

## SUSTAINABILITY IN BUILDINGS: A CALL IN VAIN OR SIMPLY A MISNOMER?

### Research summary

In an attempt to curb the widespread apathy about and misconceptions around sustainability, and in that regard bring contextual relevance to discourse and action in the built environment in Uganda, this paper is fronting two specific themes: *development* and *resilience*. This is given that development is about making tomorrow better than today and resilience is preparing for the challenges that tomorrow presents. These themes are being fronted strategically as they capture and deal with concerns about: liability (whose burden/responsibility is building construction, occupancy, maintenance and disposal); the (future) value of buildings; health, safety and wellbeing in buildings; and the concept of ownership about buildings as potential local motivators for an active sustainable movement. This approach is inspired by Moore and Karvonen (2008) whose own framework included three dispositions - context-bound, context-free and context-rich building practice. The framework evolving from this highlights key questions that acknowledge the context and priorities of sustainability in Uganda all of which are envisioned to have positive social, environmental and economic implications. The framework will constantly be tested and improved as the picture becomes clearer. As such, this forms the starting point to address the underlying issues with regard to what sustainability is and how architects may approach it in practice as a deliberate way forward to overcome the apparent apathy and misconceptions.

**Keywords: Sustainability, Practice, Design, Architecture, Buildings, Context**

In our review of the literature concerning sustainable architecture, we find a remarkably diverse constellation of ideas that defy simple categorisation. But rather than lament the apparent inability to standardise a singular approach to degraded environmental and social conditions, we celebrate pluralism as a means to contest technological and scientific certainty. At the same time, we reject epistemological and moral relativism. These twin points of departure lead us to propose a research agenda for an architecture of reflective engagement that is sympathetic to the pragmatist tradition. (Guy and Moore, 2007)

## 1. Introduction

Sustainability has been described and promoted in many circles as a call to prudently utilise our resources mindful of the needs of future generations. However, it gets a bit vague when context specific questions on how socially, environmentally and economically this can be achieved especially since it has been examined mostly through a global (developed world oriented) lens. But, Guy and Moore's (2007) stance in their article *Sustainable Architecture and the Pluralist Imagination*, offer critical guidance that while being mindful of the lens through which sustainable architecture (and practice) is looked at, we ought to remain true to the logics of theory, practice, participation and place.

Human beings tend to aspire to specific goals mostly born of personal ethos and value systems, an objective measure of which is quite difficult to apply as part of a global paradigm. In a developing country like Uganda where it is difficult to quantify the impacts of living unsustainably especially relative to the environmental message that more developed nations have focused on, and perhaps where it is even more difficult to relate it to what the

country's urgent needs are, it becomes complicated to decide what to focus on. As such, the tendency to go for what is presumably cheaper or equally socially viable at the expense of the environment or vice versa, ticking boxes in an attempt to establish a balance for the sake of it without contextualising the real issues is commonplace. Even riskier, is the ignorance with which most issues are handled completely oblivious of the consequences of people's actions on future generations. But, what does it all really mean for architecture in particular?

As part of an exploratory study this research is focusing on built environment (architecture) practitioners in Uganda to establish their views and practice as regards sustainability. This has formed the basis for a discussion on how a contextually specific agenda can be formulated in order to probe the underlying issues the outcome of which will form the way forward.

## 2. Research objectives

The aim of the research is to have a discussion about sustainability and approaches to it in design and building construction. The specific objectives are to document both the successful interventions/processes and any challenges, and probe pertinent issues in order to formulate the current state of affairs in Uganda, and possible way forward.

## 3. Approach

### 3.1 Gauging interest

The study begun by rolling out an online questionnaire to architecture practitioners to gauge their awareness of and interest in sustainability and whether they were also keen on a follow up discussion. The response has been extremely low to say the least with only 8 practitioners of 137 having expressed interest and 5 of 8 having been visited, 5 months later.

### 3.2 Office Visits

The 5 office visits yielded some interesting discussions, analysis of which represents a considerable shared view from prior anecdotal evidence on the subject.



Fig 1: One of the Office Visits (Oncepti Architects, Kampala)

### 3.3 Stakeholder workshops

In order to reach out to a wider audience seeing as online platforms are often shunned, the study employed an invite only dialogue session for practitioners. Furthermore, participants were asked to fill a printed version of the questionnaire.



Fig 2: A session involving some practitioners (Yasigi Beer Garden, Kampala)

### 3.4 Probing the underlying issues

A literature review has also facilitated an interrogation of the underlying issues. These issues, as they are discussed in the subsequent sections are based around key (potential)

drivers of sustainability in practice, and these include:

- Sustainability as an ethical concern;
- Sustainability as more than just a numbers game;
- Sustainability as an intrinsic driver for social equity and;
- Sustainability as a way of avoiding/managing/mitigating risk.

