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Adaptation Veteran Joyce Coffee Shares Strategic Insights

Joyce Coffee formed Climate Resilience Consulting in June 2016 after heading the Notre Dame Global Adaptation Index. Prior to heading ND-GAIN (part of the Climate Change Adaptation program of the University of Notre Dame Environmental Change Initiative) she was a group manager at Edelman, providing CSR counsel to large corporate, NGO and government clients. From 2004 to 2011, Coffee was a manager at the Chicago Department of Environment where she worked on the city's climate action plan.

CCBJ: How would you describe your niche in the climate change consulting ecosystem? How do you differ from, collaborate or compete with other types of firms?

Coffee: Climate Resilience Consulting works with leaders to create strategies and actions that enhance markets and lives through adapting to climate change. We help businesses and governments bridge the gap between science and real-world initiatives by creating practical solutions they can employ, including strategies, measures and tools that build resilience.

CRC has been in the works for about a decade since I worked at the City of Chicago on its Climate Action Plan. Adaptation was important to Chicago, not only because of its history with heat stress-related casualties—over 700 Chicagoans died in a heat wave in 1995—but also because adaptation defined many of our initiatives to improve lives and livelihoods in Chicago, especially our green infrastructure and air quality improvements. I started my career in international development, but what truly inspired me to start my own firm was the December 2015 Paris Agreement on climate change. While best known for its focus on mitigation and its goal to keep global warming to within two degrees centigrade, that international pact also established a global agreement for adaptation, resilience and reduced vulnerability. It expects to measure adequacy, effectiveness and progress every five years.

Just before that agreement, the United Nations released the 2030 Sustainable Development Goals, and goal 13, "taking urgent action to combat climate change and its impacts," explicitly lists as its first target the strengthening of resilience and adaptive capacity to climate-related hazards and natural disasters. Of course, other elements of the 22 SDGs directly relate to climate change, including zero hunger, infrastructure, education, health, clean water and inequalities.

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On the other hand, many of my firm's target clients don't set their watches by these international agreements and goals. Still, their focus on the bottom-line impacts of climate change reflects the World Economic Forum's global risk 2015 report. It spells out the analysis of responses from 900 global leaders, most in the business realm, and ranks the failure to adapt to climate change as 5th of 28 risks in terms of potential negative impact on countries or industries and 7th in terms of likelihood to occur within the next 10 years.

In fact, what WEF's analysis shows is that, while the world still smarts from years of global recession, experts now identify climate change risks as bigger threats to the stability of the world than economic ones.

And in terms of collaborators, I have enjoyed partnerships with Four Twenty Seven, Adaptation International, Institute for International Communities, Susanne Moser Research & Consulting, Acclimatise and Sustainable Futures.

My clients this have predominantly been in the finance industry.

CCBJ: Why the finance sector?

Coffee: I've seen a growing awareness and interest in adaptation by investors. And finance is an overarching sector that impacts resilience in every area that matters to human well-being: infrastructure, health, ecosystems, food, water and buildings. My sense is that finance as a mechanism for adaptation possesses three primary pillars:

1. The need to examine climate risk in current portfolios. I'm not just referring to stranded high-carbon assets such as coal-fired power plants. I also mean risks for wine investors from changing ecosystems that impact vine health; property developers and owners with investments along coasts and rivers; and consumer goods companies that rely on supplies from countries whose primary ports will be hurt by more intense coastal storms and sea level rise. Behind the numbers and fancy charts, much of our portfolios comprise people and things. And most of them will experience growing impacts from climate change, such as more heat and other weather changes; more precipitation than needed and less when it's necessary; sea level rises and the corresponding floods, droughts, fires and change in vector-borne disease incidence.

2. The need to ensure that any investment expected to last more than five-or-10 years is modified to accommodate a different future than its past. It seems fundamental to ensure a road or building will be placed in the right spot and made with the right materials to withstand a changed climate. But project-level climate resilience is definitely still an art, not a science. It can alter a lot of formulas and, importantly, long-standing ways of doing things when we begin to ask of every project we fund, 'Are future risks of flood/fire/drought/sea level rise/vector-borne disease etc. accounted for in this project?'

