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## **Preparedness for A Motorcycle Accident in the Morogoro Region**

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### **Abstract**

The transportation sector has grown rapidly in developing countries. Motorcycle transportation is also growing faster than any other mode of transportation in rural and urban areas in Tanzania. As a result, the transportation of motorcycles has resulted in serious accidents over time. However, as the frequency of accidents increased, it was expected that public awareness of disaster risk reduction would increase. Unfortunately, the public is not prepared for dangers of any kind, including motorcycle accidents. The main objective of this document is to examine the risk management of motorcycle accidents in Morogoro to propose best practices to prepare the community for hazards. The methodology chosen is documentary analytical research as data on road accidents in Tanzania is widely available. If disaster preparedness is not managed effectively, motorcycle accidents will persist and have a greater negative impact on the community in the region. Findings suggest the public in the Morogoro area is unprepared for motorcycle accidents. In addition, all motorcycle accidents are related to human factors such as high speed, driving without a license, use of other devices while driving, poor use of helmets and poor infrastructure. According to Road Safety Department, SUMATRA, drivers and passengers must obey road traffic rules to avoid more disasters in our area avoid. Disaster Preparedness, Motorcycles, Accidents, Public and Riders

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**Key Words;** *Disaster, Preparedness, Motorcycles, Accident, public and Rider*

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### **Introduction**

Disasters are happening all over the world, whether natural, man-made or biological. Despite technological, economic, political and cultural developments, the world still cannot get rid of the catastrophe. As a human being, the most important task is to be prepared for all dangers. Prepared is defined as any pre-hazard activity to limit the negative impact on the public once the hazard occurs. Coppola (2015, p. 275) defines preparedness as actions taken in advance of a disaster to ensure an appropriate response to its impact and the mitigation and recovery from its consequences. Being prepared is half the battle. Prevention focuses on equipping people with the skills, knowledge and information needed to deal with the threat of strikes. Unprepared communities face more far-reaching negative consequences of the dangers than prepared communities. When the community is prepared, dealing with the other two phases of disaster management becomes even more difficult. The primary goal of preparedness is to educate the public on what to do during and after a hazard or disaster. Responding to a catastrophic event is notoriously complex, unique and confusing.

Coppola (2015) points out that there are two types of readiness; Government and public preparedness. Government readiness includes administration, emergency management, public health and other service organizations. It is a pure creation and application of the Emergency Operation Plan (EOP). Public preparedness measures are taken to enable ordinary citizens to deal with disasters/threats. The focus of public preparedness is on providing public information about hazards. This article focuses on both types of preparedness. Coppola (2015, p. 276) points to the section covered by governmental readiness, namely planning, exercise, training, equipment and regulatory powers. The planning aspect of preparedness has focused on creating an Emergency Response Plan (EOP), which is the guideline for dealing with disasters in a community. EOP is a government-produced document that can be found at all levels of government as a guide for disaster times. It identifies the people and entities involved in response activities and defines their responsibilities. The basic plan of the EOP has the following components: introduction, title, table of contents, purpose, location and assumptions, operational concept, organization and distribution of tasks, administration and logistics, and development planning and logistics. Does the local authority in the Morogoro region have a prepared document?

The next part of government preparation is to provide disaster managers with practical response activities. There are four practice methods: drilling, tabletop practice, functional practice, and complete practice (Coppola 2015, p. 285). The practice provides confidence in dealing with disasters, even when it is a time of stress, pressure and confusion. The exercise is primarily conducted for disaster managers. Do we have disaster managers dealing with accidents in Morogoro?

Another part of government preparation is training the groups that are at the forefront of disasters. It empowers police, firefighters and the general public in terms of health practice in dealing with the disaster. Other countries had developed disaster centres to train disaster managers and the public, such as the Asian Disaster Preparedness Center of Thailand, Ardhi University (Tanzania), Fire Services College (UK), Japan International

Cooperation Agency (Japan), New Zealand Department of Civil Defense (New Zealand), Disaster Management Institute of Southern Africa (South Africa) and Federal Emergency Management Agency. The training is vital as the community is challenged to manage the disaster for their families, friends and strangers. Training in this regard must be for motorcyclists and the general public. Without the training of motorcyclists, victims and accidents as a whole will continue to harm the public as the accident rate is high in the Morogoro region. Another component of government preparedness is the equipment, all of the physical resources necessary to save lives and property

The government must ensure the availability of this equipment in the event of a disaster. The equipment ranges from cars (ambulances to personal protective equipment (PPE)). This equipment aims to save lives. In the event of an accident with a motorcycle, the rescue service, first aid and the flow of information must be well coordinated. The last part of state readiness is a legal authority, the additional resource requirements, the change in the data of the hazards and the course of the disaster by the authority must be reported to the government, and the necessary data and information must be corrected and transmitted promptly.

