INAUGURAL LECTURE SERIES 53

LADOKE AKINTOLA University of technology, Ogbomoso, Nigeria

Informal Urbanism and the Imperative of Inclusive Planning

Musibau Omoakin Jelili Professor of Urban and Regional Planning



LADOKE AKINTOLA UNIVERSITY OF TECHNOLOGY, OGBOMOSO, NIGERIA

Inaugural Lecture Series 53

INFORMAL URBANISM AND THE IMPERATIVE OF INCLUSIVE PLANNING

Delivered by

Musibau Omoaki Jelili Professor of Urban and Regional Planning

18 May 2023

CITATION OF PROFESSOR MUSIBAU OMOAKIN JELILI

Professor Musibau Omoakin Jelili was born about five decades ago to the family of Mr. and Mrs. Jelili Maroof of Pakoyi's Compound in Ogbomoso, Oyo State, Nigeria. Musibau, a semi-orphan (having lost his dad a few months after birth), attended Saja Baptist Day School, Ogbomoso (1977-1984), Ogbomoso Grammar School (1984-1988) and Ori-Oke Community High School, Ogbomoso (1991-1993). He gained admission into the prestigious Ladoke Akintola University of Technology (LAUTECH) in October, 1995 and obtained his B.Tech (Hons), M.Tech and PhD in Urban and Regional Planning from the same institution in 2001, 2006, and 2009, respectively. He is a corporate member of the Nigerian Institute of Town Planners (MNITP/1936) and a registered town planner (RTP/1579).

He started a teaching career in 2003 at the Best Legacy International High School, Ogbomoso, where he taught Geography and Social Studies, before joining the service of LAUTECH in 2004 as a Teaching Assistant in the Department of Urban and Regional Planning. And with divine providence, he rose through the ranks to attain a full Professorship position in 2017 as one of the fastest rising stars in the Faculty of Environmental Sciences.

As an erudite scholar and prolific writer, Professor M.O. Jelili has, to his credit, over sixty (60) publications in different publication outlets of repute. These include one book, one monograph, one edited book, thirteen chapters-in-books, thirty-four journal articles, six technical reports and many referred conference proceedings and public lectures, in the specialized areas of **land use and sustainable development planning** with a focus on **Informal Urbanism**.

As a fulfilled academic with enviable leadership qualities and research prowess, he has mentored many junior colleagues in the areas of research publication and postgraduate studies, as well as successfully supervised hundreds of B.Tech projects, six M. Tech dissertations, one M. Phil and two PhD theses, while a number are in the pipeline. His postgraduate products are/were already lecturers, heads of departments, and deans of faculties in different polytechnics and universities, as well as officers in different ministries/agencies of government and private practice in Nigeria and beyond.

As an academic of national and international repute, Professor M.O. Jelili has visited many cities and universities of the world, either as visiting lecturer, paper presenter at conferences, resource person or external examiner. These, among many others, include being:

- a Visiting Lecturer to the University of Ilorin as Reader (2016-2017)
- a Visiting Lecturer to the University of Johannesburg, South Africa, as Senior Lecturer (2012-2013)

- a Facilitator at the National Open University, Ilorin Study Centre, Kwara State, Nigeria (2016-Date)
- an External Examiner to Obafemi Awolowo University, Ile-Ife, Nigeria (2019-Date)
- an External Examiner to Olabisi Onabanjo University (OOU) (2021-Date)
- an External Examiner, Universiti Pendidkan Sultan Idris, Malaysia (2017).
- an External Examiner/Moderator to The Polytechnic Ibadan, The Oke-Ogun Polytechnic, Saki, Osun State Polytechnic, Iree and The Federal Polytechnic, Offa (2015-2022)
- a resource person invited by the UN-Habitat University Network Initiative (UNI) to a Global Meeting held at the Patel College of Global Sustainability, University of South Florida, Tampa, USA (May, 2013).
- a resource person and paper presenter invited by the Association of African Planning Schools (AAPS) to represent LAUTECH Planning School at Dar es Salam in Tanzania (October, 2010),
- an invited Lead Paper Presenter at the First National Conference of The Oke Ogun Polytechnic, Saki, Oyo State.

Other cities/countries of the world visited outside Nigeria for similar purposes include Accra and Cape Coast (Ghana), Addis Ababa (Ethiopia), Kigali (Rwanda), New York, Atlanta in Georgia, Denver in Colorado, and Detroit in Michigan (USA), among others.

In spite of the numerous academic exploits above, Professor M.O. Jelili has, over the years, been involved in so many administrative responsibilities. These, among many others, include:

- Level Advisor, Department of URP, LAUTECH (2006-2007);
- Examination Officer, Department of URP, LAUTECH (2008-2011);
- Postgraduate Coordinator, Department of URP, LAUTECH (2011-2012);
- Town and Country Planning Research Coordinator at the University of Johannesburg, South Africa (2013);
- Acting Head of Department, URP, LAUTECH (2013-2015);
- Member, NITP Presidential Committee on Urban Governance
- Deputy Dean, Faculty of Environmental Sciences, LAUTECH (2018-2019);
- Member of the Board of Postgraduate School (2018-Date);
- Chairman, Faculty Abstract Committee, (2018-2021)
- Chairman, University Committee for Office Space Allocation (2015-2019);
- Chairman, University Committee for Demarcation of Boundaries (2019);
- Director, Quality Assurance and Chairman Internal Quality Assurance Committee (2019-2021);
- Member, University Energy Committee (2018-Date);

- Member, Management Committee for University Central Research Laboratory Committee, (2018-Date),
- Chairman, LAUTECH Environmental Management Committee (2021-Date)
- Dean, Faculty of Environmental Sciences (2022-Date), etc

Professor M.O. Jelili has won many awards and distinctions. These, among others, include:

- The Best Student in SSII (English Language and Geography, 1991/92)
- The Best Graduating Master's Student in URP, LAUTECH (2004/2005)
- The National Overall Second Best Candidate in the 2006 Town Planners' Registration Council of Nigeria (TOPREC) Professional Practice Examination (PPE)
- Rockefeller Foundation Grant to partake in the International Conference of Association of African Planning Schools held in Dar Es Salam, Tanzania in October, 2010
- UN-Habitat University Network Initiative (UNI) Grant to partake in the 2013 Global Meeting at the University of South Florida, USA (as one of the few ambassadors of African universities, 2013)
- Lead Researcher, 2014/2015 TETFUND Research Grant on Informal Urbanization in Africa (2015)
- Lead Researcher, 2016/2017 TETFUND Research Grant on a Study on "Evaluation of Land Resources and Development Potentials in Ogbomoso and its Environs" (2017)
- Second Best Paper Prize at the 2017 China-Africa Urban Development Forum, an International Conference held at the University of Cape Coast

Professor M.O. Jelili is a man of many parts. In spite of his numerous responsibilities above, he is a unionist; in fact, he is the immediate past Secretary of the LAUTECH Branch of Academic Staff Union of Universities (ASUU). At the National level, he also served as the Collation Officer for Oriire Local Government Area in the 2011 General Elections of the Federal Republic of Nigeria.

Professor Musibau Omoakin Jelili is married and blessed with promising children.

PROTOCOLS

The Acting Vice-chancellor,

The Registrar and other Principal Officers,

Chairperson and other members of Committee of Provosts and Deans,

Deputy Dean, Faculty of Environmental Sciences and other Deputy Deans here present,

Professors and other Members of Senate,

Directors and Heads of Departments and Units,

Head of Department of Urban and Regional Planning

Members of Academic Staff,

Non-teaching Members of Staff,

Distinguished Guests,

Family Members and Friends,

Gentlemen of the Press,

Great Ladokites,

Ladies and Gentlemen.

1. INTRODUCTION

1.1 Preamble

I feel greatly honoured to stand before you today to present the 53rd Inaugural Lecture of the University of choice, the Ladoke Akintola University of Technology, on behalf of the Faculty of Environmental Sciences. It is the 5th (2nd by a serving dean) in the faculty and 4th in the Department of Urban and Regional Planning (DURP), after my supervisor, Professor A.A. Adedibu's "It's about time" in 2004, Professor N.B. Tanimowo's "Human Travels in Cities: A Traffic Reduction Agenda" in 2019, and Professor A.T. Adeboyejo's "Our Cities: Yesterday, Today and Tomorrow" in 2021. While Adedibu (2004) explores the various dimensions of environmental management problems, how to address them, and more importantly, the need to take urgent actions, Tanimowo (2019) x-rays the issues of trip generation, trip distribution and modal split as components of human travel pattern in relation to land use, and proposed a reduction agenda. Adeboyejo (2021), in his own

inaugural lecture, portrays the pictures of developing countries' cities, especially Nigerian cities in the past, present and forecast the situation of the future city, all towards identifying strategies for effective and efficient performance of the city.

Mr. Vice-chancellor, we have had many other inaugural lectures from urban planning and allied disciplines, ranging from Egunjobi's (1999) "Our Gasping Cities", Oyesiku's (2002) "From Womb to Tomb", through Agbola's (2005) "The Housing Debacle" and Sanni's (2018) "Housing Nigerians: A Paradox", to Gbadegesin's (2019) "The Eleventh Commandment: Stewardship for Sustainable Environment in Nigeria", among many others. They all have, in their various research efforts, contributed to knowledge in the built environment and sustainability sciences, and more importantly, in identifying ways by which our built environment could be salvaged and sustainably developed. I observe, however, that the issues and approaches captured in most of the earlier lectures, laudable as they were, were patterned in line with the 'received knowledge' in the traditional areas of urban planning and allied disciplines. They did not say much about informal sector (land use) activities, and more importantly, on the need for integrated and inclusive planning in which everything or every sector of the economy matters.

The less recognized land use activities, their participants, and the implications for urban economy, urbanization processes and sustainable development are peculiarities of towns and cities of the developing countries, particularly of sub-Saharan Africa of the global south, which need adequate attention. For example, the World Bank in one of its reports titled "The Long Shadow of Informality: Challenges and Policies", observes that informal economy accounts for more than two thirds of employments in developing and emerging economies, and for 80.4 percent of Nigerian employments (World Bank, 2022). Yet, the sector, in any of its dimensions, is not getting its due recognition in the scheme of things. This perhaps was the gap which the UN-Habitat identified for the theme of the 2022 World Habitat Day as: "Mind the Gap, Leave No One and Place Behind" (UN-Habitat, 2022). Mr. Vice-chancellor, sir, this global thought, which was in line with the Sustainable Development Goal (SDG) 11 (to make cities inclusive, safe, resilient and sustainable) has been my concern since my academic adventure as a researcher in the university system for about two decades, and it has informed my story here this afternoon – **Informal Urbanism and the Imperative of Inclusive Planning** – as a product of the informal sector, myself.

Having navigated through thick and thin, Mr. Vice-chancellor, I'm glad to inform this august gathering that divine providence has it that the inaugural lecturer of today is a man of many firsts: the first LAUTECH alumnus in the Faculty of Environmental Sciences to present inaugural lecture in the university, first alumnus to be (Acting) Head of DURP, first PhD product of the Department of Urban and Regional Planning, LAUTECH, first and only TOPREC (Town Planners Registration Council of Nigeria) Professional Practice Examination award-winning candidate in the university, first professional town planner from Ogbomoso zone to be Chairman of a State Chapter of the NITP, and interestingly,

first alumnus to produce a PhD in the Faculty of Environmental Sciences, LAUTECH, and to become a substantive Dean of the faculty. Glory be to God and Kudos to LAUTECH and sister universities home and abroad for the privileges to train and impart knowledge as an academic and professional town planner.

1.2 Why Inaugural Lecture?

To inaugurate, according to Oxford Advanced Learner's Dictionary, is to introduce a new public official or leader, or a new development or an important change at a special ceremony where an inaugural address (lecture) is delivered. In this context, it is to introduce publicly and ceremonially a new professor or university senate chair. An inaugural lecture is therefore meant to give the incumbent the opportunity to state in public what he actually professes (Farinu, 2015). As observed by Ayeni (2012) and Farinu (2015), it is meant to show the basis for the promotion or appointment of an academic to the full professorial position. The inaugural lecturer is, therefore, expected to provide a broad overview of their research efforts, findings, and contributions to knowledge, and offer necessary suggestions on how to improve the frontiers of knowledge and, more importantly, inform policy directions towards finding lasting solutions to the societal problems in their research domain, discipline or sub-discipline.

