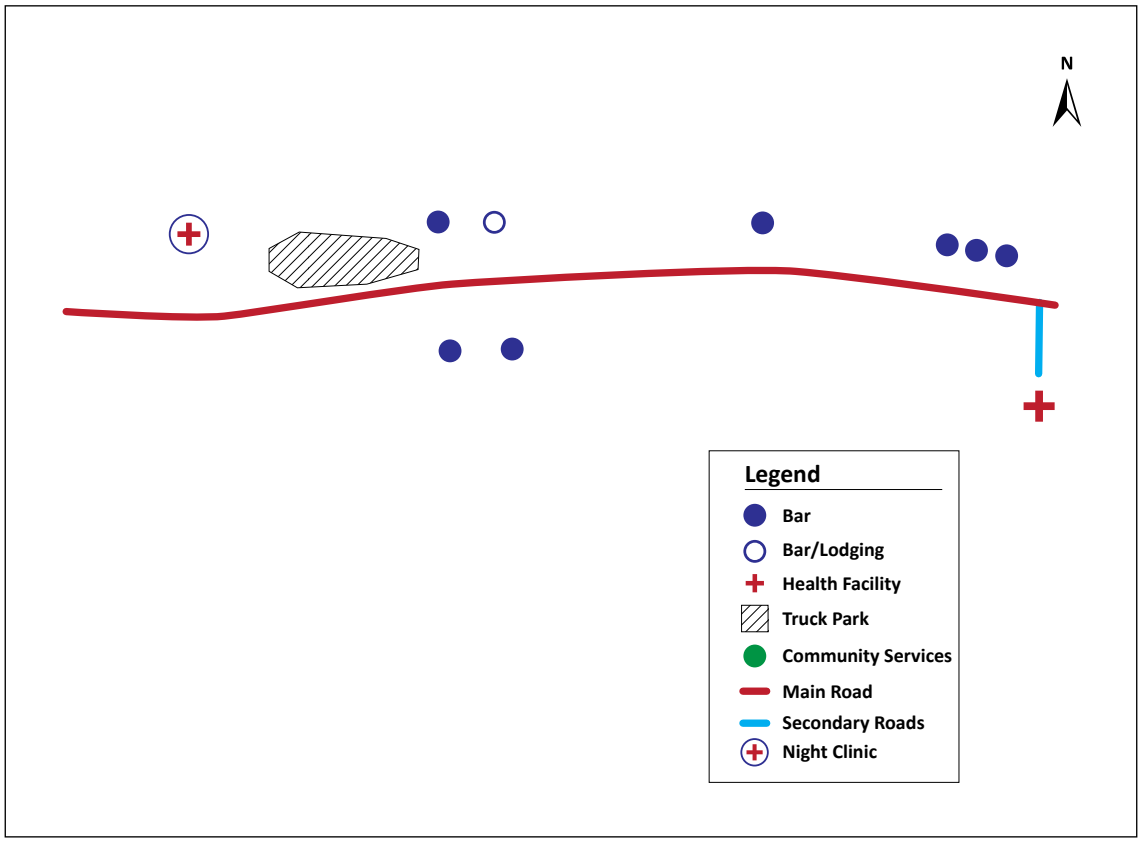
## Map 14: Tete city "hot spot"



### Moatize hot spot

The Moatize "hot spot" is a stopover of choice for truckers because there are various services offered in stalls, such as toilets/showers, food and secure parking. In Moatize sex workers offer their services to the trucks parked along the informal stalls, as well as in bars and lodges near the park.