Coppola (2015, p.297) claims that dealing with disasters can stretch resources to include more resources. The public role is added to fill the void while the disaster manager pushes his limits. The public is of the utmost importance to be well-informed about how to deal with the consequences of hazards. Road accidents happen all over the country, none of the traffic police is found in every part of the country except for a few areas, but almost everywhere in the country is open to the public. The people closest to the victims of danger are the citizens. Public training on readiness is the most important task of the agency. In this context, public preparedness against motorcycle accidents is of great importance, as motorcycle accidents are widespread in Tanzania and Morogoro. The focus of public preparedness is on educating the public about how to deal with disaster situations. In the context of the article, the public needs to be educated about motorcycle accidents in several ways, e.g. misfortune. The public needs to understand the importance of wearing a helmet, good road use, speed limit, instruction of motorcyclists, and responsibility for travel.

Another part of the state's preparation is the training of the groups that are on the front lines in the event of a disaster. It empowers police, firefighters and the general public in terms of public health practice in dealing with the disaster. Other countries had developed disaster centres to train disaster managers and the public such as the Asian Disaster Preparedness Center of Thailand, Ardhi University (Tanzania), FireServices College (UK), Japan International Cooperation Agency (Japan), New Zealand Department of Civil Defense (New Zealand), Disaster Management Institute of Southern Africa (South Africa) and Federal Emergency Management Agency. Training is vital as the community is challenged to navigate the disaster for their families, friends and strangers. Motorcyclists and the general public must be trained in this regard. Without the education of motorcyclists casualties and accidents overall will continue to hurt the public as the accident rate in the Morogoro region is high. Another component of government preparedness is equipment, all of the physical resources needed to save lives and property. The government must ensure the availability of this equipment in the event of a disaster. The equipment ranges from cars (ambulances) to personal protective equipment (PPE). This equipment is designed to save lives. In the event of an accident involving a motorcycle, rescue services, first aid and the flow of information must be well coordinated.

The last part of the state preparedness is a statutory authority, the additional resource requirements, the change in hazard data and disaster course by the authority must be reported to the government, and the necessary data and information must be corrected and transmitted promptly to fill the void while the disaster manager is pushed to the limit. The public is of the utmost importance to be well informed about how to deal with the consequences of hazards accessible to the public people closest to the victims of the hazard are the citizens. Public training on preparedness is the Agency's most important task. In this context, public precaution against motorcycle accidents is of great importance as motorcycle accidents are widespread in Tanzania and Morogoro. The focus of public preparedness is on educating the public about how to deal with disaster situations. In the context of the article, the public needs to be educated about motorcycle accidents in several ways, e.g. Bad luck. The public needs to understand the importance of wearing a helmet, good road use, speed limits, educating motorcyclists and taking responsibility for travel. Below is the status of the motorcycle accident in the Morogoro area.

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### **Status of Motorcycles Accident in Morongo and Tanzania**

