

# Reimagining Community-based Climate Urban Water Supply Sanitation Governance in Owerri Municipal Local Government Area, (LGA), Imo State, Nigeria.

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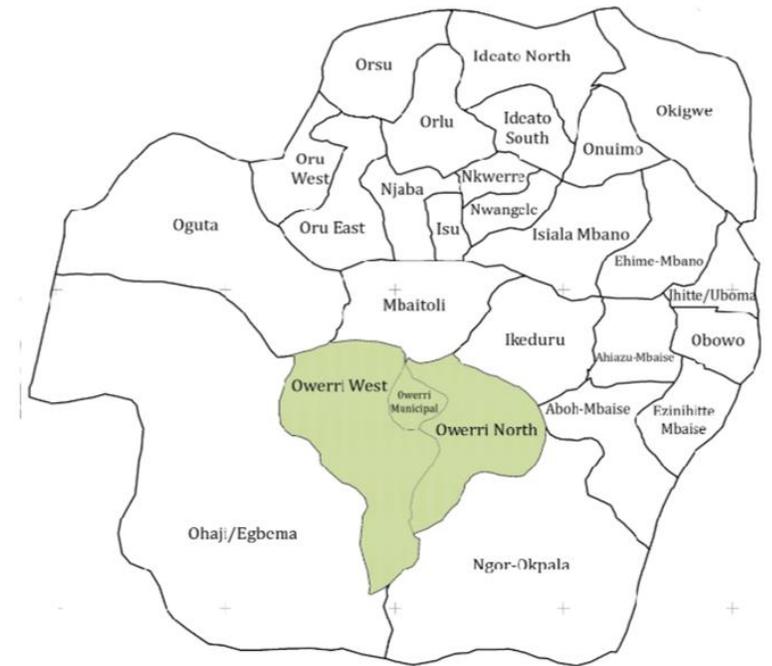
# PRESENTATION OUTLINE

- Abstract
- Introduction
- Study Area
- Theoretical
- Framework
- Literature Review
- Discussions
- Findings
- Conclusion



# ABSTRACT

- **Brief History of Owerri.**
- **Pre colonial Administrative:** Otamiri, Nworie as supplies before 1940s; ecology respected, pit latrine, poor public health
- **Colonial:** Owerri provincial Headquarters, Racial WASH individual domestic programme, 1950-mid 1980s, Owerri the Capital Territory, public health introduced with sanitary inspectors.
- **Post colonial:** Integrated Otamiri urban water programme, no public urban toilets, 1985-late, 1990s; sanitary public inspectors abandoned, inclusivity encouraged, pollution of Otamiri/Nworie rivers
- **Contemporary/Modern:** Abandoned integrated urban supply, private domestic boreholes; 1990s to date, no sanitary inspectors, schools of health technology established, vaccination increased, less public health education awareness, less inclusivity.



Map of Imo State showing Owerri  
Source: (Agoha, 2022)

# INTRODUCTION

- **Owerri Municipal and Twin city masterplan:** Water distribution expanded for old and new Owerri.
- **Inadequate infrastructure:** poor governance, and lack of funding, water supply and sanitation sector.
- **Increased population:** no functional public water supply, public toilets
- **Ecological problems:** increased industrial pollution, open defecation, ecosystem destruction, gully erosion increased
- Urban waste increased with urban refuse problems
- Nworie/Otamiri water fronts, wetland and vegetation destroyed



Map showing LGAs in Owerri  
Source: (Agoha, 2022)

# STUDY AREA

- Owerri Nchi-Ise five (5) traditional villages of Amawom, Umuechchi, Umuihugbaa, Umuonyechere, exist dotted with heritage assets, hence the name Owerre Nchi-Ise had hierarchy of public open spaces as community squares family, kindred, village and community with fruit, cah trees, landscape that purify the environment and for socioeconomic, sociocultural and judicial activities.
- Headquarters of old Owerri Colonial Province before the 1960s, State Capital of Imo State, Nigeria since 1976. Bounded by Egbu, Orji in the East, Amakohia Uratta and Irete in the North, Nekede and Naze in the South, Umuguma in the West communities.
- Located within longitude  $5.5096^{\circ}$  N, and latitude  $7.0391^{\circ}$  E with about 158 meters above sea level, (Fingerhuth, 1977).
- Ugwu Ekwema site is one of the highest points which empty natural flood water into Nworie and Otammiri rivers, there are other natural and artificial flood collection basins such as the lake Nwaebere, Ikenegbu and Aladinma housing estates.

