Integrated Climate Adaptation and Resiliency Program

Technical Advisory Council

Financing Studies Workgroup
April 9, 2018
1:00 – 2:30 PM

Meeting Minutes

1. **Welcome** **Nuin-Tara Key,** *OPR*

2. **Roll Call** **Nuin-Tara Key,** *OPR*

Council Members: Jonathan Parfrey, Jana Ganion, David Loya, Craig Adelman, Kit Batten, Louis Blumberg, Andrea Ouse, Solange Gould, Brian Strong, Bruce Riordan

3. **Funding and Financing Options for Climate Adaptation in California** **Matthew Armsby,** *RLF* **Feliz Ventura,** *AECOM*

Nuin-Tara Key introduced today's topic to the group and gave some background on the history of this work prior to today's meeting.

Nuin-Tara Key: The challenge of not having secure funding and financing opportunities rose up as a key area of concern from the Technical Advisory Council (TAC) during its first meeting of 2018. Since then, staff have undertaken efforts and partnerships to develop and financing and funding framework that will lay out the landscape of options available to fund and finance adaptation with guidance on how to use these mechanisms. The Resources Legacy Fund have been conducting research on this topic and is here today to share preliminary findings of their work thus far. They are interested in gathering input on their research from Council members. As we discuss today, and as this work moves forward into a final report, we would like to think of ways to align and feed this work into the framework that OPR is currently developing.

Feliz Ventura gave a presentation of their work on Funding and Financing Options for Climate Adaptation in California.

DISCUSSION

Jonathan Parfrey: Why is "projected funds" and "private capital" listed as Funding rather than Financing on slide 11?

> Feliz Ventura: Private capital can directly do things as well as be used as a source of financing. A property owner deciding to make an improvement on their property directly is a good example of funding on its own. There is some nuance with projected funds. I am primarily referring to

this as a source of funding as a result of taxes or grants as opposed to a financing mechanism that requires a payback. Financing is a mechanism that requires some sort of a revenue stream or a payback. It can help you to change the flow of how your money comes in over time. For example, if you expect to make X amount of taxes over 20 years but you want to spend 19 years of that in year one then you can use financing to change how the funds will come in, but the cost of that will be that you will pay some interest to whoever has fronted you the money to get that done.

Matt Armsby: An overarching interest of ours was to articulate that, while this is a public body here that talks often about public funds, there are many cases in which you would think the private sector (businesses, homeowners, etc.) might be directly responsible for making adaptation and resilience investments. There is a "who pays?" question. The public may still have a role in incentivizing or guiding or requiring investments by the private sector. In this slide, we tried to include the whole spectrum of players that could make these types of investments.

Kit Batten: The point that was just raised about who pays for what is important. My question is about slide 17. There are two colors here representing "atypical funding sources". What is the difference between these two colors (purple and blue)?

I also have another broader question. We are all benefiting from a unified set of scientific information for climate resilience planning in the near and long terms. Cal-Adapt and the Adaptation Clearinghouse that OPR is pulling together are very helpful. But we don't yet have common language around exactly how we should be doing cost benefit analyses, whether it is measuring co-benefits or avoided costs. Not just around disaster planning but in rebuilding. It would be helpful to have common language around these areas as well as guidance on how wide of a net to draw for the costs and benefits (who is paying and who is benefiting). That kind of guidance from the state would be helpful as we are all collectively moving forward on this.

Feliz Ventura: I think one of the reasons for the lack of consistency is because we operate in piece meal ways around funding in particular. There are different requirements for different grants and have very specific definitions of terms. In my mind this loops back to the need for a coordinated set of standards of how to deal with risk.

The difference in colors on the diagram is that they come from two different funding sources, but I can double check that for you.

Aaron McGregor: This was a graphic that was put together by NHA for a Resilient by Design project in the Bay Area.

Craig Adelman: Thank you for the background knowledge you provided. I would take even another step back. Whether we are talking about funding or financing, there is a spectrum of returns from social return to financial return. Part of what we do at LIIF (Low Income Investment Fund) is quantify and monetize social returns. There is a need for common language around these differences when we are talking about who is paying for what. That concept goes to the final slides – private, public, and in between – and what roles might be played. I think there might be something missing in terms of what is benefited from public private partnerships. For instance, part of what the public sector work is to mitigate the uncertainty and variability of risk for the private sector. What the private sector is built to do is efficiently deliver financial return on capital. We find that the public sector can open the door to that in a variety of ways. The private sector needs help proving the market because unproven markets are risky to enter. This role could be taken on as an early investment by the public or philanthropic sectors to demonstrate the need.

Brian Strong: I agree with the idea of monetizing social returns. It is critical to come up with a better way to understand that. A lot of the discussion of green versus grey infrastructure comes down to what the additional benefits are. Focusing on existing tools also makes a lot of sense. I think part of this is getting people comfortable with looking at these tools in a different way. For instance, making people comfortable adding a tax to their property owner for the cost of owning property in a vulnerable area. Also, I think that addressing administrative complexity in state and federal grants is a low hanging fruit. We could make recommendations around this. Often, the cost of reporting is higher than the amount of money that you are getting. I think that would be a good recommendation to have in the report. Finally, I'd like to get a better idea of what we mean by pre-development.

> Feliz Ventura: That last point is not the focus of our report, but we did hear a lot about the need for bridge financing to get to actual design and construction. We can add some more meat that as we progress here.
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> Aaron McGregor: We will also be adding a list of terms pulled from the best and most cited sources, so predevelopment could be one of those terms that we flush out a bit more.