The accident is classified as a man-made hazard/disaster. A being caused by human practices; preparations must be made to save lives. Accidents happen across the country and are one of the leading causes of death in Tanzania. According to the 2015 Crime and Road Accidents Report, 24% of deaths in Tanzania are caused by motorcycle accidents. It is one of the most common causes of road accidents in Tanzania. The Morogoro region is in the top 4 with 156 motorcycle accidents in 2015. The other top 3 are: Temeke (564), Ilala (450) and Ruvuma (182). According to the report, Morogoro has 86 crimes, including 1,714 serious traffic accidents, accounting for 19% of deaths and 37% of injuries. Quantitatively, the accident probability is 0.66 or 66 per cent. Mnzava (2013, p. 14) claims that motorcycle accidents are a major public health problem in developing countries, although they are neglected. It is estimated that more than 3,000 people die and 30,000 are injured every day, mostly in low- and middle-income countries. Morogoro Region is one of the five regions with the highest rate of road accidents in 2015. Seriously, measures must be taken to instil knowledge and skills in people. Table 1 below shows the extent of road accidents in Tanzania up to 2015. Table 1 shows that in 2014, Tanzania had a motorcycle accident involving 4,304 (46%) which killed 957 (10%) and killed 4016 (43%) injured. The trend is gradually decreasing from 4304 motorcycles in 2014 to 2749 in 2015, despite this decrease, the number of fatalities increased slightly from 957 in 2014 to 971 in 2015. Even today, motorcycle accidents threaten the lives of people in Tanzania. In the same reporting categories of accidents by vehicle, type indicates that in 2015 2,749 (33%) of all motorcycle accidents with 971 (27.5%) fatalities and 2,491 (26.4%) injuries occurred on a motorcycle, 3 of which were high-risk accidents and 2 of them died and 2 are injured.

Table 1. Number of Motorcycle Accidents, Death and injured person in Tanzania by 2015

	2014	%	2015	%
Motorcycles Accidents	4304	46	2749	44
Dead Persons	957	10	971	16
Injured Persons	4016	43	2491	40
	9277	100	6211	100

Table2. Morogoro Region, the Population distribution of by District 2012

	Population	%	Rural		Urban	
			Population	%	Population	%
Morogoro Region Population	2,218,492	100	1,582,434.00	71	636,058.00	29
Kilosa	438,175	19.8	311,940.00	19.7	126,229.00	19.8
Morogoro	286,248	12.9	273,213.00	17.3	13,017.00	2
Kilombero	407,880	18.4	309,426.00	19.6	98,454.00	15.5
Ulanga	265,203	12.0	231,295.00	14.6	33,908.00	5.3
Morogoro Municipal	315,866	14.2	10,026.00	0.6	305,840.00	48.1
Mvomero	312,109	14.1	276,447.00	17.5	35,662.00	5.6
Gairo	193,010	8.7	170,063.00	10.7	22,948.00	3.6

Source; NBS (2016), Morogoro region Profile

### Objective

The paper wants to discuss the willingness of the population against motorcycle accidents in the Morogoro region and show ways to improve disaster preparedness in the region

### Methods and materials used

The article is used to report data, written documents, research, newspapers, internet sources, and textbooks to discuss, analyze, and recommend practices in preparing people for motorcycle accidents in the Morogoro area. The extracted information is reliable because it is public and accessible to all other researchers.

### Location of Morogoro

Morogoro region is one of the 30 areas composing Tanzania. It lies between latitude 5°58" and 10° 0" South of the Equator and Longitude 35° 25" and 35° 30" to the East. It is neighbored by seven regions namely; Arusha and Tanga north, Coast east, Dodoma and Iringa West and Ruvuma and Lindi South. The region occupies a total land reaching 72,939 sq. Kilometres which is 8.2 per cent of the total area of Tanzania. It's the third-largest region in the country, behind Arusha and Tabora. It has seven districts, namely Kilosa, Morogoro rural, Kilombero, Ulanga, Morogoro municipal, Movomero and Gairo. The region has a total population of 2,218,492 (NBS,2016). The region has an uneven distribution of population, Kilosa is the district leading in terms of population with 438,175 (19.8%) people, followed by Kilombero with 407,880 (18.4%), while the newly established district of Gairo, is the least populated district with 193,010 (8.7%) People. As indicated in Table 2 below, 71 per cent of Morogoro residents live in Rural areas and 29 per cent live in urban areas.

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### ***Preparedness for Motorcycles accident in Morogoro region***

Preparedness has been defined as the way of empowering the public to deal with hazards and their effects. In this context, the accidents have to be dealt with by different stakeholders who use motorcycles in daily life. The following group must receive training, drills, education and general knowledge of the hazards;

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#### **Motorcycles drivers**

Preparation for this group must be done before the driver's license is issued. Most drivers these days ride a motorcycle without training or practice. It is estimated that 70% of motorcyclists in Morogoro Municipal have never received formal training (Mnzava, 2013, p. 47). As a result, few put on helmets, drive carelessly, fail to observe road safety, some are involved in some crimes (theft), and some have never received any technical driver training. This group has never received any preparatory training and skills. The government must train them in good driving habits and manners through the Vehicle and Road Safety Department before they can ride a motorcycle. The training or seminar must not only focus on technical training, but also other aspects such as the provision of first aid, awareness-raising and other psychological training

