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REGENERATION OF WATERFRONT SETTLEMENTS IN METROPOLITAN LAGOS

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ABSTRACT----------

Waterfronts are places where rich and influential people in the society own houses or live in them. They are desirable in many developed nations where people go to relax due to their natural beauty. In developed nations, waterfronts are continuously being regenerated to meet the needs of the 21st century and having sustainability in mind. This study aimed at challenges and prospects of regeneration of the waterfront settlements in Lagos with a view to proffering solutions to the problems identified. The research was conducted in waterfront communities on a sampled population of 192 persons. Majority of the interviewed persons are students and have lived in the waterfront community for about 10 years.

The result shows that there is awareness of the disaster occurrence and the disaster is caused mainly by prolonged rainfall and blocked drainages. It was revealed that there has been an urban regeneration for the six months and the impacts of the urban regeneration led to improved waterways/canals/drainages, improved condition of Roads and access to infrastructure. The study showed that wear and tear of roads is the major environmental or physical risks and impacts associated with disaster; change in travel behaviour and increased travel time are the major social risk and impact; increased cases of malaria is the major health risk and impact associated with disaster; while damage to property is the major economic risk and impact of disaster in the sampled locale. The study also revealed that signals or information are not available to the residents before an impending disaster.

The study concluded that urban regeneration has improved waterways, canals, drainages, condition of roads and access to infrastructure in the waterfront settlements in Lagos. However, the challenges faced by the waterfront communities is as result of lack of signals or information before an impending disaster led to wear and tear of roads is the major environmental or physical risks and impacts associated with disaster; change in travel behaviour and increased travel time are the major social risk and impact; increased cases of malaria are the major health risk and impact associated with disaster; while damage to property is the major economic risk and it impact disaster.

Based on the findings, the study recommends that the government should ensure that there is proper planning and coordination in order to control and minimize disaster risk and it impacts in Lagos metropolis; there should be effective integration of all agencies with mandates to manage disasters in the state; and the government should provide up-to-date data on disaster prone areas and vulnerabilities, and use that for risk assessment for urban planning and decision-making. ----------

1.1 INTRODUCTION

Water was an important natural resource in the growth of early settlement. Settlements were emerging at close proximity to local streams and rivers. It was used for agricultural, industrial, energy generation, household, transportation, defence element, recreational and environmental purposes (Timur, 2013). Water is a determinant in the development of urban form and pattern. The type of water resource like river, sea, lake or canal determined the various shapes of the development of settlements (Butuner, 2006).

Waterfronts are places where rich and influential people in the society own houses or live in them. They are desirable in many developed nations where people go to relax due to their natural beauty. Therefore, these areas are thought to be a commercial and residential value with great investment potential. In developed nations, waterfronts are

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continuously being regenerated to meet the needs of the 21st century and having sustainability in mind. It is noted that waterfront settlement started as informal settlements in Nigeria where farmers and fishermen who make use of the surrounding for their daily needs, made it their temporary homes during their trips. It started as a small group of tents and the wooden canopy gradually grew into large settlements. In Port Harcourt, the residents of the waterfront settlement are more than 60% of the city residents (Obafemi & Odubo, 2013).

On the other hand, Lagos State is a state in the coastal region, with different waterfront settlements. The waterfront ranges from ocean, lagoon, rivers, streams and canals. It is very important to understand that Lagos is one of the fastest growing cities in the world and this has led to increases in its population. As a result, urban development and human activities have led to environmental degradation, and have created a serious threat to continued human existence, and to the sustainability of life on earth. An increase in population as a consequence of the pressure for upgrade in an urban area have brought about the rediscovery of waterfronts in the city, therefore the emergence of the phenomenon of waterfront regeneration. Urban regeneration has been and is one of the most important strategies to address inner city decline with the purpose of ensuring sustainability (Tsenkova, 2002). The water quality of waterfronts in Lagos has been a major concern. Planning, strategies and regeneration are needed to address these problems.

1.2 Statement of the Problem

Over the last two decades, developed nations are rediscovering the value of their rivers and lakes. To address the issues of the 21st century and keeping sustainability in mind, the developed countries are consistently regenerating the waterfronts. Falade (1998) study indicates that waterfront business can be a significant income source, especially for the growing economy of countries like Nigeria. This necessitates changing the manner existing waterway in Lagos is currently used. Wealthy and powerful members of society either own or live in residences along the waterfronts of numerous cities in developed nations. They are regions of normal magnificence, business potential and attractive quality. With proper planning and arranging, the Lagos lagoon pond edge can be restored for better water quality improvement.

