

# Enhancing understanding on safe motorcycle and three-wheeler use for rural transport

Discussion Paper: Democratic Republic of Congo



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Cover photo: Kim van der Weijde (Kisangani, Democratic Republic of Congo)

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## Abstract

This Discussion Paper presents some DRC-specific findings of the project 'Enhancing understanding on safe motorcycle and three-wheeler use for rural transport and the implications for appropriate training and regulatory frameworks'. This research was carried out in DRC between February 2019 and October 2019 and this Discussion Paper was prepared ahead of a stakeholder workshop on the 17<sup>th</sup> October 2019.

The research strategy and methodology is broadly based on those used during the initial four country research phase of the project, applied in Ghana, Kenya, Tanzania and Uganda in 2018. After an initial scoping trip to DRC that took place in February 2019, the research strategy was reviewed and finalised. Activities included a review of the regulatory framework and existing training, a survey of the benefits and disbenefits of motorcycle and three-wheeler taxis, and key informant interviews.

The study has revealed that motorcycle taxis are very important for rural travel, and growing in popularity among rural communities. They are especially important for health-related trips and also provide economic advantages, creating employment and supporting agriculture.

As well as the many benefits that motorcycle taxis provide, riders and passengers are also frequently the victims of road traffic crashes, as well as crime, abuse and health issues. In addition, stakeholders advise that these modes of transport create safety risks for other road users. A very small proportion of people in rural communities do not – or cannot – use motorcycle taxis, but for the vast majority they are the most common form of day-to-day transport.

There is a poor level of compliance with existing regulations and training required by law in DRC by riders and capacity shortfalls in terms of enforcement by governmental actors. This has resulted in the poor uptake of training, a lack of legally required documentation, and helmet use.

The results of this study will be discussed by stakeholders at a workshop in Kinshasa on the 17<sup>th</sup> October 2019. The findings can be used by the DRC government and other key stakeholder to help develop relevant policy and practice.

## Key words

Motorcycles, Motorcycle taxis, Three-Wheelers, Rural Transport, Rural Access, Safety, Training, Regulation, Africa, DRC

### Research for Community Access Partnership (ReCAP)

#### Safe and sustainable transport for rural communities

ReCAP is a research programme, funded by UK Aid, with the aim of promoting safe and sustainable transport for rural communities in Africa and Asia. ReCAP comprises the Africa Community Access Partnership (AfCAP) and the Asia Community Access Partnership (AsCAP). These partnerships support knowledge sharing between participating countries in order to enhance the uptake of low cost, proven solutions for rural access that maximise the use of local resources. The ReCAP programme is managed by Cardno Emerging Markets (UK) Ltd.

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## Acronyms, Units and Currencies

AfCAP	Africa Community Access Partnership
ANC	Antenatal care
ANIPTMC	Association National des Initiateurs et Propriétaires des Taxi-Motos du Congo
AsCAP	Asia Community Access Partnership
CBT	Compulsory Basic Training
Cc	Cubic Capacity (engine size)
CDF	Congolese Franc (GBP 1 = CDF 2,048 on 06/09/19)
CNPR	La Commission Nationale de Prévention Routière
CONADEP	Commission Nationale de Delivrance des Permis de Conduire
DFID	Department for International Development (United Kingdom)
DPS	District Provincial Santé
DRC	Democratic Republic of Congo
GBP	British Pound Sterling
GPS	Global Positioning System
INPP	Institut National de Préparation Professionnelle
JICA	Japanese International Cooperation Agency
MONESCO	Mission de l'Organisation des Nations unies pour la stabilisation en République démocratique du Congo / The United Nations Organization Stabilization Mission in the Democratic Republic of the Congo
PMU	Project Management Unit (of ReCAP)
ReCAP	Research for Community Access Partnership
TRL	Transport Research Laboratory
UK	United Kingdom (of Great Britain and Northern Ireland)
UKAid	United Kingdom Aid (Department for International Development, UK)
USD	United States Dollar (USD 1 = CDF 1,664 on 06/09/19)
WHO	World Health Organization

## Executive summary

The project ‘Enhancing understanding on safe motorcycle and three-wheeler use for rural transport and the implications for appropriate training and regulatory frameworks’ was carried out in Ghana, Kenya, Tanzania and Uganda between September 2017 and March 2019. In February 2019 the research was expanded to a fifth country, the Democratic Republic of Congo.

The use of motorcycles has increased greatly in Africa in recent years. Motorcycles are often used as taxis, with riders charging a fare to carry passengers or goods. In rural areas, motorcycle taxis play a crucial role in connecting people to services and farms to markets, and in many countries motorcycles are the most commonly found vehicle on rural roads. In some countries, including Ghana, the use of motorcycles to carry fare-paying passengers is banned, although these bans are not always enforced, especially in rural areas. Motorised three-wheelers are also used in some rural areas, although their numbers are far fewer.

This DRC Discussion Paper provides a brief introduction to the project and then describes the findings of the DRC research activities. It also presents discussion questions that have emerged from the research that are designed to prompt debate during a stakeholder workshop planned for the 17<sup>th</sup> October 2019.

The overall aim of this project is to improve knowledge and understanding concerning effective ways of enabling rural people to benefit from the safe use of motorcycles and three-wheelers, with an emphasis on rural motorcycle taxis, rider training, appropriate regulatory frameworks and realistic enforcement methods.

To accomplish this, a review of motorcycle and three-wheeler taxi-related legislation, training and enforcement has been completed. A wide range of stakeholders have been engaged and have shared their insights on motorcycle taxis and three wheelers through a survey of the benefits and disbenefits. The survey was carried out in two provinces to obtain information from riders, passengers, taxi owners and owners of freight, as well as members of the community who do not use motorcycle or three-wheeler taxis. A total of 296 interviews were successfully completed and the preliminary findings are presented in this discussion paper.

The study has revealed that motorcycle taxis are the most available and accessible form of transport in rural DRC. They are especially important for providing access to healthcare, creating employment opportunities, supporting the agriculture sector, as well as offering economic advantages over other forms of transport.

As well as the many benefits that motorcycle taxis provide, there are also considerable challenges. Riders, passengers and other road users experience motorcycle related crashes, crime, abuse and health issues. Riders lack training and the legally required documentation to operate commercially. A very small proportion of people in rural communities do not – or cannot – use motorcycle taxis, but for the vast majority they were observed as the most common form of day-to-day transport.

The findings of this study can be used by the government and other stakeholders in DRC to better understand the issues related to motorcycle taxis in rural areas and to develop policy and practice to maximise their benefits and minimise their disbenefits.

# 1 Introduction

## 1.1 Research Objectives

The overall aim of the project was to improve knowledge and understanding concerning effective ways of enabling rural people to benefit from the safe use of motorcycles and three-wheelers, with an emphasis on rural motorcycle taxis, rider training, appropriate regulatory frameworks and realistic enforcement methods.

## 1.2 Research Countries

The research was carried out in the Democratic Republic of Congo (DRC), and builds upon similar research that was undertaken in 2018 in Ghana, Kenya, Tanzania and Uganda. All five countries are shown in Figure 1.

Figure 1 The five project countries



The project is being supported by the Government of DRC through the local AfCAP partner institution, specifically Cellule Infrastructure, in the Ministry of Infrastructure, Public Works and Reconstruction<sup>1</sup>.

According to the 2018 World Health Organization (WHO) *Global Status Report on Road Safety*, there is currently no data available on the number of motorcycles and motorised three-wheelers in DRC (WHO, 2018)<sup>2</sup>.

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<sup>1</sup> Cellule Infrastructure, or the Infrastructure Unit, is a technical body of the Ministry of Infrastructure Public Works and Reconstruction (MITPR), with administrative and financial autonomy.

<sup>2</sup> WHO, 2018. *Global Status Report on Road Safety, 2018*. World Health Organisation, Geneva, Switzerland. Available at: [https://www.who.int/violence\\_injury\\_prevention/road\\_safety\\_status/2018/en/](https://www.who.int/violence_injury_prevention/road_safety_status/2018/en/)

### 1.3 Background

The use of motorcycles has increased greatly in Africa in recent years, both in urban and rural areas. In many African countries, in rural areas, motorcycles are often the most commonly found vehicle, and journeys that were previously made by foot or bicycle are now made using a motorcycle. This has been shown in previous research completed by ReCAP in Ghana, Kenya, Tanzania and Uganda, and is certainly the case in DRC. Additional research conducted by AfCAP and ReCAP has explored the benefits and challenges of this increase in motorcycle use in rural areas, as well as user needs, constraints and policy issues (Starkey, 2016). More information regarding this research can be found in the [ReCAP Rural Access Library](#).

Motorcycles are often used as taxis, with riders<sup>3</sup> charging a fare to carry passengers or goods. In rural areas, motorcycle taxis play a crucial role in connecting people to services and farms to markets. They provide employment, largely for young men who hire the motorcycles to operate as taxis on a temporary basis, and also a form of income for the motorcycles' owners.

Motorcycles often fill a gap in the provision of 'conventional' transport services such as minibuses and rural taxis, by providing transport directly from people's homes to main roads, village centres and essential services such as hospitals and markets. Supported by the now widespread use of mobile phones in rural Africa, motorcycle transport is very convenient, and as such is very popular with rural populations.