Meetings of the traffic safety department often have to be arranged accordingly. The Roads Office must register all motorcyclists and ensure that everyone has received training before riding a motorcycle. Also, the road safety department needs to coordinate radio, television and newspaper campaigns to prepare motorcyclists to develop understanding. The Roads Administration is required to hold a meeting with motorcyclists to involve them in formulating additional regulations for the operation of motorcycles in any part of the country. The 2015 report on the Africa Community Partnership shows that only 33% of motorcycle riders had a license in 2014. In the same report, 1.7 million were registered between May 1, 2003, and December 31, 2014, 55% of which were motorcycles. During this period, more than 900,000 motorcycles were registered and 77% of them are used as motorcycle taxis. Even in rural areas, it is said that most motorcyclists have never had any training and drive without a license. The preparation of motorcyclists for accidents has never been carried out in the Morogoro region. Accident prevention is missing for the motorcyclist.

Preparation for this group must be done before the driver's license is issued. Most riders today ride a motorcycle without any training or practice. It is estimated that 70% of motorcyclists in Morogoro Municipality have never received formal training (Mnzava, 2013, p. 47). As a result, few put on helmets, carelessly drive, do not pay attention to road safety, some are involved in some crimes (theft), and some have never received technical driver training. This group never received any preparatory training and skills. The government must train them in good driving habits and manners through the Department of Vehicle and Traffic Safety before they can ride a motorcycle. The training or seminar must not only focus on technical training, but also other aspects such as first aid, awareness raising and other psychological training. Traffic safety department meetings often need to be scheduled accordingly. The Roads Authority must register all motorcyclists and ensure that everyone has received training before riding a motorcycle. Also, the Traffic Safety Department must coordinate radio, television, and newspaper campaigns to prepare motorcyclists to develop understanding. The Road Administration is obliged to hold a meeting with motorcyclists to involve them in the formulation of additional regulations for the operation of motorcycles in all parts of the country. In the same report, 1.7 million were registered between May 1, 2003, and December 31, 2014, 55% of which were motorcycles, saying that most motorcyclists have never trained and never ridden without a license. The accident preparation of motorcyclists has never been carried out in the Morogoro region.

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#### **Motorcycles User.**

Motorcycles make it easy for students, schoolchildren, parents and business people to travel from A to B. It is one of the cheapest and fastest means of transport. None of these users is prepared for accidents involving motorcycles. Public education about the use of the motorcycle was never intensively pursued. None of the users understands the Highway Code and the good habit of putting on a helmet. As a result, some of the users have been robbed, injured, and killed, and some have lost part of their bodies. As long as none of the motorcyclists has received any pre-training, they are again the main victims of the motorcycle accident in Morogoro. The government must conduct public motorcycle crash preparedness training. Users are unaware of providing first aid to the victim. Users do not know their rights at the time of renting motorcycles. The user did not dare to drive the motorcyclist at normal speed at a speed that was palatable to him/her/the driver. The user must be well informed about how to prepare for a motorcycle accident, otherwise, the negative trend in the number of motorcycle accidents will continue.

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#### **Road Safety Department**

Mnzava (2013, p. 40) claims that 95% of motorcycle accidents in Morogoro Municipality are due to the irresponsibility and corruption of traffic officials. The safety department is responsible for providing drills, training, seminars, workshops and other programs aimed at providing the public with adequate knowledge on how to manage motorcycle accident hazards. As can be seen from the literature, the department has no strategic actions to empower both motorcyclists and users. Road safety regulations and accident prevention in the Morogoro region are hardly known to the general public. Oluwadiya et al. (2004) claim that the rate of helmet use is low in developing countries including Tanzania. The same trends were found in Lagos and Kampala (Andrews et al., 1999). Public awareness of road safety is also very low, with 97% of motorcycle accidents caused by poor safety compliance. As I said before, the public has never been ready to face and deal with the dangers related to the accident in the Morogoro region.