An inaugural lecture is therefore an academic ceremony that is supposed to be held for, and given by, a newly appointed professor, showcasing to the world why he deserved to be offered a university senate chair and what he can offer the society, especially the relevant industry. It is therefore, not supposed to be delayed. Unfortunately, owing to some systemic challenges and individual laxities, in some cases, inaugural lecture is being turned to a form of valedictory lecture, and in some others, it is never delivered at all. Mr Vice-chancellor, sir, I believe you would understand and pardon me for having mine after about six years of my professorial promotion's effective date -1^{st} October, 2017.

1.3 My Journey into Urban Planning and Informal Urbanism

Mr. Vice-chancellor, sir, may I report here that I started with art and social science 'o' level background with credits and distinctions in core art and social science subjects, including English Language, Yoruba Language, Literature in English, Geography, Economics and Government, among others. Though, these were enough for me to gain admission to study urban and regional planning in any Nigerian university in 1993, I could not have thought of urban planning, not even in LAUTECH where you must undergo compulsory science training in Physics, Chemistry and Biology at least at 100 level. Being one of the best 'o' level results among art and social science students in town then, I was already being called "the Law", and "Barrister". However, being a lawyer was never my desire either, because of the phobia already instilled in me by a Yoruba adage that says: "at'are at'ebi Olorun maje kar'ejo" (may we not be involved in a court case irrespective of whether or not we

would be acquitted). My interest in Economics, therefore, made me to prefer courses such as Accounting, Business Administration or Economics, but my JAMB (Joint Admission and Matriculation Board) examination result did not allow this to happen, as I could not be offered admission by the first-generation universities, which were my first and second choices, respectively. So, in my second attempt of JAMB examination, I reluctantly chose Urban and Regional Planning, LAUTECH as my second choice, while my first choice was Economics at another first-generation university. But before JAMB Examination result was out, I had already met an area elder brother, Mr. Bolaji Popoola (one of the pioneer staffers of the Department of Urban and Regional Planning, LAUTECH) who advised me to settle for urban planning, and I got persuaded. Interestingly, my area brother and adviser, who later became my lecturer, eventually quit planning to become a naval officer in the US, while the reluctant advisee became a professor of planning. Glory be to God, and many thanks to my teachers and senior colleagues who understand the slippery surface I 'trekked' to attain this level, and through whom I learnt a number of lessons.

However, being a lecturer could not have been my plan as my art background had battered my Cumulative Grade Point Average (CGPA) at the science-oriented lower levels of my undergraduate study in LAUTECH, which made me to complete my Bachelor of Technology (B. Tech) degree only as a just-above-average student. Nevertheless, I pushed harder and enrolled for my master's degree in the same course, and on completion of the first semester of my master's degree programme, providence started smiling at me. I never knew I was already being noticed by Professor Layi Egunjobi (now Emeritus), the immediate past President of the Town Planners' Registration Council of Nigeria (TOPREC), who was then Head of Department while on sabbatical in LAUTECH from the University of Ibadan (UI), as he recommended me for job as a Teaching Assistant in my alma mater in August, 2004.

The offer, which I humbly accepted with prayers from the planning icon, consolidated my footing in the world of urban planning as a professional, academic and researcher, as I did not only graduate as the best graduating master's student and best master's dissertation, but also emerged as the year's (2006) Overall Second Best Candidate in the TOPREC Professional Practice Examination. Mr. Vice-chancellor, sir, moving from just above-average to the best Master's student and national second best candidate is one of the clear manifestations of excellence for which LAUTECH is known. My alma mater, through rigorous and intensive academic, technical and administrative training, can help bring to fruition the potentials in any student or employee that passes through it. I'm glad to report, Mr. Vice-chancellor, that ALL the first-and-second-generation federal universities that denied me admission to study a bachelor's degree course had at one time or another, after my training at LAUTECH, offered me employment either as a full-time faculty member, visiting senior academic, or as external examiner. Glory be to God!

Mr. Vice-chancellor, just like the fact of providence got me into urban planning, my journey into informal urbanism was by accident. My main research interest was actually in land use and sustainable development planning. This has made me to venture into issues bordering on human welfare and environmental sustainability, including environmental and socioeconomic development challenges and implications for human health, settlement planning and environmental management. In doing these, I took interest in issues hitherto neglected by or not emphasized in planning, such as street-begging (for my masters and PhD studies), street-trading, informal automobile workshops, ''illegal" urban land use conversion, informal housing redevelopment or urban renewal, informal migrant settlements, and environmental/public health implications of same. I never knew I was already contributing to an emerging field of "Informal Urbanism".

Although, my interest in addressing the question of informal sector activities started in 2004, while carrying out Professor A.A. Adedibu's assignment on urban land use as a Teaching Assistant, and I came across and had to study two publications, respectively by Okeke (2000) and Onyebueke (2000) on informal sector activities, little did I realize I was being part of evolving a new concept or field in urban planning. The two publications informed the approach I used on the assignment, which led to my first ever journal article publication titled, "Land Use Classification and Informal Sector Question in Ogbomoso, Nigeria" (Jelili and Adedibu, 2006). Citing this and other publications, Mr. Vice-chancellor, Onyebueke and Geyer (2011) have identified the inaugural lecturer of today as one of the first set of proponents and scholars in informal urbanism as a concept and socioeconomic issue in urban planning in Africa, especially in Nigeria. Glory be to God!

May I report, Mr. Vice-chancellor, that up to the late 1990s or early 2000s, what was known about the question of "informality" or "informal urbanism" was "informal sector enterprises" as a concept in Economics, or at best, informal sector (land use) activities as an emerging concept in urban planning. However, the question of informality is multidimensional and the process of its becoming internationally recognized as a concept and theme in urban planning and other built environment disciplines became manifest at the international conference organized by the Association of African Planning Schools (AAPS) held in Dar es Salam in Tanzania in October, 2010. I was privileged to be one of the few planners representing their respective planning schools on the continent (Africa). The likes of the then Dr Leke Oduwaye, representing the University of Lagos Planning School, Dr Bolanle Wahab (University of Ibadan), Dr Smart Nchuegbu (University of Nigeria, Nsukka), Dr A.T. Adeboyejo (University of Limpopo, South Africa), Dr Dan Inkoom (Kwame Nkrumah University of Science and Technology, Ghana), Late Professor Vanessa Watson (the Chair and representative of the University of Cape Town, South Africa) and of course, my humble self (Dr M.O. Jelili), representing LAUTECH, among other African planning schools' representatives. At the continental forum, "Informality" was, for the first time, one of the five themes identified and discussed, and I was one of the

few paper presenters on the theme, while Dr Bolanle Wahab of the UI presented a paper on a subtheme of informality – Indigenous Knowledge System (IKS). Other themes included climate change, curricula and pedagogy in planning, among others. At this conference, land use, development control and urbanization process implications of informal urbanization were x-rayed, and planners' interest in the question of informality was aroused and awakened. Mr Vice-chancellor, at the end of the conference, my interest in being one of the pioneer members of the emerging school of thought in planning – informal urbanism – got consolidated.

Fast-forward to 2013, while at the University of Johannesburg (UJ) as a visiting Senior Lecturer, I had a rare privilege of getting invited to a "Global Meeting" held in May, 2013 at the Patel College of Global Sustainability, University of South Florida, US, in partnership between the college and the UN-Habitat University Network Initiative (UNI), as the Focal Point representing the UJ. At the global meeting, one of the five relatively new themes, addressed, was "Informality", others were climate change, urban governance, infrastructure and urban agriculture. Being a relatively new concept, the issue of "informality" was well debated to reflect its dimensions and implications for urbanization process especially in sub-Saharan Africa and other developing countries. I was opportune to compare notes with colleagues around the world on the issue of informality and the idea of informal urbanism surfaced during the 'debates' as a totality of certain less formal ways of life, cultural and economic practices that have implications for development control, spatial planning and urbanization process. All these aligned with my already developing thoughts and interest in **informal urbanism**.

On return to my base – LAUTECH – and my appointment as Acting Head of Department same year (2013), I needed to appraise the perspectives and thoughts of urban planners in Nigeria on informal urbanism by bringing them into close interactions with colleagues from different parts of Nigeria, Africa and beyond through an international conference. Mr Vice-chancellor, one of the cardinal points of the agenda of my 2-year administration as Acting Head of Department, as orchestrated in my Strategic Plan 2013 for my department (Jelili, 2014), was to organize and host, for the first time in the annals of the department and the Faculty of Environmental Sciences, an international conference tagged "Cities and Informal Urbanization" which held in May, 2015. The well attended international conference had one of our colleagues from Kwame Nkrumah University of Science and Technology, Ghana, who was a co-participant with me at the two major international conferences where informality issues were discussed (in Dar es Salam, Tanzania and Florida, US, respectively), invited as a Guest Speaker. I make bold to say, Mr. Vicechancellor, that the international conference, organized and hosted by LAUTECH Planning School, attended by the then President of the TOPREC, Tpl (Emeritus) Professor Layi Egunjobi, was the very first attempt in Nigeria where informal urbanism was debated as the main theme of a conference. This, perhaps, informed the theme of the 2017 Mandatory

Continuing Professional Development Programme (MCPDP) of the NITP and the TOPREC for the first time on "Informal Settlement Planning.

Mr. Vice-chancellor, sir, my story this afternoon is about the leadership of LAUTECH Planning School in Nigeria in the area of **informal urbanism**, as represented in the scholarship of my humble self. Before the main aspect of the lecture – my Research activities and contributions – ladies and gentlemen, permit me to have an exploration of some planning literature to clarify some concepts and issues about **urban planning**, **informal urbanism** and land use and environmental management implications of same, as well as establish the need for **inclusive planning** for sustainable development of towns and cities in sub-Saharan Africa, particularly Nigeria.

2. URBAN PLANNING, INFORMAL URBANISM AND INCLUSIVE PLANNING: CONCEPTUAL/THEORETICAL ISSUES

Some basic concepts and theories are central to understanding issues surrounding urban planning, informal urbanism and the need for inclusive planning. These are explored below to provide the necessary background for my research adventures and findings over time.

2.1 Urban Planning: Definitions and Paradigms

2.1.1 Urban Planning Defined

Planning is a general activity that is carried out by every individual, household, organization or state. That is, there is planning in every facet of our life. This literarily translates to the fact that everyone is a planner in their own right. Thus, Oyesiku (1998), while analyzing the works of Faludi (1973) and Roberts (1974), opines that planning is a general approach to decision making and a general activity pervading human behaviour at the individual and societal levels. It involves thinking ahead, initiating and taking a predetermined course of actions and deciding in advance what should be done, how, when and by whom (Ejumudo, 2013).

While urban planning is not, in any way, at variance with the general description of planning above, its content and purpose reflect a process or processes, leading to harmonious coexistence and functional interrelationships among different competing land uses or human activities, sustainable growth and development of towns and cities, and general wellbeing of humans and other components of the built environment system. It is used correctly interchangeably with land use planning, town planning, urban and regional planning, or simply planning (Jelili, 2014).

Mr. Vice-chancellor, urban planning is much more than the parochial view of the bricksand-mortal physical planning, which is just about the physical layout of road networks separating traditional land uses. Thus, the popular definition of urban planning by Keeble (1969) as the art and science of ordering the use of land and citing of communication routes so as to secure the maximum practicable degree of convenience, beauty and economy, may not be appreciated until its multidimensional importance is emphasized.

For the purpose of this lecture, therefore, Mr. Vice-chancellor, urban planning shall be defined in the context of urban development planning, and according to Jelili (2012 and 2014) as referring to:

"a multi-sectoral, multidisciplinary, multi-interest, multi-objective and ever adjustable approach to influencing the physical and socioeconomic growth of urban and regional systems" (Jelili, 2014, pp 27).

