

# **Sustainable Settlement Planning for Displaced Populations in Developing Countries**

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## **EXECUTIVE SUMMARY**

When I initially envisioned pursuing this study back in 2015 as an extension of my Architecture degree, I was advised there were no “architectural” design elements in humanitarian shelters or settlements, and the practice of shelter development was considered to be a form of industrial engineering. Following disappointment, it took me many more years of curiosity and experience to realize that was the ultimate flaw in the system. The standardized approach to settlement planning for displaced persons is ineffective in supporting the needs and values of the refugees inhabiting them. Moreover, the sudden surplus of global refugees presents voids in the system that manages displacement, including the implementation of inefficient processes and unsustainable methods. As such, the establishment of refugee camps or long-term settlements for displaced persons should not apply a standardized approach, rather, a new sustainable approach implementing effective planning and design processes should be adopted which prioritizes sensitivity to local context, environmental awareness, community engagement, and energy efficiency. Integrating traditional planning practices within the settlement development process recognizes the current shift from short-term provisions to long-term solutions at present-day refugee camps and promotes adaptation of settlements into sustainable communities for displaced populations.

A comprehensive literature review with regard to types of displaced persons, existing shelter typologies, and current approaches to refugee camp management identified the shortcomings in meeting needs of populations who end up living at settlements for several years rather than the anticipated temporary habitation. Furthermore, several environmental impacts of these unplanned, prolonged settlements were noted in various literature, acknowledging the need for sustainable planning principles which mitigate environmental impacts and utilize

adaptive resource management. A policy analysis compares guidelines mandated by humanitarian organizations for the establishment of refugee camps in contrast with three Sustainable Development Goals (SDGs) identified by the United Nations to promote healthy living and sustainable growth. The three goals include life on land, sustainable cities and communities, and affordable, clean energy, which identify the need to develop alternative guiding principles that confront sociocultural, economic, and environmental factors affecting settlement development and operation. Although some policies mention broader environmental principles, they do not specify means to achieve these, nor prescribe practical methods which can be applied during the development process.

Kawergosk Refugee Camp (KRC) is presented as a case study that exhibits the slow progress and modifications which have been implemented over the past 9 years, in addition to evaluating the perspective of residents at the camp, and quality of their lifestyles. Subsequently, various design and planning strategies pertaining to the three SDGs are proposed for integration within KRC. These strategies are demonstrated through the redesign of the settlement within the same boundary of the existing site, and then an alternative proposal exemplifies how the settlement planning approach could have been implemented if this scenario were to be applied to a new displacement crisis and greenfield development. The final recommendations include the execution of a modified EIA process including site analysis and identification of key natural features, implementation of vernacular design principles to promote sustainable use of resources, and the promotion of participatory planning to engage the community in creating meaningful spaces. Adopting this approach will create a sustainable settlement planning approach for refugee camps. The design and planning strategies examined and discussed in this study serve as a more comprehensive approach to sustainable settlement planning for longstanding establishments that accommodate large, displaced populations over several years in developing countries which lack supportive infrastructure.