However, motorcycle transport in rural areas is certainly not without risk. Attempts by governments to regulate the use of motorcycle taxis have largely failed to keep pace with the rapid influx of motorcycles into the continent and the high demand for their services by populations.

### 1.4 Background to Motorcycles and Three-Wheelers in DRC

Uganda, which borders DRC, was the first country in East Africa in which motorcycles were used as taxis, first being noted in the 1980s. The now-ubiquitous term 'boda boda' (meaning 'border to border') was coined at the Uganda-Kenya border, where first bicycles and later motorcycles were used to transport people between the two border posts. It is likely that the use of motorcycle taxis came into DRC from the Uganda border.

While there is no verifiable data related to the number of registered motorcycles and motorised three wheelers in DRC, the vast majority of stakeholders recognised the crucial role that motorcycle-taxis are playing in filling the gap in conventional transport services. However, according to the WHO *Global Status Report on Road Safety (2018)*, there were an estimated 26,529 road traffic deaths in 2016 in DRC, of which 11.7% are estimated to be riders or passengers of motorcycles and motorised three wheelers.

During this study, riders often expressed their concern about the manner of enforcement related to motorcycles and motorised three wheelers, that they are treated badly by drivers of four-wheeled vehicles, and that there is a high risk of crashes.

Attempts to regulate the sector have been challenging and have recently resulted in the decentralisation of regulation and training accountability to individual provinces, according to interviews with stakeholders.

Despite the challenges facing the sector, motorcycle taxis remain an important means of transport. In some rural areas, they are the only means of motorised transport, even in emergencies.

### 1.5 Research Methodology

Three main activities were conducted for the DRC case study. These activities were:

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<sup>3</sup> Throughout this report, the term 'rider' is used to mean the driver or operator of a motorcycle or three-wheeler. The term rider does not include passengers.

- A review of motorcycle and three-wheeler taxi-related regulatory framework and enforcement methods
- A review of motorcycle and three-wheeler taxi rider training
- A survey of benefits and disbenefits of motorcycle and motorised three-wheeler taxis among riders and other users in rural areas
- Investigations to understand the barriers to motorcycle and three-wheeler taxi use faced by some members of the study communities.

The survey of benefits and disbenefits was carried out at six different sites in DRC within two provinces: Kinshasa Province and Tshopo Province. Kinshasa Province is located in the west of DRC near the Congolese border. The survey sites in Kinshasa Province were located within 120 km of Kinshasa city. Tshopo Province is located in the north-eastern/central area of DRC and survey sites were located within 90 km of Kisangani city. All sites were considered rural sites.

## 2 Research Findings in DRC

### 2.1 Stakeholder Mapping and Engagement

A stakeholder mapping exercise in DRC identified a total of 20 key stakeholders who have some responsibility or interest related to motorcycle and three-wheeler taxis in rural areas, representing government, private sector, and civil society. A full list of these stakeholders can be found in the project Inception Report<sup>4</sup>.

Since its introduction, the motorcycle sector has been considered an informal sector, with riders and motorcycles being largely unregulated, exhibiting poor riding habits, and being difficult to manage. Most riders have had no formal training and many operate without driving licences and do not wear helmets. There are a large number of crashes, especially in areas with higher volumes of traffic. Excessive alcohol consumption is also associated with motorcycle riders by some stakeholders.

Despite these challenges, motorcycles are generally considered a crucial mode of transport that offer the population increased opportunities for employment, increased access to social services between rural and peri-urban areas, medical centres, markets, for social trips, and other economic benefits. The majority of motorcycles are not owned by riders, rather they are rented from the owner by the rider.

According to La Commission Nationale de Prévention Routière (CNPR), or the Road Safety Commission, there were 12,554 reported crashes and 407 related deaths in Kinshasa city during 2018. Of these, 195 were reported as motorcyclists, including 40 deaths. This does not include any reported passengers or pedestrians. Based on the feedback collected during stakeholder meetings, the number of reported two and three wheeler crashes is likely to be gravely under-reported, as the police are generally only summoned when there is a death or serious injury caused by the crash. Data on rural motorcycle crashes does not appear to exist.

### 2.2 Review of motorcycle and three-wheeler taxi-related regulatory framework and enforcement methods

#### 2.2.1 Overview

The key legislation for motorcycles and three-wheelers is the '*Code de la Route*' or the Road Code, which is a national level law. Overall, all stakeholders referred to the '*Code de la Route*' as the central guidance document.

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<sup>4</sup> <http://www.research4cap.org/Library/WeijdeVanDeretal-2019-EnhancingUnderstandingSafeUseMotorcyclesThreeWheelersDRC-Inception-AfCAP-RAF2114A-190522.pdf>

The use of both motorcycles and three-wheelers to carry passengers and/or goods for a fare is permitted in DRC.

It should be noted that the regulatory framework and enforcement methods in DRC were developed at the central level and were initially implemented throughout the country. However, since the recent decentralisation in 2018<sup>5</sup>, provinces have been empowered to be responsible for the development and implementation of motorised transport legislation in line with the needs of their Province. Despite this fact, it was evident from discussions with government stakeholders that provinces remain reliant on the original laws established in Kinshasa Province, and particularly by Kinshasa City. The project team was not able to find any examples of where the legislation had actually been adapted at the Provincial level, although some stakeholders at the Provincial level suggested that this was in process.

It is important to note that verifying the level of adaptation and the progress of this in all provinces in DRC would only be possible by visiting all 26 provinces, which was beyond the scope of this project. Consequently policies, legislation and training material were primarily sourced from bodies localised in Kinshasa City. Equally, stakeholders responsible for the development and monitoring of these documents are also typically based in Kinshasa. While ministry representatives, policymakers, and enforcement agencies were identified in both research sites (Kinshasa Province and Tshopo Province), the majority of sources of information were referenced back to Kinshasa City. Furthermore, both provinces that were visited advised that they were currently updating their regulatory framework and enforcement methods.

### 2.2.2 Legislative Requirements and Processes

According to the Ville Province de Kinshasa's Bureau d'Engins et Cyclomoteurs, motorcycle owners/riders are required to have:

- Valid vehicle registration and licence plate
- Valid driving licence
- Bi-annual '*contrôle technique*' or mechanical inspection of vehicles
- Annual *vignette*
- Valid vehicle insurance
- Business licence/ Motorcycle taxi operator's licence (required for the carriage of people or goods on a commercial basis)

The cost of registering a motorcycle and obtaining a licence plate is USD 40<sup>6</sup>. The vignette, a motorcycle tax, is a recent introduction in Kinshasa Province and there are plans for a large sensitisation effort to implement the tax. The vignette, which is already in place for cars, has yet to be activated for motorcycles due to a lack of political will leading to a waived tax. The vignette will cost USD 21 for motorcycles and USD 25 for three-wheeled vehicles.

In Kinshasa Province, it is the responsibility of the state, specifically the '*Commission Nationale de Délivrance des Permis de Conduire*' (CONADEP), to issue driving licences. Obtaining a licence requires a medical vision test, a practical exam, and a theoretical exam. Ministry officials advise that the process to obtain these is relatively simple, however riders are often both unable to afford these services, or otherwise believe that these documents are not necessary.

The current driving licensing system has been suspended in DRC while it is under review. The new licensing system, once effected, will require riders to follow a course at a recognised driving school and pass theoretical and practical exams at the driving school. Upon passing the exam, the student will receive a certificate or '*brevette*' that they can present to the provincial Ministry of Transport and Communication in order to obtain a licence. However, even though the licensing system has formally been suspended, licences are still being issued according to a number of stakeholders.

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<sup>5</sup> Date for decentralisation in terms of legislation being clarified.

<sup>6</sup> DRC uses both CDF and USD.

Clear laws are in place in DRC regarding motorcycles in the ‘Code de la Route’; the requirements to wear helmets which are ‘attached’ (secured by a chin strap), carriage of passengers and goods, lighting and braking requirements, and mechanical inspection of vehicles (every 6 months for passenger carrying vehicles including motorcycles and three-wheelers).

### 2.2.3 Challenges Facing Enforcement

As part of this study, interviews at both the national and the local level revealed that there are numerous challenges facing the enforcement of motorcycle taxi-related legislation in DRC, both in rural and urban areas. A common discussion topic during interviews with stakeholders include the lack of:

- Knowledge and respect for the ‘Code de la Route’
- Concern about the high number of crashes
- Enforcement of laws pertaining to two and three wheelers
- Vehicle registration and taxation
- Driving licences
- Formal training
- Regulation of driving schools including the definition of a minimal curriculum.

Even when having the necessary documents in place, riders appear to be afraid of getting stopped by the Police and pressured into making payments. This was one of the reasons why riders lacked the motivation to acquire the necessary documents. Riders were also observed ignoring police stops and exhibiting aggressive riding that showed a lack of respect for police officers.

The police in Kisangani explained that motorcycles are currently not being controlled by traffic officers in terms of rider behaviour, as well as their ownership of the legally required documents and protective equipment. Furthermore, when the officers were carrying out their road traffic duties regarding regulating motorcycles, the police cited a poor ability to control riders. Riders often refused to stop for officers and showed poor behaviour towards the police, including threatening the officers by coming to the station ‘en masse’ to threaten officers.