The key problem with the regeneration of the waterfront in Lagos is the unplanned urbanization of building development. In addition, inadequate dry land in the physical development of the Lagos metropolitan area to accommodate several emigrants and immigrants as Lagos became a big city. More so, lack of dry land to construct basic infrastructure necessary for city residence. Also, poor sewage constitutes the problem. The government's inability to provide enough buildings to the poorer in urban areas, as a result of this, the people built wooden houses siding the waterfronts. Fadamiro and Atolagbe (2006) affirm that the implication was that the people who wanted to live near the city but could not afford the cost of renting an apartment built houses around the waterways and the lagoons. Fadamiro and Atolagbe (2006) further opine that planning, designing, and managing land use development in Nigeria are the major factors causing these problems in Lagos.

1.3 Aim and Objectives

This paper aimed to study the challenges and prospects of regeneration of the waterfront settlements in Lagos with a view to proffering solutions to the problems identified. Specifically, the study:

1. investigated the socio economic and physical characteristics of the waterfront's settlements in Lagos;
2. Examined the culture characteristics of the waterfront's settlements in Lagos;
3. Examined waterfront policy in Lagos; and
4. Examine the past efforts in addressing the problem of waterfronts in Lagos.

1.4 Scope

The study analysed the community within the waterfront challenges and prospect of regeneration. The study examined only waterfront settlements that are bounded by Lagos lagoon. Geographically, the scope of the study was focused on seven (7) communities, in three (3) different Local Government Area in Lagos metropolis area. These communities are selected based on the need for regeneration.

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Local Government Area	LCDA/ Communities
Kosofe	Oworonshoki, Ogudu, agboyin.
Lagos Mainland	Makoko, Akoka, Iwaya
Shomolu	Ilaje.

Table 1.1 (Author's Survey, 2020)

2.0 LITERATURE REVIEW

This section focuses on the literature review and conceptual framework of regeneration of waterfront settlement in Lagos. The literature was reviewed under the following sub-headings:

2.1 Meaning of Waterfront

The word waterfront simply means a land near a river, lake, stream, etc (Dong, 2004). Waterfront refers to a part of land near the water (Moretti, 2008). Port infrastructure and operations often occupy waterfront areas, according to Moretti (2008). According to Yasin et al. (2010), waterfront is widely regarded as an area close to the sea or stream. Hou (2009), described the waterfront as water borderline or water converge. To Shaziman et al. (2010), the term "waterfront" refers to the edge of the stream in towns or urban areas of various sizes.

2.2 Waterfront Regeneration

The waterfront connects the city centre, urban regions, and rivers and lakes, which are connected to the urban macro and micro. In order to give local communities long-term advantages, waterfront development must be executed with the proper concept and integrated in accordance with the potential of the surrounding area (Sushanti et al., 2020). The growth of the municipality's waterfronts depends on roads, infrastructure, and shoreline design, and vibrant colours are essential (Liang & Zhu, 2014). Regenerating the waterfront is a "real urban revolution" (Bruntomesso, 1993). One of the most intriguing aspects of urban renewal in recent decades is waterfront regeneration, which has given "cities on water" a new lease on life globally (Giovinazzi & Moretti, 2009).

A city in North-America in the 1970's came with the idea of waterfront regeneration (Papatheochari, 2011). However, how the waterfront is being regenerated is different from country to country or city to city. The methods and processes are also different. Instances from North-America, shows that the waterfront is seen as an urban renewal process. While, in Europe, it is a mere change in sea transportation. But, in the UK, it is a it seen as post-industrial urban change

2.3 Waterfront Development

Dong (2004) asserts people have different meanings attached to waterfront development. The fact that waterfront development differs widely in terms of site and city features is also underlined. For instance, one of the three interconnected water-related development concepts in Japan is urban waterfront development. It is situated between coastal development and the water. Many people consider urban waterfront development to be a cutting edge of modern urban development, drawing funding and media attention. Several cities, including Sydney, London, Amsterdam, Hong Kong, Tokyo, Toronto, Osaka, Kobe, and Dublin, have evolved via the waterfront development process.

