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# Urban Renewal and Sustainable Development in Jamaica: Progress, Challenges and New Directions

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Jasneth Mullings, Leith Dunn, Mona Sue Ho,  
Rainford Wilks and Carol Archer

Additional information is available at the end of the chapter

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## Abstract

The chapter discusses the history and context of urban renewal in Jamaica and shares the country's integrated model for urban renewal, as well as the lessons learned from over two decades of implementation. As the urban planning landscape evolves there is a call to move in new directions, incorporating concepts which embody the development of human capital. One call is to re-position urban renewal as a public health tool to reduce crime and violence, communicable and non-communicable diseases, especially for the urban poor and urban youth who share a greater burden of Jamaica's status as a Low/Middle Income Country (LMIC) and Small Island Developing State (SIDS). The call for the paradigm shift from gender-blind to gender-sensitive urban planning is expected to promote policy coherence between commitments to gender mainstreaming and gender equality and urban development modalities. There is also the need for a new governance framework to support the active participation of the average resident in the decision making process for land use management and other aspects of urban renewal to meet the goals of the New Urban Agenda and to realize Vision 2030 Jamaica, making "Jamaica, the place of choice to live, work, raise families and do business".

**Keywords:** urban renewal, Jamaica, sustainable development, gender, health, urban planning

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## 1. Introduction

### 1.1. Urbanization and sustainable development

Urbanization is defined as the movement of populations from rural areas to cities and towns. It could also mean that population centres shift their character from rural to city. The United

Nations [UN] definition is “the built-up or densely populated area containing the city proper, suburbs and continuously settled commuter areas. It may be smaller or larger than a metropolitan area; it may also comprise the city proper and its suburban fringe or thickly settled adjoining territory” [1]. The concept of sustainable development has been most often defined using the Brundtland Commission Report as “a development that meets the needs of the present generation without compromising the ability of future generations to meet their own needs” [2]. The concept underscores economic, social and environmental development as core pillars and value systems for sustainability [3, 4]. The 17 sustainable development goals [SDGs] enunciated by the United Nations for the 2015–2030 agenda are the platform on which environmental, economic and social progress is predicated globally [5]. Goal 11: *Make cities inclusive, safe, resilient and sustainable* directly addresses problems such as inadequate basic services, housing and poor quality infrastructures which pose a challenge to urban development and the well-being of urban dwellers. There is widespread acknowledgement that the attainment of each of the SDGs is co-dependent on advancement in other goals (e.g. Goals 1, 3, 4, 5, 8, 10 and 16). This issue becomes more pertinent with the estimated 60% of the world’s population expected to reside in urban areas by 2030 and the vast majority (95%) of urban expansion projected to occur in the developing world [5]. The impact of urban problems can reasonably be expected to be intensified in Lower and Middle Income Countries [LMICs] which face rapid urbanization, unmatched by the requisite resources to attend to the needs of their growing urban populations. Escalation in informal settlements is also expected to be a natural consequence of these developments, with the current >880 million slum dwellers globally [6], projected to rise to 2 billion persons by 2050 [7].

## 1.2. Urbanization in Latin America and the Caribbean and attendant challenges

The Latin America and Caribbean region is characterized by a high level of urbanization which began earlier than in other regions. Among the reasons proffered for the 36% increase in the LAC urban growth (1925–1975) are the effects of industrialization and economic restructuring, particularly in rural areas [8]. Outpacing Europe and Asia, urbanization in LAC is projected to be just under 90% by 2050 (**Table 1**), with rates varying within the region. In Jamaica, over 55% of the population resides in urban areas [9] and over the next few decades this growth trajectory is expected to continue, also throughout the Caribbean and Latin America.

With a trend towards the concentration of urban populations in mega cities [>10 million inhabitants], the LAC represents 20% or four of the world’s 19 megacities. Alongside this trend is a rapid increase in medium size cities (50,000–1,000,000), experiencing the twin burdens of declining infrastructure and services. Rural–urban migration remains a factor to contend with. However, intra-metropolitan migration has emerged as a key feature of migratory flows. Two key trends of note in the regions are (a) the movement of higher income groups into closed residential/gated communities to protect themselves from the social and environmental effects of urban decay and (b) increased concentration of low-income groups in deteriorated areas of the city. These developments have disrupted traditional integration mechanisms in education, health and culture, fuelling social and economic inequities [8]. Among the anticipated benefits of urbanization are economies of scale, economic transformation and diversification, increased productivity and higher

Major area	Percentage urban					Rate of urbanization (percentage)			
	1950	1975	2007	2025	2050	1950–1975	1975–2007	2007–2025	2025–2050
Africa	14.5	25.7	38.7	47.2	61.8	2.28	1.28	1.10	1.08
Asia	16.8	24.0	40.8	51.1	66.2	1.42	1.66	1.24	1.04
Europe	51.2	65.7	72.2	76.2	83.8	1.00	0.29	0.30	0.38
<b>LAC*</b>	<b>41.4</b>	<b>61.1</b>	<b>78.3</b>	<b>83.5</b>	<b>88.7</b>	<b>1.56</b>	<b>0.78</b>	<b>0.36</b>	<b>0.24</b>
Northern America	63.9	73.8	81.3	85.7	90.2	0.58	0.30	0.29	0.20
Oceania	62.0	71.5	70.5	71.9	76.4	0.57	-0.05	0.11	0.24

\*Latin America and the Caribbean.

Source: UN Department of Economic and Social Affairs, Population Division, —World Urbanization Prospects: The 2007 Revision, p. 5.

**Table 1.** Percentage urban by major area, selected periods, 1950–2050.

standards of living. This expectation has not materialized in many instances as the attendant economic and social problems have dogged many cities. These include pollution, traffic congestion, higher costs of living, urban unemployment, proliferation of slums and urban poverty [10, 11], as well as other ill effects such as “...inappropriate and haphazard development, inadequate basic services, poor physical infrastructure, urban congestion, inadequate waste management, environmental degradation and susceptibility to natural hazards” [12].

Many cities, including those in high-growth mode operate in absentia of critical development resources – technical, financial and human and are perennially challenged by shrinking fiscal capacity to support appropriate investments in infrastructure; limited technical and managerial capacity to support urban growth; uncoordinated efforts and lack of clarity in roles and responsibilities of state agencies; weak policy and enforcement environment to provide an enabling environment for macroeconomic stability and investments [8]. The urban poor are challenged to navigate their environment as they face a number of hurdles including “limited access to income and employment; inadequate and insecure living conditions; poor infrastructure and services; vulnerability to risks such as natural disasters, environmental hazards and health risks; particularly associated with living in slums; spatial issues which inhibit mobility and transport; inequality closely linked to problems of exclusion” [13]. Youth, who form a relatively high proportion of the population, are particularly vulnerable. Limited access to basic services, employment and housing stymies their potential for development and contribution to society, while fostering increasing perceptions of social exclusion [8]. The Jamaica Habitat III report also discusses risk for youth development which is severely impacted in Jamaican urban spaces.

*“The urban space affords a unique fuelling of youth disenfranchisement and equally presents numerous challenges and plausible solutions in a tandem reality. The urban habitats are rigged with overpopulation, environmental pollution, gang nucleus, poverty, fluent cases of youth parenting, disenfranchised homes and high unemployment rates among other ills” [14].*