## Map 15: Moatize "hot spot"



## 11.2 Tables

### Table A1: Distribution of truckers per nationality (truckers' health-seeking behaviour survey)

| | Nationality | Category % (n) | | Total |
|---|---|---|---|---|
| | | Driver | Assistant | |
| Beira corridor | Mozambican | 70.4 (152) | 84.9 (62) | 74 (214) |
| | South African | 0.5 (1) | 0.0 | 0.3 (1) |
| | Swazi | 0.0 | 2.7 (2) | 0.7 (2) |
| | Zimbabwean | 22.2 (48) | 9.6 (7) | 19.0 (55) |
| | Malawian | 1.4 (3) | 0.0 | 1.0 (3) |
| | Tanzanian | 4.6 (10) | 2.7 (2) | 0.7 (2) |
| | Missing | 0.9 (2) | 0.0 | 0.7 (2) |
| **Total Beira** | | **216** | **73** | **289** |
| Tete corridor | Mozambican | 59.9 (154) | 90.4 (47) | 65.0 (201) |
| | South African | 1.2 (3) | 0.0 | 1.0 (3) |
| | Zimbabwean | 19.8 (51) | 7.7 (4) | 17.8 (55) |
| | Malawian | 5.4 (14) | 0.0 | 4.5 (14) |
| | Tanzanian | 12.8 (33) | 1.9 (1) | 11.0 (34) |
| | Missing | 0.8 (2) | 0 | 6.4 (2) |
| **Total Tete** | | **257** | **52** | **309** |
| **Total** | | **473** | **125** | **598** |

### Table A2: Distribution of truckers interviewed by level of schooling

| | Education | Category % (n) | | Total |
|---|---|---|---|---|
| | | Driver | Assistant | |
| Beira corridor | None | 0.0 | 2.7 (2) | 0.7 (2) |
| | Literacy | 0.5 (1) | 6.8 (5) | 2.1 (6) |
| | Primary | 53.2 (115) | 72.6 (53) | 58.1 (168) |
| | Secondary | 45.4 (98) | 17.8 (13) | 38.4 (111) |
| | Higher | 0.5 (1) | 0.0 | 0.3 (1) |
| | No information | 0.5 (1) | 0.0 | 0.3 (1) |
| **Total Beira** | | **216** | **73** | **289** |

| | Education | Category % (n) | | Total |
|---|---|---|---|---|
| | | Driver | Assistant | |
| Tete corridor | None | 0.4 (1) | 5.8 (3) | 1.3 (4) |
| | Literacy | 3.1 (8) | 15.4 (8) | 5.2 (16) |
| | Primary | 38.5 (99) | 67.3 (35) | 43.4 (134) |
| | Secondary | 52.5 (135) | 11.5 (6) | 45.6 (141) |
| | Higher | 4.7 (12) | 0.0 | 3.9 (12) |
| | No information | 0.8 (2) | 0.0 | 0.6 (2) |
| **Total Tete** | | **257** | **52** | **309** |
| **Total** | | **473** | **125** | **598** |

## Table A3: Distribution of truckers per marital status

| | Marital status | Category % (n) | | Total |
|---|---|---|---|---|
| | | Driver | Assistant | |
| Beira corridor | Single | 16.2 (35) | 45.2 (33) | 23.5 (68) |
| | Married | 26.4 (57) | 6.8 (5) | 21.5 (62) |
| | De facto (common law) | 50.9 (110) | 45.2 (33) | 49.5 (143) |
| | Separated | 1.9 (4) | 0.0 | 1.4 (4) |
| | Divorced | 1.4 (3) | 2.7 (2) | 1.7 (5) |
| | Widower | 3.2 (7) | 0.0 | 2.4 (7) |
| **Total Beira** | | **216** | **73** | **289** |
| Tete corridor | Single | 15.2 (39) | 53.8 (28) | 21.7 (67) |
| | Married | 26.1 (67) | 9.6 (5) | 23.3 (72) |
| | De facto (common law) | 53.3 (137) | 28.8 (15) | 49.2 (152) |
| | Separated | 1.6 (4) | 5.8 (3) | 2.3 (7) |
| | Divorced | 1.2 (3) | 1.9 (1) | 1.3 (4) |
| | Widower | 2.7 (7) | 0.0 | 2.3 (7) |
| **Total Tete** | | **257** | **52** | **309** |
| **Total** | | **473** | **125** | **598** |