Conceptual Framework

Waterfront regeneration process goes through different phases which are:

2.2.1 The Pre-development Phase

In order to find development prospects, the pre-development phase entails project initiation, project analysis, preparation of the preliminary design, and project packaging. In order to completely realise the development, it is crucial to re-evaluate the development idea and program throughout this phase in light of evolving conditions, fresh data, research, thorough analysis, and estimates of the time and cost of the activities involved.

2.2.2 The Development Phase

Design, funding, and implementation are the main focuses of the development process. While these fundamental duties turn a project concept into a tangible reality, a project that achieves its goals requires careful coordination of the professional designers' and building contractors' work as well as the timeliness of financial support.

2.2.3 Post Development Phase

To increase long-term viability, post-development activities are considered. Even though the requirements for managing and maintaining waterfront projects are determined prior to construction, general trend agreements for

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public/private development projects must specify exactly who will be in charge of these tasks and who will cover the associated costs.

3.0 METHODOLOGY

This study employed the mixed research design which comprises both quantitative and qualitative research design. The data for this research will be obtained from both primary and secondary sources. Sample population for this study were the total number of buildings in the community which is 8,897 buildings. To determine the sample size, this study adopted the formula by Kothari (2004), which is as follows;

$$n = \frac{Z^2pqN}{e^2(N-1) + z^2pq}$$

Where n = required sample size

N = the population size (sample frame) i.e. 1,000,103 buildings

P and q = the population proportions (usually set to 0.5)

z = level of confidence (usually to 95%) in which case Z is set to 1.96

e = error margin (usually between minimum of 5% and 7%)

$n = 1.96^2 \times 0.5 \times 0.5 \times 8,897$

$0.07^2(8,897-1) + 1.96^2 \times 0.5 \times 0.5$

8,544.678

44.504

n = 191.99≈192. Thus, a total number of 192 household heads are expected to be sampled.

This research paper employed both the probability sampling and non-probability methods. The instruments employed for this research includes field notebook for observation and interview; structured questionnaires; audio recorder to record interviews. Content analysis was employed for qualitative data, while descriptive technique of analysis was adopted for the quantitative data. The descriptive analysis entailed frequency tables, charts, cross tabulation, etc. this will be done by using Stata and Excel.

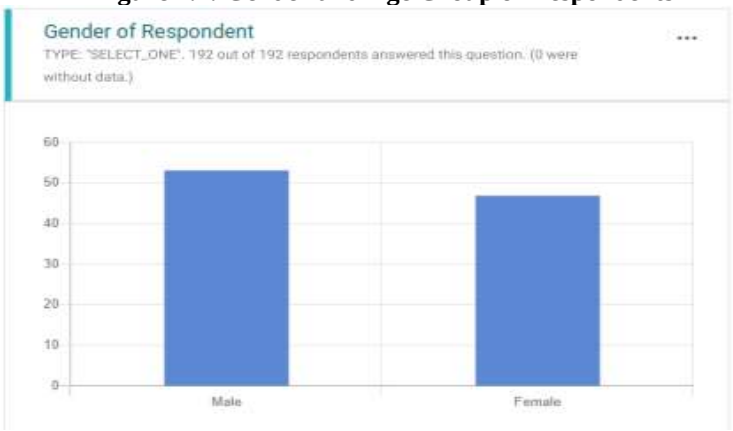
4.0 RESULT

This section presents the result of data collected from questionnaires administered to waterfront community residents. 192 questionnaires were administered via direct interviews, thus 100% response rate was achieved.

Gender of Respondents

From the survey carried out in the study area; figure 4.1 reveals that 47.4% of the interviewed respondents are female while 52.6% of them are male.

Figure 4.1: Gender and Age Group of Respondents



Source: Author's Field Survey, 2021

Age Group of Respondents

In figure 4.2, the higher percentage of the interviewed respondents are male; while the large numbers of participants are between 40-44 years, 25-29 years and 20-24 years old respectively.