In other words, urban planning is an integrated science or social science involving different branches of knowledge, categories of planners, and it is flexible. It involves:

"...all the processes of predetermining, shaping, and encouraging well coordinated urban socioeconomic and physical growth in a sustainable manner. Urban planning in that context is that which has spatial, economic and other forms of planning operating not only within each sectoral regulatory framework, but also within an all-encompassing regulatory structure that identifies and spells out the concerned stakeholders and their roles in the process". (Jelili, 2014, pp 31)

The niche created by town planners in the civil service, industry and those in the academia, notwithstanding, the description of urban planning above suggests it is beyond the purview of the 'isolated' physical planning, which unfortunately, has been the general view of urban and regional planning over time. Of course, it is not equivalent to the 'isolated' economic (development) planning either. These, among other forms of planning are facets of (development) planning which are supposed to be integrated rather than isolated as pockets of incoherent, exclusive planning processes. The supposed picture of urban planning, therefore, as orchestrated by Jelili (2012 and 2014), is an inclusive system, with different facets of planning and categories of planners. Without prejudice to the multidisciplinary nature of the training of urban planners, they do not have adequate expertise in all the required facets of urban planning. Thus, there are no clear-cut boundaries of where urban planners' expertise starts and where it ends, it is characterized by overlaps with allied disciplines, and thereby compounding the problem of urban planning identity and definition. I shall return to the details of how it works in an **inclusive planning system** in the latter part of this lecture. The question that comes to the fore, therefore, is: what form or approach of urban planning is being done over time, and how has it been changing or responding to the changing planning environment globally, and how have sub-Saharan African communities being faring over time and why?

2.1.2 Approaches to Planning Overtime

Defining planning, in the context of urban and regional planning, as established earlier, has been a subject of debate and controversy for many decades (Alenxander, 1992). For close to one and a half centuries of modern planning in the extant literature, the definition and scope of planning have continued to change, reflecting the increasing level of complexity of the built environment challenges and the orientations of planners at different historical epochs (Jelili, 2014). This has led to evolvement of different approaches/paradigms in planning. Yet plans were failing, and urban planners confronted with need for better tools and/or approaches.

Different approaches to planning can be identified from the late 19th century till now. These can be summarized into three: (i) rational blueprint/master planning (up to the 1940s), (ii) rational comprehensive planning (1950s and 60s), (iii) post-modernist planning (late 1960s/70s till now)

Planning Orientation of the Late19th and Early 20th Centuries (Rational Blueprint Planning)

Exclusive rational blueprint/master planning approach is an approach to planning of the 19th and early 20th centuries. The approach sees the planner with an end-goal in mind and pursues it through a high level of technocratic control. The planning approach of this era is otherwise described as rational exclusivity. The philanthropist movements of the 'first set of planners', otherwise described as 'the seers' exemplify this type of planning. They include Ebenezer Howard, Patrick Geddes, Le Cobusier, Raymond Unwin, Clarence Perry, (Lane, 2005), etc. The planning type of this era has two legacies that: (i) planning is an apolitical activity, and (ii) there is a single public interest, which is well understood by the planner. The approach has been criticized on the basis that the complexities of planning in a participatory democracy and mixed economy where private interests co-exist with public interests and both are to be protected are not taken into consideration (Hall and Tewdwr-Jones, 2011). This is in addition to the fact that not all problems are capable of simple solutions in physical terms, as suggested in the blueprint planning approach.

Unfortunately, knowledge of the writings in the planning literature of this era informed planning legislation and practice of the post-World War I and World War II eras in the first half of the 20th century when towns and cities needed to be rebuilt in Europe, especially in the UK. The 1932 Town and Country Planning Ordinance of the Great Britain and 1946 Nigerian Town and Country Planning Ordinance as well as building of new towns and neighbourhoods that time exemplify the planning approach. The planning approach could not address the increased complexity of urban areas, and thereby, led to agitation for better planning approach and emergence of Rational Comprehensive Planning in the 1950s and 60s.

Rational-Comprehensive Planning Orientation (of the 1950s and 1960s)

Rational comprehensive planning approach has three main features, including systems planning, cybernetics-based planning, and synopticism. Systems planning refers to the fact

of seeing a planning spatial unit – town, city or neighbourhood – as a comprehensive entity with interdependent and functionally related parts, such as land uses. The entity must also be seen as an organism that responds to external stimuli as a subset of a larger entity or system, and each of the parts must be attended to in relation to other components of the system, not in isolation from them. Cybernetics is essentially a way of organizing existing knowledge about a very wide range of phenomena. Its central notion is that many such phenomena (social, economic, biological or physical) can easily be viewed as complex interacting systems (Hall and Tedwr-Jones, 2011). The planner will exist in a state of continuous interaction with the system being planned, a system which changes partly, but not entirely, due to processes beyond the planner's control. Synopticism involves building of models and/or information system to explain and control the system by way of simulations, evaluation and re-evaluation of objectives leading to the 'appropriate' courses of actions that may be adjudged by the model/system the best in the overriding interest of the system/society.

A critical look at the rational comprehensive or systems analysis (planning) would show that: it "is concerned with scientific methods, as such, and not with any particular field of science. It is a matter of methodology rather than content. Planning, as an activity, also is basically concerned with a process. For this reason, a systems view of planning should provide a more logical basis for the creation of a proper philosophy and methodology of planning, which, in turn, should lead to far better performance in planning" (Catenese and Steiss, 1970)

In spite of the lofty ideas of the rational comprehensive or systems planning of the 1950s and 60s, plans were still failing to achieve the purpose for which they were put in place. The approach was criticised, among others, on the grounds of: (1) retention of the apolitical nature of planning, (2) inability to capture effectively the importance of the values system of the society by the scientific model of the systems analysis or planning, (3) the planner cannot disinterestedly explain the results of the system-based model without bias.

Planning Orientations of the Post-Modernist Era (1970s-Date)

The criticisms above led to the emergence of several approaches to, and orientations in planning, including incrementalism, mixed-scanning, advocacy planning, strategic planning, etc, all of which are described as the new planning paradigms of the postmodernist orientation of the late 1960s and 1970s, which has continued to pervade the literature and, in a way, influenced planning up till today. While the main objective here is not to provide a detailed description of each of these approaches, it is important to mention that they all are aimed at addressing certain issues of making planning work. The issues include multiple interests or what is described as pluralism by Davidoff (1965), the planner's bias, the ever-dynamic nature of the built environment (which may, to a considerable extent, invalidate the systems model), and the 'irrationality' nature of its components (which may make rational model less encompassing).

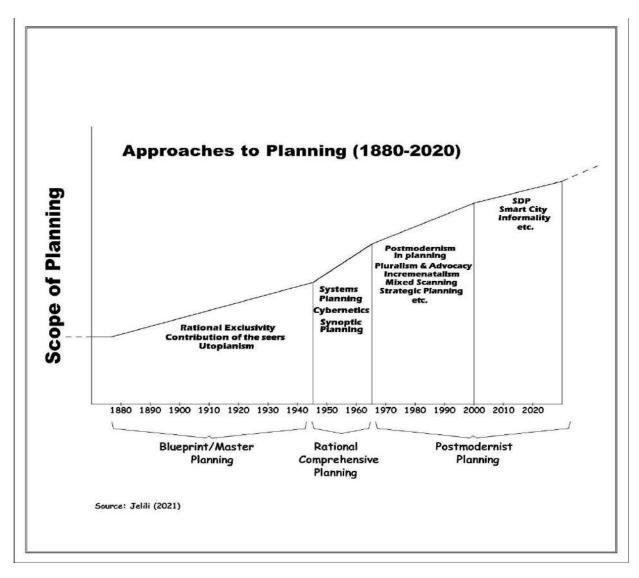


Figure 1: Approaches to Planning (1880-2000) Source: Jelili (2021)

Other approaches and concepts of the post-modernist era, especially since the wake of the millennium (Year 2000), include Sustainable Development Planning, Smart City, Informal Land Use, Urbanization or Urbanism, etc. While others have received a significant attention, the concept of informal land use, informal urbanization, or informal urbanism is just evolving.

What is important in the analysis above is the increasing scope of planning, continual paradigm shift, evolvement of new concepts, as well as the implications such have for planning definitions, theory and practice over time, and most importantly the fact that the ever-increasing complexities of the built environment across the world has created solution-defying situations, especially in sub-Saharan African communities. The problem has been attributed to the failure of the planning machinery in most African countries to emphasize and prioritize the peculiarities of the planning environment in African communities in designing the solutions. Thus, Watson and Agbola (2013) observe that

"across the continent, planners and planning systems were failing to meet the many and varied challenges of urbanization". One of the main challenges, as identified by Jelili and Adedibu (2006), Jelili (2016) and Jelili and Ogunkan (2017) is the issue of informal urbanism, expressed variously and severally, as "informal land use", "informal urbanization" and informality".

2.2 Informal Urbanism: Conceptual Clarification and Dimensions

Urbanism is about how inhabitants of urban areas, such as towns and cities, interact with the built environment. As a branch of knowledge, it is an interface between urban sociology, urban economics and urban planning. Informal Urbanism is not the opposite of urbanism; it is a way of life in cities that defines the nature and process of city formation, expansion and human interaction with the built environment which is less guided by formal institutions, regulations and frameworks. It is defined, according to Habitat Universities Thematic Hub of Informal Urbanism, as the production of urbanization independent of formal frameworks, and which does not comply with official rules and regulations. In many developing countries of the global south, especially in sub-Saharan Africa, informal urbanism has become the dominant force of urbanization, and mainly the only alternative to access the city (UN-Habitat-UNI, n.d.). Thus, understanding the complexity of informal urbanism for effective urban management in this part of the world is one of the greatest challenges of contemporary urban managers (Dovey, 2012).

Terms such as urban informality, informal urbanization, informal settlement, informal land use, informal sector activities, informal housing, informal transportation, etc, are central to understanding informal urbanism. While 'urban informality' may be synonymous with 'informal urbanism' as the totality of urban way of life that is largely independent of the formally established frameworks and control, informal urbanization is the process of evolving an informal urban setting or settlement – a town, neighbourhood or housing area - where, in line with Watson (2009), all manner of income generation, forms of settlement and housing, and forms of negotiating life take place (Figure 2). All these have been divided by Dovey (2012) into two broad groups: (i) informal practices within public space such as street trading, parking, hawking, street-begging, and advertising, and (ii) informal urban morphologies of construction and settlement, whether on public or private land. The spatial expression of all (economic) activities and practices that define an informal urban settlement, neighbourhood or housing area is described by Jelili and Ogunkan (2017), as informal land use. The latter (informal land use) is an emerging concept in urban planning, and how to integrate it into formal urban land use planning has been a concern to me as an urban planner and researcher. As such, issues such as environmental and socioeconomic dimensions of informal sector activities and practices like artisan workshops, street trading, street-begging, informal migrant settlements, informal housing redevelopment and informal land use conversion, among others, have received my research attention in the last two decades.



Figure 2: Dimensions of Informal Urbanism (Adapted from Jelili and Ogunkan, 2017)

2.3 Theoretical Frameworks for the Study of Informal Urbanism

Being an emerging field in urban planning, theoretical frameworks for informal urbanism in planning are sketchy, but developing. Most of the existing theoretical issues on the subject derive from its economic consideration (represented by urban informal sector activities). Nonetheless, five different schools of thought can be identified from the extant literature, the first four of which are economic schools of thought, which, according to Jelili and Ogunkan (2017), include the dualist, the structuralist, the legalist and the voluntarist schools of thought, while the Complex Adaptive Assemblage school of thought is the fifth and most important to us as urban planners.

While the dualist school views the formal and informal sectors as having no strong links with each other, but operate as distinct sectors of the economy, with the latter comprising only marginal activities owing to insufficient formal job opportunities (Ndhlovu, 2011; Chen 2012), the structuralist perspective is at variance with the dualist, and argues that the two constitute the various components of the urban economy which contribute meaningfully to its growth. The structuralist school argues further that formal and informal economies are intrinsically linked, and should be properly integrated and regulated to enhance their effectiveness and efficiencies (Chen, 2012; Jelili and Ogunkan, 2017).

The legalist school sees the informal sector as comprising micro-entrepreneurs who choose to operate informally in order to avoid the bureaucracy and costs of formal registration, and blame the rise of informality phenomenon on excessive state regulation and taxation (De Soto, 1989). The

voluntarist school shares a somewhat related perspective with the legalists on the claim of deliberate choice of the informal business operators to operate informally and avoid regulation and taxation. Rather than blaming the cumbersome registration procedure, however, the voluntarists argue that informal operators choose to operate informally after weighing the costs-benefits of informality relative to formality (Chen, 2012).