#### Ministry of Transport and Communication Channels

*“The motorcycle is a means of transport used by all for many reasons. It is probably the most important means of transport here (in the City of Kinshasa) and in rural areas. But the Sector is not regulated. It is informal because one does not need a license to exploit it, one does not have to respect the laws because it is unregulated and unorganized, one does not need to be registered, and it is very easy to access this mode of transportation.”*

Mr. Bagula – Ministry of Transport and Communication Channels, Kinshasa

According to the Ministry of Transport and Communication, the motorcycle sector is not well regulated. Most riders do not have a licence, register their vehicles, or know the contents of the ‘Code de la Route’. There are difficulties in controlling whether riders have licences.

There are also reported incidences of corruption from the police. For example, when performing checks for driving licences, vehicle registration, or insurance, if the rider does not have the necessary documents the police are said to expect a payment of between 5,000 CDF to 25,000 CDF before they release the rider. L’Association Nationale des Initiateurs et Propriétaires de Taxis Motos du Congo (ANIPTMC) claims that as long as riders are expected to pay these ‘fees’, riders will not be able to pay the contribution to their association, the fee to obtain the necessary documents such as a licence and vehicle registration, nor training.

According to the Bureau d’Engins et Cyclomoteurs, it is difficult to ensure that activities such as registration and licensing are carried out. There are new motorcycles entering Kinshasa every day. The Bureau d’Engins et Cyclomoteurs believes that if there is increased enforcement of the law pertaining to riders then they will adhere more strictly to the requirements.

#### 2.2.4 Motorcycle Associations

Motorcycle associations were identified in each province of the project’s scope; all associations consulted accept riders and owners of both motorcycles and motorised three wheelers. Associations are generally based in urban centres, and extend their reach through sub-sections that are managed by committees. The structure of the association generally includes a president at national, provincial, territorial, and commune levels. Association staff work as volunteers and are reportedly not paid a salary. However, it seems they do receive some kind of compensation from the contributions that are paid by members.

Members are identified by a membership card and are expected to pay a regular fee. According to associations, however, only a minimal number of riders actively pay their membership fee.

The advantage of being a member of the association is having a large voice that represents and protects its members. Associations also support riders and their families if they are experiencing challenges with the police, have been involved in a crash resulting in damage, injury or death. During the survey and various interviews, both association leaders and members claimed that associations used to offer more benefits, such as insurance, but this has since ceased.

Motorcycle associations were found to be popular amongst riders. According to the survey of benefits and disbenefits, 62% of riders interviewed are a member of a motorcycle association. This is higher than the four other project countries. One association interviewed, l’ Association National des Initiateurs et Propriétaires des Taxi-Motos du Congo (ANIPTMC), claimed to have over 441,000 members in DRC, with both paying and non-paying members.

Associations and government representatives gave varied responses when questioned about their working relationships. While it seems associations are in contact with ministerial bodies, their collaboration is minimal. During an interview, one association President argued that he feels forgotten by the government in the sense that they do not receive any financial support, despite the fact that they are performing a public service. Another association claimed that they do not interact with the government and do not receive any support. The association advised that “they do not occupy [themselves] with politics, or vice versa”.

When associations were questioned on whether they would be available to support the training and sensitisation of motorcyclists, all responded positively if the necessary funding and support was provided. Ministerial and training bodies were in agreement that associations would have a positive influence in the availability of training. There are some challenges to implementing this in Kisangani, however, as the Motorcycle Association is currently suspended due to alleged irregularities.

### 2.3 Review of Motorcycle and Three-Wheeler Taxi Rider Training

There is currently no national training curriculum for riding. However, both the national Ministry of Transport and Communications and CNPR (*la Commission Nationale de Prévention Routière*/National Road Safety Commission) are in favour of the development of such a curriculum in order to improve the competence of riders and drivers.

There is however, a ‘*Remise a niveau*’, or upgrade handbook, issued in 2018 for drivers of vehicles and motorcycles in the Democratic Republic of Congo. This handbook was introduced to bring current licence holders up to a national minimum standard of road user knowledge. It has a module specific to motorcycle riding that contains clear advice and recommendations for riders to follow which goes beyond the basic law. For example, while confirming that a suitable helmet is required, the handbook goes on to recommend the wearing of gloves, jacket, trousers and boots with clear explanations as to why these should be worn. A training, or ‘*remise a niveau*’, is required for all current licence holders and is provided over a five day

period, with two hours of instruction per day. This training is given by the Ministry of Transport and Communication in order to improve the knowledge of riders and road safety. The *'remise a niveau'* is currently being offered for free, although a new licence costs USD 35. It is not provided by private training providers.

Government recognised driving schools must meet specific requirements for registration. These include:

- A physical address
- Grounds where the practical training can be conducted
- Office infrastructure including a desk for the director and secretary of the school
- A classroom with a board to write on
- A computer and projector
- Viable equipment such as a car/motorcycle
- Qualified personnel to give the training
- A bank account
- Proof of payment of taxes

In principle, the school is reviewed each year by their Provincial Ministry of Transport and Communication to ensure that they are still meeting minimum requirements. There are no registered training schools in the villages where the surveys were carried out. The nearest registered training schools are in the urban centres – Kinshasa and Kisangani. In Kisangani, there is only one training school. In Kinshasa, there are eight recognised driving schools. Of the four driving schools that were interviewed in Kinshasa Province, all explained that there was little or no demand for training from motorcyclists. The project team identified one formal training centre that offers motorcycle training in Kisangani, the *Institute National de Preparation Professionnelle* (INPP), who have branches in several provinces with the support of funding from JICA. While the INPP in Kisangani offers training to motorcycle riders in the Province, they advised that the demand for this type of training is extremely low. The Association of Motorcycles believed that this training is not affordable for motorcycle riders, which is offered at 110,000 CDF in Kisangani Province.

Nearly all stakeholders agreed that currently the vast majority of motorcycle riders are untrained. Even if a student attends a driving school and does not pass the exam, they are still able to obtain a licence as they do not need to provide the certificate of successfully completing training prior to sitting a basic driving test.

This project's survey of benefits and disbenefits concurred with this and found that none of the motorcycle taxi riders interviewed had undergone any formal training.

In Kisangani, the police have also been involved with the Ministry of Transport and Communication and Division of Transport regarding the introduction of training and sensitisation activities.

## 2.4 Opportunities

Both at a national and provincial level, the Ministry of Transport and Communication would like to harmonise training standards, and believes that the local context of DRC must be taken into account. Currently the Provincial Ministry of Transport in Kisangani is reviewing the regulations that are in place for all vehicle classes and has commissioned a study to help determine which changes are necessary. In Kinshasa the Provincial Ministry of Transport is also revising their regulatory framework and enforcement methods to improve the guidelines available to motorised transport. The Division of Transport (within the Ministry) in Kisangani is also planning to conduct some refresher training/seminars for motorcycle taxi riders but there is no clear timeframe for this activity.

The Motorcycle Association of Tshopo Province, the Ministry of Transport and Communication, and the Division of Transport each stated that they would consider working in collaboration with one another to increase sensitisation and training opportunities for riders was welcomed. The Motorcycle Association suspension must first be addressed before this can be introduced, however.

According to INPP in Kisangani, all actors (riders, Ministry of Transport and Communication, INPP) have different requirements that need to be addressed and better coordination. For example, consideration of

the cost of organising quality training, as well as creating demand for the training. There is also a need to focus on licences, registration of motorcycle taxis, and enforcement to ensure that riders have these documents. This will allow for the proper identification and safe operation of motorcycle taxis.

## 2.5 Survey of the Benefits and Disbenefits of Motorcycle and Three-Wheeler Taxis

A full understanding of the benefits and disbenefits of motorcycles and three-wheelers in rural areas is required to help decision-makers develop appropriate and effective policies and legislation that can realistically be implemented and enforced.

The findings of this activity will give decision-makers a balanced view of the benefits and disbenefits of motorcycles and three-wheelers in rural areas, from the point of view of those people who own, ride and use them, and will also give insights into non-user perspectives. It will thus add to the overall body of knowledge on the benefits and disbenefits of motorcycles and three-wheelers for rural access.

In DRC the survey was carried out in three different locations. Two locations were in Tshopo Province and one in Kinshasa Province. In each location two different villages were selected.