Solange Gould: We spend a lot of time as a TAC problem solving ways to create community resilience to climate change. We at CDPH work with local health departments to prepare for the health impacts of climate change. A lot of what I am seeing here is about our brick and mortar infrastructure. My question is about our human and well-being climate resilience infrastructure. We have done some work quantifying the health co-benefits of climate change planning that improves community health, such as the various health outcome of investing in greater scale in walking biking and transit infrastructure. We have also calculated the direct healthcare costs associated with converting these health outcomes. Have you heard of good financing mechanisms to create infrastructure investments as well as human infrastructure investments that can work with averted human outcomes that are costly like health outcomes?

> Feliz Ventura: I have also done some work on monetizing the benefits of things like active transportation infrastructure and looking at increased productivity due to better health outcomes, so I definitely hear you on those being real and important considerations. A lot of this

work has been done but not been adopted by the private sector, so the public sector likely needs to take a role in order to make sure that data that are produced are able to be well understood and translated into economic benefits for folks who can invest in these projects and understand the needs of the private sector to actually make that happen (shape the data collection). We will also be doing some case studies that will be addressing programs, not just hard infrastructure.

Aaron McGregor: In our research, we have come across a few examples of social impact bonds that have tried to demonstrate the value propositions of these broader community investments so we can think about how to pull that into a case study and potentially share that with you to get your feedback.

Matt Armsby: There is also a slide here looking at the typology of all of these different funding sources and this report will go into greater detail about the various kinds of things one can pay for with different forms of money. The Resilient by Design financing guide also goes into this topic in some detail. We will be trying to tease out the legal and political ramifications of different funding sources. More generalized funding (like a tax) has more competition for the dollars, and often has voting requirements.

Bruce Riordan: In your professional view, is substantial funding and financing possible without regulation?

Feliz Ventura: It's possible. I think it will likely not happen quickly or in an as equitable of a way as it could without some regulation. In the long term, we have some additional considerations for protection of our societies in addition to those that might be strictly viewed from a private approach.

Matt Armsby: This also goes to the rules that are set up with funding sources when they are created that dictate how the funding should go back out the door. For example, some bonds require that certain minimum amounts benefit disadvantaged communities. There are allowable amounts that can go to technical assistance. There are bumpers put on how the money can be spent once it's in hand and part of these partnerships (NPO, Private) is thinking about how to use those bumpers to think strategically about who we engage with to provide certain services.

Jonathan Parfrey: Non-profit organizations can be actors as well such as Enterprise and others.

Feliz Ventura: We were encompassing non-profits in the public approach as well, but certainly there is a role across sectors for them and that is something we can continue to draw out.

Louis Blumberg: We had a presentation of similar work to this workgroup from Kif Scheuer from the Local Government Commission. He had a nice report and I just want to make sure you have access to that and have seen that. On the question about how to leverage existing actions, I wonder when we talk about activities that are already built/financed for extreme weather events, if it is possible to estimate the amount of *additional* funding to make them *more* climate resilient beyond which they are already budgeted for.

I was also pleased to see green infrastructure called out and recognized as valuable. There has been a fair amount of work on the natural and economic benefits to investing in natural infrastructure. We included some of these through the process for the EO B-30-15 guidance production. There are some reports about economic benefits from co-benefit activities. Have you been able to look at any of those sources?

> Feliz: In response to your second question about the incremental additional need, this kind of goes back to the moving target question. We don't necessarily have a firm sense of exactly all of the ways in which risk will manifest because our understanding of the science is ongoing. It's important to consider that even if an estimate like that were to come out, it is very likely that it would change given the changes in the science.
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> Matt Armsby: How much of that is not very detailed project specific questions? If we consider a sea wall that is estimated to cost 5 billion dollars in order to address storm surge of X in Y number of years, how much more that is going to cost when with Z much more storm surge? I wonder how much leeway was built into the original design and whether that cost estimate difference is very difficult to come to because of this.
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> Aaron McGregor: I do believe there is a high level inventory of projected adaptation costs for select counties in in the 4th assessment but in terms of it being a meaningful comparative analysis this also goes back to what Craig and others have said and that is how we are defining costs and benefits. What are the fiscal costs of implementation? It's a challenging question to answer without agreed upon criteria.
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> Feliz Ventura: Yes, it also isn't usually an incremental expenditure, which backs up to the larger theme of wanting to be coordinated around developing responses in order to used funds most efficiently and plan efficiently.

Jonathan Parfrey: Los Angeles Times published an article on "disaster bonds" that was quite critical. Scope of the catastrophe needs to be quite wide -- rather than constrained: http://www.latimes.com/world/mexico-americas/la-na-mexico-catastrophe-bonds-20180405-htmlstory.html

Kathy Schaefer: Have you had any conversations with the Insurance Linked Securities market about the data that would need to move more effectively into the market?

> Feliz Ventura: We have not had extensive conversations with the insurance industry in general on this topic. If that is something that people want to see as an additional piece of work we can

talk about that too. There have been studies on what would need to be done for something like a resilience bond.

David Loya: Important to recognize the important distinction between planning timeframes for investments and how to plan for these statewide so they filter down to rural communities.

Brian Strong: We did have a meeting with British embassy and larger insurance agencies on this. They do promote that the more insurance the better. We are still at a point where it is difficult just to release funds. Have you been thinking about an index to raise awareness to the public/policy makers that help to make decision on how we spend our dollars? This could be interesting.

Public Comment

Cindy Blain: Which projects are the hardest projects to fund?

Feliz Ventura: We don't have large database of transactions that have been done in order to give a good answer to this question. Case studies will help us understand this better.

4. **General Public Comment** **Nuin-Tara Key,** *OPR*

No public comment was received by OPR staff.