The fifth school of thought - the Complex Adaptive Assemblage (CAA) school - is orchestrated by Dovey (2010 and 2012) especially in his publication on "Informal Urbanism and Complex Adaptive Assemblage". CAA is a collection of theories about "place" and urbanism, including the two theories of "Assemblage" and "Complex Adaptive Systems". Assemblage theory was first developed by DeLanda (2006), and is described according to Dovey (2010), as a useful way of rethinking theories of place in terms of process and identity formation. An assemblage is an entity formed from the interconnectivity and flows between non-systematically predetermined constituent parts. Thus, at the urban scale, a street is not a thing, but a collection of things – the buildings, houses, shops, signs, shoppers, cars, hawkers, rules, sidewalks, goods, trolleys, etc. all come together to become the street (Dovey, 2012), and give it its identity. Thus, all cities and parts of cities are assemblages, each of which has a network of formal and informal elements, interwoven together in no predictable manner. Assemblage theory is a theory of socio-spatial change, a theory of societies and cities (DeLanda, 2006), used to understand the relationship between formal and informal practices in the city. It is characterized by the basic two-fold assumptions that the growth process of informality (as against that of formality) is: (i) rhizomic, not tree-like or systematic (ii) striated, not smooth, and (iii) simple and flexible, not rigid (Deleuze and Guattari, 1987; Dovey, 2010, 2012). Thus, an assemblage of a city or urban neighbourhood exhibits a situation in which informal land use infiltrates the available interstices (in a process not easily predictable) and becomes one of the integral components of the assemblage that define its identity.

The Complex Adaptive Systems (CASs) theory is an attempt to understand the dynamics of complex systems where the behavior of the systems depends on unpredictable interactions among independent and interdependent parts. In other words, the parts adapt to one another in relatively unpredictable ways by organizing themselves. At the urban scale, CASs theory is used to explain the complex relationships among the various elements of the assemblage. In the city, district, neighbourhood or street realm, the emergent characteristics of the urban system are always a mix of formal and informal properties and practices which define a regime of urban character with a level of resilience which refers to its capacity to adapt to change, without slipping into a new place regime or identity (Walker and Salt, 2006). A new place regime or identity may be a product of transition from a formally established residential estate to an urban informal settlement, or that from upgrading and formalization of a hitherto informal settlement into a more organized formal estate.

To control the process of adaptation by the relatively formal settlement or neighbourhood, or of aiding transition from comparatively informal to formal setting, 'key slow variables' such as land and rental value, economic vitality, gentrification, traffic speed and volume, building density, social mix, crime and public transport (Dovey, 2012) are worked on. As any of these variables changes incrementally, other parts of the system adjust or adapt. For examples, tendency to displace

informal practices increases with land rent; as informal settlements are demolished, displaced residents emerge elsewhere; as informal settlers are granted formal tenure, they may adapt by selling and moving into another informal settlement; and if street traders or hawkers are moved and organized into formalized trading zones, they emerge in another part of the network (Durand-Lasserve, 2006; Dovey, 2012).

Thus, the CASs are enmeshed in cycles of change at multiple scales with four main phases of: (i) growth, (ii) conservation, (iii) release and (iv) re-organization. That is, urban 'growth' may be as a result of invasion of interstitial urban land by informal land use, which is significant and important enough to warrant 'conservation' through upgrading or new construction as a formalization process, which eventually leads to loss of adaptability by crossing a threshold and slipping into a new regime or 'release' phase. When the process continues, it leads to a phase of 're-organization' when a new order begins to appear.

The following assertions can be said to have emanated from the foregoing theoretical issues on informal urbanism:

- There is a nexus between poverty, unemployment, regulation or taxation and urban informality
- Informal urban actors or participants are important elements of the urban economy who choose a path of informality as an inevitable option or alternative to the 'less friendly' formal path
- Unlike poverty, urban informality is not a 'disease' to be cured, but a response to key socioeconomic, political, and legal or institutional problems or challenges; it needs to be assisted (but not to be wiped out over night).
- No city, district or neighbourhood is completely formal or absolutely informal
- Informality-formality is a two-fold concept (not two concepts) with each side representing an end of a continuum.
- The 'location' of a city or an urban neighbourhood on the informality-formality continuum notwithstanding, the process of urban informality growth is rhizomic, while the relationship between it and the formal land use is complex, but understandable.
- Urban character and identity is not static, but may undergo some phases to shift its location along the urban informality-formality continuum, depending on the planning or policy intervention
- The process of shifting the location of an urban setting along the informality-formality continuum can be controlled or aided by controlling what Dovey (2012) describes as 'key slow variables' such as property rental value, economic vitality, gentrification, traffic speed and volume, building density, social mix, crime and public transport.
- Understanding the process of integrating urban informality into (formal) land use planning for effective urban management is a complex phenomenon, yet possible and imperative. It requires a well-thought-out inclusive planning that touches on everything that matters in the process of urban development planning.

2.4 Inclusive Planning

Central to the discourse on inclusive planning are the overlapping concepts of inclusive urbanism, inclusive city and inclusive urbanization. Inclusive urbanism is an important feature of an inclusive city; it is defined as a city system in which different social groups mix and have equal opportunities to participate (Espino, 2015). It embraces diversity and flexibility, understanding that everyone has different needs, and those needs are constantly changing (Asian Development Bank, 2017, 2022). Inclusive urbanization seeks to address issues in access to urban services and equitability of the urban socioeconomic structure through ensuring that all participants have access to the same level of services and opportunities as one another (Lemaire and Kerr, 2017). According to Cities for All programme, an inclusive city is a place where everyone, independent of their economic circumstances, gender, ethnicity, disability, age, nationality or religion, can, and is allowed to, participate fully in the social, economic, cultural and political opportunities that cities offer. Mr. Vice-Chancellor, sir, I make bold to say that, as appealing as it may be to the progressives and democrats, there cannot be an inclusive city without inclusive planning.

Inclusive planning incorporates plan-making and implementation processes where all community members feel welcome to participate and are confident that their participation can positively affect outcomes (Albizo et al., 2019). Inclusiveness is generally the idea that the opportunities and benefits of economic growth and urban development should be widely and equitably shared by all segments of the society irrespective of their socioeconomic and other conditions. Most cities however fall short of this ideal. This brings to the fore the stakeholders most evident in the discourse of inclusive urbanism viz: persons with disabilities; women; children and young people; elders or aged people and the lower-income residents (Belausteguigoitia, 2019; Asian Development Bank, 2022). These are the predominant participants in the informal sector and practices, as well as dwellers of the informal settlements who also have the right to be in the city, and whose rights need to be protected.

However, modern urban planning practices can adversely affect the lives of city inhabitants who are marginalized, either through identity or economic status. Construction of transport infrastructure designed for private transport (e.g. highways), housing complex development, the provision of new secondary and tertiary industrial spaces in urban centres etc. can all lead to the exclusion of citizens who cannot meet the requirements of participating in the city as it exists (Lemaire and Kerr, 2017). As noted by Espino (2015), the socially exclusionary nature of urban development is evident all over the world: in low-income countries, where the poor are excluded in the name of "modernization", as well as in high-income countries, where the poor are excluded in the name of "order". Urban plans, particularly those dealing with neigbhourhood-scale redevelopments, often entail what Jelili, et al (2006) describe as "indeliberate urban renewal" or gentrification as a side effect, as lower-income residents are forced to move due to the increase in property values and

rental payments resulting from the physical renovation of physically deteriorated neighbourhoods (Belausteguigoitia, 2019).

Inclusive planning is meant to forestall the skewed exposure of the "lower class" to illeffects left in the wake of the "privileged class" reaping the dividends of urbanization. It seeks to optimize the welfare of the poor alongside the privileged in the built environment. The fact is that poor people and their settlements are an indispensable narrative of today's urbanism. They both drive the city's economic growth and are equally entitled to all its services and opportunities. Hence, Khosla (2016) rightly affirms that the idea of a sustainable, prosperous and vibrant city is hard to imagine where the commixture of different categories of stakeholders, both in the formal and informal settings, has not happened. Inclusion is thus about right urbanism. A common approach to defining inclusivity is to consider citizen's rights to the city, and the rights and services that citizens can expect from an urban space. Organizations such as Slum Dwellers International, for example, use this rights-based approach to plan their support and interventions in improving the living conditions of the urban poor (Lemaire and Kerr, 2017).

Inclusive planning is, however, more than taking into consideration or involving all categories of stakeholders (professionals, city managers, urban residents, the less privileged, and low-income people, among others). It is not confined to mere economic opportunities and physical planning. It embraces all facets of urban development planning, which include strategic, economic, industrial, infrastructure and other development plans for cities, which the physical development plan must be in harmony with. In other words, inclusive planning, in this context, is a development planning approach, which is integrated in nature by embracing all forms of development planning and involving all categories of stakeholders. How can we operationalize this in Nigerian context? I shall return to this later.

3. MY RESEARCH ACTIVITIES AND CONTRIBUTIONS

3.1 My Research Focus and Dimensions

Mr. Vice-Chancellor, sir, the last two decades of my research life has been devoted to land use and sustainable development planning with a special emphasis on informal urbanism. I have been guided, over time, by developments in the planning literature and practice, as well as global concerns for development as orchestrated in such development agendas as Millennium Development Goals (MDGs 2000-2015) and later Sustainable Development Goals (SDGs 2015-2030). As a researcher and professional town planner, my research contributions to planning knowledge and policy implications of same, as evidenced in over sixty publications with hundreds of Google Scholar citations by thousands of authors, can be summarized into such areas as: (i) planning definitions, scope, and methodological issues; (ii) development and governance studies (iii) land use and environmental

dimensions of informal urbanism; (iv) socioeconomic dimension of informal urbanism; (v) environmental management and health impact of informal urbanism; and (vi) integrating informal urbanism into formal land use planning process.

3.2 Planning Definitions, Scope, and Methodological Issues

One of the major controversies about urban planning generally is the question of identity, definition and methodology. In this area, Mr. Vice-chancellor, I have published six articles (in reputable journals) and one book. In my publications, I have been able to not only reaffirm the multidisciplinary nature of urban planning, but also identify quite a number of categories of planners, and the framework within which they should operate for sustainable urban development purposes (Jelili, 2012, 2014). I have also noted the changing definition, scope and paradigm in urban planning to reflect the dynamic nature of the built environment, and the need for urban planners to embrace defined collaborations with other stakeholders in the management of the built environment whom I describe as planners in their own right, as highlighted earlier (Jelili, 2014).

In the area of quantitative analysis, for many decades, most of the literature materials on statistics or quantitative techniques have examples or illustrations that are alien especially to urban planning students, educators and even researchers in Africa (Jelili, 2015), yet urban planning, especially, of the rational comprehensive and postmodernist eras, requires analytical tools for informed planning decisions. My contributions in this area of methodological issues include application of quantitative and qualitative techniques in urban studies for improved usage of relevant statistical tools to prevent their abuse. Specifically, I have been able to demystify the application of quantitative techniques in urban planning and in African contexts. I started by conceptualizing, theorizing and situating data within the knowledge system to establish its centrality and importance in hypotheses and theories' testing and formulation (Jelili, 2013).

Mr. Vice-Chancellor, sir, the continuing phobia for statistics especially among learners, and at times scholars in the built environment disciplines (Jelili, 2013) has made me to venture into the philosophy, techniques and application of multivariate techniques in urban studies (Jelili, 2013, 2013, and Akinyode, *et al*, 2020). Using examples of relatively informal neighbourhoods of some parts of Hill-brow and Yeoville, as well as relatively formal neighbourhoods of Betrams, and Bruma, all in Johannesburg, South Africa, I have been able to illustrate and domesticate in planning, the process of computing an index or composite variable of external condition of housing measurable via such simpler variables as: (i) condition of wall, (ii) building finishing, (iii) general quality of houses around, and (iv) sewerage system or incidence of stagnant water, among others (Jelili, 2013, 2013). This is in addition to research contributions on the use and misuse of Likhert's scale, in which procedure for operationalizing and measuring abstract perspectives and opinions is established (Alabi and Jelili, 2022), and the use of such technologies as Google Earth Pro,

satellite imageries, and ArcGIS, among others, which outcomes are reported later in this lecture.

Mr. Vice-Chancellor, I wish to draw an inference in this area of my contributions that our complex built environment can be better understood as a system, and influenced accordingly, if the identity and multidisciplinary framework of urban planning is well appreciated as highlighted here, and appropriate analytical tools are used.