The survey comprised interviewing people from five different user groups:

1. Riders of motorcycles and three-wheelers
2. Passengers of motorcycle and three-wheeler taxis
3. Owners of motorcycle and three-wheeler taxis
4. Owners of freight, who use motorcycle and three-wheeler taxis to transport their goods
5. Non-users – people who very rarely or never use motorcycle and three-wheeler taxis

The questionnaires covered the following topics:

- Overall opinions
- Economics and finance
- Access and mobility
- Injuries and health issues
- Crime and personal security
- Access to services and protective equipment

### 2.5.1 Survey Locations

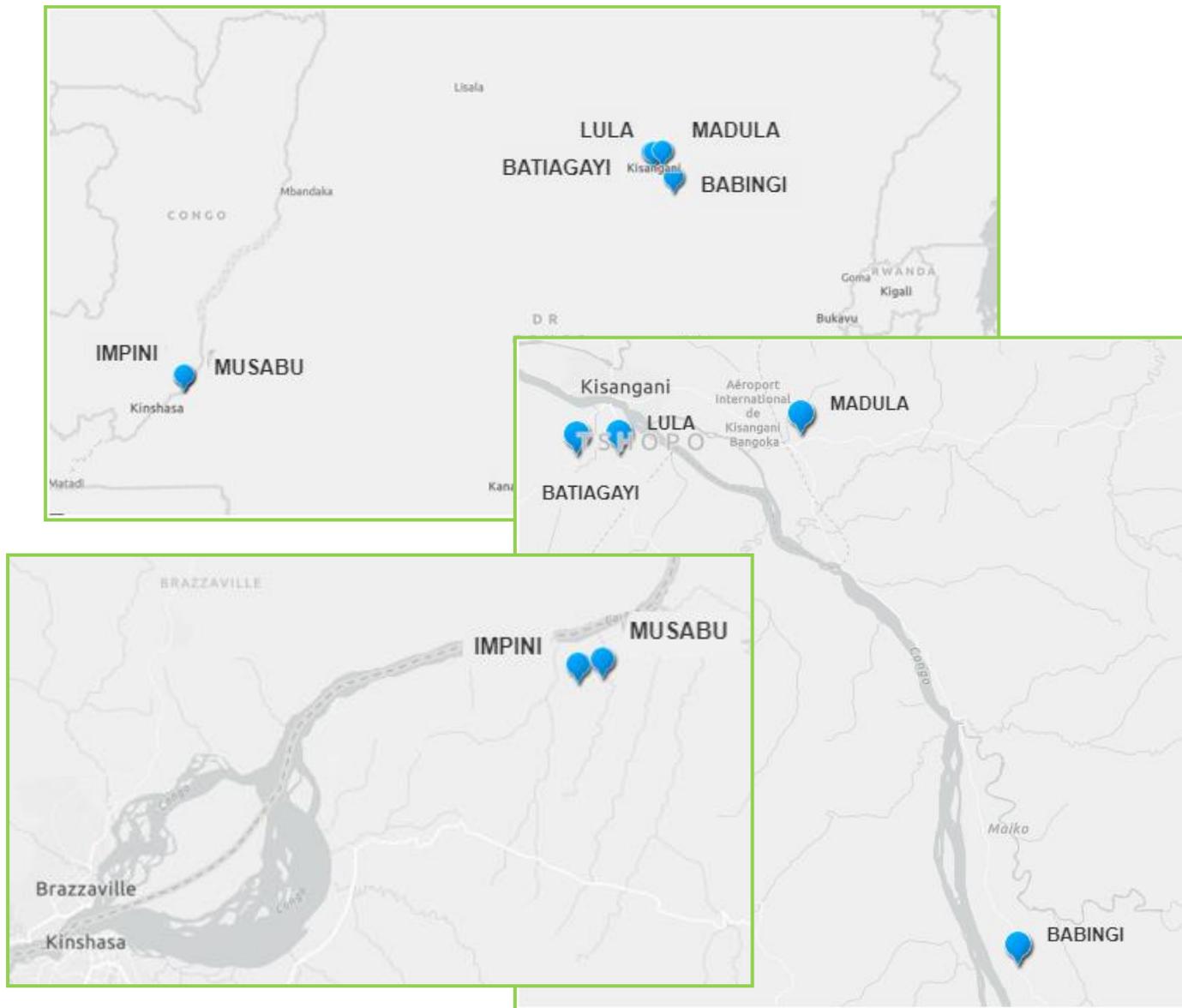
The survey of benefits and disbenefits was carried out in six different sites across DRC. Table 1 outlines the six settlements and more detailed information is provided in Tables 1 to 4.

**Table 1 Survey Settlements, DRC**

Location	Province	Health Zone	Village	# of interviewees
Rural, but 9km from Kisangani	Tshopo	Lubunga	Batiagayi	99
Rural, but 8km from Kisangani	Tshopo	Lubunga	Lula	
Rural - 90km from Kisangani	Tshopo	Wanie Rukula	Babingi	100
Rural - 23km from Kisangani	Tshopo	Wanie Rukula	Madula	
Rural – 105 km from Kinshasa city	Kinshasa	Maluku I	Impini	97
Rural – 120 km from Kinshasa city	Kinshasa	Maluku I	Musabu	

Information about the settlements was obtained through the Ministry of Health’s site profiles, interviews with local leaders, discussions with local people and general observation by the project team. This

information should be considered as a snapshot of what was found during the short visit to each settlement, rather than a comprehensive profile.

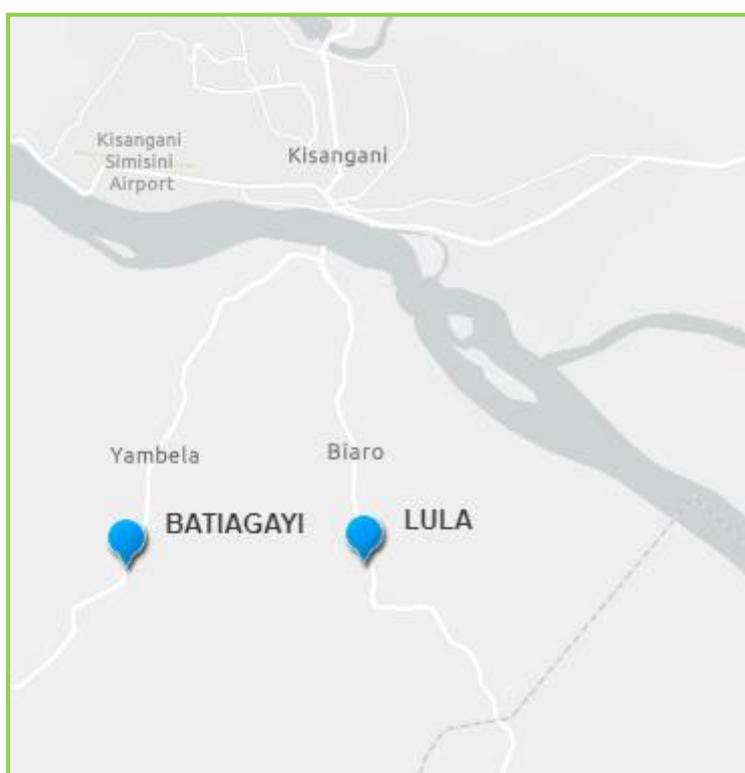


Source: ArcGIS

**Figure 2 Map of all survey sites in DRC: Babingi, Batiagayi, Impini, Lula, Madula, Musabu,**

**Table 2 Settlements in Lubunga, Tshopo Province**

	<b>Village: Batiagayi Health Zone: Lubunga, Osio Route: Opala</b>	<b>Village: Lula Health Zone: Lubunga, Ngene Ngene Route: Ubundu</b>
Location and access	<ul style="list-style-type: none"> <li>Latitude : 0.445833</li> <li>Longitude : 25.153333</li> <li>Altitude : 400.6m</li> <li>9km from district centre (Kisangani) along the Opala route</li> <li>9 km from nearest sealed road</li> <li>Less remote location (although to access Kisangani motorcycle and canoe must still be used)</li> </ul>	<ul style="list-style-type: none"> <li>Latitude : 0.446389</li> <li>Longitude : 25.193889</li> <li>Altitude : 413.1m</li> <li>8km from district centre (Kisangani) along the Ubundu route</li> <li>8 km from nearest sealed road</li> <li>The location is 8km from Kisangani but the road is in a total state of disrepair</li> </ul>
Transport options	<ul style="list-style-type: none"> <li>Motorcycles and bicycles are the main modes of transport</li> <li>Accessible all year round by motorcycles and bicycles</li> </ul>	<ul style="list-style-type: none"> <li>Motorcycles and bicycles are the predominant mode of transport. Bicycles also very common.</li> <li>Motorcycles and bicycles are used all year round</li> </ul>
Population	<ul style="list-style-type: none"> <li>Village of Batiagayi: 1,467people</li> <li>Ethnic groups include: Alengola, Bakumu, Bambole, Batopoke, Bangandu, Lokele, Bazimba and Batetela. The Walengola, Bakumu and Bambole people are indigenous to the area.</li> </ul>	<ul style="list-style-type: none"> <li>Village of Lula: 840 people</li> <li>Ethnic groups include: Baniamituku, Basoko, Bamongo, Walengola and Batopoke.</li> </ul>
Economy	<ul style="list-style-type: none"> <li>Dependent on agriculture and livestock. The most cultivated products are cassava, rice and squash. Young motorcyclists are in the minority as the majority of young people are farmers.</li> </ul>	<ul style="list-style-type: none"> <li>Agriculture dependent, mainly cassava and rice.</li> <li>Many young people are farmers, some young men work as motorcycle taxi riders</li> </ul>
Recent development	<ul style="list-style-type: none"> <li>The arrival of motorcycles, mobile phones, and the television channels 'canal plus' and 'startimes' are considered recent developments in the village. The motorcycle taxis have created employment for young people and facilitated mobility of the population.</li> </ul>	<ul style="list-style-type: none"> <li>The introduction of motorcycle taxis and mobile phone are considered as developments for the village. The motorcycle taxis have created employment for young people and facilitated mobility of the population.</li> </ul>
Local issues	<ul style="list-style-type: none"> <li>Land conflict</li> <li>Long distances to travel to draw water from undeveloped springs</li> <li>After the rain, large puddles form on the road (unsealed) which becomes slippery</li> </ul>	<ul style="list-style-type: none"> <li>Land conflict</li> <li>Long distances to travel to draw water from undeveloped springs</li> <li>After the rain, large puddles form on the road (unsealed) which becomes slippery</li> </ul>