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## Causes of Motorcycles Accidents in Morogoro region

Mnzava (2013, p. 40) outlines the causes of motorcycle accidents in Morogoro; Failure to use the means of protection, disclosure of one's competence, use of the device while driving, strenuous work, poor safety compliance, motorcycle defects, poisoning, human carelessness, poor infrastructure, high speed, driving without formal training, traffic officials, corruption and substandard motorcycles from China imported. Odera (2009) asserts that motorcycle accidents are caused by the lack of a certified driver, speed and reckless driving, poor regulation and law enforcement, poor helmet use for the driver and his passengers, failure to use attention measures, and overloading. Jorgensen and Abane (1999) point out that an accident can be caused by: misjudgment, ignorance, incompetence, breaking the rules and negligence, all human errors. Motorcycle accidents in Morogoro are mainly caused by human error due to poor preparation of both the riders and their passengers

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## Discussion

The transport sector is growing fast in developing countries, especially the motorcycle tax. The growth of the sector, mainly related to motorization, causes more problems than before (Galukande et al, 2009). The risk of commuting by motorbike is high, but people prefer to use it. There are several reasons for this, such as B. cheap for low-income people, fast, can bypass traffic jams, drive with them and reach any part of human settlements. The public ride motorcycles to markets, schools, hospitals, churches, mosques, industries and farms. It is also used to transport different types of luggage from one place to another. Motorcycle accidents are now a major mode of transportation in both urban and rural areas. As reported, between May 1, 2003, and December 31, 2014, more than 900,000 motorcycles were registered in Tanzania

An average of 83,000 motorcycles were registered each year. Its rapidly growing mode of transportation continues to cause problems due to the unwillingness of the driver, passenger and the general public. Readiness to deal with the risk of accidents here in Morogoro region must include: driver's training on road safety rules to be coordinated by the Road Safety Department, driver's-technical training, all motorcyclists must have a drivers license after training, the Road Traffic Department must coordinate this exercise effectively, the passengers need public education on traffic safety rules, road crossing, pedestrian crossing, putting on the helmet, driver's control, safe driving, training on the first aid of the accident victim and how to avoid motorcycle accidents. All mentioned activities have to be coordinated by all stakeholders, transport, fire brigade, health sector, civil protection committees, police, NGOs, CBOs, schools, universities, colleges, SUMATRA and all relevant actors in the region

In addition, regular meetings of road safety, authorities and stakeholders must be observed. A motorcycle accident prevention campaign must be launched across the country, with live radio and television programs, films, plays, sports, curricula, seminars and other effective means to reach people. Ultimately, people must have proper risk awareness and preparation at all times in their lives. Mnzava (2013, p. 43), outlined the impact of motorcycle accidents in the Morogoro region; intellectual disability, reduced working capacity, marital separation, mental health problems, segregation and stigma, physical disability, permanent dependency, loss of social status, conflict between riders and owners of motorcycles and loss of life. In an unprepared community for motorcycle accidents, the costs outlined are calculated daily. Worse still, the economy of the region and the country as a whole will be affected as the active part of the population decreases over time as the accident rate increases. The family economy is said to continue to decline, driving families into extreme poverty. Mnzava (2013, p. 15) notes that motorcycle accidents mainly affect people aged between 15 and 44, who make up the labour force of the country and region as a whole. With the growing transport sector, the public needs to be engaged.

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## Conclusion

So far there has never been intensive preparation for motorcycle accidents in the Morogoro region. The public, drivers and traffic must work together to ensure that on-call knowledge, practices, skills and rules are known. Civil protection committees at all levels of government need to educate the public about disasters, with a particular focus on motorcycle accidents. Public education about disasters must be integrated into all levels of study, from elementary school to university, to raise public awareness. The road/village authority must also provide the on-call knowledge weekly, monthly or yearly, but the knowledge must be imparted. The government in the region needs to educate the public to develop a preventative culture rather than a curative one. This strengthens the sense of responsibility of many motorcyclists. This gives the passenger control over the driver in case of various bad behaviours like speeding, using the device while driving etc. As a region in Morogoro is available through local radio stations (MUM FM, IMAN MEDIA, Abood FM, SUA FM), the public must be informed of disasters through live reporting or recorded programs. If not, the public will continue to choke on motorcycle accidents in the area.

*The authors confirm that the data supporting the findings of this study are available within the article [and/or] its supplementary material*

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