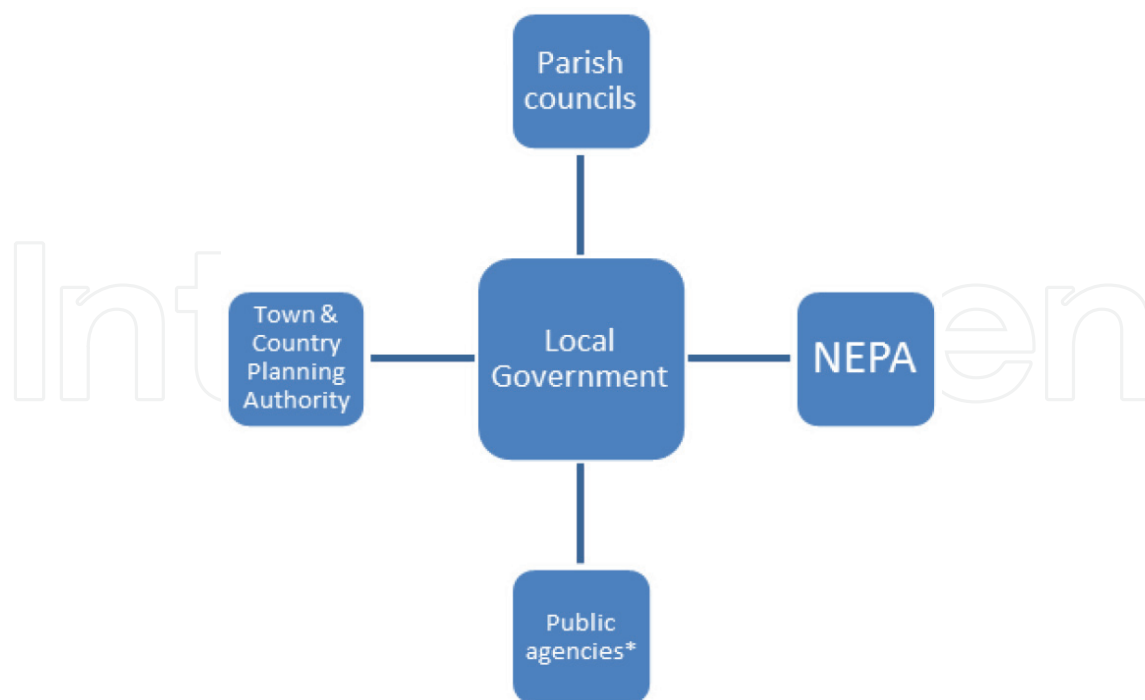
### 1.3. Urban decay in Jamaica

With the United Kingdom relinquishing political authority over Jamaica in 1962, the nation became an independent state. In the 1960s, fresh into the throes of early independence, industry and trade thrived in urban centres, attracting hordes of rural migrants in search of better opportunities and quality of life. Mass migration quickly resulted in over-populated towns and urban centres throughout Jamaica. The poorly designed and maintained infrastructure and basic urban services strained under the increased pressure. The mass migration also led to a burgeoning of unplanned growth in squatter communities islandwide. Inadequate physical planning and oversight has contributed to growing urban sprawl, dilapidated housing and environmental degradation, particularly worse in urban slums. Up to a decade ago (2008), approximately 20% of Jamaica's population was estimated to reside in slum conditions [15]. It is expected that this proportion would have shown a marked increase since then. As Tindigarukayo [16] outlined, this has had significant impacts in four major areas: environment, social conditions, economic and health status, noting that the practice has negative effects for both squatters and the wider community. A National Squatter Management Policy and Implementation Plan [NSMP] has been developed as a response to this growing problem [14].

### 1.4. Urban renewal in the context of the local urban planning framework

Vision 2030 Jamaica [17] is a national plan for development which encapsulates national goals, outcomes and strategies. Goal 4 addresses the target of having a healthy environment, with outcomes being sustainable management of natural resources, hazard risk reduction, climate change adaptation, as well as sustainable urban and rural development. The plan recognizes urban sprawl and dilapidated housing as problems emerging from the lack of spatial planning. The objective in part is to develop and action a national spatial plan which will support the necessary social and economic development to take the country forward to fulfilling the vision of 'Jamaica, the place of choice to live, work, raise families and do business'. In Jamaica, Local Government, through the Parish Councils, serves as the central driver of the urban planning process (**Figure 1**). Local Government is supported by National Environment and Planning Agency (NEPA), the national agency with oversight for land use management and planning which was established out of a merger of the Town and Country Planning Authority (TCPA) and the National Resources Conservation Authority (NRCA). Additionally, public agencies have legislative authority in the planning process. Land use planning is guided by the National Land Policy; legislative provisions (e.g. Town Country Planning Act, 1958; Parish Council Act, 1901; Local Improvement Act, 1914; Urban Development Act, 1968; Housing Act, 1968) and Development Orders which provide the standards and guidelines for physical planning. It is important to note that all the Acts mention above have been in varying stages of revision for over 10 years. With over 100 pieces of land and land-related legislation and overlapping functions across public agencies, the case has been made for legislative and administrative reform to improve efficiencies in the planning environment [18].

Notably, the planning process for land use management demonstrates a limited role for the average citizen to participate in the decision making process as an individual or through community-based organizations or institutions.



**Figure 1.** Urban planning architecture, Jamaica. Source: Jasneth Mullings. The asterisk (\*) denotes public agencies involved in planning: Urban Development Corporation [Office of the Prime Minister]; Ministries with portfolio responsibility for Local Government and Environment, Water, Housing, Transport and Works; Land Development and Utilization Commission; Natural Resources Conservation; Authority and subcommittees; Line agencies [e.g. National Works Agencies, Jamaica Bauxite Institute, Water Resources Authority, Mines and Geology Division]; Office of Disaster Preparedness and Emergency Management; Negril Green Island Local Planning Authority [NGILPA]; Portmore Planning Authority.

### 1.5. Sustainable urban renewal

The global concept of urban sustainability is receiving more attention given the rapid physical, economic and social transformations occurring in cities. Facing the influx of growing urban dwellers and a mismatch of resources, urban decay is a common phenomenon in many cities. Urban renewal is among the planning responses which can be used to address this challenge. Urban renewal aims to improve the quality of life of the affected community by improving environmental, social, and economic conditions.

It is recognized that improving the built environment is insufficient [19] as successful renewal involves improving the life opportunities, promoting social cohesion and a sense of belonging [20]. The concept of sustainability has been applied to urban renewal as an attempt to mitigate the deficiencies in the urban renewal process. The sustainable urban renewal approach requires a strategic multi-sector and multi-agency partnership at national and local levels and many cities have begun to incorporate this approach into their planning mechanism [21]. Nicola Dempsey et al. [22] argue that while physical and economic development are critical for urban sustainability, there should be an increased focus on urban social sustainability, defined by Yiftachel and Hedgcock [23] as: “the continuing ability of a city to function as a long-term viable setting for human interaction, communication and cultural development.”

The important role played by social capital in sustainable development [24] allows planners an appreciation of social issues which can inform a sustainable strategy for urban renewal [25–29], taking into account the close linkages between environment and society. Hence the case is made for active community engagement as a critical component of reshaping the urban space [30, 31].

## 2. Urban renewal: the Jamaica Programme

### 2.1. Brief history of urban renewal programmes in Jamaica

Facing significant pressure from the burgeoning population explosions in urban spaces, Government identified the need for a central entity, acting in the public interest, to be charged with responsibility for ensuring planned and orderly development in urban areas, in accordance with national priorities. Thus in 1968, a Special Act of Parliament gave birth to the Urban Development Corporation (UDC) [32]. The UDC bears direct responsibility for urban renewal and urban development in designated areas, as well as rural modernization through collaboration with government entities and private interests. The Government of Jamaica has had a long history of urban renewal and slum upgrading initiatives within the last three decades. **Table 2** captures the major urban renewal programmes undertaken by the Government of Jamaica since 1994.

As the representatives of the Government of Jamaica, the Planning Institute of Jamaica has played a critical coordinating role with international development partners, while the Jamaica Social Investment Fund (JSIF) has been largely responsible for the implementation of many of the projects outlined in **Table 2** [in tandem with government ministries and agencies]. Over the last few decades the UDC has also played a vital role in revitalizing urban centres, developing new townships and urban settlements, while improving the coverage and quality of public infrastructure. Outside of funding from international development partners, urban renewal programmes are funded via a tax incentive scheme with four options: urban renewal bond; investment tax credit; tax relief on rental income; and exemption from transfer tax and stamp duty [33]. The Urban Renewal (Tax Relief) Act is the legislative act which provides funding support for urban renewal projects in areas of Downtown Kingston managed by UDC. It was amended in 2015, providing the relevant Minister of Government discretionary powers to amend specific sections of the Act.