Source: ArcGIS

Figure 3 Map of Batiagayi and Lula

Table 3 Settlements near Wanie Rukula, Tshopo Province

	Babingi Village	Madula Village
Location and access	<ul style="list-style-type: none"> <li>Latitude :-0.055833</li> <li>Longitude: 25.583611</li> <li>Altitude :431m</li> <li>32 km from BCZ (<i>Bureau Central de Zone de Sante</i>) of Wanie Rukula</li> <li>90 km from Kisangani</li> </ul>	<ul style="list-style-type: none"> <li>Latitude : 0.465833</li> <li>Longitude: 25.372222</li> <li>Altitude :431m</li> <li>35 km from BCZ (<i>Bureau Central de Zone de Sante</i>) of Wanie Rukula</li> <li>23 km from Kisangani</li> </ul>
Transport options	<ul style="list-style-type: none"> <li>Motorcycle taxis are the main means of transport used in the village</li> <li>Accessible all year round by motorcycle taxi</li> </ul>	<ul style="list-style-type: none"> <li>Motorcycles have become the main transport for the village as they are less expensive than other motorised transport</li> <li>Accessible all year round</li> </ul>
Population	<ul style="list-style-type: none"> <li>5,199 people</li> <li>Many young people</li> </ul>	<ul style="list-style-type: none"> <li>8,256 people</li> <li>Many young people</li> </ul>
Economy	<ul style="list-style-type: none"> <li>Agriculture dependent - mainly maize, cassava and rice</li> <li>Driving motorcycle taxis is the main income-generating activity for young men</li> </ul>	<ul style="list-style-type: none"> <li>Agriculture dependent - mainly maize and cassava</li> <li>Driving motorcycle taxis is the main income-generating activity for young men</li> </ul>
Recent development	<ul style="list-style-type: none"> <li>Motorcycle taxis have brought some mobility and economic activities</li> </ul>	<ul style="list-style-type: none"> <li>Motorcycle taxi riders are able to pay medical bills more easily than other social classes in the village</li> </ul>
Local issues	<ul style="list-style-type: none"> <li>No mobile phone network coverage</li> <li>No drinking water</li> <li>No irrigation system</li> </ul>	<ul style="list-style-type: none"> <li>No drinking water sources</li> </ul>

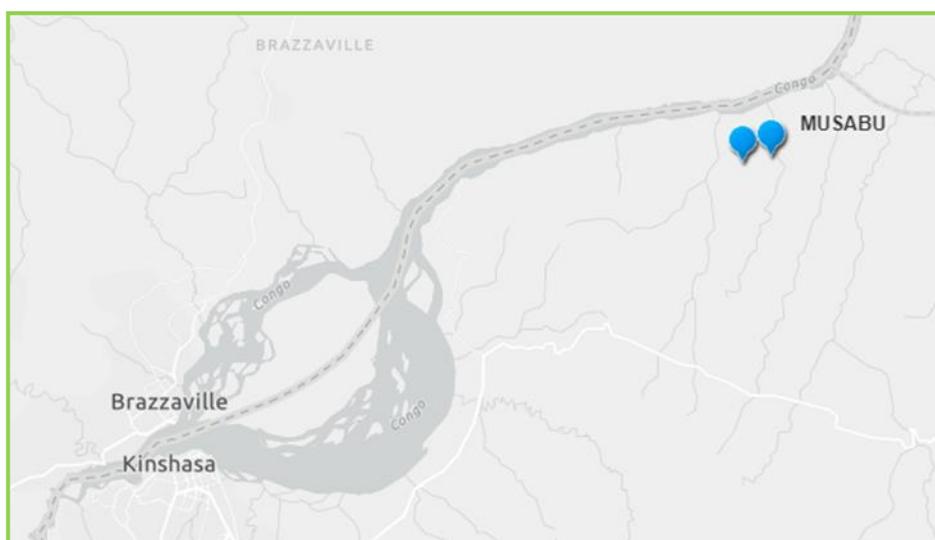


Source: ArcGIS

**Figure 4** Map of Madula and Babingi

**Table 4 Settlements in Maluku I, Kinshasa Province**

	<b>Impini Village</b>	<b>Musabu Village</b>
Location and access	<ul style="list-style-type: none"> <li>• Latitude :-4.038056</li> <li>• Longitude: 15.815</li> <li>• Altitude : 704.4m</li> <li>• 105 km from Kinshasa city centre</li> <li>• 25km from the main sealed road</li> <li>• 70km from the BCZS</li> <li>• 70km from the General Hospital</li> </ul>	<ul style="list-style-type: none"> <li>• Latitude : -4.033056</li> <li>• Longitude : 15.840833</li> <li>• Altitude : 665.1m</li> <li>• 120 km from Kinshasa city centre</li> <li>• 27 km from the main sealed road</li> <li>• 80km from the BCZS</li> <li>• 80km from the General Hospital</li> </ul>
Transport options	<ul style="list-style-type: none"> <li>• Access is difficult, especially during the rainy season</li> <li>• Motorcycles are predominant mode of transport</li> </ul>	<ul style="list-style-type: none"> <li>• Access is difficult, especially during the rainy season</li> <li>• Motorcycles are predominant mode of transport</li> <li>• There are also trucks which transport agricultural products</li> <li>• During the rainy season the village is inaccessible with an increase in the cost of transport</li> </ul>
Population	<ul style="list-style-type: none"> <li>• 1,243 people</li> <li>• More younger people than older people</li> <li>• Ethnic groups: The Tekes are dominant. Followed by the Yaka and Mbala</li> </ul>	<ul style="list-style-type: none"> <li>• 4,500 people approx.</li> <li>• Ethnic groups: The Yakas are dominant, followed by the Tekes and Mbala</li> </ul>
Economy	<ul style="list-style-type: none"> <li>• Agriculture dependent, mainly cassava</li> <li>• Other products are aubergines, chillies, tomatoes, okra and maize.</li> </ul>	<ul style="list-style-type: none"> <li>• Agriculture dependent, mainly cassava</li> <li>• Other products are aubergines, chillies, tomatoes, okra and maize.</li> </ul>
Recent development	<ul style="list-style-type: none"> <li>• The motorcycle taxis have helped to open up the village, allowing goods to be transported to the city for trade.</li> </ul>	<ul style="list-style-type: none"> <li>• The motorcycle taxis have helped the village to develop. There are now shops where you can find all the food found in Kinshasa. It also helped to open up the village.</li> </ul>
Local issues	<ul style="list-style-type: none"> <li>• No drinking water</li> <li>• No electricity</li> <li>• No schools</li> <li>• Not well-developed roads</li> </ul>	<ul style="list-style-type: none"> <li>• No drinking water</li> <li>• No electricity</li> <li>• Not well-developed roads</li> </ul>



Source: ArcGIS

Figure 5 Map of Impini and Maluku

### 2.5.2 Survey Respondents

A total of 296 people participated in the survey of benefits and disbenefits of motorcycle and three-wheeler taxis. Table 5 shows the breakdown of the survey respondents.

Table 5 Survey Respondents, DRC

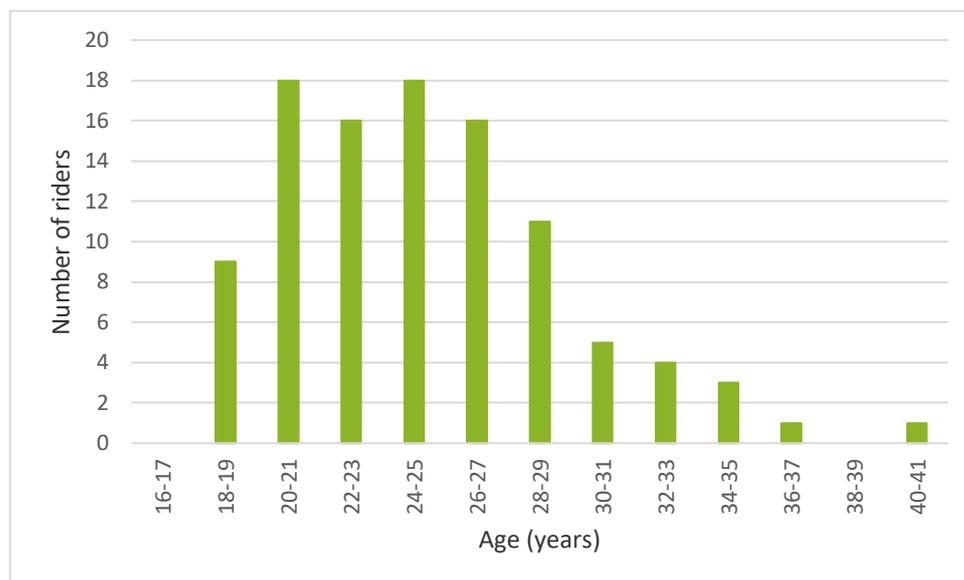
	Motorcycle taxis				Motorised three-wheeler taxis				Non-users
	Riders	Passengers	Vehicle owners	Freight owners	Riders	Passengers	Vehicle owners	Freight owners	
Maluku I	36	30	10	15	0	0	0	0	6
Lubunga	34	30	10	15	0	0	0	0	10
Wanie Rukula	35	30	10	15	0	0	0	0	10
Total number of respondents	105	90	30	45	0	0	0	0	26

A number of health facilities and hospitals were also visited to better understand the link between motorcycle use and the health of riders, passengers and other road users.

