ANALYSIS OF THE SOCIOECONOMIIC EFFECTS OF LAND RECLAMATION IN LEKKI, LAGOS STATE, NIGERIA

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ABSTRACT
The paper investigates the effects of land reclamation in Lekki area of Lagos state. The objectives of the study include the extent of the reclaimed land in the study area, examination of the factors for relocation to the study area, livability and satisfaction of the residents, the implication of the reclamation exercise and the examination of the control measures put in place to mitigate possible effects of such reclamation exercise. The study adopts survey research design and multi-stage approaches. Data collection were done using questionnaire survey and personal observation instruments. The study uses descriptive and inferential statistical tools for data analysis and interpretation. The study reveals the portion of wetland and ocean based has been transformed to human settlement and that the occupier placed high premium on home ownership than shelter in their decision for relocation to the study area, they are satisfied with the level of infrastructure in the study area and that the perceived disadvantages of the reallocation was consider too insignificant to reckon with in their decision to relocate. The study recommends among others formulation of policy for the maintenance and preservation of the quality of the reclaimed environment.

Key words: Land reclamation, investigation, effects, satisfaction, infrastructure
JEL CLASSIFICATION: Q24, Q28, Q51, R42, R58

1. INTRODUCTION
Land reclamation has played a significant role in the urban development process in coastal areas in many parts of the world, including China, Britain, Korea, the Netherlands, the United States and Nigeria. While reclamation provides valuable land for many coastal areas in the world, it also creates various engineering, environmental, and ecological problems. Natural coastlines have diminished due to numerous reclamation projects in natural coastal areas (Yan et al.2023).These problems are studied by many researchers. Chen et al (2023) investigated reclamation project in Zhejiang province aimed to reclaim about 1278 km^2 of tidal flats to meet land -use demands and drive economic growth. Huang et al (2023) investigated land reclamation and risk management in the coastal zones of China. Musa et al (2023) examined reclamation, land sustainability evaluation and management for soils of Tin mined area of Barkin Ladi, Plateau State, Nigeria. Akande, Oyebode and Sowemimo (2021) studied an evaluation of post-reclamation management foe housing development in Nigeria. Oyedepo and Oluyege (2024) studied spatiotemporal assessment of wetlands and land reclaim activities in Eastern Lagos State, Nigeria. Herbert (2024) studied Delineation of land reclamation areas in Eti-osa and Lagos Island Local Government Areas of Lagos State. Sridhar and Laniyan (2019) studied Impact of Sand Mining and Sea Reclamation on the Environment and Socioeconomic Activities of Ikate and Ilubirin Coastal Low Income Communities in Lagos Metropolis, Southwestern Nigeria. Obiefuna, et al (2013) researched on the changes in the wetlands of Lagos/Lekki between 1984 and 2006.
Findings shows that most problems identified are associated with ground and surface water, which generate others, such as general wetness of the surrounding grounds, damp penetration, drainage problems and flooding. The effect of these on the occupants is general inconvenience,

which generates social tension and sense of insecurity and it has been established that insecurity has negative impact on livelihoods (Nwosu, et al, 2024, Auwal, Yemari, and Aliyu, 2024).

Damp penetration has been described as one of the most serious defects in buildings (Seely, 1986). Apart from causing deterioration of the structure, it can also result in damage to furnishings and contents and can in severe cases adversely affect the health of the occupants. Structural defects may also arise as a result of drying out of subsoil after flooding and washing away of the supporting soil by under washing water currents. Walls may also experience surface damage by scouring and erosion, efflorescence and cracks. Furthermore, electrical installations as ducts and conduits that traps flood water must be carefully treated and have continuous technical inspections for a year after the flooding, to avoid possible danger. In addition to the implications highlighted above, a critical attribute of the building that is severely impaired is the aesthetics, (Anderson, 1987) believes that aesthetics is the focus of all maintenance activities and that it is the prime significance of maintenance. (Lloyd, 1962) also believes that among the Yoruba's in Nigeria, aesthetics of a building causes the building to bring prestige to its owner as it marks him out as one of his town's worthier citizens.

However, the economic life and the life cycle cost of the buildings in the study areas are the most severely affected factors besides all other implications. The earning power of these buildings may not be able to compete with that elsewhere and the life cycle cost is high.