### 2.2. Building an integrated model for the development of volatile urban communities

In Jamaica, the development of urban spaces has been assigned priority status given their potential contribution to economic development and public safety and security. Just over half (55%) of the population resides in urban areas, with a projection to 58% by 2030 [34]. Inadequate urban planning has resulted in a range of consequences that is well documented, including environmental degradation, unsafe and dilapidated housing and limited access to basic services [17]. In addition to the deficits in the physical environment, the profile of

Programme	Year	Funder	Objectives
Programme for Resettlement and Integrated Development Enterprise [Operation PRIDE]	1994	Government of Jamaica	Reduce squatting and improve shelter provisions while empowering persons to relocate legally into organized communities
Jamaica Urban Poverty Project	1997–2000	World Habitat, UK	Poverty alleviation through training, infrastructure improvement and maintenance, housing restoration and construction
Inner-City Renewal Programme	2000–2005	GOJ	Improvements in physical and social infrastructure; reduction in crime and violence and stimulation of economic and employment opportunities
Inner City Housing Project [IChP]	2004–2008	National Housing Trust	Construction of 5000 new housing units in 15 inner city communities. Project included related physical and social infrastructure, as well as social development programme to address psychosocial needs of residents
Inner City Basic Services for the Poor Project [ICBSP]	2006–2013	International Bank for Reconstruction and Development [IBRD]/The World Bank/GOJ	Improve quality of life in 12 Jamaican inner-city areas and poor urban informal settlements through improved access to basic urban infrastructure, financial services, land tenure regularization, enhanced community capacity and improvements in public safety
United Nations Habitat Participatory Slum Upgrading Programme [PSUP]	2008	European Commission	Improve living conditions of the urban poor; strengthen capacity of local, central and regional institutions and key stakeholders' in settlement and slum improvement
Kingston Urban Renewal Programme [KURP]	2009–2010	GOJ/Inter-American Development Bank [IDB]	Infrastructural and social intervention initiative, including income-generating activities
Community Renewal Programme [CRP]	2013–2014	GOJ/International Development Partners	Project aimed at improving community empowerment, housing, sanitation and waste disposal, economic opportunity, recreation, dispute resolution and crime
Integrated Community Development Project [ICDP]	2014–2020	The World Bank	Provision of basic infrastructure and social services in 18 communities islandwide
Poverty Reduction Programme [PRP]*	2014–2018	European Union/ GOJ	Support the governance, physical transformation, socio-economic development, and youth development components of the CRP
Expansion of the downtown Kingston Urban Renewal project	2016	People's Republic of China/GOJ	Expansion of development area and rejuvenation of Downtown Kingston to promote investments in the capital city

\*Several international development partners have contributed to the Government of Jamaica's poverty reduction programme and are listed on the website of the Jamaica Social Investment Fund [JSIF]. See also the UDC website for ongoing projects.

**Table 2.** Snapshot of urban renewal programmes, Jamaica 1994 to present.



many urban communities have seen marred by high rates of crime and violence which have impacted negatively on social capital and trust. Crime persists as a national concern. The Global Study on Homicide (2013) of the United Nations Office on Drugs and Crime [35], ranked Jamaica as sixth in the world with a homicide rate of 39/100,000. Data provided by the Jamaica Constabulary Force in 2017 ranked St. James, St. Andrew, St. Catherine and Kingston as the parishes accounting for the highest reported number of murders in 2017. The far reaching negative impact of crime on economic and human development cannot be overlooked, diminished or silenced. How can crime be prevented in Jamaican communities? The straightforwardness of this question belies the complexity of issues that gives rise to and perpetuate crime. Solutions proffered for the transformation of volatile communities have included a menu of elements geared at improving the physical environment, broadening access to basic services as well as social programming. The justification for these activities draws on theories including “Broken Windows” which prioritize addressing elements in the physical environment that signal neighbourhood disorder [littering, loitering, overgrown vacant lots, abandoned buildings] [36]; Crime Prevention Through Environmental Design (CPTED) [37] promotes alterations to the physical design of the built environment in order to enhance opportunities for detection and apprehension. Social risks factors are prioritized in Crime Prevention through Social Development (CPSD) [38] which draws attention to the plethora of social risks factors which when present does not cause violence but can contribute to the likelihood of violence occurring. Though debatable, an integrated model that builds on the strengths of both situational and social prevention is a recommended way forward.

### **2.3. Towards an integrated model for urban renewal**

Among the first major initiatives of the Government of Jamaica, the Inner-city Renewal Programme (ICRP) was launched in 2000 for the purpose of redeveloping areas in the Kingston Metropolitan Area which denoted characteristics of urban blight and social decay [39]. The programme’s main goal was “...to facilitate sustainable improvements in the quality of life of persons in these areas through the improvement of physical and social infrastructure, reducing the levels of crime and violence and stimulating economic and employment opportunities” [39].

The ICRP was faced with many administrative challenges in implementation, especially related to inter-agency coordination and community engagement and was subsequently followed by the next major national initiative, the Inner City Basic Services Project [ICBSP]. The ICBSP was funded by the World Bank with counterpart funding from the Government of Jamaica and implemented by the Jamaica Social Investment Fund [JSIF] from 2006 to 2014. The ICBSP project was implemented in 12 pre-selected inner city communities in Kingston, St. Andrew, St. Catherine, St. James and Clarendon [12]. The epicentre of project design was inner city renewal; with a focus on crime and violence prevention as a key priority. The project was built on a general framework that integrated situational prevention with social interventions to enhance the human, social, economic and environmental development of 12 inner city communities in a holistic model with the objectives of expanding access to basic services and improving safety and perception of safety. The selection of project communities

was led by the Planning Institute of Jamaica (PIOJ)] and involved the Ministry of National Security, the Social Development Commission (SDC) and the Jamaica Social Investment Fund (JSIF) [40]. Hence, the project design was aligned to national priorities and reflected a multi-faceted understanding of the needs of the targeted communities. The project was also built on an innovative framework that integrated situational prevention with social interventions to enhance the human, social, economic and environmental development of the 12 pre-selected inner city communities in a holistic model. This project was the first in the country to take an integrated approach to crime- and violence-prevention. Instead of crime suppression utilizing strictly hard policing and paramilitary force only the ICBSP used infrastructure and public safety methodologies to address crime and violence in the target areas.

The ICBSP integrated situation prevention focused on investments in the physical environment to reduce opportunities for crime such as the provision of mobile mediation posts, zinc fence removal and substitution, conversion of open lots in parks and green spaces, rehabilitation of road networks to facilitate more effective policing and delivery of services, solid waste management. Social activities were focused on addressing a range of social risks factors including premature exit from the school system building human capacity building and included skills training and job placement, school based activities and the strengthening of community based organizations. The implementation of an integrated package of technical and social sub-projects under the ICBSP was underpinned by attention to four social dimensions: participation, gender, management of social risks and social safeguards. Development efforts can be lopsided and result in the exclusion of individuals and groups who are in most need of benefits as well as generate adverse impacts; attention to these social dimensions were therefore necessary to safeguard outcomes including inclusive and equitable access to services, resources and opportunities; empowerment of groups and individuals to participate in and benefit from development activities and mitigation of chronic or unforeseen risks. The integration of both technical and social components was evident in the Project Development Objective (PDO) which had a multiplicity of both technical and social indicators. The design and delivery of sub projects also reflected integration of both technical and social elements as teams of multi-disciplinary specialists were involved in the design, appraisal, review, implementation, monitoring and evaluation activities. This integrated approach resulted in:

- A balanced approach to transformation that demonstrated visible improvements in infrastructure, service delivery and community aesthetics as well as well as interventions to build the capacity of individuals, groups, and institutions.
- Leveraging social outputs as inputs into infrastructure subprojects - e.g. skills development and certification of persons in areas including construction and electrical installation provided a pool of skilled labour to undertake technical works.
- Building community capacity for sustaining benefits beyond the life of the project by strengthening community capacity to utilize, manage and, maintain assets acquired under the project, including roads networks, water systems, recreational spaces, parks and green spaces.

The project was given an overall rating of Satisfactory by the World Bank having met Project Development Objectives. The communities were generally satisfied with both project outcomes and project implementation. In the 2013 Citizens' Report Card, 98% of respondents reported that they would welcome the JSIF back into their communities, while 84% said the best projects were chosen for the communities [41]. The success of the ICBSP model has provided the impetus for both the Government of Jamaica and the World Bank to embark on a new project, namely the Integrated Community Development Project (ICDP) which is currently being implemented by the Jamaica Social Investment Fund from 2014 to 2020.