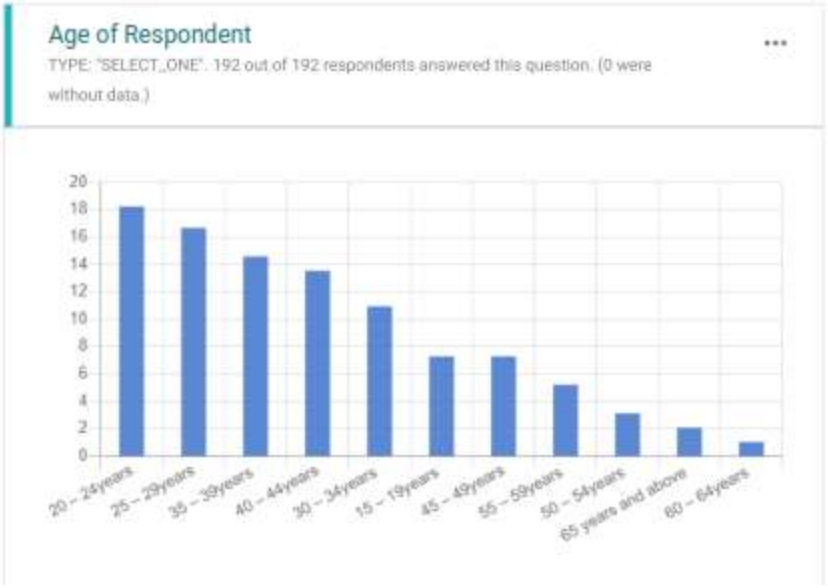
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Figure 4.2: Age Group of Respondents



Source: Author's Field Survey, 2021

Literacy Level of Respondents

Table 4.2.1 below shows the literacy level of the respondents' interviewed in the study area. The higher percentage of the interviewed respondents received only primary formal education or Junior secondary education. This is a true representation of the entire population in the study area.

Table 4.1: Literacy Level of Respondents

		Frequency	Percent
No Formal Education		1	0.52
Yes	Primary	49	25.52
	JSS/Modern School	72	37.5
	SSS/Sec./TTC	34	17.71
	ND/NCE	20	10.42
	University Graduate/HND	16	8.3
Total		**192**	**100.0**

***Source**: Author's Survey, 2021.*

Type of Employment of Respondents

The survey in figure 4.3 below shows the interviewed respondents' type of employment. The finding shows that the majority of the interviewed persons are students.

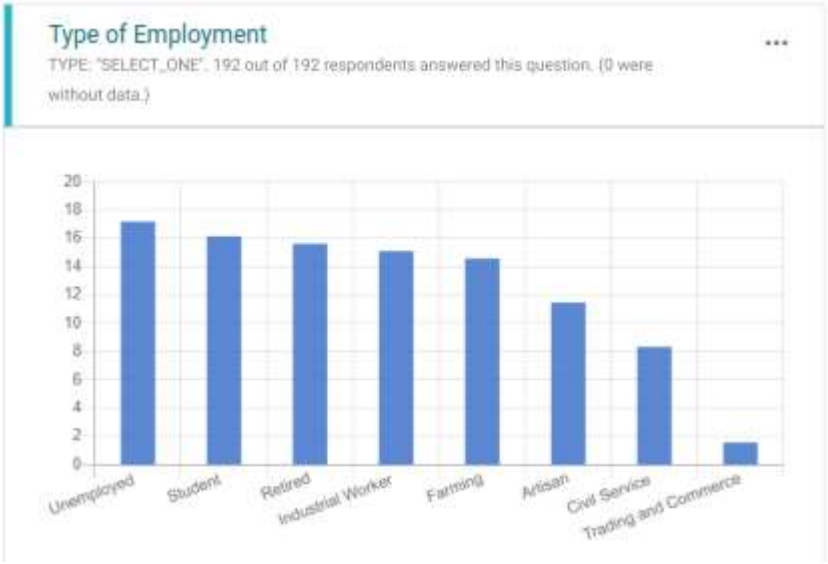
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Figure 4.3 Nature of Employment of Respondents



Source: Author's Field Survey, 2021

The analysed data was interpreted to answer the research questions raised in chapter three and satisfy the research Aim and Objectives. Hence, interpretations and analysis are discussed under the following sub-headings:

Urban Regeneration Experience, Length and Magnitude of Impact

Table 4.2 shows the respondents' Urban Regeneration experience in Waterfront Communities and also their responses on the length and impact of the Urban Regeneration. The finding reveals that greater numbers of the participants have experienced an urban regeneration that lasted for two (2) months.

Table 4.2: Experience in the last Calendar Year and Length of Experience

Urban Regeneration Experience			Urban Regeneration Length		
	Frequency	**Percent**		**Frequency**	**Percent**
2	68	35.42	Once	7	3.9
3	57	29.69	Twice	139	77.2
1	38	19.79	Thrice	34	18.9
4	16	8.33	One month	59	30.73
None	10	5.21	> two weeks	54	28.12
Above 4	3	1.56	Two months	51	26.56
Total	**192**	**100.0**	**Total**	**192**	**100.0**

Source: Author's Field Survey, 2021

Magnitude of Impact of Urban Regeneration on Waterfront Communities

Table 4.3 below shows the magnitude of impact of the last urban regeneration event the respondents experienced. The result reveals that the majority believe that the last urban regeneration had a great impact.