As noted earlier, the government, as owners of reclaimed lands, and as monitoring agents of other privately owned lands, presently has agencies that are ill equipped for post reclamation management responsibilities. So, in other to effect desired changes, government responses would largely be premised on policy formulation in relation to planning regulation. Due to negligence of Nigerian National Housing Policy in the provision of housing for specialized areas in reclamation zone; the policy is also weak as a result of its low emphasis on development of maintenance personnel and in not advocating maintenance in the design and implementation stages of projects. On this basis, the research aims at assessing the socioeconomic effect of reclamation of land in Lekki, Lagos, Nigeria. The remainder of the study is as follows. Section two delves into literature review and brief information on the study area. The third section shed light on procedure followed for data gathering. The fourth section analyses and interprets the data while the fifth section concludes the study with recommendations emanating from the study.

2. LITERATURE REVIEW

This section is structured into the theoretical and empirical sections. Under theoretical section, bargaining models and Maslow's hierarchy of needs were considered while the some previous works, the Lagos state procedure of going about reclamation and the context of the study were considered.

2.1 Theoretical Literature   2.1.1

Bargaining model

The bargaining model views planning as the result of give and take on the part of a number of interests who are all involved in the process. It argues that this bargaining is the best way to conduct planning within the bounds of legal and political institutions. The most interesting part of this theory of planning is that it makes public participation the central dynamic in the decision-making process. Decisions are made first and foremost by the public, and the planner plays a more minor role.

2.1.2 Maslow's hierarchy of needs

Maslow's hierarchy of needs which is usually portrayed in the shape of a pyramid with the largest and most fundamental levels of needs at the bottom and the need for self-actualization and self-transcendence at the top. The exception of the most fundamental (physiological) need – there may not be a physical indication, but the individual will feel anxious and tense.

Maslow's theory suggests that the most basic level of needs must be met before the individual will strongly desire (or focus motivation upon) the secondary or higher level needs.Maslow argued that each level in the needs hierarch must be substantially satisfied before the next need becomes dominant (Obialor et al., 2024).

Physiological needs (Shelter, food, clothes) are the physical requirements for human survival. If these requirements are not met, the human body cannot function properly and will ultimately fail. Physiological needs are thought to be the most important and they should be met first.

Figure 1.0: Maslow's hierarchy of needs

2.2 Empirical Literature

While population is increasing at a geometrical rate, land can be said to be static. The demand for housing, infrastructure and other amenities is also increasing. According to Piel (1997) developing countries will face major challenges providing quality accommodation and related city services such as hospitals, security, schools and other amenities for new urban dwellers. For the developed countries that are able to provide the basic amenities, another challenge awaits: limited natural resources (Land). It is evident that increasing population sizes and further urbanization trends will trigger off an increased demand for develop-able land. According to the World Bank (2023), quoted by Eze and Chinemeogo (2024), Nigeria's population has grown from around 122million in 2000 to over 220million by 2023. A New land is necessary in order for a central government to facilitate sufficient accommodation to cater for the influx of urban dwellers and to provide space for further economic growth.

Due to increasing population and aspiration for greater economic development in Nigeria and in Lagos in particular, there is a strong need to provide additional, strategically planned urban areas within Lagos. However, space for this within the central areas of Lagos is heavily restricted. This is the reason why project proposals for land reclamation are being developed by various private firms; with the anticipation that it will bring significant economic benefits to the region through direct investment in the local economy, knowledge sharing and publicity for Lagos. Land reclamation is also an important activity in several coastal regions in many countries such as Belgium, the Netherlands and Singapore. It has also become an industry and a fine art. Land reclamation is receiving increasing attention as a feasible urban solution for coastal development.

Increased industrial activities and the resultant population explosion in major Coastal Cities of the world, such as Amsterdam, London, and Nigeria particularly Lagos, Port Harcourt, Bonny, Okrika, Brass and Warri and the consequent demand for increased residential space, have

forced State and Federal Governments to undertake large scale housing development. However, the coastal lands comprising mainly swampy soils which can hardly be used in their present condition without ground improvement. The methods of ground improvement can be by excavation and replacement of unsuitable foundation soils, emboldening and reclamation using hydraulic filing with fine to coarse sand. A straightforward evaluation of these impacts is not easy to achieve, mostly because effects are wide ranging, heterogeneous and difficult to measure in the long term. However, thanks to innovative dredging techniques introduced over the last few decades, land can nowadays be reclaimed under advantageous economic conditions (Kolman, 2012).