More recently, crime prevention strategies in volatile communities have included the deployment of the security forces operating out of strategically operated posts in a "clear, hold and build" strategy within Zones of Special Operations (ZOSO) [42]. In addition to security measures, the Act also provides for the social and economic development of any area designated as a zone. The social intervention strategy of the ZOSO promotes an integration of social and technical intervention within an integrated framework of multiple agencies. Current models utilize a lead/coordinating agency, multi-agency collaboration and implementation; community engagement; transformation of built and social environments; legislative action; public/private partnerships; diversified funding sources and partners and a monitoring and evaluation mechanism (Figure 2).

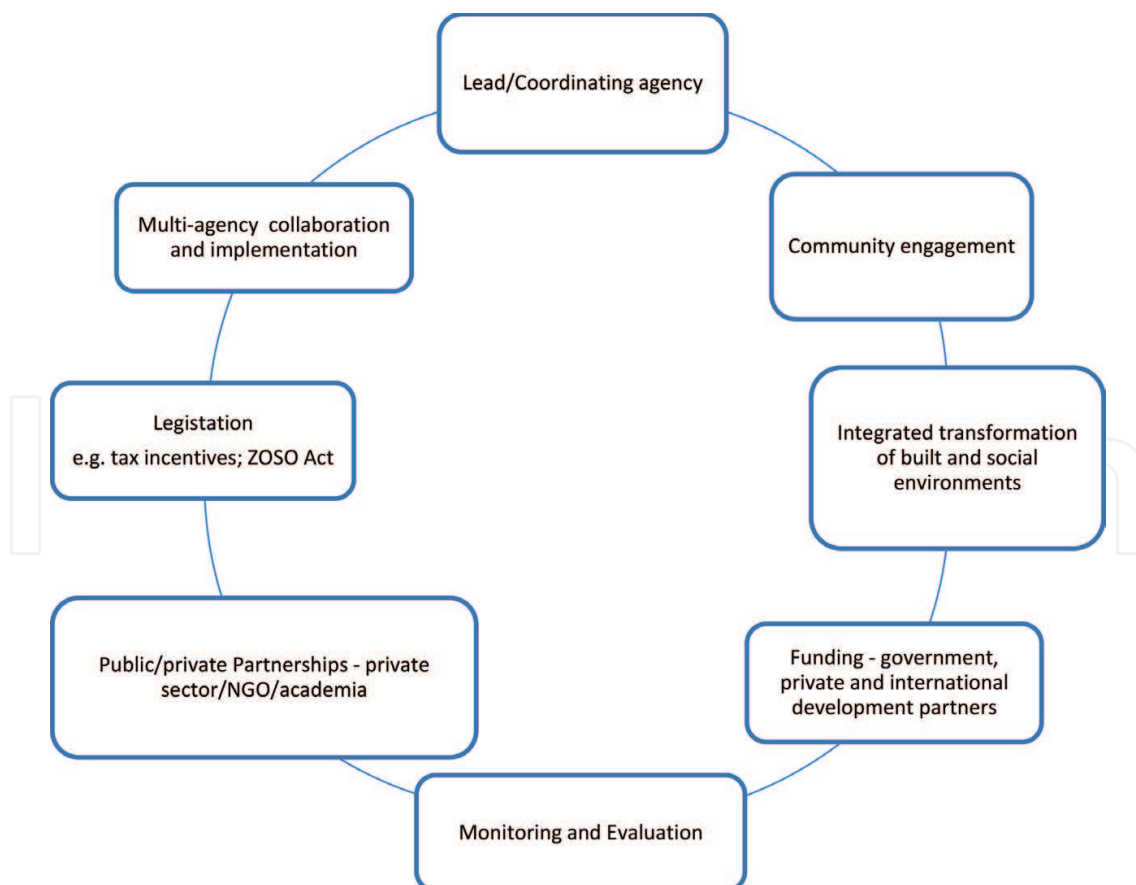


Figure 2. Integrated model for urban renewal – Jamaica.

### 3. Lessons learned and new directions

#### 3.1. Lessons learned

An assessment of the ICRP showed gaps in agency coordination and accountability, community preparation for intervention (i.e. buy-in), inadequate funding and lack of a sustainability plan. Best practices noted are the community engagement and consultations through the Community Development Committees, and multi-agency participation. While this model has not worked to perfection, some key lessons learned from the past 20 years include the need for a holistic approach with emphasis on community readiness, engagement and ownership, improved coordination and monitoring of multi-agency activities, as well as sustained resource mobilization and programme maintenance and management [39]. Lessons learned have been integrated into subsequent models such as the ICBSP and the ICPD. What is clear is that infrastructure investments must be balanced with and complemented by social services as this approach is essential to improving and maintaining access to the infrastructural works and intervention sustainability.

#### 3.2. New directions

##### 3.2.1. *Urban renewal as a public health tool*

In its purest and most ideal form urbanization is a mark of development, associated with increased wealth, more readily available amenities and generally a higher quality of life for the inhabitants. Whatever the path to urban living, we now recognize that it is a two-edged sword, on the one hand associated with better access to nutrition, physical activity and health care but on the other, it may be associated with poverty, crowding and ill-health [43]. The essential characteristics that emerge from the UN definition of an urban agglomeration are density of population and the concept of a 'city'. At its most simplistic, the contrast with a rural setting would include greater space per individual and this may be extended to the concept of fresh air which for many decades was a premise for a healing environment (tuberculosis etc.) [44]. While the space and physical environment are no doubt important, it cannot be far-fetched that the physical characteristics must influence and affect how inhabitants behave in the one, rural, versus the other, urban, setting. Presumably these behaviours influence the health differences that are seen in the one versus the other setting. What may be more proximate however is an examination of the physical and other environmental characteristics and the behaviours that they influence and how the appropriate behaviours can be encouraged within the changing environment, for example the increasing density of the population. There is good evidence that certain behaviours account for large proportions of prevalent disease. In past circumstances the role of poor sanitation, unsafe water supply, under-nutrition, disease vectors, environmental pollution and other factors accounted for the vast majority of diseases seen and the improvement in these factors was accompanied by significantly improved health [45, 46]. In the present dispensation while many countries still grapple with the previous scenario, the epidemiological profile has shifted worldwide to a dominance of non-communicable diseases and the factors that explain the current pattern

have also been identified. There is strong evidence that poor dietary practices, reduced physical activity, tobacco smoking and the harmful use of alcohol will explain the majority of the non-communicable diseases that plague us today [47]. These are all behavioural factors which are influenced by social circumstances, individual choice and a combination of the two. This picture is epidemiologically consistent with the concept of rural living being healthier as it is likely to be more associated with diets of lower energy density and lifestyles which involve greater physical activity. Smoking and alcohol consumption may be less easy to explain.

Rates of communicable and non-communicable diseases are higher in urban informal settlements as they lack the basic infrastructure and services necessary for good health and quality of life. Poor sanitation hikes rates of diarrhoeal diseases. Overcrowding inflates communicable diseases such as tuberculosis, and other respiratory infections while inadequate draining, exacerbated during periods of flooding provides prime breeding sites for vectors such as mosquitoes. Malnutrition among urban slum dwellers decreases their natural immunity, thereby escalating their risk of morbidity and mortality from these diseases [48]. Non-communicable diseases such as cardiovascular disease, asthma, violence and mental illnesses are major public health concerns in poor urban areas [49]. Informal settlements are also plagued by intentional injuries arising from high levels of exposure to violence and crime and inter-partner violence, as well as non-intentional injuries from accidents in the home [50–52]. Stress and depression are marked features among the urban poor and slum dwellers, especially in developing countries [50].

Tindigarukayo [16] outlined the Jamaican experience of significant negative implications of informal settlements [i.e. squatting] – environmental, social, economic and health, noting that the practice impacts both squatters and the wider community. Importantly, there is a distinctive interplay among these risk factors, possibly synergistic which compounds the threat to public health and safety. Squatting harms the physical environment as it encourages deforestation for fuel, increases exposure to fire hazards, and vulnerability to the forces of nature and results in poor environmental health practices such as the inadequate disposal of sewage and solid waste. Socially, squatter communities are impacted by the absence of reliable access to amenities [e.g. electricity and water] and social services [e.g. roads, playgrounds], resulting in illegal access to these critical resources. These communities often become hotbeds for crime and illegal activities. The non-existence of educational institutions in close reach of many squatter communities results in low school attendance and high rates of drop-out, which is further compounded by the lack of priority on education. Lack of tenure also affects them by way of unstable occupancy/tenancy.