Table 4.3: Magnitude of the Disaster impact

Statement	Frequency	Percent
Great Impact	77	40.1
Indifferent	68	35.42
Little Impact	50	26.04
No impact	13	6.77
Total	**192**	**100.0**

Author's Field Survey, 2021

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IMPACTS ASSOCIATED WITH URBAN REGENERATION IN YOUR COMMUNITY

The research assessed the impacts of urban regeneration on the livelihoods of the residents living in waterfront communities. The participants were asked about the impacts associated with urban regeneration in their Waterfront Communities. The impacts were classified into environmental/physical, social, health and economic. Table 4.4 below shows the respondents' view on the factors associated with urban regeneration in Waterfront Communities. The findings in table 4.4 below shows that urban regeneration in waterfront communities have a positive impact on environmental/physical, social, health and economic.

Table 4.4: Risk and Impact associated with Disaster in Waterfront Communities

Environmental/Physical Impacts		
Statement	**Frequency**	**Percent**
Improved waterways/canals/drainages	88	45.83
Improved condition of Roads	74	38.54
Access to electricity infrastructure	45	23.44
Access to other infrastructure	8	4.17
Access to telecoms infrastructure	6	3.12
Total	**192**	**100.0**
Social Impacts		
Decreased traffic delays/travel time	70	36.46
Longevity of lives	57	29.69
Change in travel behaviour	53	27.6
Improved power supply and other basic urban services	23	11.98
Abrupt decrease in crime	22	11.46
Total	**192**	**100.0**
Health Impacts		
Environmental sanitation	99	51.56
Few cases of diseases	80	41.67
Reduced cases of Malaria	26	13.54
Total	**192**	**100.0**

Economic Impacts		
Improved vehicle performance	106	55.21
Decrease in transport fare	43	22.4
Increase in value of properties	39	20.31
Improvement of business activities	26	13.54
Total	**192**	**100.0**

Author's Field Survey, 2021

Disaster Resilience Capacity of Waterfront Communities

The research got information on available institutional capacity and facilities to respond to the people's needs in time of disaster and emergency and early warning signals. The formal and informal institutions in charge of Disaster management, planning for and post disaster recovery were interviewed and their responses recorded.

Disaster Management Responsibility in Waterfront Communities

Table 4.5 shows the respondents view of who is responsible for disaster management in waterfront communities. The findings indicated that residents' association is responsible for the management of disasters in waterfront communities.

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Table 4.5: Disaster management responsibility in Waterfront Communities

Statement	Frequency	Percent
Residents' Association (CDA)	81	42.19
Your LCDA	66	34.38
Your LGA	37	19.27
Individual residents	24	12.5
Ministry of Waterfront Infrastructure	12	6.25
Environmental Sanitation Corps (LAGESC)	9	4.69
Lagos State Environmental Protection Agency (LASEPA)	7	3.65
Ministry of the Environment (MOE)	5	2.6
Total	**192**	**100.0**

Source: Author's Field Survey, 2021

Early Warning Signals

Table 4.6 below shows the views of the respondents; whether or not they get any form of warning signals or information prior to disaster occurrence and also how they come across such information. From the survey, a higher percentage of the interviewed do not get any signals or information before an impending disaster while for those who get signals or information, a higher percentage of them get such signals from television and radio stations.

Table 4.6: Warning signals before Disaster occurs and how they hear of the impending Disaster

Statement		Frequency	Percent
No	No prior information or news usually heard	170	88.54
Yes	No prior information or news usually heard	7	3.65
	Circulars from resident's association	6	3.12
	Word of mouth or neighbours	6	3.12
	TV and Radio stations	5	2.6
	Newspapers	3	1.56
	Local government/LCDA	2	1.04
	Social media	1	0.52
Total		**192**	**100.0**

Source: Author's Field Survey, 2021

Preparation for Impending Disaster

Table 4.7 below shows how the respondents in the study area prepare for an impending disaster. The results from the table shows that the majority of the respondent's preparation is moving house items and valuables to a higher level and waiting for the disaster. Therefore, the majority of the respondents always prepared for impending disasters.