Duarte et al (2012) and He et al (2004) for example have studied the effects of soil change on organic marine habitat due to land reclamation, and they concluded that it is due to population growth being concentrated in the coastal zone which also harbors a disproportionate fraction of the world's wealth. Indeed, some industries linked to the marine environment such as tourism, maritime transport and aquaculture are growing rapidly. Consequently, human activity in the coastal zone is likely to continue to increase which would lead to the loss of organic marine habitat such as sea grass. Nadzir et al (2014) and Wang et al (2010) studied the ecosystem service losses as a result of land reclamation, and it can be said that coastal ecosystems are under tremendous pressure from human activities in many parts of the world. Adelabu (2015) examined the current approach to flood risk management by private and public agents in the context of international practices of flood risk management. The study revealed that the state government has been taking primary responsibility of flood management of which includes both structural and non-structural measures. The structural measures involves the construction of the channel, the ongoing construction of revetment to protect cities from coastal flooding. With rapid economic development and growing urbanization in many coastal areas, reclaiming land from the sea has become increasingly intense since the 1980s. The prospect for sustainable development in these coastal communities is bleak if the current trend of exploitation continues. Unfortunately, decisions by land developers and some local managers are typically driven by short term direct economic benefits, ignoring the ecological damages and environmental degradation resulting from land reclamation. Also, but evidently less, research has been conducted into the socioeconomic implications of land reclamation.

Developers of waterfront properties around the world are known to carry out dredging and land reclamation activities for a number of reasons. They range from the need to create more land space, harbor and waterways or fight the threat of erosion to existing waterfront properties. Based on this the state government has put measures in place to control the impact of land reclamation. My findings at the Lagos State Ministry of Waterfront and Infrastructure Development via the Engineering Department show that Land Reclamation through Dredging is permissible in Lagos State under the following guidelines:

i.   An application for Land Reclamation and Shoreline Protection is written to the Commissioner for Waterfront and Infrastructure Development in Alausa, Ikeja with a specified application fee. The documents to accompany the application include an approved survey of the land and a complete site layout plan showing the shoreline to be reclaimed.

ii.   Also to accompany the Application letter, a site plan showing the complete size of the marshy and waterlogged area to be reclaimed with a detailed description of the location where the dredging will take place, as well as the Environmental Impact Analysis (EIA) Report. The EIA report will be done at the Ministry of Environment.

iii.   The application letter is also to have a Hydro-graphic Survey and Bathymetric Survey Report of the proposed water area to be dredged for reclamation. Hydro-graphic surveying "looks" into the ocean or lagoon to see what the floor looks like. This is done by Marine or Water Surveyors and Engineers. They also record tide or water level measurements. Such Surveys also helps to determine sea or lagoon floor material (i.e. amount of sand, mud and

rocks). On the other hand, Bathymetric Survey measures the depths of water bodies from the water surface. It's the marine equivalent of topography. This is to be conducted by a Marine Surveyor or Engineer.

iv.   The applicant must also submit with the application letter, copies of current tax clearance certificates for Two Directors as well as copies of the Company's Certificate of Incorporation, where it's a corporate body seeking to do the reclamation.

v.   After, the application has been received and an approval has been granted, the applicant will be required to pay an administrative fee to the Ministry of Waterfront and Infrastructure Development and a cost per cubic meter of the size of the portion of land to be reclaimed to the Lagos State Government. This would have been determined by officials of the Engineering Department of the Ministry through several fact-finding visits to the site while the approval process is ongoing, as well as supporting documents like the approved Survey Plan of the area. There are several reasons why an application for land reclamation may not be granted even when all supporting documents are complete. It is important to state that the waterfront land to be reclaimed must have a Certificate of Occupancy or Governor's Consent, and all titles to the land must have been duly approved by the Lagos State Government. All this would be verified by the Estate Department of the Ministry. Also, the land in question must not in any way interfere with drainage channels or be seen to be capable of causing any environmental hazard. This is one reason why the Environmental Impact Analysis Report is very important.

2.2.1 Study Area
Lagos State, Nigeria was created on May 27, 1967 by virtue of State (Creation and Transitional Provisions) Decree No. 14 of 1967, which restructured Nigeria's Federation into 12 States. Prior to this, Lagos Municipality had been administered by the Federal Government through the Federal Ministry of Lagos Affairs as the regional authority, while the Lagos City Council (LCC) governed the City of Lagos. Equally, the metropolitan areas (Colony Province) of Ikeja, Agege, Mushin, Ikorodu, Epe and Badagry were administered by the Western Region.
Lagos State lies in the south-western part of the Federation. It shares boundaries with Ogun State both in the North and East and is bounded on the west by the Republic of Benin. In the South it stretches for 180 kilometers along the coast of the Atlantic Ocean. Lagos state is smallest State in the Federation, it occupies an area of 3,577 sq. km, 22% or 787sq. km of which consists of lagoons and creeks. Lagos played the dual role of being the State and Federal Capital until 1976, when the state capital was moved to Ikeja. Then, on 12 December 1991, the seat of the Federal Government was formally relocated to Abuja.