3.3 Development and Governance Studies

As observed earlier, Mr. Vice-chancellor, urban planning is synonymous with urban development planning, in that all planning efforts at the urban or city level is towards development – physical, economic or social. One of the cardinal areas of my research has been on addressing urban development and governance challenges. In this area, I have been able to publish not less than ten articles.

In one of my first research attempts, the impact of Odo-Oba/Obada, as an informal market town and emerging urban economy, on development of infrastructure and regional economy of the less urban Orire Local Government Area was analyzed (Jelili, 2001). It was found that the market town had a high potential to turn around the physical and socioeconomic development of itself and that of the more rural hinterland. The potential impact then is now a reality, with its emergence as a Local Council Development Area headquarters, attraction of social and physical infrastructure such as more schools, microfinance bank, upgraded road network within the town and the regional area, expansion of the market size and urban and regional economy of the area, among others.

In another study of planning implications of housing redevelopment in largely informal high density areas of Ogbomoso, Nigeria (Jelili, *et al*, 2006), we observed that the redeveloped properties, though appreciated due to increased property values in the area, were associated with change of ownership, loss of family ties, increased density and juxtaposition of incompatible uses, all of which were as a result of the uncoordinated process of what is described as indeliberate renewal of informal urban neighbourhoods,

In a set of other development studies, the environment, tools, planning approach and governance structures of African countries, especially those of Nigeria, South Africa and Kenya were explored and compared (Jelili, 2013; Jelili, *et al*, 2013). We observed a general pattern of segregation (apartheid) induced form of planning, which is less inclusive in favour of the neighbourhoods of white colonialists and later those of the privileged elites whose neighbourhoods are well serviced at the expense of the vast majority who are largely accommodated in informal less serviced urban neighbourhoods. Of particular importance is the instruments of planning, observed to be of the traditional master planning approach in Nigeria, as against the strategic planning approach to urban development planning, especially in South Africa with such planning instruments as City Development Strategy

(CDS) and Integrated Development Plan (IDP), from which physical planning instrument called Spatial Development Framework (SDF) emanates (Jelili, *et al*, 2013). This system, as obtained in SA, and as concluded in our explorations, provide frameworks for effective and coordinated urban development in all ramifications. Also observed, is the governance structure, which does not favour municipal government or administration in Nigeria, as obtained in other climes, such as the UK, US and South Africa.

In a similar study of regional development planning framework in Nigeria (Jelili, *et al*, 2008), we observed an inadequate governance and/or development structure, which is capable of retarding urban and regional development, and proposed a structure of regional development and governance for the country. The proposed structure recognizes the existing six geo-political zones as supra-states with each having a Regional Council, comprising all the governors and commissioners of planning or any other relevant ministry, making two from each state. The proposed structure may help bring to fruition the expected gains of devolution of power to subnational levels being canvassed for from different quarters if it eventually sees the light of the day.

In another similar study (Jelili, 2010), an intra-state development planning structure with urban and/or municipal governments for towns and cities, and rural government for rural and regional areas, was recommended. This regional development approach to governance structure has defined functional relationships and non-overlapping areas of jurisdiction for different institutional and administrative units of the nation, geo-political zones, states, urban and rural areas (Jelili, et al, 2008; Jelili, 2010)

In some other studies, borne out of the inquisitiveness to find means of addressing development challenges in African communities, I serially probed into the regular submissions of the global sources of urbanization and development statistics, and observed, in line with Potts (2012), a great deal of erroneous assumptions about African urbanization processes and sustainable development challenges (Jelili, 2012 and Jelili, 2020). In Egypt, for example, we observed, in line with Bayat and Denis (2000), that contrary to the prevailing belief of a continuous rural-urban influx, the urbanization process had been both stabilized and diffused. It was reported that the increase in Egyptian population of 23 million between 1976 and 1996 (which was equal to the total population of Egypt in 1956) was interestingly associated with an end to urban polarization which had led to loss of proportions of populations of such cities as Cairo, Alexandria, Tanta and Mansoura in Egypt (Bayat and Denis, 2000; Jelili, 2012, Jelili, 2020). The less noticed dimension of urbanization is that described as urbanization of large villages (Jelili, 2020) as also exemplified by Odo-Oba, a fast urbanizing informal settlement (village) in Oyo State, Nigeria.

With the analysis above, one can conclude that, rather than dissipating energy on apprehension created by what Potts (2012) describes as conflicting, exaggerated and

fictitious statistics of urbanization and development challenges from the 'almighty' sources, we should look inward as African urban managers on the best way to chart the course of development for African communities. This had provoked my consciousness as a researcher to come up with a term called "Afro-Urban Planning" (Jelili, 2013). What is Afro-Urban Planning in Nigerian context? I shall return to this shortly.

3.4 Land Use and Environmental Dimensions of Informal Urbanism

Mr Vice-Chancellor, let me reiterate that urbanization process in most African countries is largely informal in nature (Jelili, 2016, 2017). Informal in the sense that, it is largely spontaneous, unguided, and characterized more by human activities, practices and housing delivery process outside the confines of formal urban regulation and rules, yet involves most urban dwellers. Hence, any form of urban planning that is done, especially in sub-Saharan Africa, without covering issues of informal urbanism is liable to fail. In this area of my research endeavours, I have been able to contribute substantially towards establishing the nexus between land use and such dimensions of informal urbanism as informal economy, vagrancy, street-begging, mendicancy and informal migrant settlement. Not less than eight articles have been published in this area.

To establish the less guided process of urbanization and implication for urban land use in Nigeria, as a consequence of less controlled urbanization, one of our studies on land use change between 2005 and 2015 in Ikeja, Lagos, based on Google Earth Pro and satellite imagery, (Jelili, et al, 2015) revealed that, within a space of 10 years, developed area increased by 10.66 percent, while vegetation decreased by over 50 percent. Open space/undeveloped land, however, witnessed an astronomical increase of 193.06 percent! This nature and magnitude of change was not anticipated by any known development plan, but was not unconnected with the massive urban development, which necessitated: (1) increasing clearing of green area for urban development, including parking space and parks and gardens (2) increased built up area or uncontrolled city expansion, and (3) yet to be developed, but already cleared space for the anticipated physical development.

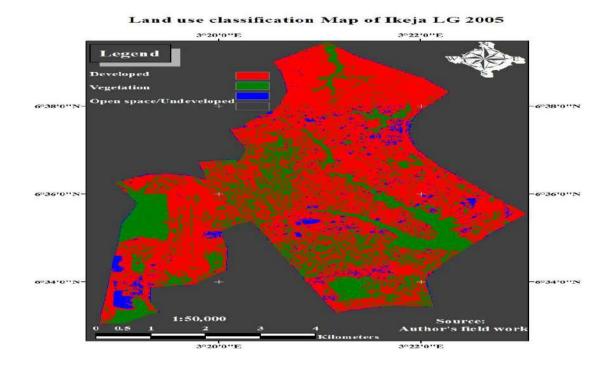
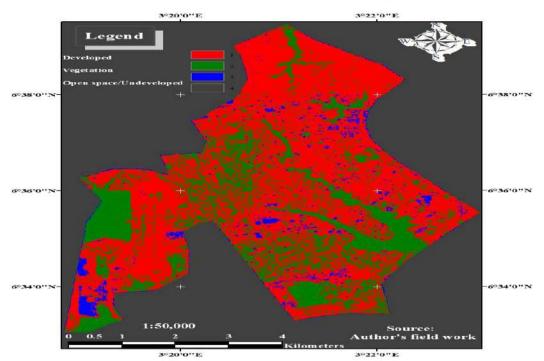


Figure 3: Land use Classification Map of Ikeja Local Government Area, 2005 (Jelili, et al, 2015)



Land use classification Map of Ikeja LG 2015

Figure 4: Land use Classification Map of Ikeja Local Government Area, 2015 (Jelili, et al, 2015)

Table 1: Land use/ land cover change in Ikeja (2005 – 2015)

Land use Land	Area in	Area in	Area in hectares	% of
cover	hectares 2005	hectares 2015	2005 - 2015	change
Developed	2,999.17	3,318.81	319.64	10.66
Vegetation	1,394.78	693.56	701.22	50.28
Open	197.34	578.33	380.99	193.06
space/undeveloped				
Total	4591.29	4591.29	1,401.85	100

Source: Jelili, et al, 2015

The serious implications of this trend are: (1) reduced farmland, and the resultant effects on rural hinterland dwellers, who are mostly farmers, as well as food insecurity threat for the affected urban populace (2) local climate change, and its resultant negativities such as increased temperature and sea level, among others.

Also as a consequence of uncontrolled informal urbanization, in a study of land use change and environmental implications of informal migrant settlement of Sabo, Ibadan, with Google Earth Pro and satellite imagery data, we observed a massive, unguided change of use and the implications for environmental planning and management:

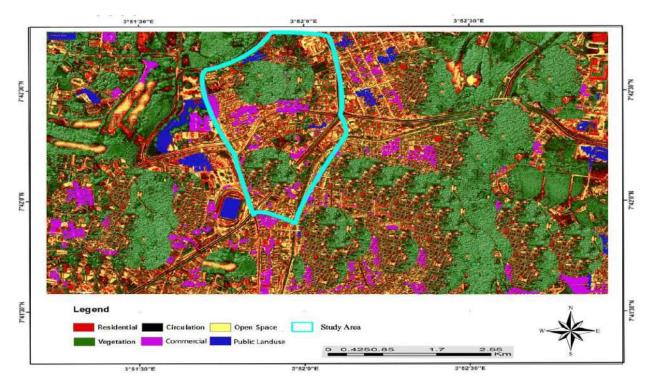


Figure 5: Imagery of the Existing Land Use Pattern of Ibadan and the Delinetaed Area of Sabo (1975). Source : Jelili, et al, 2022

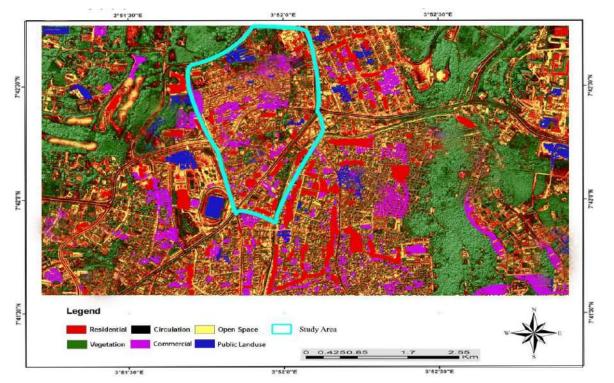


Figure 6: Imagery of the Existing Land Use Pattern of Ibadan and the Delinetaed Area of Sabo (1995). Source : Jelili, et al, 2022

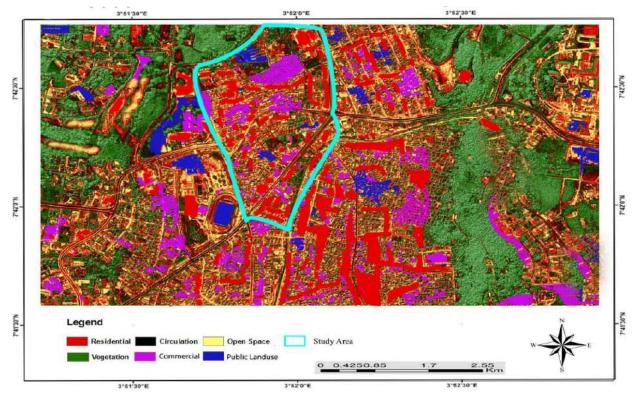


Figure 7: Imagery of the Existing Land Use Pattern of Ibadan and the Delinetaed Area of Sabo (2015). Source : Jelili, et al, 2022

IBADAN	Year					AREA (M ²)					
LULC	1975	1985	1995	2005	2015	1975	1985	1995	2005	2015	
	(%)	(%)	(%)	(%)	(%)						
RESIDENTIAL	25	33	37	41	44	56075	74019	82991	91963	98692	
CIRCULATION	5	7	10	11	11	11215	15701	22430	24673	24673	
OPEN SPACE	28	21	10	4	2	62804	47103	22430	8972	4486	
VEGTATION	27	20	15	14	12	60561	44860	33645	31402	26916	
COMMERCIAL	11	16	26	27	30	24673	35888	58318	60561	67290	
PUBLIC LAND	4	3	2	3	1	8972	6729	4486	6729	2243	
USE											
Total	100	100	100	100	100	224300	224300	224300	224300	224300	

