Project Information Document/ Identification/Concept Stage (PID)

Concept Stage | Date Prepared/Updated: 28-Apr-2021 | Report No: PIDC234749

BASIC INFORMATION

A. Basic Project Data

Project ID	Parent Project ID (if any)	Environmental and Social Risk Classification	Project Name
P175400		Low	Motorcycle Safety by Design in African Countries: Effects of Built infrastructure on the Frequency of Motorcycle Collisions
Region	**Country**	**Date PID Prepared**	**Estimated Date of Approval**
OTHER	World	28-Apr-2021	
Financing Instrument	**Borrower(s)**	**Implementing Agency**	
Investment Project Financing	World Resources Institute (WRI)	World Resources Institute (WRI)	

PROJECT FINANCING DATA (US$, Millions)

SUMMARY

Total Project Cost	0.20
Total Financing	0.20
Financing Gap	0.00

DETAILS

Non-World Bank Group Financing

Trust Funds	0.20
Global Road Safety Program	0.20

B. Introduction and Context

Country Context

In the region, urban areas specifically are facing an exponential population growth because of migration due to the higher availability of jobs and substantially higher per capita income. Most of the urban areas in the target countries have an underfunded public transport sector. This low funding has resulted in an inadequate and low-quality public transportation network. Furthermore, insufficient and unsafe infrastructure has

resulted in rising numbers of people moving away from using active modes of transportation. This has further enhanced dependence on self-owned motorcycles and motorcycle taxies. Besides driving economic growth by providing low-cost access to employment, education, and healthcare, motorcycles in Sub-Saharan Africa are also increasingly being used for the delivery of essential goods and services.

The soaring numbers of motorcycles are resulting in a higher number of motorcycle crashes and more fatalities not only for both the motorcyclist and pillion passenger but also for pedestrians. The unprecedented growth in fatalities and injuries is due to a lack of safer road infrastructure for motorcyclists and other road users, along with inadequate road behavior awareness.

For example, Kenya has recorded a 28.4% growth in fatalities and 47.2% higher serious injuries to motorcyclists in the beginning of 2020, in comparison with a corresponding period in 2019. Similar conditions prevail in the other countries being considered for this study. We also know that crashes involving PTWs (Powered Two Wheelers) are substantially underreported, as stated by transport ministries in Ghana and Uganda. According to UNECE, traffic fatalities in Uganda were 25.9% higher in 2016 than a decade ago. WHO estimated the crash fatality rate of Uganda to be 29 per 100,000 population in 2018- the highest in East Africa. The unprecedented growth in fatalities and injuries is due to lack of safer road infrastructure for motorcyclists and other road users, along with inadequate road behavior awareness.

Stemming further growth of severe crashes involving motorcycles, and then lowering crash rates will be a significant challenge in the region and this effort is hampered by significant gaps in knowledge and data.

Sectoral and Institutional Context

Global Road Safety Facility competitively awarded through the Call for Proposals FY20 the proposed study which aims to reduce road traffic deaths and serious injuries through improvements in the knowledge of the project stakeholders and the standard of road safety engineering.

This small research and capacity building (ASA/study-type) activity will be carried out by World Resources Institute (WRI) with partner organization - Collaborative Sciences Center for Road Safety (CSCRS).

The World Resources Institute (WRI) is a global research non-profit organization that is working to save lives using a robust, multidisciplinary approach to prevent unnecessary deaths and suffering. Collaborative Sciences Center for Road Safety (CSCRS) is a National University Transportation Center supporting the FAST Act research priority of promoting safety.

Relationship to CPF

This is a small grant funded activity supporting road safety in African context and as such is in line with CPFs of all African countries.

C. Project Development Objective(s)

Proposed Development Objective(s)

The overall objective is to provide evidence-based recommendations for improving roadway infrastructure design and operations in cities in LMICs in Sub-Saharan Africa to better address safety of motorcycles.