Table 4.7: Preparation for an impending Disaster

Statement	Frequency	Percent
Temporarily relocate	84	43.75
Move house items and valuables to a higher level and wait for the Disaster	111	57.81
Stock your house with food items and medicines	14	7.29
Clear your drainages	7	3.65
Raising fences and sand filling compounds	2	1.1
Total	**192**	**100.0**

Source: Author's Field Survey, 2021

Actions when Disasters Occur

Table 4.8 below shows what the respondents do when disasters occur in the area. The result shows Preferred action taken to prevent when disaster occurs is preventing malaria by use of mosquito nets, control mosquito breeding by pouring kerosene in stagnant water and using anti malaria drugs.

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Table 4.8: Actions when Disaster occurs

Statement	Frequency	Percent
Raise furniture and other items above likely Disaster levels	97	50.52
Prevent malaria by use of mosquito nets, control mosquito breeding by pouring kerosene in stagnant water and using anti-malaria drugs	98	51.04
Join other residents to manage the Disaster	12	6.25
Stay indoors till Disaster subsides/Do nothing	7	3.65
Total	**192**	**100.0**

Source: Author's Field Survey, 2021

Actions after Disaster Occurrence

Table 4.9 below shows the actions of the respondents after a disaster occurrence. The majority of the respondents agreed that they reflect on the past disaster and prepare for future occurrence; while 30.73% choose to insure the insurable properties.

Table 4.9: Actions when Disaster occurs

Statement	Frequency	Percent
Raise furniture and other items above likely Disaster levels	97	50.52
Prevent malaria by use of mosquito nets, control mosquito breeding by pouring kerosene in stagnant water and using anti-malaria drugs	98	51.04
Join other residents to manage the Disaster	12	6.25
Total	**192**	**100.0**

Source: Author's Field Survey, 2021

INSTITUTIONAL CAPACITY FOR MANAGING DISASTER

The residents of the waterfront communities were asked to rank the institutions responsible for managing disasters in their communities. Their responses are recorded below:

Residents Satisfaction to Disaster Management Operations by Agencies

Lagos State Emergency Management Authority (LASEMA)

The table 4.10 below shows the respondents' perception of the overall Disaster management in the area by Lagos State Emergency Management Authority (LASEMA). The finding reveals that a higher percentage of the respondents are not very satisfied with Lagos State Emergency Management Authority in the area in terms of overall Disaster management.

Table 4.10: Lagos State Emergency Management Authority (LASEMA)

Statement	Frequency	Percent
Not Satisfied (NS)	64	33.33
Moderately Satisfied (MS)	55	28.65
Satisfied (S)	46	23.96
Very Satisfied (VS)	15	7.81
Not Very Satisfied (NVS)	12	6.25
Total	**192**	**100.0**

Source: Author's Field Survey, 2021

Lagos State Environmental Protection Agency (LASEPA)

Table 4.11 below reveals the participants' opinions on the Lagos State Environmental Protection Agency (LASEPA) activities in managing disaster. The findings show that a large number of participants, 100(52.08%) of the total participants, are not satisfied with LESPA roles in managing disasters in waterfront communities. While, others 92(47.92) are satisfied.

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Table 4.11: Lagos State Environmental Protection Agency (LASEPA)

Statement	Frequency	Percent
Not Satisfied (NS)	75	39.06
Moderately Satisfied (MS)	53	27.6
Satisfied (S)	32	16.67
Not Very Satisfied (NVS)	25	13.02
Very Satisfied (VS)	7	3.65
Total	**192**	**100.0**

Source: Author's Field Survey, 2021

Lagos State Ministry of Environment (MOE)

Table 4.12 below shows the perception of participants in Lagos State Ministry of Environment (MOE) in managing disasters in waterfront communities. 117(60.94%) of the total participants are not satisfied with activities of Lagos State Ministry of Environment (MOE) on disaster management. While, 75(39.06) are satisfied.