Table 2: Land Use/Land Cover Change in Sabo Ibadan (1975-2015)

Source : Jelili, et al, 2022

Table 3: Percentage Land Use/Land Cover Change in Sabo Ibadan (1975-2015)

Land Use	Area	%Δ	Area	%Δ	Area	%Δ	Area	%Δ	Area	%Δ
	1975	1975-	1985	1985-	1995	1995-	2005	2005-	2015	1975-
		85		95		2005		15		2015
Residential	56075	32.0%	74019	12.1%	82991	10.8%	91963	7.31%	98692	76.0
										%
Circulation	11215	40.0%	15701	42.8%	22430	10.0%	24673	0.0%	24673	120.0
										%
Open space	62804	-25.0%	47103	-52.4%	22430	-60.8%	8972	-50%	4486	-
										92.8
										%
Vegetation	60561	-25.9%	44860	-25.0%	33645	-6.7%	31402	-4.7%	26916	-
										55.5
										%
Commercial	24673	45.5%	35888	62.5%	58318	3.8%	60561	11.1%	67290	172.7
										%
Public	8972	-25.0%	6729	-33.3%	4486	50.0%	6729	-66.7%	2243	-
										75.0
										%

Source: Jelili, et al, 2022

Over the forty-year period there was a 76.0% increase in the land cover for residential uses. Circulation and commercial activities however witnessed exponential increase with a staggering 120.0% and 172.7% increases, respectively. It is however noteworthy that while land cover increased on the aggregate for residential land use, there has been a steady decrease in the proportion of change of the land use over time, with a decline in the percentage increase from 32.0% (1975-1985) to 7.31% (2005-2015) between 1975 and

2015. This general reduction in the proportion of change of residential land cover appears unusual and can only be explained by land use conversion of existing buildings, notably from residential to commercial. Although, residential and commercial land uses both share an aggregate increase in land cover, there is an intermittent increasing trend recorded for the commercial land use. The commercial land cover increase of 45.5% within 1975-1985 became 62.5% within 1985-1995 while that of 3.8% for 1995-2005 became 11.1% within 2005-2015, in contrast to the decline recorded in the same time frames for residential land cover. This implies that part of the residential land cover gave way to the commercial. Field evidences lend credence to this, showing that some residential buildings were either converted to other land uses such as filling stations, hotels and shopping complex, or in some other cases, old residential buildings were demolished giving way to new designs, a phenomenon described by Jelili *et al* (2006), in their study of Ogbomoso, as indeliberate urban renewal.

Circulation (road networks) also witnessed an intermittent decreasing trend in land cover until it remained static with 0.0% in 2015. This implies that despite its aggregate 120% increase, no more space accrues to circulation in the study area. While land cover for circulation remains static, there is an acute shrinkage in the land cover associated with the remaining three land uses. Over 92 percent of the initially unoccupied land (open space) had been developed over the forty years period. More importantly, 75% of the land initially meant for public uses had also been infringed upon and 55.5% of the initial vegetation cover had also been chipped off. On the whole, the exponential increase in commercial land use area, general decline in residential land cover, static status of circulation land use and reduction in vegetation and public land use areas show that an uncontrolled and unguided land use development will only exacerbate environmental problems. This is because the changing land use pattern was not anticipated in any form of urban plan for the city. The study also confirms the concentration of migrants in the area and their socioeconomic importance to the larger city, as well as recommends effective integration of the informal settlement into the city formal planning and environmental management framework (Jelili, et al, 2022)

In another dimension of informal urbanism, the informal practice of street-begging and/or vagrancy, and the nexus between it and land use or urban architecture have been extensively explored. Mr Vice-chancellor, in most of my studies in this area, without prejudice to the prominence of the developing world in informal urbanism generally, I have been able to confirm that street-begging is not peculiar to African or Nigerian cities, it is a global urban challenge, of which cities of Mexico, US, Britain, and China, especially Shanghai where they are called special names like 'liumin' (floating people) and 'youmin' (wandering people) (Fabrega, 1971; Lu, 1999; Smith, 2005; and Jelili, 2006, 2009, 2013) are notable for this phenomenon.



Plate 1: Drug-Induced Begging in Chicago Plate 2: Blind Beggars in a US City (www.sanjayausta.photoshelter.com, 2012) (www.apaxusa.wordpress.com, 2012)



Plate 3: Aged Beggar in a Chinese City Plate 4: Poverty Begging in Ayang, China (<u>www.chinabuzz.net</u>, 2012) (<u>www.chinasmack.com</u>, 2012)



Plate 5: Poverty-cum-old-age Begging in Guangzhou, South China (<u>www.globaltimes.cn</u>, 2012)



Plate 6: Disabled Beggars in a Nigerian City Plate 7: Poverty Beggars in a Nigerian City

(Jelili, 2013)

Of particular importance, Mr. Vice-Chancellor, is the established nexus between incidence of street-begging and vagrancy, and land use pattern. In our studies (Adedibu and Jelili, 2009; Jelili and Adedibu, 2010), for the first time in the extant literature, we have been able to liken the spatial pattern of the incidence of vagrancy and/or street-begging with the three classical models of urban land use – concentric zone model, sector model and multi-nuclei model by Burgess (1925), Homer Hoyt (1933) and Harris and Ullman (1945), respectively. We observed severally that street-beggars and vagrants, generally, concentrate more at city centres and less as you move towards the outskirts, along major transport corridors, and at centres of activities, reminiscent of concentric zone, sector and multi-nuclei models, respectively. We, however, observed that factor of physical nature of the road –

smoothness/roughness and availability of other informal businesses – determined their hotspots. Similar to the above are studies on: (i) "The influence of land use on the spatial variations of begging in Ogbomoso, Nigeria" (Ogunkan and Jelili, 2010); (ii) "Comparative analysis of intra-urban pattern of begging in Ilorin and Ogbomoso, Nigeria (Jelili and Adedibu, 2010) and (iii) "Urbanization and land use correlates of street-people" (Adedibu and Jelili, 2009), among others, where the nexus between land use, urbanization level and street-begging and/or vagrancy was established.

In another development, as a good example of informal activities, spatial distribution and planning implications of informal automobile workshops (IAWs) in Osogbo were examined (Jelili, et al, 2017), and it was observed that IAWs were randomly located in the town to occupy every available interstitial urban space, and could spring up beside, behind, in front, or within any form or type of land use to distort any existing plan or order. The study then recommended establishment of organized Mechanic Village or Complex, the success of which would also depend on a number of daunting factors, including enforcement of physical development control. Other studies in this area have explored the unplanned locations and/or distributions of some spontaneous properties or land uses such as telecommunication masts (Akindele, et al 2014; and Odunola, et al, 2015) due to informal urbanization process of Nigerian cities.

Mr. Vice-chancellor, sir, what has been generally noted in this area of my research contributions is the fact that the way the city environment is planned, organized and managed determines the incidences of such informal practices as street-trading, begging, vagrancy of various forms and informal workshops and migrant settlements in different parts of our cities.

3.5 Socioeconomic Dimensions of Informal Urbanism

Mr. Vice-chancellor, as observed earlier, most urban planning problems require not just physical planning solutions, where the power of 'eminent domain' or 'police power' is usually applied to ensure compliance of space users with the planned use or newly designated use of a portion of land or property. Socioeconomic factors are to be probed into to determine the reasons for occurrence of events where they do. In this area of my contributions, not less than seven (7) articles have been published in highly reputable journals to address the socioeconomic questions of street-begging as a solution-defying urban phenomenon.

In our several studies, we have been able to, among others, analyze the: (i) characteristics and types of beggars in cities, and found them to include the poor, the less privileged, the disabled, corporate beggars, thugs and even criminals in disguise (Adedibu and Jelili, 2011); (ii) socioeconomic implications of street-begging, especially as a means of survival for the helpless poor and needy and the destitute (Adedibu and Jelili, 2010); (iii)

sociocultural correlates of begging, and observed that incidence of street-begging in an urban neighborhood is a reflection of the religio-cultural background of the society and people's perception of the phenomenon that may encourage it or otherwise (Jelili, 2011); and (iv) the need for specific rehabilitation strategies, to reflect different reasons for which they take to begging, rather than a blanket approach of evacuating them, which always provides a temporary succor, only for them to reappear in larger 'multitudes' (Adedibu and Jelili, 2011), or at best 'redistributes' them to where they tend to be less visible.

In this area of my contributions, Mr. Vice-chancellor, the general conclusion is that informal urban practices such as street-begging, panhandling, vagrancy and even crime, have differing socioeconomic factors promoting them, which urban management actors must be able to understand and factor into the process of reducing them to the barest minimum, rather than a fire-brigade approach of forceful eviction, which may never work anywhere.

3.6 Environmental Management and Health Impact of Informal Urbanism

Mr. Vice-chancellor, sir, may I observe here that urban planning is a preventive medicine. And if it is true that prevention is better than cure, then urban planning must be prioritized over and above medical and other professions. This is because a healthy environment means a healthy community and healthy individuals, and effective urban planning can promote healthy living and livable community. I observe further that such features of informal urbanism and urbanization process as informal housing, squatter settlements, urban sprawl, informal economic activities and industries, and/or informal land use, among others, have a lot of environmental management and health implications, manifest in different forms of urban pollution and environmental health challenges. In this area, I have been able to venture into studies primarily aimed at unveiling the nexus between informal land use activities and different forms of urban pollution and environmental management and environmental management issues and more importantly how to use land use planning to address health-related environmental challenges (Jelili, 2017, Jelili, *et al*, 2021).

In our study of the processes and environmental implications of charcoal production in Orire Local Government Area in southwestern Nigeria, we observed an environmentunfriendly process that adds to the volume of carbon released to the atmosphere and promotes desertification. The materials used in the process of charcoal production, which is a major supply of energy to the urban poor in the informal setting, include logs of wood (from felled trees), grasses, leaves, earth and source of fire.













Plate 8a-h: Stages in Charcoal Production Process (Jelili, et al, 2014)

About 12 bags of charcoal are produced per week per village of an average size of less than fifty housing units, where it was observed that every male member of the community had at one time or the other engaged in the process of charcoal production as a means of livelihood. Unfortunately, a large percentage (over 70%) of the wood used in the production of charcoal in the area is obtained from trees intentionally felled for the purpose of charcoal production. This reveals the high rate of deforestation tendency in the area without any effort towards afforestation. This may result into a great loss of biodiversity as well as increased soil erosion. We observed that the machines used produce a high

intensity of noise which scares away forest animals and also constitutes air pollution, earring loss and other psychological damages. No doubt, charcoal production has contributed significantly to atmospheric contamination in the study area. Yet, it was a major source of income for the villagers and a major source of energy for a considerable proportion of urban dwellers, especially the urban poor and operators of the informal urban economy. More so, though the residents were aware of the negative impacts of charcoal production, they still supported it due to the perceived socioeconomic importance of the activity, especially in promoting other trade sectors of the economy as well as reducing social vices, which some poverty-ridden elements of the communities might have perpetrated, were it not for charcoal production (Jelili, *et al*, 2014).

In another study, we analyzed the spatial distribution and environmental pollution implication of informal automobile workshops (IAWs, for mechanics, panel beaters, car rewires and battery chargers) in Ogbomoso. It involved testing of soil and water samples for their bio-chemical properties like conductivity and acidity/alkalinity; their inorganic (nitrate, chloride, sulphate, carbon), and heavy metal (zinc, iron, lead and cadmium) contents. Also collected were data on concentration of total dissolved and suspended solids (TDS and TSS) in water samples and concentration of selected pollutants (CO, CO₂) in the ambient air.

The study concluded that, unlike the pattern reported for Osogbo earlier, the spatial distribution of IAWs in Ogbomoso was not random, but concentrated along major roads and at certain intervals, within spaces/buildings not pre-allocated to them. The activities were just springing up as squatter informal land use, with a lot of negative environmental impacts. Such impacts, though varying in magnitude with the type of pollution (air, water, soil) and density of the area where an IAW was found, depended on the nature and duration of activity of specific informal workshops.