Key Results

- The paper will provide a replicable methodology to study the relationship between infrastructure and motorcycle safety in other African countries.
- The results will directly assist the target audience in improving motorcycle safety, while simultaneously accounting for the safety of other road users based on Safe System principles, through informed actions and empirically proven solutions. The intended audience for this publication includes municipal transport engineers, urban planners and public policy professionals at all levels of government, and Development Agencies/Banks involved in decision making. In short, the audience will be the one who can directly impact the design and operation of roadway infrastructure design in areas undergoing urbanization.

D. Preliminary Description

Activities/Components

The research project will involve two parts.

1. The first part will involve a literature review of previous research on motorcycle safety in low- and middle-income countries focusing on the region, and an overview of how recent policies and government actions in the selected region have affected motorcycles. We will aim to find data from 2-3 cities.

2. The second part will investigate the link between the variation in road infrastructure and the occurrence of motorcycle crashes. Specifically sought will be geocoded crash data collected for a period of at least three years to account for possible regression-to-the-mean bias in our crash estimates. These will be obtained from national/state/city transport department or private fleet operators. These data will be combined with built environment data will be retrieved from a combination of sources (including city agencies and Google Street View tools for retrieving street geometry attributes). The resulting analysis will aim to be conducted for two

selected cities (Accra and Nairobi), with a focus on the city with the strongest available datasets- particularly good quality geocoded crash data. If data from one of the cities is not of sufficient quality a reduced scope of analysis will be carried out.

If data is unavailable or of poor quality, model specifications from those areas where we have adequate crash data could be used to derive estimates of crashes for those areas that do not have adequate data.

The databases will be analyzed to identify relationships between motorcycle crash incidence and the built environment. This analysis will include the development of crash concentration maps and motorcycle crash zones, both in terms of total crashes and KSI crashes. Our analysis will be carried out at the corridor level in order to understand how the built environment influences crash frequency. This is based on similar previous work we have carried out in Latin America and data availability

The effects of elements like lane widths, the number of lanes, proximity to midblock and intersections, pavement condition, median and pavement types, and speed calming measures will be specifically examined. This part will also include a comparative analysis of different motorcycle safety solutions in the region. On completion of the project the possibility of developing peer reviewed research papers or a design guide. of road safety data across cities being studied will be explored. A final report will document these efforts and will provide concrete policy and design recommendations for scaling the implementation of effective motorcycle safety measures in Sub-Saharan African countries.

Environmental and Social Standards Relevance

E. Relevant Standards

ESS Standards		Relevance
ESS 1	Assessment and Management of Environmental and Social Risks and Impacts	Relevant
ESS 10	Stakeholder Engagement and Information Disclosure	Relevant
ESS 2	Labor and Working Conditions	Relevant
ESS 3	Resource Efficiency and Pollution Prevention and Management	Not Currently Relevant
ESS 4	Community Health and Safety	Relevant
ESS 5	Land Acquisition, Restrictions on Land Use and Involuntary Resettlement	Not Currently Relevant
ESS 6	Biodiversity Conservation and Sustainable Management of Living Natural Resources	Not Currently Relevant
ESS 7	Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities	Relevant

ESS 8	Cultural Heritage	Not Currently Relevant
ESS 9	Financial Intermediaries	Not Currently Relevant

Legal Operational Policies

Safeguard Policies	Triggered	Explanation (Optional)
Projects on International Waterways OP 7.50	No	
Projects in Disputed Areas OP 7.60	No	

Summary of Screening of Environmental and Social Risks and Impacts

The environmental and social risks are assessed to be low for this project. The potential environmental and social risks and impacts are likely to be negligible, because the project activities will focus on research and dissemination of results and there will be no civil works. The project will have positive environmental and social impacts that will include: (i) suggesting recommendations to policy makers that will contribute to improved road safety and road safety infrastructure, (ii) use of appropriate safety gear for motorcycle users in the region, and (iii) contributing to knowledge around safe systems for motorcycle users which is a key means of transport for many people in sub-Saharan Africa.

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