Table 4.12: Lagos State Ministry of Environment (MOE)

Statement	Frequency	Percent
Not Satisfied (NS)	85	44.27
Moderately Satisfied (MS)	40	20.83
Not Very Satisfied (NVS)	32	16.67
Satisfied (S)	26	13.54
Very Satisfied (VS)	9	4.69
Total	**192**	**100.0**

Source: Author's Field Survey, 2021

Lagos State Emergency Medical Service (LASEMS)

Table 4.13 below shows the analysis of how participants are satisfied with Lagos State Emergency Medical Service (LASEMS) roles in managing disasters in the waterfront communities. 113(59.39%) of the total participants are not satisfied with the roles of Lagos State Emergency Medical Service (LASEMS) on disaster management. While 79(40.61%) are satisfied

Table 4.13: Lagos State Emergency Medical Service (LASEMS)

Statement	Frequency	Percent
Not Satisfied (NS)	75	39.06
Moderately Satisfied (MS)	45	23.44
Not Very Satisfied (NVS)	38	19.79
Satisfied (S)	22	11.46
Very Satisfied (VS)	12	6.25
Total	**192**	**100.0**

Source: Author's Field Survey, 2021

Nigerian Meteorological Agency (NIMET)

Table 4.14 analysis reveals that the participants' opinions on the Lagos State Nigeria Meteorological Agency (NIMET) roles in disaster management. The findings show that 86(44.79%) of the total participants are not satisfied with NIMET roles in managing disasters in waterfront communities. While 106(55.21%) are satisfied.

Table 4.14: Nigerian Meteorological Agency (NIMET)

Statement	Frequency	Percent
Not Satisfied (NS)	81	42.19
Moderately Satisfied (MS)	46	23.96
Satisfied (S)	43	22.4
Very Satisfied (VS)	17	8.85
Not Very Satisfied (NVS)	5	2.6
Total	**192**	**100.0**

Source: Author's Field Survey, 2021

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Lagos State Fire Service

Table 4.15 shows the survey analysis of participants' opinions on the Lagos State Fire Service. The findings shows that 87(45.31%) of the total participants, are not satisfied with Lagos State Fire Service roles in managing disasters in waterfront communities. While, 105(55.69%) of the total respondents are satisfied.

Table 4.15: Lagos State Fire Service

Statement	Frequency	Percent
Not Satisfied (NS)	75	39.06
Moderately Satisfied (MS)	58	30.21
Satisfied (S)	38	19.79
Not Very Satisfied (NVS)	12	6.25
Very Satisfied (VS)	9	4.69
Total	**192**	**100.0**

Source: Author's Field Survey, 2021

Lagos Environmental Sanitation Corps (LAGESC)

Table 4.16 shows the survey analysis of participants' opinions on the Lagos Environmental Sanitation Corps (LAGESC). The findings reveal 135(70.31%) of the total participants are not satisfied with LAGESC roles in disasters management in waterfront communities. While, 57(29.69%) of the total respondents are satisfied.

Table 4.16: Lagos Environmental Sanitation Corps (LAGESC)

Statement	Frequency	Percent
Not Satisfied (NS)	77	40.1
Not Very Satisfied (NVS)	58	30.21
Moderately Satisfied (MS)	35	18.23
Satisfied (S)	20	10.42
Very Satisfied (VS)	2	1.04
Total	**192**	**100.0**

Source: Author's Field Survey, 2021

Local Council Development Authority

Table 4.17 shows the survey analysis of participants' perception on the Local Council Development Authority. The findings reveal 100(52.09%) of the total participants are not satisfied with Local Council Development Authority roles in disaster management in waterfront communities. 92(47.91%) of the total respondents are satisfied.

Table 4.17: LCDA

Statement	Frequency	Percent
Not Satisfied (NS)	79	41.15
Moderately Satisfied (MS)	62	32.29
Satisfied (S)	23	11.98
Not Very Satisfied (NVS)	21	10.94
Very Satisfied (VS)	7	3.65
Total	**192**	**100.0**

Source: Author's Field Survey, 2021

Lagos State Ministry of Waterfront Infrastructure

Table 4.18 shows the analysis of participants' perception on the Lagos State Ministry of Waterfront Infrastructure. The findings reveal 100(52.09%) of the total participants are not satisfied with Lagos State Ministry of Waterfront Infrastructure roles in disaster management in waterfront communities. 92(47.91%) of the total respondents are satisfied.

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Table 4.18: Lagos State Ministry of Waterfront Infrastructure

Statement	Frequency	Percent
Not Satisfied (NS)	53	27.6
Moderately Satisfied (MS)	50	26.04
Not Very Satisfied (NVS)	47	24.48
Satisfied (S)	25	13.02
Very Satisfied (VS)	17	8.85
Total	**192**	**100.0**

Source: Author's Field Survey, 2021

Residents Association

Table 4.19 shows the analysis of participants' perception of the Resident Association. The findings reveal 76(39.9%) of the total participants are not satisfied with Resident Association roles in disaster management in the waterfront communities. While, 116(60.91%) of the total respondents are satisfied.