These have been restated with a touch of local relevance in order to motivate initial steps toward mainstreaming sustainability in practice in Uganda.

## 4. Findings and Discussion

### 4.1 Knowledge, Perceptions and Practice

The ethos of any practice is based around what people know and this is shaped through day-to-day encounters.

Lets begin by looking at the survey that has had a total of 29 respondents thus far. The analysis is based on their occupation, their familiarity with sustainability and their application in practice.

Built environment practitioners expressed varying degrees of familiarity with sustainability in practice. The majority of correspondents 11 of 18 stated that they are moderately familiar with sustainability practices in the built environment. Of these, 8 reported that they sometimes apply the knowledge they have in making their projects sustainable, while 3 of the 11 reported that they often apply the knowledge they have.

3 built environment specialists expressed slight familiarity with sustainability in the built environment; these further indicated that in their practices, tenets of sustainability are rarely employed. The pertinent question worth answering for this, the major number of respondents involved in shaping the built environment is how to increase uptake of information and knowledge on sustainable practices in the built environment.

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On the more knowledgeable end of the scale, 3/18 built environment practitioners indicated that they are very familiar, and 1/18 extremely familiar with the tenets of sustainability and their application in the construction industry. These 4 further indicated that they often and always apply the tenets of sustainability in their projects respectively. The results collected indicate a direct correlation between knowledge in sustainability and application in the built environment.

Amongst the respondents, there were 2 educators. One of the educators stated that they are very familiar with sustainability while the other indicated a slight familiarity with sustainability. This raises questions on whether educators and the environment within which they operate adequately equip students with the tools and ability to apply sustainability in practice. It must be mentioned that having only two respondents from this particular area is an inadequate sample space, and therefore, this particular vein would require further investigation.

Of the 8 student respondents: 4 expressed a moderate familiarity with sustainability; 2 indicated only a slight familiarity with sustainability; 2 expressed an above average familiarity with sustainability and 1 indicated an extreme familiarity with sustainability and also indicated that they always apply sustainability in their practice.

With regard to whether or not the students utilise the tenets of sustainability in practice, a number of questions are raised. Students who indicated that they had slight familiarity with sustainability indicated that they often apply sustainability in their projects. One is left to wonder on their ability to execute the claim given they expressed inadequate knowledge with regards to sustainability in the built environment.

The findings suggest that the whole idea of sustainability is not as alien as may be assumed; perhaps it is widely misunderstood

or misrepresented. This then may be a challenge of removing bottlenecks that hinder availability and access to existing knowledge.

Another argument could be that because architects are traditionally design-led and proposal orientated, with no requirement in regulations for the verification of actual performance over time, the consequences of poor performance with a specific focus on the tenets of sustainability is usually left to the client and user. With little formal feedback built in to inform future design strategies, mistakes are continuously repeated for example, in the UK, buildings routinely under perform by 400% on energy and carbon targets and we fail to learn obvious lessons (SCHOSA, 2015). Doesn't this then contradict what Collier (2006) asserts as our sense of the ethical, that inhabiting our environment is one of the means by which we represent our cultural identity and demonstrate what we care about?

While evidence of any attempts in practice could be an example of a building project whose design statement highlights issues that the design process explored, in the absence of any common criteria to measure and deliberate upon, it becomes difficult to conclude how far sustainability is actually practiced. Some have even argued whether in a context of mild climatic conditions and seemingly endless supply of previously untapped resources this should be an issue. In Uganda's case as such, studies that quantify and predict the consequences of *bad* decisions ought to be designed and undertaken in order to motivate practitioners to think and practice sustainably. And, Collier (2006) gives three pointers in this regard - to look at practice as social, as virtue and as learning.

#### 4.2 Trends, if only as the benchmark

A lot of numbers in the form of alarming statistics about the environment (read climate change), demographics and the costs related to

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products in vogue vis-à-vis what they mean in a specific context are trending.

When apparent global trendsetters like Frank Gehry and Peter Eisenman publicly dismiss sustainability as “bogus” and that it “has nothing to do with architecture”, we could also question the American Institute of Architect’s position that sustainable design has become mainstream. In the same article Lance Hosey (2013) reveals some interesting statistics that sustain the haze around the practice of sustainability - that only 12% to 13% of reporting firms’ projects are meeting the current targets of the AIA’s 2030 goals.

Where sustainability is mixed up with a global capitalist, consumerist, product driven culture it becomes difficult to trace the right choices.

#### *4.3 Hints of Interest*

Having been asked to share any on going projects attempting to employ sustainable design, practitioners listed some and requested for more support in the form of a resource centre for information on: sustainable materials; advances in research on contextually relevant topics dealing with sustainability; documentation of locally sustainable projects and the measure by which these are considered sustainable.