In general, the survey team was easily able to identify riders, passengers, owners and freight owners of motorcycle taxis. Non-users were significantly harder to identify. Whilst a few three-wheeled motorcycles were observed on the routes into Lubunga and Maluku, there was a minimal number of these vehicles in comparison to the number of motorcycles, which explains the absence of respondents in this category. This was especially so in rural areas, which is comparable to the other four project countries, except Ghana. Whilst this leaves the analysis of motorised three-wheelers impossible, the lack of uptake of motorised

three-wheelers in rural areas in comparison to motorcycles is an interesting finding in itself. Higher capital costs coupled with physical access challenges on rural tracks are possible reasons for this.

Figure 6 shows the age profile of the motorcycle taxi riders



**Figure 6 Age profile of riders interviewed, DRC**

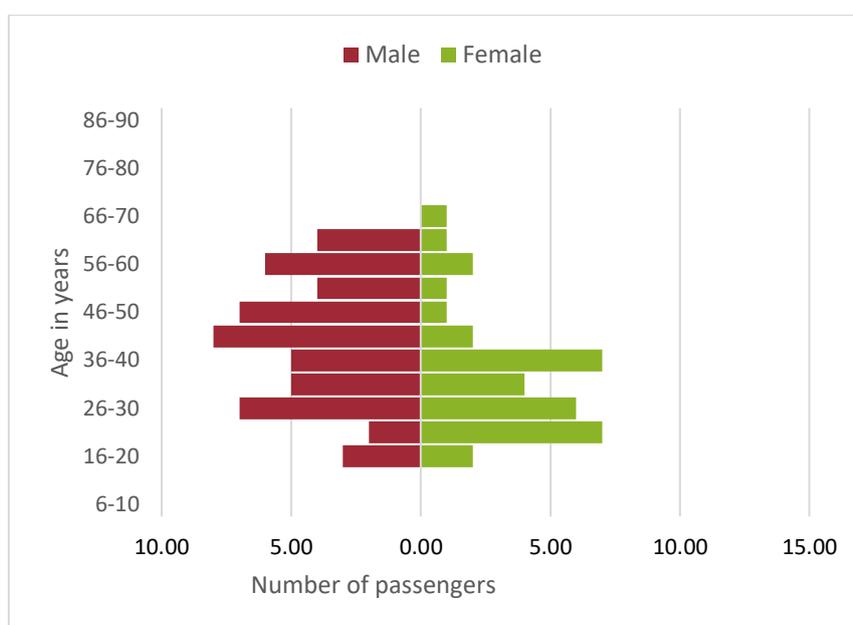
The chart shows that the vast majority of riders who were interviewed were between 20 and 30 years. Of the 105 riders interviewed, only one was female. Two riders had an observed form of disability of which one was a sight disability.

Eighty-seven percent of riders interviewed had completed secondary school or tertiary school/university degree. This indicates that riders have a higher level of education than any other groups of respondents interviewed. Riders in DRC appear to be more highly educated in DRC than other project countries, which is perhaps linked to the considerable difficulties young people in DRC are experiencing in finding employment.

Sixty-two percent of riders said they are a member of a motorcycle taxi association. However, there appears to be multiple definitions of “membership” and these riders may not all be fully paid-up members.

Sixty-eight percent of riders said they own a mobile phone in working order, and from these riders, 47% said that they have access to the internet on their phone.

Figure 7 shows the ages and gender balance of passengers.



**Figure 7 Age profile and gender of passengers interviewed, DRC**

The chart shows that there were more male passengers than female passengers. Fifty-nine percent of passengers interviewed were male, and 41% were female. Men of a wide range of ages used motorcycle taxis, whilst female passengers tended to be under 40. Four percent of passengers interviewed were observed as having a form of disability.

Thirty-three percent of passengers said that they owned a mobile phone in working order, with only 33% of these phones having access to the internet.

Eighty-eight percent of passengers said that the suitability of motorcycle taxis for rural passenger transport was either 'Good' or 'Excellent'. Nine percent defined the suitability as 'Bad'.

### 2.5.3 Access and mobility

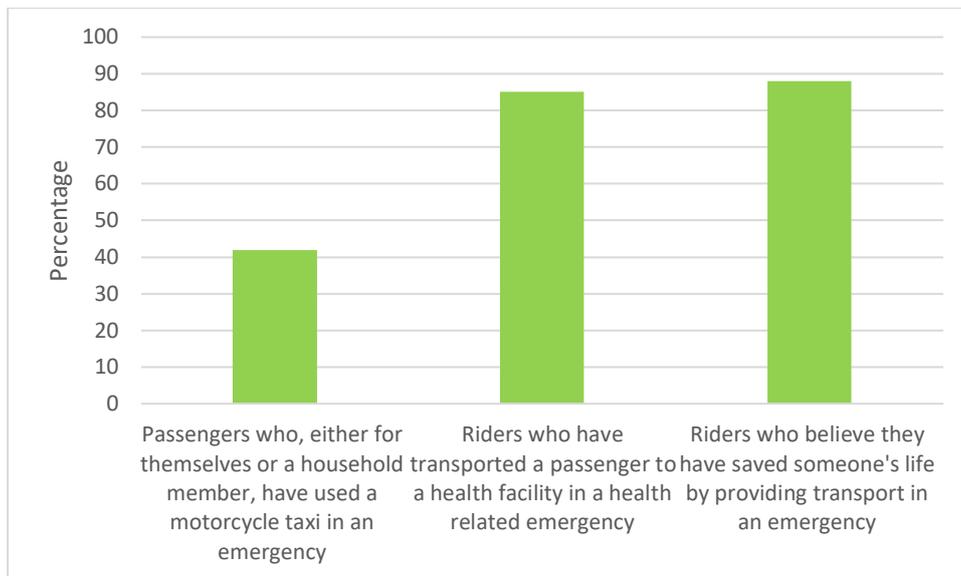
Sixty-two percent of passengers said that it was either 'very easy' or 'quite easy' to access a motorcycle taxi – the lowest of the five countries in the study. Passengers value riders who ride slowly and carefully (23%), who they know and trust (19%), who offer a cheap price (19%), whose vehicle is in good condition (14%) and who are older (8%). The data also shows that in many areas, motorcycles are simply the only type of motorised transport available.

Stopping the motorcycle/motorised three-wheeler taxi at the side of the road is the most common way for passengers to find a motorcycle taxi (67%), while 13% of passengers went to the nearest taxi stand/stage.

As in the first four study countries, motorcycle taxis are also used to access health facilities, with 89% of riders saying that they transport people to health facilities for non-emergency cases, and 47% of passengers interviewed saying they had used a motorcycle taxi for non-emergency access to a health facility.

Motorcycles are also used in emergencies. Eighty-eight percent of riders believe they have saved a life in providing transport in an emergency. The chart shows that 42% of passengers said either they or a member of their household had used a motorcycle taxi in an emergency. Eighty-five percent of riders reported that they have transported passengers to a health facility in an emergency. While this is rider perception and has not been clinically verified, 88% of riders believe they had saved a life by providing transport in an emergency.

Figure 8 shows the use of motorcycle taxis in an emergency in DRC.



**Figure 8 Use of motorcycle taxis in an emergency in DRC**

As is also the case in the other countries in this study, rural DRC has limited ambulance services, especially between the home and the first level health centre.

This is also often the case for transport to hospitals. According to hospital staff, one of the most common forms of transport to the hospital is motorcycle taxi. In Kisangani, for example, while many patients come from a distance of 15-18 km, the head of the trauma department explained that some also travel from 350 km away and that can take five days, by a number of different modes of transport, especially if the roads are in a poor condition. This is similar for the private tertiary hospital in Kisangani, who also receive the majority of their patients by motorcycle. This hospital explained that patients have no other choice of transport. Even the doctors use motorcycles to travel to work.

In more rural areas, it was explained by staff at the 'Centre de Sante' (primary health facilities) and 'Centre de Sante Base' that motorcycles were used to reach their facilities for non-urgent or minimally urgent visits, but were especially important if referral to hospital is necessary. Three-wheelers are often not accessible in rural areas.

One rural 'Centre de Sante' did explain that access to motorcycles locally could be limited during the day, when all motorcycles have gone to work in more urban/peri-urban areas. While this was an exceptional finding, it carried a great impact for the community, who often have to wait several hours to find a motorcycle for transport, also because there is no mobile phone reception in the village.

#### ***Transport for pregnant women***

A freight owner explained the experiences of pregnant women in his area:

*"Even pregnant women take a motorcycle to go to the hospital. Others give birth on the motorcycle because there is no other means of transport" Male, 61 years*

The survey also showed that motorcycle taxis are particularly important for female farmers and business people, with 69% of freight owners being female. The main items being transported by motorcycle taxi were agricultural produce (36%), items for sale in a shop (24%) and cooking fuel such as charcoal and firewood (16%).