Fig.1.1 Map of Nigeria Showing Lagos
Today, the word 'Lagos' most often refers to the urban area, called "Metropolitan Lagos" in Nigeria, which includes both the islands of the former municipality of Lagos and the mainland suburbs. Lagos is the Seventh (7th) fastest growing city in the world and is the commercial nerve of the country Nigeria, hosting the head-offices of most commercial businesses such as

banks, insurances, etc. Lagos is the most populous state in Nigeria, with people migrating from other states on a daily basis.
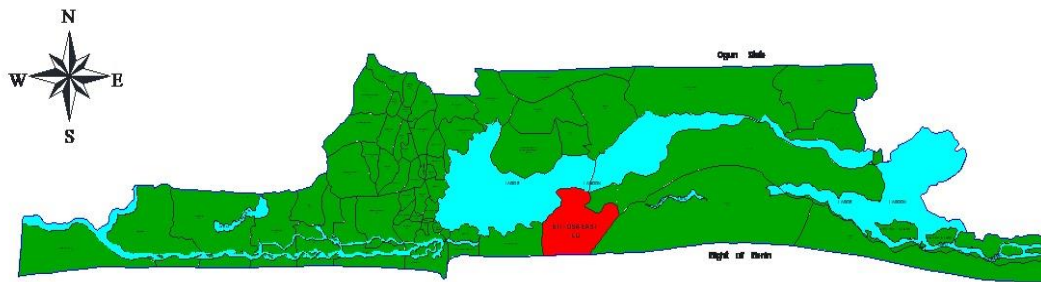

Fig. 1.2 Map of Lagos State Showing Eti-Osa Local Government
2.2.2 Geographic Location
Geographically, the study area lies between Latitude 6°28'12.5"N, Longitude 3°36'29.9"E; Latitude 6°28'13.1"N, Longitude 3°36'46.1"E; Latitude 6°28'10.8"N, Longitude 3°36'46.2"E; and Latitude 6°28'10.5"N, Longitude 3°36'29.7"E within Lekki Peninsula Sub-region. 3.7

Fig. 1.3: Map Showing Lekki Area.

Fig. 1.4: Satellite Imagery of the Study Area, Source: Google Earth

Figure 1.5: Map Showing Some Currently Reclaimed Islands in Lekki Area

Source: **Google Earth**

2.2.3 Climatic Condition

The study area is located within Lagos state and as such lies within the humid zone of the climatic regions. Its vast expanse of water within Lagos adds to the humidity content of the air which creates some discomfort in the afternoon heats. Meteorological data collected from the Nigerian Meteorological department (NIMET, Oshodi) Lagos. It serves as project area for the basis for the climatic characterization of the area.

3. METHODOLOGY

3.1 Research Design

This section addresses the plan, structure, and strategy of investigation of issues related to reclamation of the land in Lekki area of Lagos State. The plan outlines the research scheme by which the work was carried out, the structure indicates specific outline, while the strategy shows the means by which the research was executed and the methods to be adopted in data collection and analysis. In this study, the cross-sectional survey type of design was used. This includes descriptive and inferential analysis to describe each of the many variables that are necessary for the study.

3.2 Data sources

Sources of data collection for this study were obtained through primary and secondary source of data. The secondary sources are information gathered through official and non-official documents; review of literature, Ministry of Physical Planning and Urban Development, Lagos State, the Lands Bureau, Lagos State, Office of the Surveyor –General, Lagos State, Federal/Lagos State Inland waterways, LSDPC (Lagos State Development and Property Corporation) and UPDC (UAC Property Development Company). In addition, theoretical background to the research topic were sourced through careful study of relevant text books, journals, reports, newspapers, magazines, and thesis. Also addition information was gotten from internet search engines.

3.3 Sampling Technique

The target population for the study is the total number of population within the two study areas which are Femi Okunnu Estate (LSDPC) and Pinnock Estate (UPDC) both in Lekki. However, there is no population census that has given a breakdown of the population along the coastal lines alone. Based on this challenge, the total number of houses in the estates were used as the research population. The total number of population sampled in all the 2 sample areas is 541 Houses. A multi-stage sampling strategy was adopted. At the first stage, purposive sampling technique was used to select the Estate, second stage all number of houses within the estate were identified. At third stage a random sampling techniques was employed in the administration of the questionnaires.

