



**FLOOD RISK AND DISASTER MANAGEMENT IN
FREETOWN, SIERRA LEONE: OPTION FOR
COMMUNITY FLOOD DISASTER MANAGEMENT**

BY

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ABSTRACT

Flood disaster has been a major issue affecting many coastal communities globally including Freetown, the seaside capital city of Sierra Leone. The need for housing due to significant in-migration resulted to pressure in the urban space dominated by hills overlooking the city which deforestation, stone mining and construction of hillside settlements are increasing the rate of runoffs during rainy seasons. The study identified the absence of Flood Preparedness Framework and lack of community participation as the reasons why resilience efforts to mitigate against floods have not reduced the economic, physical and environmental damages caused by floods in the past. Based on field work, observation and interviews carried out for this study on the strategy on how to improve flood resilience measures in Freetown, the study carried out the following investigation; 1) assessment of the levels of flood vulnerability and extent of flood damages experienced by these communities; 2) investigation on the levels of community participation performance in their preparedness efforts to reduce the impact of floods and 3) assessment of the flood resilience measures of the flood affected communities. Early preparedness measures through active community participation will help improve flood resilience measures in Freetown. This study also recommends a long-term policy to tackle floods through the provision of affordable housing for the urban poor to relocate them into safer zones free from the risk of flooding. This will protect urban sprawl, protect “Environmentally Sensitive Areas” (ESAs) and reduce the risks of flooding in Freetown.

خلاصة البحث

كانت كارثة الفيضانات من القضايا الرئيسة التي أثرت على العديد من المجتمعات الساحلية على الصعيد العالمي، وتشهد عاصمة سيراليون. وأدت الحاجة إلى المساكن إلى الضغط في الحيز الحضري الذي تهيمن عليه التلال المطللة على المدينة التي تؤدي إلى إزالة الأحراج وتعدين الحجارة وبناء مستوطنات التلال إلى زيادة معدل الجريان السطحي خلال موسم الأمطار الذي يترجم في النهاية إلى الفيضانات. وقد حددت الدراسة عدم وجود إطار التأهب للفيضانات ونقص المشاركة المجتمعية كأسباب محدّدت جهود المرونة للتخفيف من الفيضانات الأضرار الاقتصادية والفيزيائية والبيئية التي سببتها الفيضانات في الماضي. واستنادا إلى العمل الميداني والملاحظة والمقابلات التي أجريت لهذه الدراسة بشأن الاستراتيجية المتعلقة بكيفية تحسين تدابير مقاومة الفيضانات في فريتاون، فأجريت الدراسة لتحقيق التالي؛ (١). تقييم مستويات التعرض للفيضانات ومدى الأضرار الناجمة عن الفيضانات التي تعاني منها هذه المجتمعات. (٢). التحقيق في مستويات المشاركة المجتمعية في جهود التأهب للحد من تأثير الفيضانات. (٣). تقييم تدابير مقاومة الفيضانات للمجتمعات المتضررة من الفيضانات. وستساعد تدابير التأهب السريع من خلال المشاركة المجتمعية الفعالة في تحسين تدابير مواجهة الفيضانات في فريتاون. كما توصي هذه الدراسة بسياسة طويلة الأجل لمعالجة الفيضانات من خلال توفير الإسكان الميسور للفقراء في المناطق الحضرية لنقلهم إلى مناطق أكثر أماناً خالية من مخاطر الفيضانات. وهذا من شأنه حماية الامتداد العمراني وحماية "المناطق الحساسة بيئياً (ESAs)" والحد من مخاطر الفيضانات في فريتاون.

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DECLARATION

I hereby declare that this thesis is the result of my own investigations, except where otherwise stated. I also declare that it has not been previously or concurrently submitted for any other degrees at IIUM or other institutions.