Unplanned settlements negatively impact on the economic landscape by increasing demand on limited urban services, destroying ecological sites for marine industries and occupying productive lands for agriculture, tourism, etc. Squatters face economic exclusion as they are often denied employment opportunities, arising from the fear and rejection of the communities in which they reside. They are also disabled economically, as in the absence of legal rights to the lands they occupy, their productivity and contribution to society is impaired. Women with young children are particularly vulnerable as they are forced to choose between child neglect [i.e. leaving children unattended to pursue economic opportunities] and starvation.

Also in Jamaica, Mullings et al. [53] reported results from a national survey, the Jamaica Health and Lifestyle Survey 2007–2008 which demonstrated that women in urban informal/squatter communities and men in poor urban communities faced a doubling of their risk of depressive symptoms. Of great concern is the preponderance of health problems in these social-environmental clusters which are less recognized by the formal health care sector, which often treats with the costly late complications of these diseases. Neglect of urban slum health carries a high economic, social and developmental cost for urban populations and public health and must be tackled at all levels. The call for studies of urban slum populations to better understand the magnitude and characteristics of the problem and a new approach to health assessment to improve the public health response mechanism for this vulnerable group is justified [49].

What is required is the enabling of healthy behaviours and environments in the urban setting where they may not occur 'naturally'. The fact is that the offending behaviours which account for a disproportionate amount of disease are influenced by almost all aspects of society including urban planning, community structure and governance, transportation, security, food availability, import policy, agricultural practices, education. Urbanization and urban settings which discourage healthy behaviours must be targeted using a combination of bottom-up and top-down approaches to influence environment [physical and social] and behaviours [e.g. diet, physical activity, tobacco use, alcohol consumption and violence]. An adequate response will require the buy-in of all the stakeholders to a vision that will harness all these components into a coordinated system of multi-sectoral programming to address urban living conditions and the underlying social, economic and psychological drivers of poor quality of life. This governance must supersede the narrow interest of any sector and will require innovative ways of harnessing all assets in society, especially those at the community level including faith-based organizations.

### *3.2.2. Urban renewal through the gender lens*

Historically, urban planning has been a male-dominated field. This patriarchal tradition has implications for commitments to gender equality and the empowerment of women and vulnerable groups [54]. It also challenges goals to achieve the UN's Sustainable Development Goals, especially Goal 5 on gender equality, Goal 10 reduced inequalities and Goal 11 sustainable cities and communities. Most importantly, differences in gender roles and responsibilities have major implications for how social groups have access to and use planned public spaces in urban areas. UN Habitat 2012 [55] supports the use of sex-disaggregation of data based on the collection of data on men and women separately in relation to all aspects of urban planning, including employment and livelihood, housing, ethnicity, class, caste, age and location.

A gender and development theoretical framework uses gender as a social concept and tool of analysis. Gender and gender identities create clearly defined social roles and expectations for both males and females associated with masculinity and femininity, as well as hierarchies and unequal access to power and decision making (including financial and other resources for development). These realities must be considered in urban planning—essentially planning cities based on the gender roles ascribed to different groups. Gender mainstreaming is a

process and a strategy introduced by the United Nations in 1987, to assess the likely impact of planned legislation, policies and programmes on males and females, given their ascribed gender roles and responsibilities. Gender mainstreaming in urban planning for renewal would therefore require the collection of data disaggregated by sex and other socioeconomic and demographic variables. It involves asking basic questions such as: Who needs what? Who has access to what resources? Where? When? Gender analysis of the data can be used to identify the specific needs of each demographic group and this information can be used as evidence to guide urban planning and to make it more effective and efficient. This approach stands in sharp contrast to traditional approaches to urban planning. Using this methodology is essential in Caribbean countries which have many single female headed households which tend to be larger in size, have a larger number of family members and to have less income than male headed households because of the gender wage gap which is reflected in women earning less than men. In single-female headed households, women are the primary breadwinners, as well as primary caregivers and community organizers, representing a 'triple shift'. These lived realities mean that women will need efficient physical infrastructure and services to fulfil their three gender roles efficiently.

#### 3.2.2.1. *Paradigm shift: gender blind to gender-sensitive urban renewal*

Urban renewal plans will need to consider the trend of increasing urbanization which has resulted in Jamaica having a population that is 55% urban [9]. Planners will also need to consider the country's demographic profile and the reality of a demographic transition, moving from a largely young population to an increasingly larger population of older persons. Urban planners will also need to make provisions for this older population that is living 20 years longer on average and where the life expectancy for women is 5 years longer than for men. In this context traditional urban planning which is 'gender blind' would need a paradigm shift to become 'gender-sensitive'. Gender blind means that planners assume that there are no differences in how the physical urban environment will be used by all stakeholders. This incorrect assumption results in *gender biases* which create problems for specific demographic groups including women, persons with disabilities and children. Traditional approaches can also reinforce gender and other inequalities which will impact access to education, jobs and enjoying an independent fulfilling life. UN Habitat 2012 [55], therefore argues the case for gender sensitive urban planning, which includes several components. Among them is appropriate *legislation* which is required to support the allocation of human and financial resources to support physical planning. This has implications for the design and use of roads, walkways, ramps for wheelchair users and prams, building codes, creation of 'green spaces' and parks as well as road infrastructure and traffic flows. Urban renewal will require rethinking gender needs – e.g. designing bathroom facilities and use of equipment to facilitate the creation of safe spaces for women and girls who are more at risk of gender based violence. It also offers scope for independence of persons with disabilities, children, older women and men and other vulnerable population groups. This approach to re-thinking and redesigning spaces to address the needs of users supports the concept of an inclusive society.

### *3.2.2.2. Legislation, good governance and gender inequality*

Power to influence legislation requires a minimum of 30% of women in Parliament to successfully lobby for gender sensitive legislation and here there are two challenges. In a system reflective of a culture of patriarchy, women are significantly under represented at the highest levels of decision making which is in Parliament. Also women in Parliament are not organized into women's caucuses that would advocate and pass laws that facilitate and empower women to fulfil their socially ascribed gender roles. In Jamaica for example women are 51% of the population but only 17% of Parliamentarians. A major barrier to good governance is the lack of awareness of gender as a tool of analysis and global commitments to gender equality which may result in a diminished understanding of the value of such legislation to achieve national development goals. 'Tribal' and adversarial political culture undermine the possibility of progressive legislation to support gender sensitive urban planning and sustainable development. Increased gender equality in political participation and in Parliament should significantly increase the number of women in positions of leadership, power and decision making, including at the local government level.

### *3.2.2.3. Safety, security and safety audits*

Statistics on crime and violence reported by the Jamaica Constabulary Force [56] reflect high levels of crime, including murder and gender based violence. The fear of crime and the perception of the government's ability to manage crime are problematic. Gender analysis of the crime problem can help to improve interventions to promote safety and security. Use of gender-sensitive gender audits can also help to increase understanding of the causes, characteristics consequences and solutions, serving as a guide to urban planning to ensure that basic needs are addressed and housing solutions create an environment for well-being.

### *3.2.2.4. Commitments to gender equality and sustainable development*

Jamaica has ratified and signed several international conventions that provide a strong governance framework for gender sensitive urban renewal. Among these are the UN Convention on the Elimination of all forms of Discrimination against Women (CEDAW) [57]; the National Policy for Gender Equality (NPGE) [58]; Vision 2030 Jamaica [17] which includes a Gender Sector Plan and the Sustainable Development Goals [5]. SDG 5 promotes the principle and practice of gender equality as a basic human right and gender is also regarded as a cross cutting issue for the achievement of all 17 SDGs.