Density	Locality	Cond.	Nitrat	Chloride	Sulphate	pН	Org.	Pb	Cd	Fe	Zn
		µs/cm	e				Carbon				
				%	%	H ₂ o	g/kg	mg/k	mg/k	mg/k	mg/kg
			%					g	g	g	
Low	Randa 1	253	0.13	3.38	9.28	6.80	8.39	55.6	3.05	71000	1320
	Randa 2	383	0.10	31.25	9.14	6.21	9.50	14.9	1.60	26500	108
Medium	Stadium	373	0.18	12.00	8.63	7.01	5.61	24.1	4.00	9775	118.5
	Arowo-mole	653	0.10	13.75	8.81	6.90	5.54	460.0	0.35	21625	241.0
High	Kara	443	0.16	52.50	8.23	6.25	1.53	24.2	2.10	24225	137.0
_	Ijeru	513	0.20	16.25	7.60	7.09	11.02	830.5	2.85	78500	1337.5
*Permissible level						6-		100			400
						7.5					

Table 4: Physicochemical properties of soil samples within/around IAWs in the study area

Source: Authors' Fieldwork (2016); and *permissible levels adapted from (FEPA, 1991, 1999; AFAR, 2000 and Kumar, 2007)

While the concentrations of other physicochemical properties of soil were observed to be within the permissible levels, those of heavy metals like lead (Pb) (ranging between 14.9 - 830.5mg/kg), and zinc (Zn) (ranging between 108 - 1337.5mg/kg), however, exceeded the permissible levels of 100mg/kg and 400mg/kg, respectively.

Density	Locality	Cond. us/cm	TDS (Mg/l)	TSS (mg/l)	Nitrate (mg/l)	Chlrd. (mg/l)	Sulpt (mg/l)	pH (H ₂ 0)	Pb (mg/l)	Cd (mg/l)	Fe (mg/l)	Zn (mg/l)
Low	Randa 1 Randa 2	363 333	277.3 249.8	232.3 213.2	2.74 1.28	234.0 198.0	0.05 0.91	8.1 7.8	0.574 0.520	0.057 0.058	0.02 0.07	0.008 0.010
Medium	Stadium Arowo- mole	283 803	212.3 602.3	181.1 513.9	1.12 2.26	90.0 918.0	0.83 8.88	7.6 7.8	0.481 0.496	0.036 0.014	0.03 0.04	0.006 0.004
High	Kara Ijeru	553 553	410.3 414.8	353.9 353.9	2.18 2.39	522.0 540.0	3.65 4.07	7.1 7.3	0.773 0.586	0.019 0.030	0.12 0.03	0.003 0.004
*Permissible level								6-7.5		0.01 mg/l	1.0mg/ 1	

Table 5: Physicochemical properties of water samples within/around IAWs in the study area

Source: Authors' Fieldwork (2016); and *permissible levels adapted from (FEPA, 1991, 1999; and AFAR, 2000)

Results on water samples (Table 2) indicated varying concentration levels of pollutants. For heavy metals, it was observed that all but iron (Fe) exceeded their permissible levels, with lead (Pb), cadmium (Cd), and zinc (Zn) having concentration values of 0.481-0.773mg/L, 0.014-0.058mg/L and 0.003-0.01mg/L, respectively. It is important to mention that having high concentration levels by some of these heavy metals raises health concerns. For example, cadmium is highly toxic, and many cadmium compounds are also believed to be carcinogenic, the adverse physiological effect of much consumption of it includes depressed growth rate, anaemia, hypertension, damage to renal tubules and poor mineralization of bones (Lundset et al, 2003).

A similar pattern of exceeded permissible levels (prescribed by FEPA and WHO) was observed for TSS and TDS, with concentration values ranging between 181.1 and 513.9 mg/L, and between 212.3 and 602.3 mg/L, respectively. It is important to note that though high values of TDS in ground water are generally not harmful to humans, they may affect persons suffering from kidney and heart diseases, while continuous consumption of water with high TDS values may cause gastro-intestinal irritation (Geetha et al, 2008).

Furthermore, it was observed that while the concentrations of nitrate and sulphate, 1.12-2.74 mg/L and 0.05-8.88mg/L, respectively, were within the WHO permissible level of 250 mg/L, chloride with a high concentration level ranging between 90.00 and 918.00 mg/L exceeded the permissible level. The health implication of this is the tendency of the residents to be disposed to eye irritation, and stomach discomfort, among others.

In another set of studies, we examined the extent, spatial variations and causes of declining air quality in the core, transition and sub-urban areas of Ogbomoso, with data on air pollutants like oxides of carbon (CO), sulphur (SO₂) and vital particulate matter (PM) analytes in different land use/zonal areas with air samplers and data on household practices using questionnaire administration.

Zone &(s/n)	Selected	Sampled	Outdo	or Mean	(µg/m³)	Indoor Mean (µg/m ³)			
	Precincts	Buildings	Pm ₁	Pm _{2.5}	Pm ₁₀	Pm ₁	Pm _{2.5}	Pm ₁₀	
Core Area 1	Oja Igbo	13	30.9	44.9	172.8	26.6	45.3	168.1	
"2	Isale Ora	13	35.1	58.4	328.5	24.3	44.8	178.0	
"3	Isale Afon	15	25.7	40.9	173.5	25.8	41.7	177.3	
"4	Orita Merin	9	24.9	41.0	172.1	26.3	45.4	200.8	
"5	Oke Agbede	15	26.4	43.8	182.2	24.1	41.8	154.5	
"6	Ora	8	31.1	46.1	189.9	24.2	47.6	186.3	
Transition 7	Ileewe	22	33.6	38.4	187.9	24.2	41.3	154.9	
"8	Alasa layout	12	31.2	50.7	253.3	32.3	51.4	230.8	
"9	Sanuaje	20	28.4	54.0	214.5	25.6	48.8	189.4	
"10	Oke Alapata	10	22.3	42.3	154.7	22.9	40.3	159.6	
"11	California	16	23.6	36.9	162.9	22.2	36.2	172.3	
"12	Care Taker	15	23.0	36.2	140.5	26.6	41.7	184.9	
"13	Osupa	11	30.7	56.8	267.7	25.1	49.6	218.9	
"14	Randa	7	28.8	53.9	278.6	22.6	46.3	220.8	
"15	Apake	13	30.9	54.2	382.7	22.9	40.9	189.2	
"16	Sabo	7	31.8	46.0	208.5	23.2	36.1	194.7	
"17	Stadium	48	26.2	42.6	150.2	25.1	40.3	195.8	
"18	Orita Naira	6	35.5	60.5	314.4	22.9	48.9	221.5	
Suburban 19	Ajilete Estate	7	17.8	26.5	96.8	17.9	28.7	168.7	
"20	Iwagba	13	27.6	48.8	164.3	20.0	37.6	170.5	
"21	BHS	14	27.7	45.8	168.0	20.6	36.9	148.8	
"22	Babi	11	21.9	35.3	136.0	19.8	32.3	144.8	
"23	Hamama	21	29.3	52.0	193.8	22.3	45.1	157.3	
"24	Adenike	30	26.5	42.1	149.8	20.9	37.5	154.7	
"25	Aare Ago	8	31.3	55.9	179.4	21.1	48.1	145.8	
"26	Low Cost	7	23.9	36.4	98.2	18.8	30.3	142.7	
"27	Apostolic	14	23.7	42.1	162.8	23.7	40.4	145.7	
Cumulat	tive mean	385	27.7	46.3	188.8	23.6	41.6	175.5	

Table 6: Indoor and Outdoor PM Concentrations

Source: Jelili, et al (2020)*Sampling Time Range per Building: 45 min. – I hour

Findings revealed, among others, that the cumulative mean concentrations of indoor and outdoor respirable particles (PM_{2.5}) in the study area (41.6 \pm 10.1µg/m³ and 46.3 \pm 8.0 µg/m³, respectively) were lower than the WHO Interim Target of 75µg/m³, while concentrations of inhalable particles (PM₁₀) ($175.8 \pm 54.3 \mu g/m^3$ and $188.8 \pm 122.0 \mu g/m^3$, respectively) were higher than the set limit of 150µg/m³ for daily averages. Inhalable particles dominated particle concentrations, with a cumulative $PM_{2.5}/PM_{10}$ ratio of 0.24. The inter-zonal variations of air quality, using "cumulative PM Aggregate" showed that indoor and outdoor air quality varied significantly with residential zone (p=0.0005 and p=0.01, respectively), with the transition zone having the worst indoor air quality; the core area, the worst outdoor air quality and the suburban zone having the best aggregate air quality. Land use sources of specific air toxics were also identified, with abattoir and sawmill found to have raised ambient levels of PM_{2.5} beyond WHO limit (Jelili, *et al.*, 2018; Jelili et al, 2019; Jelili, et al, 2020). Regression analysis showed a significant but weak relationship between indoor and outdoor PM levels (r = +0.221), with a coefficient of determination (R²) of 0.049), indicating that only about 5% of the variation in indoor air quality was associated with outdoor air quality, and suggesting the influencing role of other factors such as residents' indoor utilities and practices. Waste disposal methods (viz. open refuse burning) and fuels/energy sources (viz. firewood and charcoal) were linked with increased concentrations of airborne particulates.

It was generally concluded that air quality in Ogbomoso and similar towns was considerably low with respect to ambient levels of inhalable particles (PM_{10}) and pragmatic land use planning measures, which would help to ensure better air quality, were recommended, alongside the use of cleaner fuels and effective waste management system (Jelili, *et al*, 2020).

3.7 Integrating Informal Land Use into Formal Land Use Planning

Mr. Vice-chancellor, sir, I want to reiterate that urban planning is about how to promote human well-being and welfare. Rather than allow informal activities and their operators to suffer undue neglect or control, informal urbanism school of thought is of the view that everything and/or everyone matters, and should be catered for. This accounts for my interest on how to integrate the phenomenon into formal urban planning. In this area alone, I have been able to produce not less than four research articles, some of which have won international recognitions and awards.

In our study of "Land use classification and informal sector question in Ogbomoso, Nigeria" (Jelili and Adedibu, 2006), we were able to develop an index for measuring incidence of informal land use and establish the nexus between it and land use mix, type and density. We observed commercial and residential land uses, in that descending order, as the most generators of informal land use, and significant correlation coefficients of 0.42

and 0.59 between incidence of informal land use and land use mix and density, respectively.

This informed a later and more comprehensive study on "Urbanization and informal land use in Nigeria, Africa" (Jelili and Ogunkan, 2017). In the study we opined that poor understanding and recognition of "informal urbanism" and urbanization process had made the planning and management of African communities difficult, as they were largely informal in nature. We first established the construct of informal land use (ILU) and various dimensions of informality as essential ingredients of understanding informal urbanization process in Africa, and later built a model for integrating the informal land use into formal urban planning process in African setting (Jelili and Ogunkan, 2017).

In the study/paper, which won the Second Prize for the Second Best Paper at the Africa-China Urban Development Forum, 2017 with a cash price of \$400 (awarded in 2018), we established that incidence of informal land use (IILU) to be generated in a given urban neighbourhood could be predetermined and pre-distributed in a neighbourhood plan, before they were generated. This was achieved by collapsing sixteen land use and socioeconomic variables (using Principal Components Analysis) into five composite dimensions or components, which were: (1) Less heterogeneous indigenous population, (2) Level of participation in the informal sector activities, (3) High density commercial land use, (4) Residential land use complexity, and (5) Female-dominated self- employment, with their respective percentages of variance of 23.68, 17.06, 14.6, 11.64, and 10.06 percent. With the composite components as independent variables and IILU as dependent variables in the following regression model:

y = -0.025x1 - 0.125x2 + 0.847x3 + 0.049x4 - 0.189x5,

we observed that 77.1% of a change in IILU is accounted for jointly by the five factors, with Component 3 (High density commercial land use) having the highest impact as observed in its regression coefficient of 0.847.

Based on the findings above, we then proposed that if each of the components is taken as a land area of one hectare for: (1) indigenous, less heterogeneous sub-population, (2) people (a socio-economic class) whose major occupation is in the informal sector, (3) high-density commercial area, (4) urban residents other than those captured in the other components/categories here, and (5) participants in female-dominated self-businesses, respectively (as suggested by the model), the five (5) hectares of land will have in it a cumulative amount of 0.557 hectare of informal land use (IILU) given as:

 $IILU \quad = -\ 0.025(1) - 0.125(1) + 0.847(1) + 0.049(1) - 0.189(1)$

= - 0.025 - 0.125 + 0.847 + 0.049 - 0.189 = 0.557 hectare Our conclusion was that this empirical-data-based hypothetical case could be used to predetermine the IILU that a given urban neighbourhood, with a given size and socioeconomic characteristics, tend to generate and plan for them before they spring up.