Among the people who said that they do not use motorcycle taxis, 42% said that the main reason is because they are afraid of crashing, 12% said they are physically unable to use them, 12% said they are too expensive, and 12% said that they are afraid for their personal safety and security.

#### 2.5.4 Economics and Finance

Motorcycle taxis are used to generate income for both riders and owners in rural areas. The majority of riders (77%) reported that the ‘best thing about motorcycle taxis’ was earning money or generating employment.

The survey found that after paying all expenses related to operating the motorcycle taxi, the average rider’s profit for the last seven days – according to the riders themselves – was around CDF 46,309 (GBP 22.54). This compared to an average weekly profit/income of GBP 19.25 that the riders reported earning in their previous jobs. Using the latest Gross National Income figures from the World Bank (<https://data.worldbank.org/country/congo-dem-rep>), average yearly income in DRC in 2018 was around GBP 398, or GBP 7.65 per week – although it should be noted that this includes both rural and urban populations. At GBP 22.54 for riders, the survey found that their weekly profits were 295% of the national average.

Of the 62% of riders who said that they belonged to a motorcycle taxi association, the vast majority (almost 88%) paid a one-off joining fee averaging around GBP 9.72. Sixty-six percent of riders paid a monthly fee, averaging GBP 1.08. Members of associations were found to have earned higher average profits (after expenses) (11%) in the last seven days: around GBP 28.89, compared to non-members with an average profit in the last seven days of GBP 25.90<sup>7</sup>. This is shown in Figure 10.

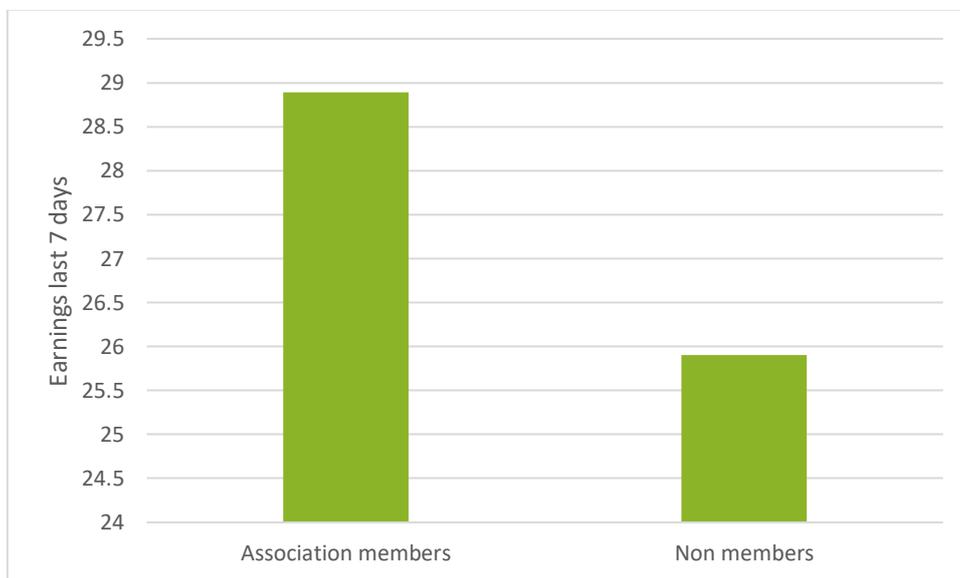


Figure 10 Rider profit in last seven days in DRC

Only 14% of motorcycle taxi riders said they owned the motorcycle that they ride. Fifty-six percent were owned by a business person (not a friend or family member), 19% were owned by a family member and the remainder were used by the rider through a friend or other arrangement.

<sup>7</sup> Please note data on associations is being double checked

The average purchase price of the motorcycle was around GBP 733, and 53% of riders who owned the vehicle themselves had bought it as a one-off, lump-sum purchase. For those riders who hired the motorcycle from a third party, the daily hire charge was GBP 8.92 and the weekly average hire charge was GBP 30.75. Some riders explained that they worked as motorcycle taxi rider three to four days in a week. Others may negotiate favourable rates if hiring a motorcycle weekly rather than daily.

Riders said they pay less in unofficial bribes and ‘dashes’ to police and/or other government officials (daily average of GBP 0.24) than they do in official fines (daily average of GBP 0.60). However, during the surveys there was some uncertainty from riders on the difference between an official and unofficial bribe.

For passengers and transporting freight, the average cost of a trip based on the distance is presented in Table 6. When asked about their perception of the affordability of motorcycles, 62% of passengers claimed that they could not afford a motorcycle without splitting the fare with other passengers.

**Table 6: Average cost of trip for passengers and freight owners**

Length of trip	Passengers		Freight owners	
	CDF	GBP	CDF	GBP
Less than 2 km	1500	0.73	500	0.245
2 to 4.9 km	4357.14	2.13	1000	0.49
5 to 9.9 km	1733.33	0.84	5142.85	2.52
10 to 19.9 km	2312.5	1.13	4250	2.08
20 km or more	5952.57	2.91	15412.93	7.55

During night-time travel, the average cost of a trip increases in comparison to when it is day-time. When asked for an example of fares during the day and at night, night-time fares showed an increase by over 188%, perhaps due to riders’ concerns about crime. While passengers claimed that the fare also increases during rainy conditions, the data was not conclusive about this.

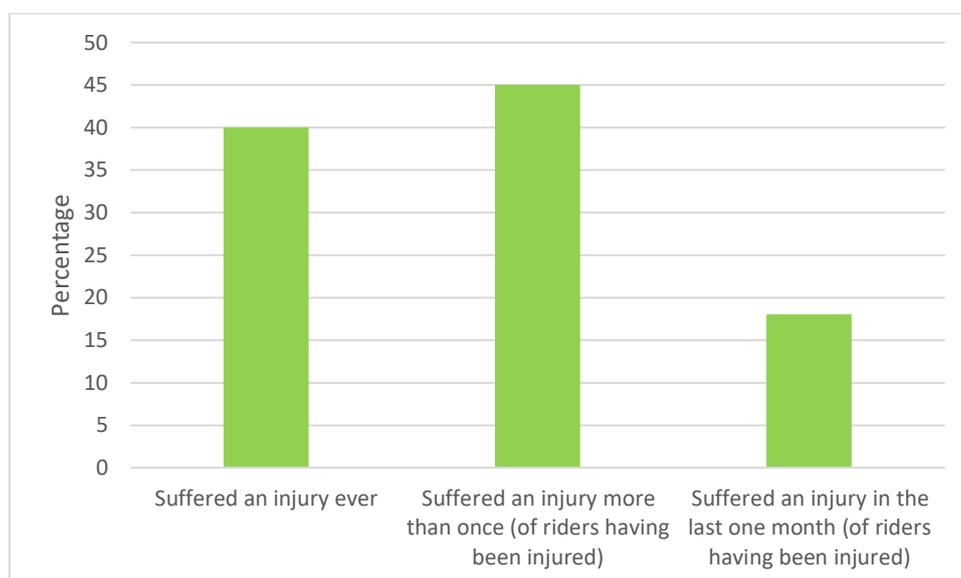
### 2.5.5 Injuries

Sixty-four percent of riders and 80% of passengers said that ‘the worst thing about motorcycle taxis’ was the risk of being a victim of a crash or injury.

In the study, data was collected only on injuries which respondents said occurred while they were using a motorcycle taxi on a rural road, and which resulted in them either losing money, requiring medical attention or affecting their family life.

Figure 11 shows the frequency of injuries suffered by motorcycle taxi riders.

The chart shows that 40% of motorcycle taxi riders said that they had suffered an injury ever. Of these, 45% had suffered more than one injury, and 18% had suffered an injury within the last one month.



**Figure 11 Frequency of motorcycle taxi rider injuries in DRC**

Four passengers had also suffered an injury in the last month related to riding a motorcycle taxi.

In the case of the worst injury suffered by riders within the last three years, 43% of riders said that the most severely injured part of their body was their legs, feet or pelvis and 34% was their head, face or neck. Fifty-two percent of all injuries were described by the rider as 'Moderate', with 31% as 'Severe' and 17% as 'Minor'.

Looking only at the worst injury suffered by riders within the last three years, 78% of riders missed at least one day of normal activity as a result of the injury. Of these, the average number of days of normal activity missed was 18, with the maximum stated days lost being 100.

According to a hospital in Kisangani, who receive most severe rural cases of injury, there is a high prevalence of motorcycle crash victims who suffer from head injuries, injuries to limbs, concussion and paralysis. Some of the patients die from their injuries, and the hospital regularly receives cases where there have been multiple casualties from one crash. Furthermore, another tertiary hospital expressed their opinion that the condition and design of the roads has contributed to the number of road crashes. Further challenges include a lack of wearing helmets, the time it takes from the actual crash to receiving medical care and that patients often can't afford to pay for their treatment.

In more rural areas where there is significantly less traffic, the '*Centre de Sante*' and '*Centre de Sante Base*' indicated that they see significantly fewer road crashes caused by motorcycles and few to no deaths. The severity of crashes was also deemed lower than in more urban areas.

