GUEST EDITORIAL

Special issue: urban regeneration for sustainable development

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Background

Cities are currently facing numerous challenges to cope with population growth and rural urban drift and these are having impact on quality of life and a range of opportunities that urban environments can offer its residents (Evans and Jones, 2009). These challenges can largely be put into threefold: social, economic, and environmental sustainability disparities. Cities are intricate entwined collections and centres of human interaction, creativity, knowledge, diversity, culture, commerce, and economic creativity (Elnokaly and Elseragy, 2011). With more than half of humanity living in cities and the number of urban residents growing by nearly 73 million every year, it is estimated that urban areas account for 70 per cent of the world's gross domestic product and has therefore generated economic growth and prosperity for many. It is expected that two-thirds of the world population will be living in urban areas (UN, 2018).

In this regards, urban regeneration concept has become central and a key driver towards the sustainable development of cities (Akotia and Opoku, 2018). Urban regeneration practices provide the opportunity to transform the decline areas as well as the entire urban built environment. Roberts (2000, p.17) defines Urban Regeneration as the "comprehensive and integrated visions and actions, which lead to the resolution of urban problems and which seek to bring about a lasting improvement in the economic, physical, social and environmental conditions of an area that has been subject to change". Despite the developmental challenges brought about as a result of urbanisation, it also has the opportunity to drive sustainable development (Teferi and Newman, 2018). Sustainable urban regeneration should deliver city

level policies and processes that address the socio-economic challenges faced by the society with the aim of minimising the negative impacts on the environment. Urban regeneration is considered as means to regenerate and upgrade existing declined places towards the achievement of the sustainable development goals (SDGs). It is believed that a sustainable built environment could greatly impact on the realisation of SDG 2 (End Hunger), SDG 3 (Good Health & Well-Being), SDG 4 (Quality education), SDG 6 (Clean Water & Sanitation), SDG 7 (Affordable & Clean Energy), SDG 8 (Decent Work & Economic Growth), SDG 9 (Industry, Innovation & Infrastructure), SDG 10 (Reduced Inequalities), SDG 11 (Sustainable Cities & Communities), SDG 13, (Climate Action) and SDG 15 (Biodiversity) (Opoku, 2016; Opoku, 2019).

There is also recognition that, the cross-cutting nature of urban planning, design and development issues has an enormous impact on most of the sustainable development goals (UN, 2018). The recent Habitat III conference in Quito outlined the new urban planning and development agenda, which provides that, cities are made sustainable, shape to ensure liveability, provide homes and sustainable neighbourhoods. The agenda frames global policy for cities and urban regeneration for the next 20 years and beyond. Urbanization should be at the heart of the 2030 sustainable development agenda and SDG 11 in particular is aimed at making cities and human settlements inclusive, safe, resilient and sustainable (UN, 2015). However Teferi and Newman (2018) believe that regenerating the urban slums in the developing world could greatly contributes to the realisation of many of the SDGs including SDG 1 (End poverty), SDG 6 (Clean Water & Sanitation), SDG 7 (Affordable & Clean Energy) and SDG 11 (Sustainable Cities & Communities). Urban regeneration is an essential activity impacting on the agenda towards a more sustainable society (Lombardi et al., 2010). Sustainable development goal 11, target 11.3 sets a global ambition to "enhance inclusive and sustainable urbanization and build capacity for participatory, integrated and sustainable human settlement planning and management by 2030" (UN, 2016, p.14).

This Special Issue

This special issue presents high-quality research papers that address sustainability issues of urban regeneration towards the delivery of Sustainable Development Goals (SDGs) for cities. The special issue is based on contributions from authors' response to an open call for papers; the papers went through a very rigorous double-blind review process resulting in nine (9) accepted papers with five (5) papers addressing regeneration issues in the global south while the remaining four (4) papers are based on cases from the global north.

De Kock and Carta begin this special issue by examining the confused meaning of modern-day regeneration projects. The paper presents a theoretical framework that helps identify visual sustainability in urban projects and evaluates its relevance for the use, design and making of public space. It is aimed at showing how the process of urban regeneration is far more nuanced and sophisticated than much of today's building industry allows for. Visual sustainability represents 'the technology before the technology' and future research must recognise how human needs, not technology, provide the meaning into 'how' we may create a successful, smart, and sustainable urban.