In another attempt towards understanding how to formalize informal land use or settlement, a study of urban renewal process of Isale Gangan in Lagos Island by the Lagos State Urban Renewal Authority (LASURA), using a narrative inquiry approach, was conducted (Jelili, *et al*, 2020).

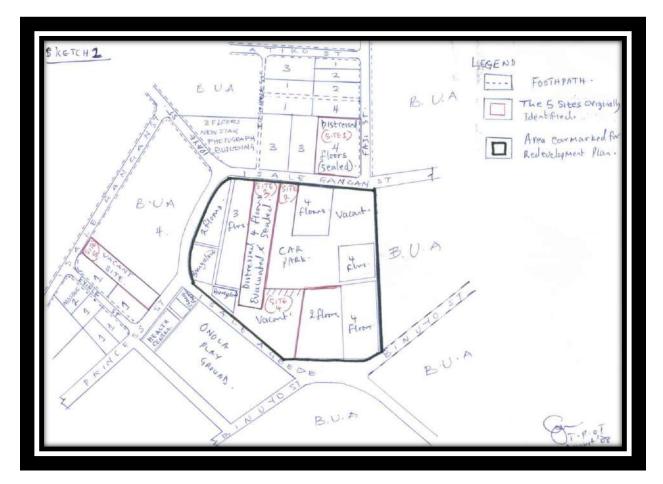


Figure 8: The Layout of Isale Gangan urban renewal project site; (LASURA, 2017; Jelili, *et al*, 2020)

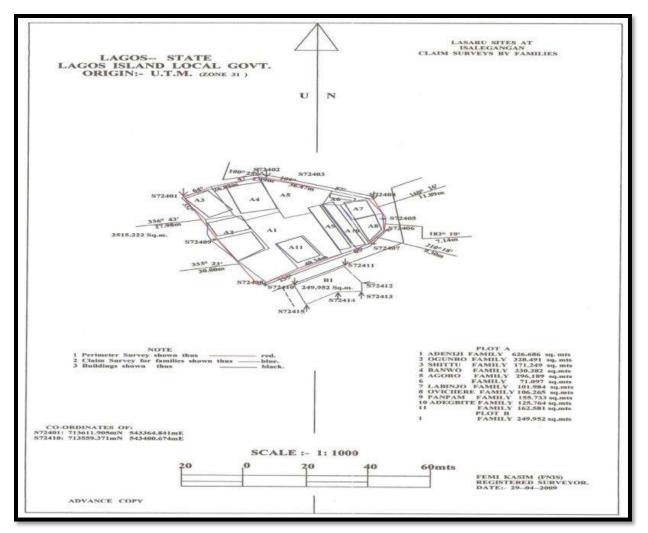


Figure 9: Joint Title Document for Isale Gangan urban renewal project site; (LASURA, 2017; Jelili, *et al*, 2020)



Plate 9: Newly Redeveloped High-rise Condeminium (Jelili, et al, 2020)

Our findings revealed that Isale Gangan was a decaying informal neighbourhood that required upgrading and massive redevelopment, and the government independently financed the project. The project site consisted of newly constructed 11 flats meant to be sold and 48 renewed flats within nine residential floors. The process of redevelopment involved acquisition of lands/properties through land pooling scheme, in which individual property owners submitted their title documents to LASURA and a joint title document, that had names of initial landlords listed, was issued in respect of the newly constructed high-rise buildings which replaced the old, obsolescent largely informal buildings (Figure 9 and Plate 9).

The summary of the gains of the process was captured by an interviewee as follows:

"At first when we heard that the government wanted to renew the area, we were quite happy because it was a good thing, but again scared that there would be problems as regards giving up our inherited lands. But then, there were lots of meetings between us and LASURA. They promised to relocate us and pay two years rent to others who opted for it, they also promised to relocate us back. We agreed, they relocated some of us, paid rent to others and the demolition exercise commenced, and they put up the big structure. Presently, we are being relocated back in accordance with the values of individual properties while some affected families were asked to pay additional fees due to the values of their housing units before the renewal project and the values of the housing units given to them after the renewal".

Some lessons learnt in the process are that:

- Land pooling could be an effective approach of urban renewal of an informal urban neighbourhood if well implemented
- Public participation and stakeholders' involvement in which everybody matters, remains imperative in urban renewal process, especially when an informal urban neighbourhood is concerned.

Other similar studies were on the planning and management of Internally Displaced Persons' (IDPs) camps in which overcrowding, inadequate toilet, health and other facilities and generally poor maintenance of the camps were observed (Jelili, 2016, Jelili and Olanrewaju, 2016). We observed that IDPs' camps in Nigeria were mere informal shelters, not maintained with the international best practices, and submitted that they should provide only temporary abodes for the internally displaced people, whose conditions and reasons for the displacement must have been looked into for necessary rehabilitation both in and outside the camps.

4. CONCLUSIONS

Mr. Vice-Chancellor, sir, may I use this medium to draw some general inferences based on my research experience that:

- The demonstrated 'received' knowledge of planning, in form of comprehensive physical development plans for cities and other forms of physical plans, may just be a 'fantasy', not capable of addressing the peculiar challenges of African urban communities, which are not just physical, but also have economic and social dimensions.
- Many erroneous assumptions about African urbanization processes (Potts, 2012; Jelili, 2020), and over exaggeration of planning orthodoxy have been 'blindfolding' to a large extent, African urban scholars and planners, and preventing them from identifying the best approach to planning their urban communities.

- African urbanism and/or urbanization process is informal in nature and requires special consideration and tools which may not be envisaged by the orthodoxy of the modern planning science which is based mainly on the study of European and North American cities.
- Our complex built environment can be better understood as a system, and influenced accordingly, if the identity and multidisciplinary framework of urban planning is well appreciated.
- The way the city environment is planned, organized and managed determines the incidences of such informal urban practices as street-trading, begging, vagrancy of various forms and informal workshops in different parts of our cities.
- Informal urbanism and/or uncontrolled urbanization process has a lot of environmental and health implications for city residents, and requires pragmatic land use planning measures
- Informal urban practices such as street-begging, panhandling, vagrancy and even crime, have differing socioeconomic factors promoting them, which urban management actors must be able to decipher and factor into the process of reducing them to the barest minimum, rather than a fire-brigade approach of forceful eviction, which may never work anywhere.
- Rather than dissipating energy on apprehension created by what Potts (2012) describes as conflicting, exaggerated and fictitious statistics of urbanization and development challenges from the 'almighty' sources (e.g World Bank, WHO, etc), we should look inward as African urban managers on the best way to chart the course of growth and development for African communities.
- Less-inclusive, less-coordinated national/state economic and urban development planning framework in which physical development planning is done in isolation of economic and other facets of development planning has been a serious aberration in development planning process at the national and sub-national levels in Nigeria.

5. RECOMMENDATION (INCLUSIVE AFRO-URBAN PLANNING MODEL)

Mr. Vice-Chancellor, sir, I reiterate that there is need for what Jelili (2013) describes as Afro-Urban Planning for addressing Nigerian urban development planning challenges. Afro-Urban Planning is a construct used to capture the features and processes of managing urban development and urbanism in sub-Saharan Africa. It is a pan-Africanist approach to urban planning. And the way it is used or adapted by any of the sub-Saharan African countries may not agree wholly with any other urban development planning model. Urban Planning, in that context, shall be as defined earlier, referring to all facets of urban development planning in a defined synergetic and collaborative framework in which all categories of planners and stakeholders are involved.

The argument here is that Afro-urban planning, while upholding the multidisciplinary nature of urban planning, as well as the various facets and inputs of other allied disciplines and categories of planners, also identifies the 'local planner' (LP). The LP, who may not necessarily be a conventional urban planner, but essentially one of the locality-based professionals, sub-professionals, technicians, and artisans, all of whom are relatively informed, influential and of good charisma in the locality. The process of involving the LP constitutes an integral part of the Afro-urban planning process which is integrated and inclusive in nature.

For effective and sustainable urban development, which is the main goal of the proposed Inclusive Afro-Urban Planning Model here, it is recommended that (Figure 10):

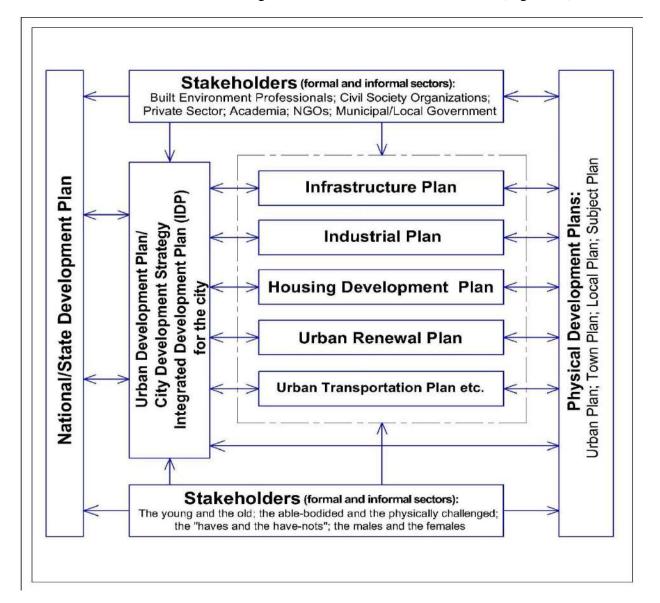


Figure 10: Inclusive Afro-Urban Planning Model (Author's model, 2023)

There should be a National (and State) Development Policy, backed up by an appropriate legislation at both the national and state levels, that provides for an Integrated Development Plan (IDP) at the national, regional, state and city levels.

At the city level (which is the concern here), such Urban Development Plan (UDP) is a Strategic Development Plan for the city, which may otherwise be described, in line with the global orientation, as City Development Strategy (CDS). It is an emerging strategic urban planning approach, described according to Cities Alliance (2000), as a tool that helps a city harness the potential of urbanization through strategic planning.

The proposed UDP, SDP or CDS must emanate from an all-inclusive development planning process, in which all categories of planners – urban and regional planners, development economists, engineers, other professionals of the relevant government agencies, civil society organizations, and LPs, among others, are involved. It is aimed primarily at achieving economic progress, social equity and environmental sustainability for the city. It must, thus, be multidisciplinary and all-inclusive.

The UDP spells out different types of other plans, which are subsets of, and emanate from it, such as economic development plan, infrastructure plan, industrial plan, housing development plan, phasing plan, and of course, physical development plan (PDP), which is of different scales, and is the spatial expression of all other types of plan, including that of the parent UDP. The PDP, which is similar to what is described as Spatial Development Framework (SDF) in South Africa, must reflect and be in harmony with all the proposals in other types of plans to guarantee its effective implementation.

In all the plan types, from the parent UDP to the PDP, all segments of the city population – formal and informal sectors and their operators, professionals and subprofessionals, government agencies and civil societies, the haves and the haves-not, the able-bodied and the physically challenged, etc, must be involved in the processes and captured in the contents of the plans.

For effective UDP or CDS, there is need for a slight change in our governance structure in Nigeria for us to have a system of Municipal Governments for cities in Nigeria, as suggested by Jelili (2008). A municipal government is also a grassroots government for a city system to be seen as an urban economy and driven as such for sustainable city development. This is a challenge for the incoming political dispensation in Nigeria, especially the national and states' assemblies on the need for legislation for municipal or urban government as a variant of the third tier of government.

As an urban and regional planner, I suggest further that the proposed model for integrating the informal urbanism into formal urban land use and development planning in this lecture should be looked into and be enhanced through further research and implementation of the Inclusive Afro-Urban Planning model.

On a final note, Mr Vice-Chancellor, I consider my position here, as borne out of my twodecade research experience, as one of the major responses to a poser by two pan-Africanist planning icons, Professors Vanessa Watson (late) and Tunde Agbola in their publication "Who will plan Africa's cities?" (Watson and Agbola, 2013). And I wish to submit that cities in Africa can be planned effectively by urban planners of my school of thought who understand the possessive connotation of "Africa's cities", as against "African cities", and who appreciate **informal urbanism and the imperative of inclusive planning** for African urban communities.

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