### *3.2.3. Urban planning: a new governance framework for sustainable development*

Missing from the various integrated approaches to urban renewal in Jamaica is the sustained development and assimilation of community-based organizations or institutions in the decision making process. Projects implemented (**Table 2**) have recognized the importance of building community capacity for sustaining benefits beyond the life of the project by strengthening community capacity to utilize, manage and, maintain assets acquired



under the project, including roads networks, water systems, recreational spaces, parks and green spaces. However, no mention is made of the role of these entities in the decision making process. Put another way, the active participation of these institutions in the governance process does not reside outside of the scope of the projects. Most of the projects listed (**Table 2**) used a top-down approach to urban renewal, led primarily by government agencies rather than an approach where issues to be resolved and strategic interventions were defined and executed by all stakeholders and a multi-disciplinary professional team, including persons trained in aspects of land use management and urban planning. Drnevich [59] noted that the involvement of critical stakeholders in any urban renewal initiative must be community driven and the application of community driven development must follow some fundamental principles in order to yield success. This diversity of participation in problem definition, alternative solutions and strategy development increases the success of the solution. The partners “buy in” to the final strategy bring resources and expertise and become part of the solution. Sara and Katz [60] studied urban renewal in six countries and concluded that sustainable initiatives were those in which the communities “controlled key investment decisions and part of the investment cost.” Similarly, in a study of community-based organization’s (CBO) involvement in the development process in South Africa, Adato, et al. [61] pointed out that CBO’s involvement in all aspects of project development [design, management and monitoring] helped to reduce cost per beneficiary by approximately 50% [62]. The preponderance of scholarly research on current approaches to urban renewal calls for a new governance framework which directly involved the residents in all aspects of the decision making process. For example, see [63] where the author argued that the defining feature of urban governance is that the management of cities is not the sole domain of government or the private sector, but is the jurisdiction of a wide variety of actors that interact with one another to govern cities. It is also important to recognize that the actors/stakeholders in the governance and management of cities are not likely to always have equal power because urban governance is a concept that brings together the political, economic, and social systems and processes in a contemporary capitalism system that is itself an intrinsically unequal system [64].

The Local Governance Act developed in 2014 and enacted in 2016 [65] was an attempt to include the variety of actors in the urban governance process. The introduction to the 2016 Act asserts that it allows for a governance process which is more autonomous and responsive to the citizenry. The Act also attempt to reconcile several anomalies and repair the deficiencies of existing Acts such as the Parish Councils Act (1887) [66], the Kingston and St. Andrew Corporation Act (1923), the Municipalities Act (2003), and the Parochial Elections [Modifications] Act (1979) [67]. Unfortunately, the Act speaks to without defining a clear approach to land use planning and the role of professionals trained in the field of land use planning and urban management. It is safe to assume that decision-making process on land use management has not changed materially. It is therefore necessary to propose a new governance framework to ensure the active participant of community residents in the decision making process. Below is the proposed structure for a new governance framework to drive sustainable land management and urban planning in Jamaica (**Figure 3**). **Figure 4** proposes a mechanism for the operationalization of the new governance structure.

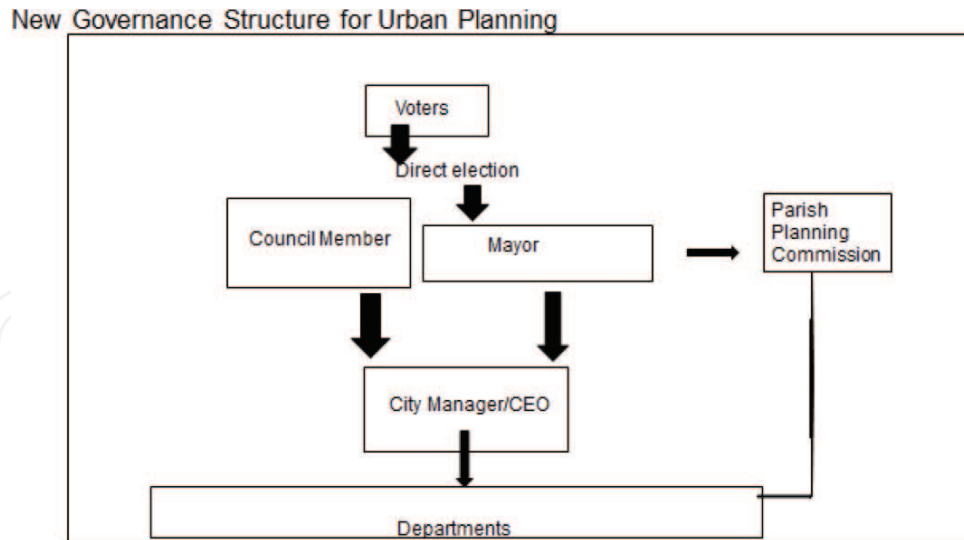


Figure 3. New governance framework for urban planning in Jamaica. Source: Carol Archer.

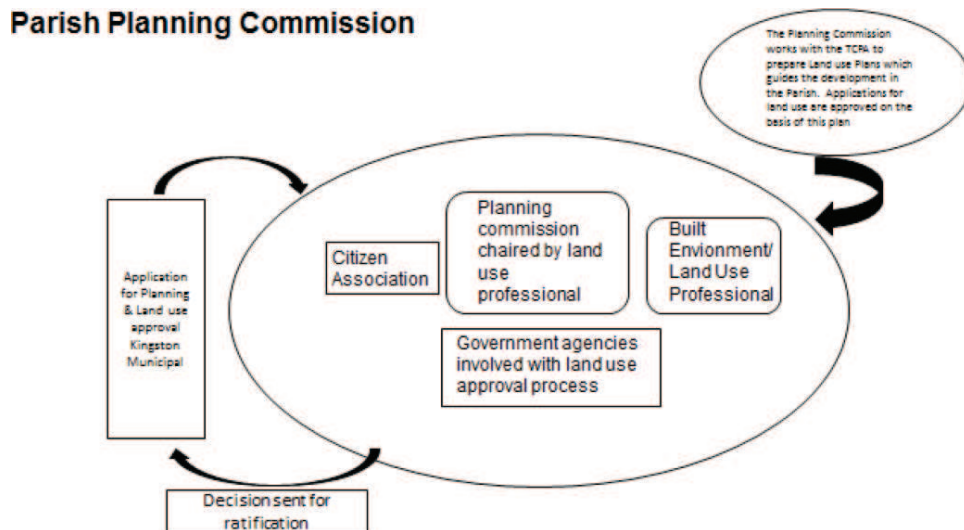


Figure 4. Mechanism to operationalize the new governance structure. Source: Carol Archer.

This structure calls for direct election of Mayors by the residents of a parish. Currently, the Mayor of the parish capital and the chief decision maker for land use management in the parish is selected from among the caucus of councillors from the ruling party. An individual can win his or her electoral division by one vote and be selected by the caucus as Mayor. Direct election of Mayors from a wide cross-section of the population of the parish will give greater legitimacy to the office of the Mayor. The proposed structure also calls for the creation of a Planning Commission. Listed below are the major features of the proposed Commission:

- Independent, semi-autonomous and insulated from the mainstream of political and administrative affairs.
- Includes representatives of the urban planning profession and others from the Built Environment Professionals approved/vetted by the council or services commission

- Include representatives from neighbourhood organizations [community councils]
- Serve for a period of 10 years [typical time period for the redevelopment of an urban area]
- The commission should be given the power to veto or override the city council by the requirement of a greater-than-majority vote of the Commission.
- Recognize that the Municipal Council is, and should, be the principal legislative and policy-making authority of the municipal government.
- Recognize that when a specialized organization is relatively independent of the Municipal Council, its professionals and technicians can exert their professional training and practice
- Provide opportunities for citizens to actively participate in policy-making by expressing their wishes and opinions to the legislators through the Commission.

#### **4. Challenges and opportunities for sustainable development**

To realize opportunities and overcome challenges, there is need for urban planners in the Caribbean to scale up the mainstreaming of gender and community engagement and participation in all facets of professional training, policies, programmes and practices. This will help to promote policy coherence between commitments to gender mainstreaming and gender equality as well as future practices. This new approach implies the use of community driven approaches that focus on gender-sensitive needs assessments, audits, and budgets. This approach will help to prioritize the allocation of resources to address gender inequalities which affect both sexes from various backgrounds. The analysis points to the need for increased national training programmes on gender and commitment to gender re-socialization to promote more equitable gender roles and responsibilities as well as access to financial and other resources. This has implications for the delivery of programmes in education and religious institutions, as well as public education and media awareness programmes to promote behaviour change.