Forty-three percent of riders said that they are still suffering some physical impact from the injury, 12% said they are still suffering some psychological impact, and 17% said that they are still suffering some economic impact.

Of the riders who had suffered an injury, 79% had been carrying a passenger at the time of the crash that resulted in the injury, this was the highest of the five project countries.

'Rider error' (41%) was stated as the most common type of incident. On average, riders advised they were travelling at 33 kph when the accident occurred. Thirty-three percent of riders said that they had been travelling at over 50 kph at the time of the crash, and seven percent had been travelling at over 80 kph.

Twenty-nine percent of riders said they were wearing a helmet at the time of the incident.

Seventeen percent of passengers reported that while travelling on a motorcycle taxi in a rural area they had suffered an injury that either resulted in them losing money, requiring medical attention or affecting their family life. This was the highest of the five countries involved in the study. Passengers judged 'rider error' (60%) to be the most common cause of crashes.

### 2.5.6 Health Issues

Forty-two percent of riders said that they have suffered from health issues that they attribute to riding a motorcycle, the highest of the five project countries. The most common cause of health issues was general pain (57%), often specified as back pain.

During interviews, health centres reported that they have seen an increased number of hernias in male patients who work as motorcycle 'taxi-men', inflamed testicles, as well as back pain and problems with their vision.

### 2.5.7 Crime and Personal Security

Twelve percent of riders said that they think the risk of being a victim of crime is the worst thing about motorcycle taxis.

Fifty-nine percent of riders said that they have been a victim of crime, verbal abuse or threats, which again is the highest of the five countries. Of those riders, 33% have been victims of either theft (without force), robbery (using force) or assault (without taking property). Eighty-four percent of riders had been victim of verbal abuse. Crimes took place most commonly during the day (75%), and money was the item most commonly stolen.

When questioned, 72% of passengers did not feel comfortable using a motorcycle taxi at night.

Ten percent of passengers said they had been a victim of crime, verbal abuse or threats while using a motorcycle taxi, which is the highest number of the five countries. The majority suffered from verbal abuse.

### 2.5.8 Access to Services and Protective Equipment

None of the riders interviewed had ever undertaken a formal training course: the vast majority of riders interviewed said they had either been taught by friends or family, or were self-taught. According to riders, the reasons for not following a formal training programme was due to there not being any offered in their area (54%), no perceived need for formal training (33%), lack of affordability (4%), and other reasons (9%). This, together with the lack of demand experienced at driving schools, shows that there needs to be concerted efforts to increase the demand for rider training, as well as more affordable access to riding courses.

Only 15% of riders interviewed had a driving licence, 12% had a motorcycle taxi operator's licence, or business licence, and only one percent (one rider) had insurance.

Only five percent of riders reported that they 'always' wear a helmet – the lowest of the five countries in this study. Only 52% of riders who wear a helmet said that they own their own helmet. Fifty-three percent of riders said they sometimes wear a helmet and 36% said they never wear a helmet. Riders said that helmets are uncomfortable, hot and restrict their hearing and vision. Fourteen percent of riders said there was no need to wear a helmet. Sixty-two percent of riders said that passengers never ask for a helmet. Ninety-two percent of passengers never wear a helmet, of which 80% reported that this was due to riders not providing a helmet for them.

According to staff at two hospitals in Kisangani, the lack of helmets significantly contributes to the problem and that this should be more strongly enforced.

## 2.6 Investigations into Barriers to Motorcycle Taxi Use

### 2.6.1 Interviewees

Fifty-four percent of the twenty-six non-users interviewed were observed by the interviewers as being below average in terms of relative wealth status in the area where they live, based on their home environment and clothing. Only one of the interviewees was disabled. Eight percent of the interviewees were aged over 70 years; 19% were below 30 years old; and the remainder were between 30 and 50 years old. Forty-two percent of non-users were female.

### 2.6.2 Barriers to Motorcycle Taxi Use

For individuals who were able-bodied but very rarely or never used motorcycle taxis, the most common constraint was fear of a crash (42%). All but one of these respondents had either been in or witnessed a motorcycle crash. Other listed constraints included motorcycle taxi fares being too expensive (12%), fear for personal security (12%) and physical inability to use a motorcycle taxi (12%).

Three people stated their physical ability as being one reason for not using motorcycle taxis, one specifying the condition of asthma.

Several respondents commented on the poor skills of some motorcycle taxi riders and the frequent crashes involving these motorcycles. Much of the criticism was aimed at younger riders who were said to lack both training and the maturity to act responsibly. However, several respondents believed they would take a motorcycle if they had to, especially to be fast.

**Quote: Concerns about younger, less-experienced riders**

*"The disadvantage is that we let 13 year olds be the drivers of motorcycles" Female, 46 years*

Lack of affordability was cited as a barrier to motorcycle taxi use for regular use, and also in some cases for emergencies.

**Quotes: Lack of affordability of motorcycle taxis**

*"Even in the case of an emergency I do not have the means to pay for a motorcycle."*  
Female, 42 years

*"I can use the bike in case of an emergency if another person pays the cost, but I cannot do it due to a lack of (financial) means" Female, 49 years*

### 2.6.3 Impact of not using motorcycle taxis on day-to-day lives and livelihoods

All of the non-users interviewed still recognised that motorcycle taxis have many benefits. The most common benefits mentioned include:

- Being a fast mode of transport
- Providing access where other vehicles do not
- Offering a means of doing business or earning money
- Generating employment

### 3 Key Questions for Dissemination Workshop

A stakeholder workshop is planned for the 17<sup>th</sup> October. The results of the research will be shared and a set of initial discussion questions have been prepared.

- 1) What can be done to ensure riders access adequate and affordable training in rural areas?
- 2) What barriers (i.e. price and complexity) do the licensing requirements impose on riders? How can these be overcome to improve the motivation of riders to acquire a licence and the legally required documentation?
- 3) What role can associations play in professionalising the sector? Can they help improve the level of training of riders? To improve the adherence to having the necessary documents?
- 4) What are the barriers to helmet use for riders and passengers and how can they be overcome?
- 5) What measures can be put in place to strengthen enforcement of the 'Code de la Route'?
- 6) How can different stakeholders work more effectively together? Consider ministerial bodies, enforcement agencies, associations, training centres, etc.
- 7) What pilot or small activity can be implemented in the next 6 months to begin improving the situation relating to the adherence to or enforcement of the 'Code de la Route'?

### 4 Conclusions

In DRC, motorcycle taxis are highly popular, highly available and profitable to the riders. Multiple groups appear to be benefitting from the existence of motorcycle taxis, including riders, passengers, freight owners and motorcycle owners. Overall, the opinion of motorcycle taxis is positive in the regard that they offer a fast and easily accessible mode of transport, access to areas otherwise not accessible by other vehicles, and a mode of employment and income. However, the research also showed that motorcycle taxis are a common cause of road crashes, few riders have a driving licence or insurance, and that several negative consequences are associated with the use of motorcycle taxis. It was also a widespread opinion that riders do not respect the 'Code de la Route'.

Overall, motorcycle and three-wheeler taxis bring considerable opportunity to DRC and appear to improve access for rural and peri-urban communities, as well as improved employment opportunities. However, deliberate and concerted efforts by a number of stakeholders are required to ensure motorcycle and three-wheeler taxi safety, the enforcement of regulation, rider training, and to address health concerns to maximise their impact and potential.

## 5 References

- Bishop, T and Amos, P, 2015. Opportunities to improve road safety through 'boda-boda' associations in Tanzania. Amend. Final Report. ReCAP Project Ref. TAN2015G / SC14069. Available at: <http://www.research4cap.org/Library/BishopAmos-Amend-Tanzania-2015-BodaAssocs+Final+Report-AFCAPTAN2015G-v150616.pdf>
- Starkey, 2016. The benefits and challenges of increasing motorcycle use for rural access. Research for Community Access Partnership (ReCAP), UK. Available at: [http://research4cap.org/Library/Starkey-ReCAPPMU\\_2016\\_BenefitsChallengesofIncreasingMotorcycleUseRuralAccess\\_iTRARR\\_160314.pdf](http://research4cap.org/Library/Starkey-ReCAPPMU_2016_BenefitsChallengesofIncreasingMotorcycleUseRuralAccess_iTRARR_160314.pdf)
- Transaid, 2014. An investigation into the role of transport operator associations in shaping Transport Services in Africa's rural areas. AFCAP Project Ref. AFCAP/GEN/127/A. Available at: <http://www.transaid.org/wp-content/uploads/2015/09/AFCAP-Transport-Operator-Associations-and-Rural-Access.pdf>
- WHO, 2014. Violence and Injury Prevention: The Facts. World Health Organization, Geneva, Switzerland. Available at: [http://www.who.int/violence\\_injury\\_prevention/media/news/2015/injury\\_violence\\_facts\\_2014/en/](http://www.who.int/violence_injury_prevention/media/news/2015/injury_violence_facts_2014/en/)
- WHO, 2015. Global Status Report on Road Safety, 2015. World Health Organization, Geneva, Switzerland. Available at: [http://www.who.int/violence\\_injury\\_prevention/road\\_safety\\_status/2015/en/](http://www.who.int/violence_injury_prevention/road_safety_status/2015/en/)