3.4 Sample Size

Sample size in a research is the total number of items from which the required information is extracted. Sample size is critical to ensuring the validity of a research because if properly determined, a number of influencing factors like the purpose of study; the population size etc. justifies collected data to help make meaningful inferences. The sample size in this research

was determined by ensuring that it does not fall below the representative size obtained from some statistical estimation theory which is based on the degree of confidence it carries. The number of houses/households for this study is given as (n_o), assuming a confidence level of 95%, probable error is given as not more than 0.05 (5%). Yamane (1967) mode of determination will be adopted.

$$n_o = \frac{N}{1+N(e)^2}$$ .... (1)

Where n_o=the sample size
N = the population (Total no. of houses)
e = the margin error (5%)
N = 541 Houses
e = 5% (0.05)

$$n_o = \frac{541}{1 + 541(0.05)^2}$$

n_o = 399 houses.
Therefore, the total number of population to be sampled in the 2 estates was 399. The sample sizes for each of the settlement were further selected proportionately using the formula given in Kumar (1999) as follows:

Proportion (p) = $\frac{\text{Estimated population in each Reclaimed land (x)}}{\text{Total Population in all the 2 Reclaimed land (N)}}$ x n .... (2)

Number of Population that was sampled in each settlement - sample size x (p) ……………... (3)
x = Number of Population in each of the selected Area
N = Total number of population in all the 2 selected Area (541)
25% of the total population of the study area was taken as the sample size, which value is 135.25 but was rounded up to 150.
Sample size for Femi Okunnu estate is calculated as
$\frac{391}{541}$ x $\frac{399}{1}$= 288 Houses
Sample size for Pinnock estate is calculated as
$\frac{150}{541}$ x $\frac{399}{1}$= 111 Houses.
Consequently, 288 houses in Femi Okunnu Estate and 111 houses`3` in Pinnock Estate constituted the sample size.

4.0 DATA ANALYSIS AND DISCUSSION
4.1 Extent of Land Reclamation in the Study Area
The result of the digital image processing (DIP) reveals the historical period in which the study areas were being reclaimed (Figure 1.6).

Figures 1.6 (a, b, c): Satellite images of the land cover of the study area.

(a) 1984 Land cover image of study area (b) 2000 Land cover image of study area (c)2022 Land cover image
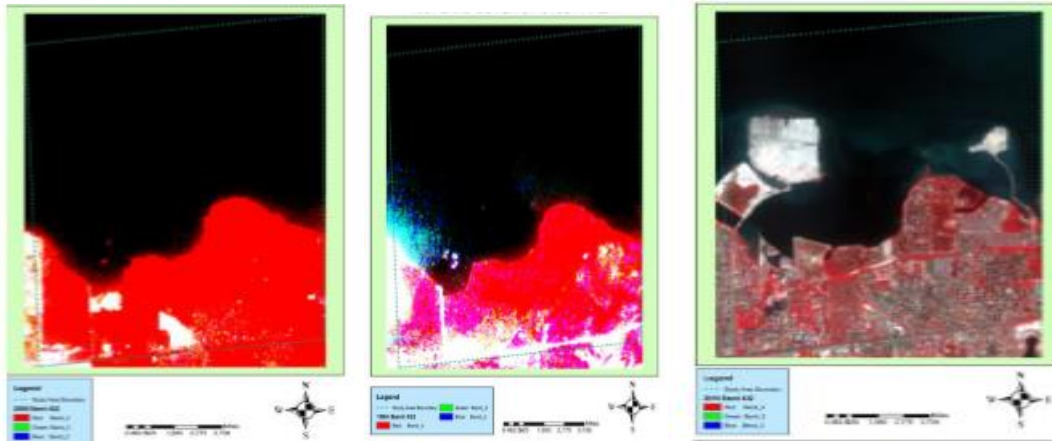
Source: USGS Database

**Table 1:** Some of spectral characteristics of the Landsat TM bands are as follows

TM Band	Colour	Wavelength(nm)	Uses
1	Blue	450 -520	Useful for mapping shallow coastal waters. Strong vegetation; Also, differentiating soil from vegetation
2	Green	520-600	Designed to measure visible green reflectance peak of vegetation for vigor assessment. Also, useful for sediment concentration in turbid water.
3	Red	630-690	An important band for vegetation discrimination. Also, good for detecting ferric (red coloured) pollution
4	Near Infrared (Black)	760-900	Very strong vegetation reflectance; useful for determining biomass. High land/water contrast, therefore good for delineating water bodies/coastlines

Landsat Thematic Mapper(TM) has been operational since 1984 following the launch of Landsat-4. The spatial resolution for the sensor is 30m except for the Band which measures emitted thermal infrared radiation and has a resolution of 120m.

With reference to table 1 above; figure 1.6 [(a) 1984 classified Landsat image of study area] displays a large portion of the image covered in red, representing a large portion of vegetation. Furthermore, the near Infrared portion (black) represents the water bodies. Comparing the images in figure 1.6 (a), (b) and (c); the images clearly reveal a larger portion of vegetation in 1984 than 2000, and an insignificant portion in the year 2022.