Table 4.19: Residents Association

Statement	Frequency	Percent
Not Satisfied (NS)	64	33.33
Moderately Satisfied (MS)	59	30.73
Satisfied (S)	47	24.48
Not Very Satisfied (NVS)	12	6.25
Very Satisfied (VS)	10	5.21
Total	**192**	**100.0**

Source: Author's Field Survey, 2021

Lagos State Traffic Management Authority (LASTMA)

Table 4.20 shows the analysis of participants' perception on the Lagos State Traffic Management Authority (LASTMA). The findings reveal 137(71.35%) of the total participants are not satisfied with LASTMA roles in disaster management in the waterfront communities. While, 55(28.65%) of the total respondents are satisfied.

Table 4.20: Lagos State Traffic Management Authority (LASTMA)

Statement	Frequency	Percent
Not Satisfied (NS)	76	39.58
Not Very Satisfied (NVS)	61	31.77
Moderately Satisfied (MS)	38	19.79
Satisfied (S)	15	7.81
Very Satisfied (VS)	2	1.04
Total	**192**	**100.0**

Source: Author's Field Survey, 2021

Lagos State Waste Management Authority (LAWMA)

The analysis on Table 4.21 below shows the respondents' perception of the Disaster management activities of Lagos State Waste Management Authority (LAWMA) in their respective communities. From table 4.21, the result reveals that a larger percentage of the sampled population are of the opinion that the activities of Lagos State Waste Management Authority in the study areas in times of Disaster is not satisfactory.

Table 4.21: Lagos State Waste Management Authority (LAWMA)

Statement	Frequency	Percent
Not Satisfied (NS)	74	38.54
Not Very Satisfied (NVS)	52	27.08
Moderately Satisfied (MS)	49	25.52
Satisfied (S)	16	8.33
Very Satisfied (VS)	1	0.52
Total	**192**	**100.0**

Source: Author's Field Survey, 202

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5.0 DISCUSSION AND CONCLUSION

5.1 Discussion

The study was conducted in waterfront communities on a sampled population of 192 persons. Majority of the interviewed persons are students and have lived in the waterfront community for about 10 years. The result shows that there is awareness of the disaster occurrence and the disaster is caused mainly by prolonged rainfall and blocked drainages. It was revealed that there has been an urban regeneration for the six months and the impacts of the urban regeneration led to improved waterways, canals, drainages, improved condition of roads and access to infrastructure.

The study showed that wear and tear of roads is the major environmental or physical risks and impacts associated with disaster; change in travel behaviour and increased travel time are the major social risk and impact; increased cases of malaria is the major health risk and impact associated with disaster; while damage to property is the major economic risk and impact of disaster in the study area. The result of the study showed that resident's associations are responsible for the management of disasters in waterfront communities. Also, the majority of the residents do not get any signals or information before an impending disaster.

5.2 Conclusion

The aimed to study the challenges and prospects of regeneration of the waterfront settlements in Lagos with a view to proffering solutions to the problems identified. The study concluded that urban regeneration has improved waterways, canals, drainages, condition of roads and access to infrastructure in the waterfront settlements in Lagos. However, the challenges faced by the waterfront communities is as result of lack of signals or information before an impending disaster led to wear and tear of roads is the major environmental or physical risks and impacts associated with disaster; change in travel behaviour and increased travel time are the major social risk and impact; increased cases of malaria are the major health risk and impact associated with disaster; while damage to property is the major economic risk and impact of disaster in the study area.

5.2 Recommendations

Based on the findings from the research, the following recommendations are made in order for Waterfront Communities to be resilient to Disaster and other shocks and stresses:

1. The Government should ensure that there is proper planning and coordination in order to control and minimize disaster risk and it impacts in Lagos metropolis
2. There should be effective integration of all agencies with mandates to manage disasters in the state.
3. The government should provide up-to-date data on disaster prone areas and vulnerabilities, and use that for risk assessment for urban planning and decision-making.
4. Government should procure maintenance devices for critical risk reduction like drainage, traffic sensors, among others.
5. There should be constant assessment of safety in public infrastructure to address disasters.
6. There should be a rules and regulation policy on land use planning principles, and law enforcement officers that will ensure risk compliance by practicing strict urban development control measures.
7. Installation of early warning systems or signals for Disaster occurrence; and putting in place emergency management practices.

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