Sørensen, Rasmussen, Øien and Frandsen adopt interview approach in clarifying how different actors employ parameters of sustainability in the building design and what enables the holistic perspective of the interrelating social, economic, and environmental parameters. The study shows that decision support tools are used late in the design process and commonly

focused on single parameters of sustainability. The analysis shows how practitioners of the planning and early design phases operate at general levels of geometrical clusters and volumes but must continuously evaluate each project in perspective of the specifications of end-users and the public to ensure holistic sustainability.

However, *Oke, Aghimien, Akinradewo and Aigbavboa* examine the various factors influencing the ability of cities to develop resilience through smart city drivers through a survey of construction professionals involved in the design, planning, development and general management of cities and infrastructure. The study grouped the factors influencing resilience into five including climate change, education, food security, public safety, and threat to disease, in order of their importance. Findings revealed that the most important of these factors are development of literacy and technical skills of citizens, regeneration of agricultural land and increased localised food production. The paper also examined the effects of these factors on six smart city drivers and found out that smart economy has the most influence on the resilience of a city.

Das applied Systems Analysis (ASA) linked System Dynamics (SD) conceptual models based on the interlinkage and causal feedback relationships among various factors developed, which could assist in offering perspectives that would enable eliciting of policy interventions to develop smart cities. Using the context of the city of Bloemfontein, South Africa and drawing on the perceptions of stakeholders, the paper offers a perspective on such a transformation by first assessing the performance of various factors and attributes that influence three important aspects of a smart city: economy, mobility and governance system. It then recorded the viewpoints of stakeholders about how these aspects can contribute to the development of a smart city.

On the other hand, *Akotia, Manu, Opoku and Sackey* adopt qualitative research approach using a semi-structured interview to provide an overview of sustainability benefits within the context of the sustainable regeneration projects in the UK from a study that examines the roles and sustainability drivers of construction industry practitioners' towards the promotion of sustainability on their regeneration projects. The findings revealed that out of the eight socio-economic sustainability drivers presented to practitioners, enhancement of reputation was the most important 'socio-economic' sustainability driver while the least important driver was legislative and legal requirement. The findings further revealed that majority of practitioners/organisations were promoting the socio-economic sustainability drivers that meet corporate business objectives.

Oke, Aghimien, Aigbavboa, and Akinradewo appraise the Drivers of Smart City Development in South Africa. Using the drivers (smart environment, smart economy, smart people, smart governance, smart mobility, and smart living) the study adopts multiple-choice questionnaire. Smart environment was found to be a major driver of a smart city while smart people, smart governance and smart living are also key to the achievement of the goals and objectives of the concept. The developed key smart city drivers are a workable, adaptable, and efficient city design mechanism and it will be useful for city planners, statutory agencies as well other stakeholders in the development of smart cities.

Peel, Ahmed and Saboor investigate the barriers and enablers to energy efficiency retrofitting in social housing in London, UK based on the perception of experts employed in construction companies. The paper group the barriers and enablers into seven categories that include: financial matters, technical, IT, government policy and regulation, social factors (including awareness of the energy efficiency agenda), quality of workmanship and disruption to residents

using literature review, interviews and surveys with key stakeholders within the housing sector and draws recommendations to enable effective and efficient retrofitting for social housing projects.

Again, **Boyle and Michell** identify the key ingredients required to drive collaborative urban regeneration in marginalised communities in the global south using case study methodology which included a series of interviews and community engagement workshops. The study established that in the absence of effective leadership and service delivery from local authorities the community feel disenfranchised as their community is not seen as an immediate priority. It is concluded that fundamental ingredients for effective collaborative urban regeneration is trust between the key stakeholders, a diverse assortment of expertise and skills, and an in-depth engagement process. Without these factors urban regeneration is likely to only entrench the complex urban issues it seeks to reconcile.

Finally, **Adinyira, Agyekum, Baiden, Ebohon and Ampratwum** present a case study of the regeneration redevelopment of the largest open-air market in West Africa (Kumasi Central Market-Ghana) and the role of stakeholder participation in the entire regeneration. The determination of the most important stakeholders during the regeneration of the market is followed by a comparison of the regeneration process regeneration with the literature on urban regeneration, sustainable development, participation, and project management. Identification of all-important stakeholders by the consideration of their attributes of power, legitimacy and urgency and distrustfully engaging all stakeholders is vital to the success of any urban regeneration project.

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