It is interesting to note that examples of projects where sustainability was a major consideration are mostly schools. This may be attributed to the fact that a number of charity/development organisations are involved in such projects that set out to deal with real societal problems. According to Andersen (2010) it is crucial that a scientific knowledge base on how communities are resourcing themselves and being resourced by initiatives from local and national governments, NGOs as well as the international donor community is built.

#### *4.4 Monitoring and Evaluation*

In order to achieve sustainable architecture, the question of how often practitioners

monitor and evaluate their work as a way of avoiding/managing/mitigating risk is one to ponder. This encapsulates what it means to have a certain ethical outlook on practice, a keen awareness of good benchmarks and an overall interest in social sustainability. However, following Moore and Karvonen (2008) on their assertion that sustainable architecture as a whole has come to be dominated by energy efficiency and climate change strategies that can improve the economic performance of buildings *yet* providing little or no critique of architectural production, the role of experts and users, the cumulative impacts of buildings with respect to larger urban fabric, and so forth, this begs the question: how can it be sustainable architecture if the process does not engage any monitoring and evaluation as a holistic approach to the built environment?

#### **5. Future implementation**

The impact of this study is envisioned beyond architecture practice - into policy, architecture education and day-to-day stakeholder decision-making.

Fig 3 presents a matrix within which to develop a thorough and context specific approach to sustainability in architecture practice in Uganda. The matrix attempts to expound on six logics of architectural discourse as proposed by Guy and Farmer (2001): technical, ecological, aesthetic, cultural, medical and social by reconfiguring them to suit a contextually specific lens. As such, in an attempt to provide room for a holistic understanding of the local context it builds from the underlying issues as four themes that capture the scope of issues raised thus far and are consistent with existing discourse on the subject. It goes ahead to focus on key areas that provide the basis for contextually specific questions and a viable way forward to motivate a new attitude toward sustainability.



Underlying issues	Key questions	Key Motivators
An ethical dilemma?	<ul style="list-style-type: none"> <li>• What is your design philosophy?</li> <li>• Price of ignorance - where does theory meet practice?</li> <li>• Who is charged with taking decisions in the design and building process?</li> <li>• Whose burden is design, building construction, occupancy, maintenance and disposal?</li> <li>• Are you aware of the harm you could do if you ignore the basics?</li> </ul>	Liability
A numbers game?	<ul style="list-style-type: none"> <li>• How do you value buildings - design, construction through to occupancy/operation?</li> <li>• How long are your buildings designed/built to last?</li> <li>• How much room for flexibility and adaptation do you provide?</li> </ul>	The future value of buildings
An issue for social equity?	<ul style="list-style-type: none"> <li>• What is in place to cater to and uplift occupants in these buildings?</li> </ul>	Health, Safety and Wellbeing
How to avoid/manage/mitigate risk?	<ul style="list-style-type: none"> <li>• How do the design and building processes and; maintenance, disposal and occupancy strategies - prior and post construction inform each other?</li> <li>• How do we evaluate the whole process in order to reliably transform the building into a sustainable timeless property?</li> </ul>	Taking Ownership

Fig 3: A matrix to probe scenarios to establish a motivation to act/practice sustainably

## 6. Conclusions

The issues raised from the on-going dialogue give a good indication of where to place emphasis in order to promote sustainability in practice. There is a deliberate attempt to encapsulate all the tenets of sustainability in the discourse that is social, economic and environmental aspects, giving them all equal importance. While this may create a larger and more enigmatic concept it is worth noting that:

in developing countries, the average standard of living is much lower than in developed nations and in many instances, the challenge is to meet basic human needs. The emphasis here should therefore be on development (and assessment tools) that aim to address these basic needs while avoiding negative environmental impacts (Gibberd, 2002). With regard to resilience, given the fact that the less developed populations are least resilient – here defined as the ability to

withstand and mitigate disturbances, while continuing to function (Mazur, 2013), there are a number of urgent and important questions that arise, for example: how many people are listening, do people care to listen, how well is sustainability understood, is it a priority, and who calls the shots? As such, this reemphasises the ethical responsibility of every practitioner and the benefits of placing the user/occupant of the building at the forefront of design/construction decisions; while at environmental level the issues to consider are mostly about an awareness of the implications of today's decisions on the future and finally; at economic level, a keen familiarity with the *real* numbers - the gains and/or savings vis-à-vis maintaining the status quo. While this is not as context specific as it should be, the framework is deliberately non prescriptive. It gives room to test the issues arising in order to develop a simple, measurable, action oriented, realistic and time/context specific agenda as a matrix of strategies.

## 7. Acknowledgments

This study is part of a larger research project - Energy and Low Income Tropical Housing. The paper is focusing on members of the Uganda Society of Architects to gauge their attitude toward sustainability and later motivate uptake for more sustainable practice.

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