Urban planners will need to value and use multidisciplinary research that combines quantitative, qualitative and participatory methodologies to better understand underlying behaviours that are linked to gender roles and design urban spaces with these considerations. Jamaica's 2014 report to Habitat notes gender and women's issues must be central when planning designs in urban spaces for infrastructure, housing, employment and livelihoods. As a Small Island Developing State (SIDS) facing significant environmental threats, practical needs of community members must be considered, taking account of the gender profile resulting from analysis of sex disaggregated data [68]. Policy coherence is important given several commitments to gender mainstreaming to promote gender equality, equity [fairness] and sustainable development for all.

#### **5. Conclusion**

Urban planning has evolved from the Garden City movement initiated by Sir Ebenezer Howard at the turn of the 20th century [69], to modern urban planning approaches such as

the healthy city concept which aims to improve quality of life and maximize citizens' potential by improving the city environs through inter-connections in the political, economic, and social spheres [70]. The model of urban renewal in Jamaica aims to improve quality of life and well-being of community and residents, through infrastructure, social and economic development programmes. The integrated model is intended to serve the Government of Jamaica as a tailored blueprint for community development and is a model that can and should be further replicated to have a more scaled and sustained impact. The model can be further enhanced by refocusing on three areas: public health, gender and a new governance structure for urban planning. In the re-positioning of urban renewal as a public health tool, a succinct examination of urban health, inclusive of social determinants of health and the socio-ecological model of health would be a useful exercise. Innovative public health care delivery which targets 'at risk' and off-the-grid communities with services such as mobile clinics can propel us towards practical and sustainable development outcomes. Additionally, a compelling case has been made for the urban renewal agenda to focus on well-needed gender-sensitive approaches to assessment, planning and policy development to ensure effective responses to changing needs. Sensitizing male and female legislators and agents of central and local government and mainstreaming gender in the policies and programmes of central and local government can also have a positive impact on urban planning, resulting in infrastructure and services being more equitable for all stakeholders. Thirdly, the New Urban Agenda calls for a new governance structure, one that integrates sustainable urban management through a Planning Commission and provides for an expanded role for citizens in the decision making process.

## Author details

Jasneth Mullings<sup>1\*</sup>, Leith Dunn<sup>1</sup>, Mona Sue Ho<sup>2</sup>, Rainford Wilks<sup>1</sup> and Carol Archer<sup>3</sup>

\*Address all correspondence to: [jasneth.mullings@uwimona.edu.jm](mailto:jasneth.mullings@uwimona.edu.jm)

1 The University of the West Indies, Jamaica

2 Jamaica Social Investment Fund, Kingston, Jamaica

3 University of Technology, Kingston, Jamaica

## References

- [1] United Nations. United Nations World Urbanization Prospects. The 2011 Revision. Population Division. New York: United Nations; 2011
- [2] United Nations General Assembly. Report of the World Commission on Environment and Development: Our Common Future. Oslo, Norway: United Nations General Assembly, Development and International Co-operation: Environment; 1987
- [3] Zheng H, Shen G, Wang H. A review of recent studies on sustainable urban renewal. *Habitat International*. Jan. 2014;**41**:272-279

- [4] Emas R. The Concept of Sustainable Development: Definition and Defining Principles. Brief for Global Sustainable Development Report 2015; 2015. Accessed at [https://www.academia.edu/31158981/The\\_Concept\\_of\\_Sustainable\\_Development\\_Definition\\_and\\_Defining\\_Principles](https://www.academia.edu/31158981/The_Concept_of_Sustainable_Development_Definition_and_Defining_Principles)
- [5] United Nations. Sustainable development goals. Accessed at: <http://www.un.org/sustainabledevelopment/cities/> [Access date: April 17, 2018]
- [6] United Nations. Millennium Development Goals Report 2015. New York: United Nations; July 1 2015 Available from: [http://www.un.org/millenniumgoals/2015\\_MDG\\_Report/pdf/MDG](http://www.un.org/millenniumgoals/2015_MDG_Report/pdf/MDG)
- [7] State of the World's Cities 2012/2013: Prosperity of Cities. New York: United Nations Human Settlements Programme; 2013
- [8] USAID. Urbanization in Latin America and the Caribbean: Trends and Challenges. Washington DC: USAID Contract No. AFP-I-00-04-00002-00, Task Order No. 9. 2010
- [9] Central Intelligence Agency. World Factbook. Available from: [https://www.cia.gov/library/publications/the-world-factbook/geos/print\\_jm.html](https://www.cia.gov/library/publications/the-world-factbook/geos/print_jm.html) [Access date: April 17, 2018]
- [10] Indrawati S. Urbanization and Urban-Rural Integrated Development. Beijing, China: The World Bank; 2014. Available from: <http://www.worldbank.org/en/news/speech/2014/03/23/urbanization-and-urban-rural-integrated-development>
- [11] Annamalai T, Devkar G, Mahalingam A, Benjamin S, Rajan A, Deep A. What is the evidence on what makes an effective urban planning framework for improved access to water, sanitation, and electricity services in low income or informal settlements?. EPPI-Centre, Social Science Research Unit, Institute of Education, University of London; 2014
- [12] Government of Jamaica. Jamaica report to HABITAT 2014; 2014. Available at: <http://habitat3.org/wp-content/uploads/Habitat-III-Jamaica-Report.pdf>
- [13] Baker JL. Urban Poverty: A Global View (English). Urban Papers; No. UP-5. Washington, DC: World Bank; 2008. Available from: <http://documents.worldbank.org/curated/en/954511468315832363/Urban-poverty-a-global-view>
- [14] Government of Jamaica: National Report for Third United Nations Conference of Housing and Sustainable Urban Development (HABITAT III). Kingston, Jamaica: Ministry of Transport, Works and Housing; 2014
- [15] Government of Jamaica. Rapid Assessment of the Problem of Squatting in Jamaica. Kingston, Jamaica: Ministry of Housing; 2008
- [16] Tindigarukayo JK. The impact of rural-urban influx on Jamaican society. *International Journal of Humanities and Social Science*. 2014;4(9; 1):35-40
- [17] Planning Institute of Jamaica. Vision 2030: National Development Plan. Kingston, Jamaica: Planning Institute of Jamaica; 2009. Available from: <http://www.vision2030.gov.jm/portals/0/ndp/executive%20summary.pdf>

- [18] Planning Institute of Jamaica. Urban planning and regional development sector plan 2009 – 30. Vision 2030 Jamaica-National Development Plan. Government of Jamaica; 2009
- [19] Planning and Lands Bureau. Urban Renewal Strategy. Hong Kong: Hong Kong Special Administrative Region government; 2001
- [20] Arthurson K. Redevelopment of public housing estates: The Australian experience. *Urban Policy and Research*. 1998;**16**(1):35-46
- [21] Yi Z, Liu G, Lang W, Shrestha A, Martek I. Strategic approaches to sustainable urban renewal in developing countries: A case study of Shenzhen, China. *Sustainability*. 2017; **9**(8):1460. DOI: 10.3390/su9081460
- [22] Dempsey N, Bramley G, Power, Brown C. The social dimension of sustainable development: Defining urban social sustainability. *Sustainable Development*. 2009;**19**(5):289-300
- [23] Yiftachel O, Hedgcock D. Urban social sustainability: The planning of an Australian city. *Cities*. 1993;**10**(2):139-157
- [24] Danchev A. Social capital influence on sustainability of development (case study of Bulgaria). *Sustainable Development*. 2005;**13**(1):25-37
- [25] Price Waterhouse. Evaluation of Urban Development Grant, Urban Regeneration Grant and City Grant. London: HMSO; 1993
- [26] Edwards J. Urban policy: The victory of form over substance? *Urban Studies*. 1997; **34**(56):825-843
- [27] Roberts P. Evolution, definition and purpose of urban regeneration. In: Roberts P, Sykes H, editors. *Urban Regeneration: A Handbook*. London: Sage; 2000
- [28] Stubbs M. Heritage-sustainability: Developing a methodology for the sustainable appraisal of the historic environment. *Planning, Practice & Research*. 2004;**19**(3):285-305
- [29] Friedman A. *Sustainable Residential Development: Planning and Design for Green Neighborhoods*. New York: McGraw-Hill; 2007
- [30] Fordham G. *Made to Last*. York: Joseph Rowntree Foundation; 1995
- [31] Edgar B, Taylor J. Housing. In: Roberts P, Sykes H, editors. *Urban Regeneration: A Handbook*. London: Sage; 2000
- [32] Government of Jamaica. Urban Development Corporation Act 1968. Kingston: GOJ; 1968
- [33] Urban Development Corporation. Tax Incentive. Available from: <http://www.udcja.com/tax-incentive> [Access date: April 17, 2018]
- [34] Planning Institute of Jamaica. Vision 2030 Jamaica national development plan– Population sector plan. Government of Jamaica Population Task Force; 2007. Available from: [http://www.vision2030.gov.jm/portals/0/sector\\_plan/microsoft%20word%20-%20population2.pdf](http://www.vision2030.gov.jm/portals/0/sector_plan/microsoft%20word%20-%20population2.pdf)