Focusing on the images, the portion of area that was a body of water in the year 1984 had started witnessing encroachment and sand filling by the year 2000. Ultimately, by 2022 the reclaimed areas had transformed into developed settlements areas in which the estates being studied, Femi Okunnu and Pinnock (figures 1.7 and 1.8), are a part of. This provision of more land has stimulated the economic growth of the study area. More land has thus been provided for development, infrastructure and accommodation.

Figure 1.7: Site lay out for Femi Okunnu Estate, Lekki.
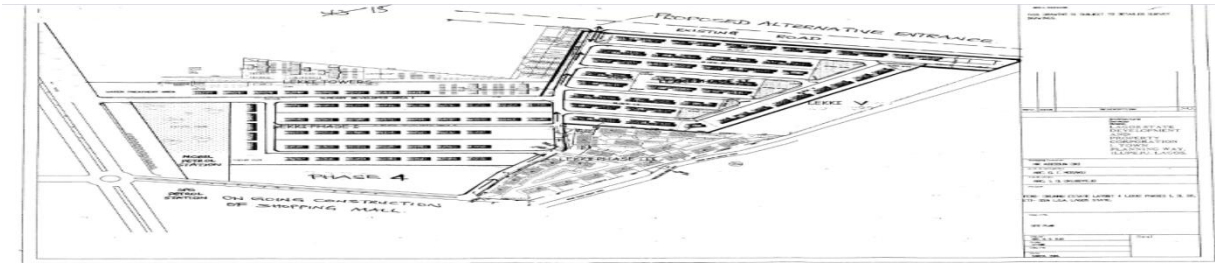
Source: Lagos State Development Corporation (LSDPC)

Figure 1.8: Site Layout for Pinnock Estate, Lekki
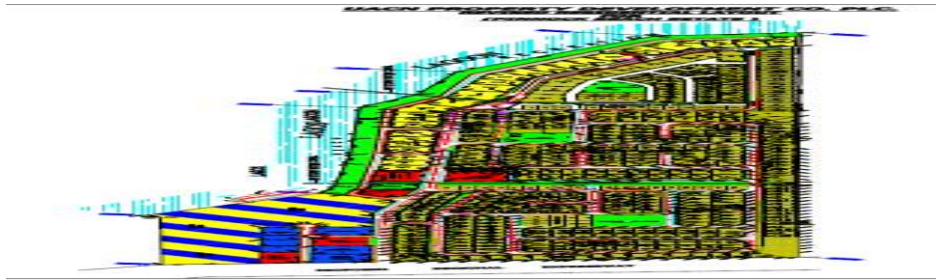
Sources: UAC Properties Plc.

The study results in table 2 reveals the ranking of factors that attracted the residents to the estates, with home ownership been the highest with an attitudinal index value of 4.32, followed by serenity with an attitudinal index value of 3.51 and security with an attitudinal index value of 3.48, while affordability is least ranked with an attitudinal index value of 2.57.

Factors influencing location to the estates	Highly Insignificant	Insignificant	Neutral	Significant	Highly significant	Total	*SWV	Attitudinal Index
	1	2	3	4	5			
Home ownership	10	20	10	22	88	150	648	4.32
Serenity	17	30	13	40	50	150	526	3.51
Security	25	10	5	88	22	150	522	3.48
Amenities	30	18	12	50	40	150	502	3.35
Increase /Decrease in family size	20	40	10	50	30	150	498	3.32
Proximity to important activity place	25	15	30	60	20	150	485	3.23
Psychological attachment	45	20	3	52	30	150	452	3.01
Affordability	55	35	10	20	30	150	385	2.57

Table 2: Factors influencing location to the estates
*SWV means Sum of Weighted Value
Source: computed by the author

4.2 Reclamation, Livability and Satisfaction Level of Residents
To assess the livability of the study area in cognizance of some of the undesirable consequence of reclamation on residents, the satisfaction level of residents was assessed. Satisfaction level was graded from very low to very high, and a chi-square statistic was conducted on satisfaction level in relation to flooding experience, available infrastructure, security level, rent value and land value. This was to allow the researcher statistically verify the results obtained in table 2. A significant difference in satisfaction level across the study area indicate that the result of the analysis is not supported. Poor level of satisfaction across any of the social and economic

factors therefore indicate that the reclaimed area was inadequate in references to factor being analyzed. The result of the analysis is as presented in table 2.