## Table A4: Distribution of truckers per religion

| | Religion | Category % (n) | | Total |
|---|---|---|---|---|
| | | Driver | Assistant | |
| Beira corridor | Catholic | 29.2 (63) | 26.0 (19) | 28.4 (82) |
| | Muslim | 7.4 (16) | 5.5 (4) | 6.9 (20) |
| | Protestant/Evangelical | 39.8 (86) | 32.9 (24) | 38.1 (110) |
| | Hindu | 0.5 (1) | 0.0 | 0.3 (1) |
| | Christian (other) | 4.2 (9) | 12.3 (9) | 6.2 (18) |
| | Animist | 2.8 (6) | 0.0 | 2.1 (6) |
| | None | 15.7 (34) | 21.9 (16) | 17.3 (50) |
| | Missing information | 0.5 (1) | 1.4 (1) | 0.7 (2) |
| Total Beira | | 216 | 73 | 289 |
| Tete corridor | Catholic | 32.7 (84) | 19.2 (10) | 30.4 (94) |
| | Muslim | 9.7 (25) | 3.8 (2) | 8.7 (27) |
| | Protestant/Evangelical | 32.7 (84) | 50.0 (26) | 35.6 (110) |
| | Hindu | 3.5 (9) | 3.8 (2) | 3.6 (11) |
| | Christian (other) | 4.3 (11) | 0.0 | 3.6 (11) |
| | Animist | 0.8 (2) | 0.0 | 0.6 (2) |
| | None | 16.0 (41) | 23.1 (12) | 17.2 (53) |
| | Missing information | 0.4 (1) | 0.0 | 0.3 (1) |
| **Total Tete** | | **257** | **52** | **309** |
| **Total** | | **473** | **125** | **598** |

## Table A5: STI symptoms among truckers

| | Number who ever had an STI % (n) | | Location when STI was discovered % (n) | | | Number of those who continued having sex after noticing the symptoms % (n) | |
|---|---|---|---|---|---|---|---|
| | Driver | Assistant | Place | Driver | Assistant | Driver | Assistant |
| Beira corridor | 29.2 (63) | 24.7 (18) | On the road | 40.6 (26) | 38.9 (7) | 4.6 (3) | 0.0 |
| | | | At home | 53.1 (34) | 61.1 (11) | | |
| | | | Another place | 3.1 (2) | 0.0 | | |
| | | | No information | 3.1 (2) | 0.0 | | |
| **Total Beira** | **216** | **73** | | **64** | **18** | **65** | **18** |

| | Number who ever had an STI % (n) | | Location when STI was discovered % (n) | | | Number of those who continued having sex after noticing the symptoms % (n) | |
|---|---|---|---|---|---|---|---|
| | Driver | Assistant | Place | Driver | Assistant | Driver | Assistant |
| Tete corridor | 21.0 (54) | 26.9 (14) | On the road | 40.4 (26) | 42.9 (6) | 23.5 (12) | 35.7 (5) |
| | | | At home | 57.9 (33) | 57.1 (8) | | |
| | | | Another place | 1.8 (1) | 0.0 | | |
| | | | No information | 0.0 | 0.0 | | |
| **Total Tete** | **257** | **52** | | **57** | **14** | **51** | **14** |
| **Total** | **473** | **125** | | **121** | **32** | **116** | **32** |

## Table A6: What did the truckers do after realizing they were not healthy?

| | Source of help for those truckers that claimed they had been sick in the past 12 months | Category % (n) | | Total |
|---|---|---|---|---|
| | | Driver | Assistant | |
| Beira corridor | Hospital/public health centre | 59.4 (38) | 72.2 (13) | 62.2 (51) |
| | Hospital/private health centre | 21.9 (14) | 0.0 | 17.1 (14) |
| | Counselling at pharmacy | 4.7 (3) | 5.6 (1) | 4.9 (4) |
| | Traditional healer | 3.1 (2) | 5.6 (1) | 3.7 (3) |
| | Used medicine they had | 6.3 (4) | 11.1 (2) | 7.3 (6) |
| | Other | 3.1 (2) | 5.6 (1) | 3.7 (3) |
| | No information | 1.6 (1) | 0.0 | 1.2 (1) |
| **Total Beira** | | **64** | **18** | **82** |
| Tete corridor | Hospital/public health centre | 60.8 (31) | 64.3 (9) | 61.5 (40) |
| | Hospital/private health centre | 13.7 (7) | 14.3 (2) | 13.8 (9) |
| | Counselling at pharmacy | 7.8 (4) | 0.0 | 6.2 (4) |
| | Traditional healer | 7.8 (4) | 14.3 (2) | 9.2 (6) |
| | Used medicine they had | 3.9 (2) | 7.1 (1) | 4.6 (3) |
| | Used left-over medicine from someone else | 2.0 (1) | 0.0 | 1.5 (1) |
| | Waited till symptoms disappeared | 2.0 (1) | 0.0 | 1.5 (1) |
| | No information | 2.0 (1) | 0.0 | 1.5 (1) |
| **Total Tete** | | **51** | **14** | **65** |
| **Total** | | **115** | **32** | **147** |