# OWERRI TWIN CITY PLAN

With abused open spaces, 5 avenue bridges linking the old & new Owerri

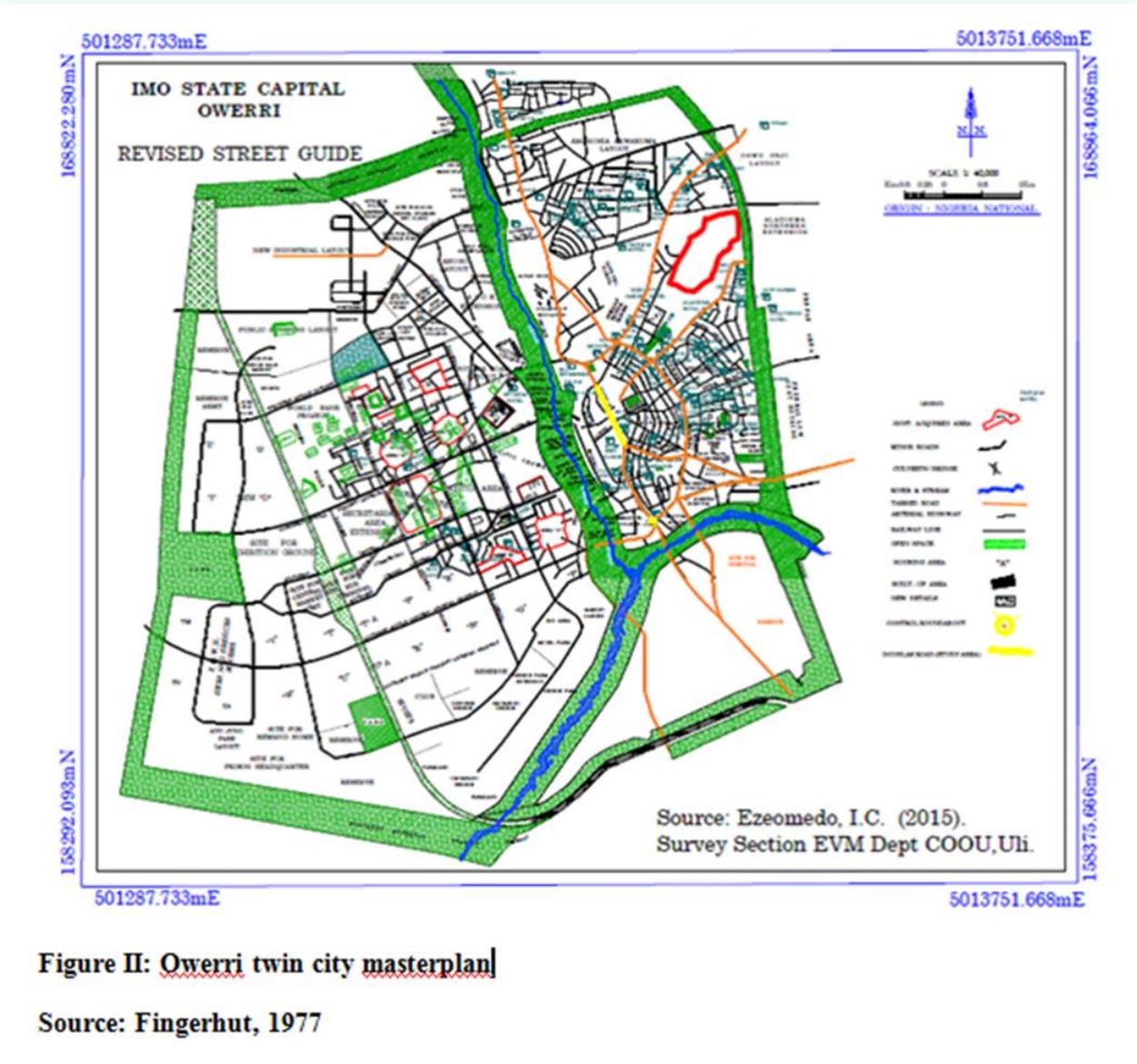


Figure II: Owerri twin city masterplan

Source: Fingerhut, 1977

# LITERATURE REVIEW

- Effective and inclusive Urban governance WASH system
- Regulated urban borehole system
- Ground water statistics & preservation
- Soil statistics, health & preservation
- Public health governance system from communities and neighbourhood
- Integration of traditional community squares, Green/sustainable Public toilet system; biodegradation, solar energy, urban climate smart agriculture, artificial/natural water body preservation to control urban heat problem



# DISCUSSIONS

- Natural water supply from Nworie and Otamiri
- High land density that requires optimisation of available land resources hence climate smart urban agriculture needed
- Artificial water bodies preservation
- Underground water drainage system of 1983-1985
- Urban water reticulation & rain water harvesting
- Gully erosion and land weathering control
- Wetland ecosystem, indigenous flora, fauna and waterfront abuse
- Open defecation minimisation



