

## **Sustainable transformation of low-income communities: multidisciplinary approach to scalable solutions**

This Special Issue aims to address three of the United Nations goals for sustainable development:

- Goal 6: clean water and sanitation.
- Goal 7: affordable and clean energy.
- Goal 11: sustainable cities and communities.

These goals highlight the need for a radical transformation of low-income communities in the least developed countries. The issue extols the virtue of approaching the implementation of Sustainable Development Goals (SDGs) from the inter- and transdisciplinary perspectives approach for a holistic solution to sustainable development challenges in low-income countries. This is to ensure the equality of access and outcome of sustainable growth and development captured in the SDGs of ensuring no one is left behind (UN, 2016).

This Special Issue included three papers and a brief outline of these papers is as follows.

### *Impacts of integrated scheme on livelihood and rural housing condition in Nigeria*

In this paper, Odebode identified one of the most protracted problems of rural communities in developing countries, which is inadequate rural housing and services, and proposed an effective strategy for improvement and delivery, using the case study of rural housing condition in Nigeria. This paper is timely as scarcity of water and energy and attendant social costs acquiring them, which often fall on women and children, have become major constraints on rural development in developing countries (Omarova *et al.*, 2019; Bain *et al.*, 2015; Bajard *et al.*, 1981). The paper approached the study from two perspectives: first, it discusses the importance of integrated development approach to rural housing and services. Second, it examines the impact of integrated rural development approach to rural housing and services on livelihood and well-being in the selected rural areas of Osun State, Nigeria. The author used the triangulation research method, combining qualitative and quantitative data from respondents through a multi-stage sampling technique to produce descriptive statistics, frequency distribution, and correlation and regression analysis.

The result reveals that the integrated scheme contributed positively to the livelihood of the respondents by providing the stability essential for income generating opportunities through the multiple combinations of livelihood options now available as a result. Not only did home ownership increase, but also access to household facilities such as water and electricity, enhancing the quality of life and well-being of rural communities in Osun State of Nigeria. The paper confirms the orthodoxy in the development literature that the availability of necessary government supports is a prerequisite for an integrated development approach for sustainable rural housing delivery, enhancing the livelihood and well-being of rural communities in developing countries. The paper contributes to the debate on the challenges and solutions to inadequate rural housing and services in developing countries.

### *Climate change and women in South Asia: a review and future policy implications*

Climate change is a phenomenon exercising environment experts and policy makers around the world owing to the various form and dimension that it is manifesting



(Kates and Wilbanks, 2003). The dimension of climate change addressed by Patel, Agrawal, Mathew, Patel, Mohanty and Singh is the vulnerabilities of women to climate change in South Asia.

Through exhaustive literature reviews, the authors demonstrated that climate change has significant and disproportionate socio-economic impacts on women through various vectors. These includes agriculture, livelihood, food security, physical and mental health, water and sanitation in the South Asia region. The study showed the importance of gender-biased development programmes and policies in ameliorating the effects of climate change in South Asia.

The study concluded by emphasising that devising gender-focussed development policies and programmes is a necessary prerequisite to reduce the vulnerabilities of women to the vagaries of climate change.

*Neo Ekistics for flood mitigation in cities*

Abdulkareem, Kenawy and ElKadi presented this paper to shed light on how conventional man-made flood protection measures have proved inadequate to climate change effects, requiring a critical look to nature for possible solutions. This study seeks to orientate debates towards flood resilience, which is holistic in nature given that it harnesses the synergies between adaptation and mitigation solutions to climate change effects.

The authors appealed to “Ekistics”, a term pioneered by Doxiadis, a seasoned urban planner, who approached human settlement design from a holistic perspective owing to his conviction that such an exercise should not be the prelude of one profession or discipline (Doxiadis, 1959). An inter -and intra-disciplinary approach that combines the research and experience of diverse disciplines including urban, regional, city and community planning and architecture as well as behavioural science including human psychology, anthropology, culture and politics is critical to effective human settlement design (Doxiadis, 1959; Pyla, 2008). The authors of this study employed urban design as a tool to promote collaborative approach to human settlement design. The ecological setting of the city was emphasised as one of the most influential physical characteristics influential to effective flood controls. Expert elicitation was persuaded to stand on the measurement that initiates change in the behaviour of the city’s physical setting both natural and built. These measurements were translated into physical indicators by the authors and mainstreamed into urban design. The results were validated through simulation to illustrate the importance of applying the concept “Ekistics” into urban design and planning. Socio-economic factors affecting the placement of these physical solutions were also investigated, and how and why local communities should adopt and adapt the results of the study in preventing local flood scenarios were explained. The paper provides an evidence-based solution that supports decision makers in approaching flood controls.

The studies contribute to the advancement of SDGs 6, 7 and 11. Future research may seek to focus on the governance aspects of SDGs, particularly identifying local stakeholders critical to their effective implementation that ensures no one is left behind. This can be facilitated by taking multidisciplinary approaches considering contextually and culturally rooted solutions to deliver true sustainability.

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