## Table A7: Cost of last STI treatment

| | Cost of STI treatment (only those answering positively as having treated their STI) | Category % (n) | | Total |
|---|---|---|---|---|
| | | Driver | Assistant | |
| Beira corridor | Free | 5.3 (30) | 0.0 | 4.2 (3) |
| | ≤10 MT | 26.3 (15) | 33.3 (5) | 27.8 (20) |
| | > 10 ≤ 50 MT | 35.1 (20) | 20.0 (3) | 31.9 (23) |
| | > 50 ≤ 100 MT | 10.5 (6) | 6.7 (10) | 9.7 (7) |
| | > 100 ≤ 150 MT | 5.3 (30) | 20.0 (3) | 8.3 (6) |
| | > 150 ≤ 200 MT | 5.3 (30) | 6.7 (3) | 5.6 (4) |
| | > 200 ≤ 500 MT | 10.5 (6) | 13.3 (2) | 11.1 (8) |
| | > 1000 ≤ 1500 MT | 1.8 (1) | 0.0 | 1.4 (1) |
| **Total Beira** | | **57** | **15** | **72** |
| Tete corridor | Free | 0.0 | 0.0 | 0.0 |
| | ≤10 MT | 61.8 (21) | 72.7 (8) | 64.4 (29) |
| | > 10 ≤ 50 MT | 20.6 (7) | 9.1 (1) | 17.8 (8) |
| | > 50 ≤ 100 MT | 2.9 (1) | 0.0 | 2.2 (1) |
| | > 100 ≤ 150 MT | 5.9 (2) | 18.2 (2) | 8.9 (4) |
| | > 500 ≤ 750 MT | 5.9 (2) | 0.0 | 4.4 (2) |
| | > 1000 ≤ 1500 MT | 2.9 (1) | 0.0 | 2.2 (1) |
| **Total Tete** | | **34** | **11** | **45** |
| **Total** | | **91** | **26** | **117** |

## 11.3 Ethical Clearance for Study by Bio-ethics Committee of the Ministry of Health

REPÚBLICA DE MOÇAMBIQUE

MINISTÉRIO DA SAÚDE

COMITÉ NACIONAL DE BIOÉTICA PARA A SAÚDE
IRB 00002657

Exmo Senhor
Dr. Cristiano Matsinhe
Kuta

Ref.380/CNBS Data 06 de Novembro de 2009

Assunto: Parecer sobre "Mapeamento de Áreas de Risco ("Hot Spots") de Infecção por HIV em dois corredores de transporte em Moçambique."

O Comité Nacional de Bioética para a Saúde (CNBS) analisou as correcções efectuadas no protocolo intitulado: "***Mapeamento de Áreas de Risco ("Hot Spots") de Infecção por HIV em dois corredores de transporte em Moçambique.***", sobre o mesmo o CNBS chegou à seguinte conclusão:

Não havendo nenhum inconveniente de ordem ética que impeça a realização do estudo, o CNBS dá a sua devida aprovação.

Recomenda aos investigadores que o mantenham informado do decurso do estudo.

E faz notar que a aprovação ética não substitui a autorização administrativa.

Sem mais de momento as nossas cordiais saudações.

Dr. José Manuel Carvalho Fumane

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