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I dedicate this thesis to:

My late grandfather (Chernor Bhoje Gajikoh) grandmothers; Haja Isatu Gajikoh (Neneh Sougeh) and Fatmata Jarai Gajikoh

my Father Alhaji Mohamed Salieu Gajikoh

my Beloved Mothers Haja Mariama Juldeh Gajikoh, Haja Isatu Bailor Gajikoh, and Fatmata Hotcha Gajikoh (late)

Uncles; Alhaji Abdulai Gajikoh and Alhaji Ibrahim Gajikoh

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LIST OF ABBREVIATIONS

Asia Disaster Preparedness Center (ADPC)
Central Business District (CBD)
Church Missionary Society (CMS)
College of Medicine and Allied Health Sciences (COMAHS)
Community Based Disaster Management (CBDM)
Community Based Organizations (CBO).
Community Bottom-Up Approach (CB-UA)
Community Disaster Management Approach (CDMA)
Companhia de Desenvolvimento Habitacional e Urbano (- Department of Housing and Urban Development of the state of Sao Paulo) (CONU)
Department for Environment, Food and Rural Affairs (DEFRA)
Disaster Risk Management (DRM)
Drainage and Irrigation Department (DID)
Environmental Impact Assessment (EIA)
Environmental Protection Agency (EPA)
Environmentally Sensitive Areas (ESAs)
Flood Disaster Management (FDM)
Flood Disaster Management (FDM)
Flood Emergency Response (FER)
Flood Preparedness Response Measures (FPRM)
Focus Group Discussion (FGD)
Fourah Bay College (FBC)
Freetown City Council (FCC)
Geographic Information System (GIS)
Government Local Authorities (GLA)
Government Top-Down Approach (GT-DA)
High Risk Zones (HRZ)
Housing Development Board (HDB)
Institute of Public Administration and Management (IPAM)
Integrated Community Based Disaster Management (ICBDM)
Knowledge Awareness and Practices (K.A.P)
Kyoto Center for Disaster Management Studies (KCDMS)
Low Risk Zones (LRZ)
Mean Sea Level (MSL).
Medium Risk Zones (MRZ)
Ministries, Departments and Agencies (MDAs)
Ministry of Health and Sanitation (MoHS)
Ministry of Lands Country Planning and the Environment (MLCPE).
Ministry of Works, Housing and Infrastructure (MWHI)
National Fire Force (NFF)
National Fire Force (NFF)
Non-Governmental Organization (NGOs)
Office of National Security (ONS)
Prince Of Wales (POW)

Republic of Sierra Leone Armed Forces (RSLAF)
Sierra Leone Meteorological Department (SLMD).
Sierra Leone Police (SLP)
Sierra Leone Red Cross Society (SLRCS)
United Nations (UN)
United Nations Environment Protection (UNEP)
United Nations Human Settlements Program (UN-HABITAT)
United Nations Office on Drugs and Crime (UNODC)
United Nations Water Institute (UNESCO-IHE)
United Nations Convention Against Corruption (UNCAC)
United States Dollar (USD)
Urban and Regional Planning (URP)
World Health Organization (WHO)

CHAPTER ONE

INTRODUCTION

1.1 INTRODUCTION

Flood disaster management studies is shifting from the traditional approach of emergency flood response approach to a more community-oriented approach to improve flood resilience measures. Flood disaster management and resilience measures adopted in the previous years within the municipality of Freetown did not reduce the economic and physical damages during flood disasters. This chapter discusses the background of the study with some evidence on the economic and physical damages during previous flood disasters and their severity. It is anticipated that, a shift from the traditional approach of emergency flood response to the adoption of the community disaster management approach through community participation and preparedness efforts will help improve flood resilience measures in Freetown. This chapter further discusses the significance of the study to; 1. The local communities affected, 2. The local authorities; 3. The government of Sierra Leone and; 4. Towards town planning generally.

1.2 BACKGROUND OF THE STUDY

Seasonal floods affect Freetown the capital city of Sierra Leone every year usually during the rainy season and the most vulnerable communities to the risk of flooding located along the coast. Freetown serves as both the administrative and the business capital of Sierra Leone. The Freetown city was initially planned for a population size of 500,000 people which used to be the size of the city's population before the year 2000. This number increased dramatically to a population size of nearly 1, 500,000 because