Climate-Safe Infrastructure Webinar - Financing Infrastructure II

May 29, 2018

Q&A with Presenters

Questions to John Cleveland

1) *I thought MBTA just recently issued a Sustainability Bond. Where does that play into the funding mechanism for the projects? How about other agencies? Are they as ready to invest as MBTA? What are their strategies?*

Response: Yes, they did recently issue the largest tax exempt green bond in the U. S. See Slides 10-14 of the attached presentation for additional detail on what the bond paid for. Several of the projects were resiliency-related.

2) *Can you say more about the "governance structure" portion of your "It takes a system" slide? What would be the responsibilities and the authority of such an entity? What would it take to set that up? Seems like if such an entity has any more than money-management related functions local governments might be a bit hesitant to give away any of their own powers. How do you envision such a structure to make it effective?*

Response: There are a number of key functions for which governance issues need to be clarified.

- At the City scale:
    - Who plans and manages large capital projects that are related to climate resilience?
    - Who organizes the financing?
    - Who is responsible for on-going operations and maintenance (especially in the case of green infrastructure solutions, significant maintenance is needed).
- At the District scale:
    - Similar questions related to planning and managing capital projects and financing.
    - Who decides what the contributions to projects are from property owners who benefit from the protection (vs. the broader tax base)? (As an example, the legal structure for Business Improvement Districts is not suitable for the scale of investment required for resilience.)
    - Who negotiates with private property owners about changes needed to their development plans, and how is this done?
    - How do we manage resilience investments that are required on existing properties (resilience retrofits)?

The four district resilience planning projects in the works in Boston (East Boston, Charlestown, Seaport, Downtown) are providing very useful and detailed insights about the opportunities and challenges of district-scale resilience. The good news is that in several cases, there are workable and practical solutions that can provide protection for significant portions of vulnerable neighborhoods. But achieving these benefits will require the planning vision to be consistently enforced over time, with a mix of financing sources made available to fund public and private investments. There is not yet a clear framework for implementing this complex regulatory oversight and financing support.

In all four of the districts, new regulatory requirements will have to be imposed on many different property types, including public open/green space, public facilities and buildings, public and private infrastructure (transportation, water, energy), and private property and buildings. And these requirements will need to be imposed in some cases on new construction, and in others, on existing assets. In addition, each district plan proposes hundreds of millions of dollars of projects to achieve the desired protection outcomes.

How will this all be coordinated? Who is "in charge" of the district resilience plan? What are the relative roles of the city (Boston Planning and Development Agency) and Article 25, Article 80, and Article 37 (various new development requirements), and the Zoning Board), the Commonwealth (state building code, Chapter 91, MEPA, Wetlands Protection Act), infrastructure managers (transportation, waste, water, energy, communications), and the federal government (FEMA, National Pollutant Discharge Elimination System)? How do all these regulatory players become synchronized around a common vision for the district? And how will the investments be paid for? Which investments are the responsibility of private property owners, and which should be paid for from public funds? Are the costs borne by the district, or are they socialized across the municipality?

There are several agencies in the City that will likely need to have some roles in this process — the Boston Planning and Development Agency that controls new development; City Public Works Department; and the Boston Water and Sewer Commission. But none of them currently have the technical capacity or the financial capacity to manage and coordinate investments at the scale that are needed. So, the various roles and how they will practically work need to be sorted out and codified. This is a doable task but will likely require some changes in legal authority that are not yet in place.

Questions to Karl Schultz

1) I missed what you explained about avoiding double counting? Can you explain that again?

<u>Response</u>: A risk in some multi-criteria analytical approaches to measuring adaptation outcomes is that some variables are co-dependent and are otherwise simply different ways of describing impacts in different ways. For instance, a community that is at risk of more frequent or more extreme flooding owing to climate changes, may face multiple impacts: damage to building stock, and increased risk of communicable diseases, lost productivity owing to lack of access to work, and lost productivity owing to damage to building stock where productive activity occurs. When looking at avoided impact costs employing cost-benefit analytical tools, either the "stock" (damage replacement costs, for instance) or the "flow" (lost productivity owing to a building not being open for business, for instance) can be counted, but not both when counting the various economic impacts (some of which are non-financial, such as the extra time spent procuring clean water post-flood, for instance). But, ultimately all the impact costs of climate change, and the avoided impacts of the adaptation project, need to follow a clear accounting and either sum up the stock or the flow. The VRC Standard Framework sets rules regarding how methodologies to calculate the VRCs and by using one basic approach - avoided impact costs - the rules are clear and projects can consider all impacts that can be costed, but avoids double counting compared to an approach that might say weight and add up impacts across a variety of different (economic or not) indicators.

2) If anyone from California wanted to engage with your Foundation to pilot this VRC idea, what kind of institution would be ideal for you to engage with?

Response: Higher Ground Foundation would welcome engagement with a wide variety of different institutions, and if we are looking to undertake a pilot project, then ideally a variety of different ones would need to be involved.

a. A starting point in considering involvement is understanding if there is a well-defined set of climate change induced impacts on a clearly defined "system" (e.g. a community with a clear boundary) with clear options available to reduce these impacts. Furthermore, the impacts and avoided impacts would need to be estimated with good quality and publicly available data and analytical approaches.

b. Equally important, the potential partners would need to be clear "project proponents" or other "partners". If we are talking about a project proponent, then it would be interested in going through the process with HGF, subject experts, and third party auditors. It would have resources but also resource needs. For instance, it could be a local community or state agency that has a mandate to undertake a climate resilient infrastructure project, but lacks sufficient up-front capital to make its project climate resilient, but could raise funds over time as the project progresses.

c, We are also keen to partner with financing groups - public or private - that want to be involved and pilot using VRCs to encourage results-based adaptation investments. Other important partners include auditors, who would like to join the auditors working group we are forming and develop capacities in VRC audit of project documents and VRC monitoring reports, and technical experts in climate services and adaptation to build the data platforms and methodologies for different VRC generating projects.

Details on what is entailed for projects and more on our Pilot Implementation and Partnerships Phase can be found on our website here: https://www.thehighergroundfoundation.org/projectcall

I would also be happy to discuss further how we could partner.

3) Who has taken on (or could take on) the Third Party accreditation/validation?

Response: We are forming an auditors working group and draft accreditation standards for auditors, along with validation and verification guidelines. Details are and will be posted on our auditors working group page here: https://www.thehighergroundfoundation.org/auditors-working-group

Basically, however, we welcome interested parties to get in touch and discuss your interests. Feel free to contact me or Anubhav Dimri, our coordinator for auditors here: anubhav@thehighergroundfoundation.org

4) Your low/medium income levels are not applicable to the US, and certainly not in California, but relatively speaking, we have plenty of lower income communities. Given your cut-off line, they could never be considered as low-income, even though their situation is quite real. Is there a way your baseline and system of evaluation can be adjusted by country or state?

Response: The question is good. While middle income (by international standards, around $4000 per capita) is extremely low for California, poverty is real even at higher resource levels. Well-being can be high in societies with this level of income, however, and the correlation between wealth and wellbeing begins to break down, in absolute terms, as incomes increase. But I do understand that empirical research on levels of inequality suggest severe well-being challenges in societies of any income level. [See for instance Wilkinson and Pickett, The Spirit Level.]

As noted in my presentation, VRC generating projects and programs may be integrated with other M&E systems. I’d add that they do not need to, and ideally do not exist in a policy vacuum without considerations by policy makers and planners of local priorities and challenges. As such, I’d be very interested to consider together how VRCs generation could be employed to address equity issues as they relate to climate vulnerabilities and climate adaptations.