# EROSION AT IKENEGBU: CONTROL & ARTIFICIAL LAKE POSSIBILITY



**Erosion site at Ikenegbu, Owerri**  
**Source:** (Researchgate.net, 2011)



**Erosion site at Ikenegbu, Owerri**  
**Source:** (Researchgate.net, 2011)

# OWERRI TWIN CITY LAYOUT

- Right-old Owerri
- Left-new Owerri

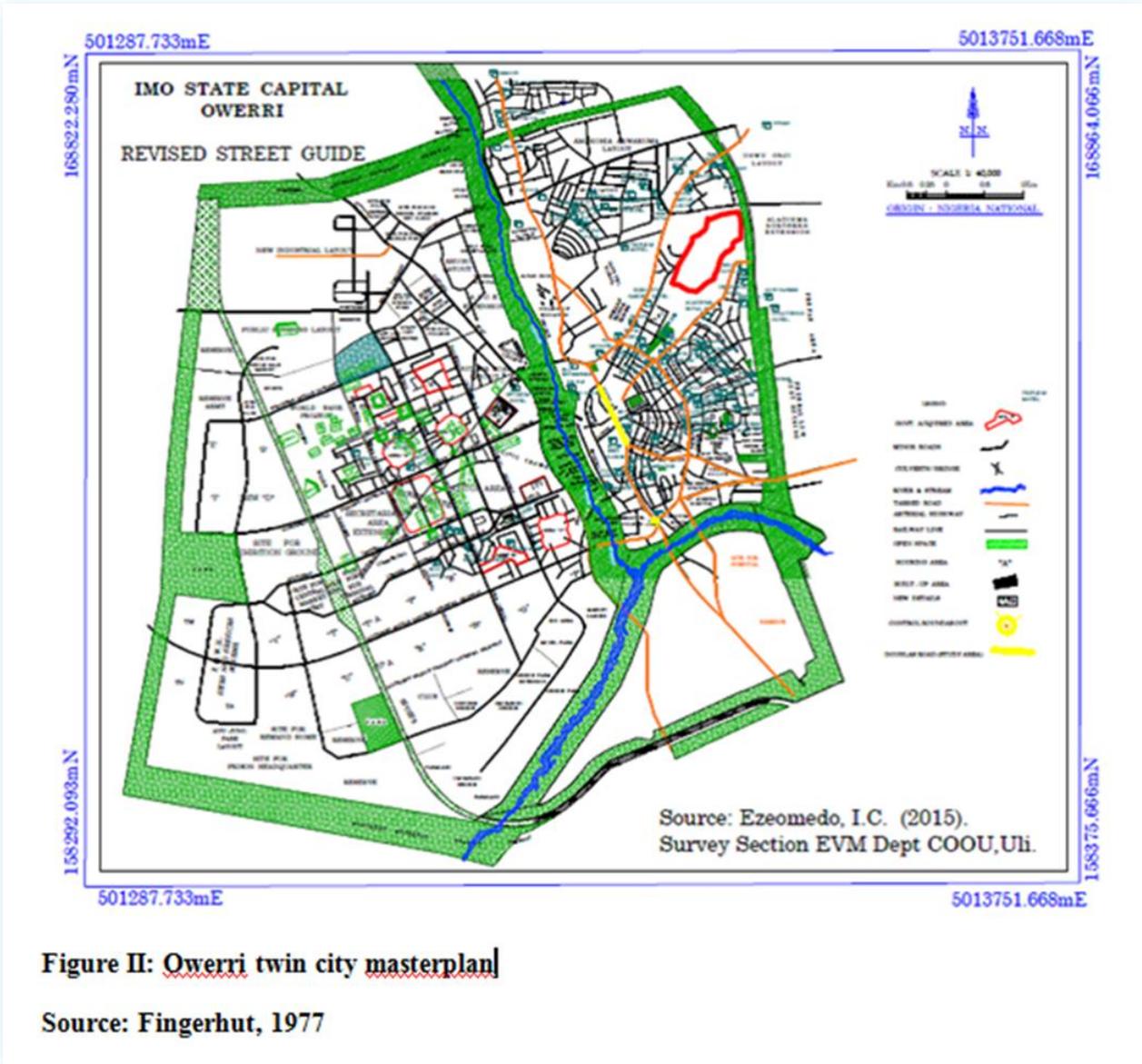


Figure II: Owerri twin city masterplan

Source: Fingerhut, 1977

# FINDINGS

- **Inadequate infrastructure with high land density:** challenge facing urban water supply and sanitation in Owerri Capital Territory.
- Poor governance and lack of transparency are significant challenges facing the sector.
- Lack of funding is a major constraint to improving water supply and sanitation services.
- **Improved Sanitation Infrastructure:** Constructing and maintaining adequate sanitation facilities, including public toilets and latrines to reduce open defecation.
- **Behavioral Change:** Promoting awareness and behavioral change through community engagement and education.
- **Policy Implementation:** Strengthening policies and enforcement to prevent open defecation and ensure proper waste management.
- **Community Participation from traditional sociological hierarchy:** Encouraging community participation in sanitation efforts, including monitoring and maintenance of facilities



# RECOMMENDATIONS

- Urban public toilets in public places
- Integration of traditional public open spaces, governance & urban planning regulations
- Inclusive urban governance system involving all stakeholders
- Urban smart forest & agricultural systems with genetic & traditional animal, cash & fruit trees along walkways
- Green & smart city with sustainable energy systems, water harvesting, integrated, drainage, pedestrian walkways, cycling routes perfected
- Aggressive public health awareness, vaccination & integration of traditional systems



# CONCLUSION

- Improved governance
- Increased funding, and community/neighbourhood participation and integration of community squares as a means of restoring communal lifestyle of the people to check and deal with environmental and infrastructural abuses.
- Integrated urban water supply and sanitation governance in Owerri Capital Territory
- Collaboration and teamwork between policymakers and stakeholders to develop effective solutions to these challenges.
- Integrated green/sustainable infrastructure
- Urban Agriculture & forest preservation/restoration
- Public awareness and enlightenment through traditional age grade, women, youth and other social systems



# PROPOSED GOVERNANCE SYSTEM

STATE PUBLIC HEALTH



LGA PUBLIC HEALTH



COMMUNITY AND NEIGHBOURHOOD (AGE GRADE) AND YOUTH ASSOCIATIONS → VILLAGE → WOMEN → KINDRED → FAMILY → INDIVIDUAL



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# Thank You

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