Table 3: Result of Chi-square analysis on residents' satisfaction level

Variables	Sig. Value
Rent	0.890
Land	0.802
Security	0.787
Infrastructure	0.622
Flooding	0.342

Source: Computed by the author

Adopting a (significant level) p-value of 0.05, results presented in the table above shows that there is no significant difference in the satisfaction of residents across the study area on all the variables investigated. Juxtaposing the results above, p-value of 0.787, 0.622, 0.890, 0.802 and 0.342 for security, infrastructure provision, rent value, Land value and Flooding experiences of residents, respectively, with the findings in table 3, it could be statistically inferred that the high level of satisfaction reported by residents is same for the entire area. It is recalled here that the least attitudinal score for the factors investigated was 3.01 (recorded for psychological attachment (see table 3). This 3.01 score indicates that the disposition of the residents in relation to the factors observed is highly positive (above average). Hence, we conclude that reclamation exercise and its attendant infrastructure provision, and security provision are highly adequate (all are above average) across the study area, and consequently satisfaction level is high. Also, in regards to flooding, rent value and land value, the result is supported as there is no significant difference in satisfaction level.

From the table 3 the degree of satisfaction with the infrastructure within the estates is revealed. In the attitudinal index, Security has the highest value (4.32) followed by proximity of the amenities to the residents with a value of 3.51, and amenities/infrastructure with a value of 3.35, while psychological attachment is least ranked with an attitudinal index value of 3.01. This is in agreement with Obialor et al., (2024) assertion on the structure of human needs as advocated by Marlow in his theory of human needs.

Table 4: Degree of satisfaction with the infrastructure within the estate
SWV means Sum of Weighted Value

Degree of satisfaction with the infrastructure within the Estates	Highly Insignificant	Insignificant	Neutral	Significant	Highly significant	Total	*SWV	Attitudinal Index
	1	2	3	4	5			
Security	10	25	20	22	88	150	648	4.32
Proximity of amenities to the residents	17	30	13	40	50	150	526	3.51
Availability of Amenities/Infrastructures	30	18	12	50	40	150	502	3.35
Affordability	20	45	10	52	30	150	498	3.32
Psychological attachment	45	20	3	52	30	150	452	3.01

Source: computed by the author

4.3 Investigation of Consequences of Reclamation on the Environment

Potential and possible consequences of reclamation were investigated and the ranking of the consequences is given in table 5. The study using the Likert Scale of Rating shows that the

Developers put measures in place to control the consequences of reclamation. Looking at the table, it would be noticed that flooding of septic tank / soak away has the lowest rankings with value of 0.00, and 2.33 for general flooding, while the ranking with peeling of paints from walls having the highest value of 3.80, followed by dampness of wall with a value of 3.50.This observation correlates with the reports in previous study by Seely (1986) who affirmed that Damp penetration has been one of the most serious defects in buildings in reclaimed areas.

Table 5: Ranking of Potential Consequences of Reclamation on the Environment. SWS means Sum of Weight Value

Effects of reclamation	Highly Insignificant	Insignificant	Neutral	Significant	Highly Significant	Total	SWV	Attitudinal Index
	1	2	3	4	5			
Peeling of paints from wall	15	15	20	60	45	150	570	3.80
Dampness of building walls	25	15	10	60	40	150	525	3.50
Cracks on the wall	20	30	10	55	35	150	505	3.37
Foundation cracks	20	50	15	25	30	150	415	2.77
Flooding of surrounding land YHand building areas	30	50	30	15	25	150	405	2.70
Sinking building	35	55	20	15	25	150	390	2.60
Slanting building	50	30	20	15	25	150	355	2.37
Drainage problem	50	20	30	25	15	150	355	2.37
General flooding	60	40	10	20	20	150	350	2.33
Flooding of soak away pit and septic tank	0	0	0	0	0	150	0	0.00

Source: Computed by the author

As flooding is one of the common features and fear associated with reclamation exercise, the study correlates the consequent of it with some selected indices as revealed in table 5. Nascent from the correlation, the analysis showed the consequences of land reclamation on property value (Table 6).It could be inferred from the results that experiences of flooding in the study area have no significant (*p-value: 0.786*) influences on desires of residents to have land properties (House Ownership) in the reclaimed area. The result also shows that rent value (*p-value: 0.085*) is not significantly determined by consequences of flooding. However, there is a significant (*p-value: 0.002*) but negative (weak) (*correlation coefficient: 0.342*) effect of consequences of reclamation on Land value in the study area. The implication of this is that for the study area, disadvantages associated with reclamation are not a strong factor that affects the decision of residents in desiring to own or rent apartments in the area. This actually establish observations of Nwosu et al (2024) that affirmed that as economies transit to higher income levels, the demand for improved environmental quality increases. However, the relentless pursuit of economic growth, industrial expansion, and anthropogenic activities continue to impose significant pressures on the environment. However, for land value, the negative value of *coefficient of correlation* indicates that if increase is experienced in flooding in the study area, a decrease in land value may result.