- [35] United Nations Office on Drugs and Crime. *The Global Study on Homicide*. Vienna, Austria: UNODC; 2013 Available from: [https://www.unodc.org/documents/gsh/pdfs/2014\\_GLOBAL\\_HOMICIDE\\_BOOK\\_web.pdf](https://www.unodc.org/documents/gsh/pdfs/2014_GLOBAL_HOMICIDE_BOOK_web.pdf)
- [36] Kelling GL, Wilson JQ. Broken windows: The police and neighborhood safety. *Atlantic Monthly*. 1982;**249**(3):29-38
- [37] Crowe T. *Crime Prevention through Environmental Design: Applications of Architectural Design and Space Management Concepts*. 2nd ed. Oxford: Butterworth-Heinemann; 2000
- [38] The John Howard Society of Alberta. *Crime Prevention through Social Development: A Resource Guide*; 1995. Available from: <http://www.johnhoward.ab.ca/pub/pdf/C7.pdf>
- [39] Planning Institute of Jamaica. *Social Assessment of the Inner-City Renewal Programme. Rae Town Pilot Project*. Kingston, Jamaica: PIOJ; 2004
- [40] Jamaica Social Investment Fund. *Inner City Basic Services for the Poor Project (ICBSP)*. Available from: <http://www.jsif.org/content/inner-city-basic-services-poor-project-icbsp> [Access date: April 17, 2018]
- [41] Jamaica Social Investment Fund. *Implementation and Completion Results Report: Inner City Basic Services for the Poor Project JSIF*; May 2014
- [42] Government of Jamaica. *The Law Reform (Zones of Special Operations) (Special Security and Community Development Measures) Act*. Kingston: GOJ; 2017
- [43] Dye C. Health and urban living. *Science*. 2008;**319**(5864):766-769
- [44] Demaitre L. Air, miasma and contagion—Epidemics in antiquity and the middle ages. *Bulletin of the History of Medicine*. 2004;**78**(2):466-468
- [45] Esrey SA, Potash JB, Roberts L, Shiff C. Effects of improved water supply and sanitation on ascariasis, diarrhoea, dracunculiasis, hookworm infection, schistosomiasis, and trachoma. *Bulletin of the World Health Organization*. 1991;**69**:609-621
- [46] Pelletier DL, Frongillo EA Jr. Changes in child survival are strongly associated with changes in malnutrition in developing countries. *Journal of Nutrition*. 2003;**133**:107-119
- [47] Nabel EG, Stevens S, Smith R. Combating chronic disease in developing countries. *Lancet*. 2009;**373**(9680):2004-2006
- [48] Sclar E, Garau P, Carolini G. The 21st century health challenge of slums and cities. *The Lancet*. 2005;**365**:901-903
- [49] Riley LW, Ko AI, Unger A, Reis MG. Slum health: Diseases of neglected populations. *BMC International Health and Human Rights*. 2007;**7**(2):1-6
- [50] National Academy of Sciences. *Cities Transformed: Demographic Change and its Implications for the Developing World*. New York: National Academies Press; 2003

- [51] Bartlett SN. The problem of children's injuries in low-income countries: A review. *Health Policy and Planning*. 2002;**17**:1-13
- [52] Winton A. Urban violence: A guide to literature. *Environment and Urbanization*. 2004;**16**: 165-184
- [53] Mullings JA, McCaw-Binns AM, Archer C, Wilks R. Gender differences in the effects of urban neighborhood on depressive symptoms in Jamaica. *Revista Panamericana de Salud Pública*. 2013;**34**(6):385-392
- [54] Reinecke S. The Intersection of Urban Planning and Gender [Internet]. 2016. Available from: <https://aboutdci.com/2016/05/intersection-urban-planning-gender/>
- [55] UN Habitat. *Gender and Urban Planning: Issues and Trends*. Nairobi: UN Habitat; 2012
- [56] Government of Jamaica. Jamaica constabulary force periodic serious and violent crimes review January 01, 2017 to July 15, 2017. Jamaica Constabulary Force Statistics and Information Management Unit, Planning, Research and Development Branch; 2017. Available from: <https://www.jcf.gov.jm/sites/default/files/JCF%20Periodic%20Serious%20Crimes%20Review%20Weekly%20Jan%2001%20to%20July%2015%2C%202017.pdf>
- [57] United Nations. *UN Convention on the Elimination of all Forms of Discrimination against Women*. Geneva: United Nations; 1980
- [58] Government of Jamaica. *National Policy for Gender Equality*. Kingston, Jamaica: The Bureau of Women's Affairs (Gender Affairs); 2011
- [59] Drnevich R. Partnerships for community development and housing. *Journal of Housing & Community Development*. 1995;**52**(2):9-14
- [60] Sara J, Katz T. *Making Rural Water Sustainable: Report on the Impact of Project Rules*. United Nations Development Programme (UNDP) and World Bank Water and Sanitation Program. Washington, DC; 1997
- [61] Adato M, Besley T, Haddad L, Hoddinott J. *Participation and Poverty Reduction: Issues, Theory and New Evidence from South Africa*. Background Paper for World Development Report 2000/2001. Washington, DC: International Food Policy Research Institute and World Bank; 1999
- [62] Dongier P, Domelen J, Ostrom E, Rizvi A. *Community-Driven Development*; 2004. Available from: [http://siteresources.worldbank.org/INTPRS1/Resources/383606-120533-4112622/5805\\_chap9.pdf](http://siteresources.worldbank.org/INTPRS1/Resources/383606-120533-4112622/5805_chap9.pdf)
- [63] Mouolutas T. The glass menagerie of urban governance and social cohesion: Concepts and stakes/concepts as stakes. *International Journal of Urban and Regional Research*. 2004;**28**(2):449-465
- [64] Brenner N. Globalization and Reterritorialization: Re-scaling of urban governance in the European Union. *Urban Studies Journal*. 1999;**36**:3431-3451



- [65] Government of Jamaica. Local Governance Act (2016); 2016. Available from: <http://www.japarliament.gov.jm/attachments/article/341/The%20Local%20Governance%20Act,%202016%20No.%208.pdf>
- [66] Government of Jamaica. The Parish Councils Act 1901; 1901. Available from: [http://moj.gov.jm/sites/default/files/laws/Parish%20Councils%20Act\\_1.pdf](http://moj.gov.jm/sites/default/files/laws/Parish%20Councils%20Act_1.pdf)
- [67] Commonwealth Local Government Forum. The Local Government System in Jamaica. Available from: [http://www.clgf.org.uk/default/assets/File/Country\\_profiles/Jamaica.pdf](http://www.clgf.org.uk/default/assets/File/Country_profiles/Jamaica.pdf) [Access date: April 17, 2018]
- [68] Dunn L, Wedderburn J, editors. Gender, Climate Change and Disaster Risk Management. Kingston, Jamaica: Institute for Gender and Development Studies Mona Unit UWI and Friedrich Ebert Stiftung; 2013
- [69] Howard E. Garden Cities of Tomorrow. London, UK: Swan Sonnenschein & Co., Ltd.; 1902
- [70] World Health Organization. Healthy Cities Approach. Available from: <http://www.euro.who.int/en/health-topics/environment-and-health/urban-health/who-european-healthy-cities-network/what-is-a-healthy-city> [Access date: April 17, 2018]