

EERI-NSF Rapid and Research Needs Workshop

Breakout Session Title: Sustainability, Capacity and Capacity Building

Discussion Leaders and Recorders: Khalid Mosalam and Alexandros Taflanidis

Panel Members: Norma Alcantar, Roger Bilham, Cecilia Gonzalez-McHugh, Franco Montalto, and Scott Olson

Session Overview: The participants focused initially on definitions of the notions of sustainability, capacity and capacity building as they pertain to Haiti. Subsequently, they discussed the goals and stakeholders of future research effort in Haiti. All members stressed the importance of having the Haitian people as primary stakeholder of any relevant research effort and the need to provide *sustainable* solutions that do address the unique *constraints* of the country but also *build on the capacity of its people*. The participants also acknowledged the importance of quick dissemination of any new knowledge/understanding so that other researchers are aided in their endeavors and expressed some concerns for the corruption in Haiti. The session concluded with a discussion on the research needs and barriers related to the intended goals: these needs were classified in three different categories (a) fundamental knowledge, leading to (b) enabling technology, and ultimately to (c) integrated systems solutions.

Definitions

- *Sustainability.* For any approach to be sustainable it needs to ultimately provide integrated solutions based on *locally available resources and respectful of the Haitian culture*. This principle should extend extent to various aspects
 - Economic
 - Education
 - Social
 - Environmental
 - Infrastructure
 - ...
- *Capacity.* Any approach needs to be initially based on a learning process on behalf of the researchers to understand local practices and existing capacities. Only this way will the opportunity be provided to build on this capacity.
- *Capacity Building.* As a first stage, capacity building can be based on training or getting people to join in field work. Ultimately this should aim to **empower** the Haitian people, which can be established by disseminating knowledge in an inverted pyramid scheme, starting with limited groups of researchers and ultimately seeking the broad-base of the entire population.

Goals and stakeholders

The fundamental goal of any future research effort should be to ultimately provide a resilient community, constructed by the Haitian people so that it is ultimately sustainable. This will require tailoring the education system to enable and expand the capacity of the Haitian people to provide such a resilient community. Another goal should be to demonstrate that mitigation techniques can provide

solution to similar environments, i.e. not necessarily limited to Haiti. The primary stakeholders of any research effort are the **Haitian people**; anything developed should be primarily focused on them. The secondary stakeholder should be the local government, which can then take charge of the dissemination of the relevant knowledge. A final, equally important stakeholder is the rest of the research community.

Knowledge needs and barriers

At the basic level of *fundamental knowledge*, collaborative research is needed that is explicitly integrating Haitian needs (and relevant constraints). Such research should be fundamental but also **applied** in Haitian context, for example using indigenous materials or knowledge dissemination methods. There is a critical necessity that any research efforts have an additional **applied** aspect/potential. Understanding the particular motivations behind corruption and developing innovative incentives to prevent it is another, highly important, research topic that can help lift many of the barriers for sustainable rebuilding of Haiti. Examples of other, more focused research needs, include understanding of material properties and development of new/alternative materials relevant to Haiti or in-situ assessment of construction materials.

In terms of *Enabling Technology (Technology Base)* relevant research topics could extend to

- Monitoring and quality control
- Inspection program
- Integration of governance responsibility
- Social context of suppressing corruption
- “Sustainable” building code

Finally examples of *Integrated System Solutions (Technology Integration)* can extend to

- Life cycle assessment of integrated infrastructure solutions and impacts to Haitian society
- Continual educational opportunities associated with promoting sustainability