Table 6: Consequences of land reclamation on the property value.

Variables	Pearson correlation coefficient	Spearman rank correlation coefficient	P-value
House ownership		0.076	0.786
Rent Value	0.655		0.085
Land Value	-0.342		0.002

Source: Computed by the author

The measures put up by the estate's development control units were investigated and reported in table 7. The figures 1.9- 1.11 show there is provision for proper drainage system within the estates, which is one one of the measures put in place to curb the effect of reclamation. This has minimized the possibility of flooding within the estate. This actually in agreement with the with the observation of Adelakun (2015) in his study that observed the current approach to flood risk management by private and public agents in the context of international practices and discovered that appropriate measured were put in place to mitigate possibilities of coastal flooding.

Table 7: The Measures put in Place to Control the Consequences

Consequences	Control Measures
General Flooding	Provision of drainage channels
Flooding of soak away pit	Use of sewage treatment plant instead of soak away pit
Cracks in the wall	Enforcement of certain foundations design system
Slanting and sinking buildings	Allowing the land to settle and compacting the land
Foundation cracking	Enforcement of certain foundations design system
Dampness of wall	Provision of drainage channels

Source: Computed by the author

Figure 1.9

Figures 1.10

Figure 1.11

Table 8: Level of Occurrence of Negatives Consequences of Reclamation

Consequence of Reclamation	Frequency (Percentage)	
	Disagree	**Agree**
No flooding of soak away pit	0 (0)	150(100)

No foundation crack/ sinking	7 (4.7)	142 (94.7)
No Slanting/ sinking buildings	15 (10)	135 (90)
No General Flooding	24 (16)	126 (84)
Dampness of wall	42 (28)	107 (71.3)
Crack on the wall	45 (30)	105(70)
Peeling of paints	60 (40)	68 (45.3)

Source: computed by the author

From the table 8 above, the most effectively controlled consequence is flooding of soak away pit (100%). This is as a result of the measures put in place, which is the usage of sewage treatment plant instead of individuals sinking soak away pits. Consequently, there is a zero case of soak away flooding. Cracking and sinking of foundation is relatively scarce within the estates (94.7 % Agree and 4.7% Disagree), that implies there are no such within the estate. This shows that the measure of allowing the land to settle during and after reclamation was adequate and effective in curbing the problem. General flooding of the environment is minimal and this suggests that the provision of drainage reduces flooding within the estate. This however contrasted the assertion of James et al., (2013) that concluded in the study that human activities such land reclamation disrupt and destabilized runoff generation and flood magnitude. However, dampness of wall and peeling of paints are relatively noticeable and are significant occurrence in the area.

5. CONCLUSION AND POLICY RECOMMENDATION

Land reclamation practices in Lagos metropolis has benefited immensely from hydraulic sand filling technology, imported through the avenues of globalization; the technology has made large areas of reclaimed lands available from previously uninhabitable, marshy and coastal lands. The study considered the factors of relocation to the reclaimed land, livability and satisfaction of the residents, consequences of the reclamation exercise and the put in place controlled measured. The study noted that the real reason people locate in the area is not for shelter, but for the desire to own houses in a certain type of location and that this plus the infrastructures provided in the area informed their satisfaction with dwelling with in this reclaimed land. The finding is in agreement with Mohit, Ibrahim, and Rashid (2010) studies that concluded that customer's residential satisfaction is a feeling of contentment or fulfillment when the customer has ultimately achieved what he has expected in a house. Added to this is the workable controlled measured that were put in place. Nevertheless there will always be apparent inadequacies. With increased economic activities and migration to cities as a result of urbanization, particularly in coastal areas, reclamation will be ineluctable. However the environmental effects might be disastrous if ignored (Akinpelumi, et al, 2024). And to this intent, Eretan, Atoyebi, and Sodiq, (2024) in their study affirmed that technological advancement can harm the environment. Therefore, the apparent inadequacies need to be addressed in order to promote best practice which is spawned by an integrated approach to planning and foresight. Consequently, to promote environmental sustainability and socioeconomic wellbeing of the residents within the reclaimed land, some recommendations are hereby put forward: there is need to maintain and sustain the cherished elements in the estate like security, attendant infrastructural provision, other benefits and the general satisfaction being enjoyed by the residents of the study area. At the same time, there is need to strategies to completely eliminate the observed negative consequences of the reclamation such dampness of the wall and paints pilling being experienced in the study area. It is also recommended that effective monitoring and management of the Estates constantly to mitigate against the likely but yet to manifest common side effects like landslide, flooding, ocean rise, loose of properties and lives must not be trivialized.

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