3. New investments for innovation: Early sector leaders in adaptation investment opportunities include water-saving devices (e.g., PepsiCo's "More Crop Per Drop" for Walker's chips), seed varietals (e.g., Monsanto's Water Efficient Maize for Africa) and futuristic mapping (e.g., CubeSat meteorological satellites providing data as a service).

I'm fortunate to be a part of a group looking at these issues, the Global Adaptation and Resilience Investment work group, and I also am eagerly consuming communication from the Task Force on Climate-Related Financial Disclosure, by the Bank of England's Mark Carney and former New York City Mayor Michael Bloomberg. They offer fantastic opportunities to take the questions of climate risk in portfolios form the fringe to the mainstage in the next year or two. Some in the financial services industry aren't waiting, though, and I often recommend Blackrock's Adapting Portfolios to Climate Change as a great resource.

CCBJ: Are there other corporate sectors that have a demand for adaptation?

Coffee: I'm often asked, "I'm looking for corporate adaptation partners. Where are the low-hanging fruit?" Frankly, based on my experience advising corporate clients at Edelman and raising money from the corporate sector at ND-GAIN, corporations are not finding brand value in announcing their adaptation leadership through partnerships. On the other hand, many sectors already are actively adapting or finding opportunities in adaptation. They include:

- The extractives industry, reflecting their long-term investments in vulnerable places.
- Engineering and construction firms whose post-disaster business lines have seen increases in demand in the last decade and are likely to grow (e.g., AECOM as a major corporate winner following Hurricane Sandy).
- The agriculture and food sectors because drought, fires and floods already have had a direct impact on their value chains, (e.g., Mars candy company and its recent hiring of a climate scientist).

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A frontier for corporate adaptation is "adaptation outside the fenceline" – working with local governments and community organizations to ensure the resilience of the roads, bridges, health systems and neighborhoods that companies, their workers and their consumers depend on. I would love to collaborate together with cities and corporations to foster more of that. I predict that will be a growing area of corporate leadership in the next few years as adaptation becomes a practical need-to-do, not a fluffy nice-to-do.

CCBJ: What are interests you most for 2017?

Coffee: In 2016, while working on a project with Four Twenty Seven for the World Bank, which is considering if and how to create a global adaptation investment fund, I read the New Climate Economy's Sustainable Infrastructure Imperative report. It was written by some of the institutions I repeatedly turn to for the latest facts and ideas, such as the Climate Policy Initiative, Overseas Development Institute and World Resources Institute. They routinely describe how to finance better growth and development. I think the report is required reading for those of us whose work includes adaptation outside of the U.S.

As we in the U.S. prepare for a new era in national government, with a "red fed" congress and a renegade president, I am working with Enterprise Community Partners and Georgetown Climate Center on a 100 Resilient Cities project (pioneered by the Rockefeller Foundation) to craft federal policy positions that will help increase urban resilience. I'm inspired by the assets we can glean from outgoing leaders. A recent interview in Bloomberg entitled "FEMA's Director Wants Capitalism to Protect Us from Climate Change" caught my eye for its assertion that the federal government was offering social welfare for developers.

CCBJ: A project you're doing with Rockefeller Foundation and Institute for Sustainable Communities focuses on how credit ratings agencies, insurers and institutional investors can fund resilience for states, cities and communities. What are some of the options you're exploring there?

Coffee: Here are three interesting takeaways:

1. The insurance industry's "one in one hundred" risk modeling to determine the viability of investments based on an event occurring once every hundred years, can be replicated for whatever case risk is examined – whether it relates to setting priorities for where the most impactful green infrastructure investment should be made in a region or to examining the Federal Reserve Bank portfolio's risk to stresses and shocks. Risk modeling is expensive and done by just a few companies, e.g., AIR Worldwide, RMS and Corelogic. But an important effort has begun

Examples of Physical Climate Risks and Potential Financial Impacts

Acute

- Increased severity of extreme weather events such as cyclones and floods

Chronic

- Changes in precipitation patterns and extreme variability in weather patterns
- Rising mean temperatures
- Rising sea levels

Source: Task Force on Climate-Related Financial Disclosure

- Reduction or disruption in production capacity (e.g., shutdowns, transport difficulties, supply chain interruptions)
- Impacts to workforce management and planning (e.g., health,safety, absenteeism)
- Write-offs and early retirement of existing assets (e.g., damage to property and assets in "high-risk" locations)
- Increased operating costs (e.g., inadequate water supply for hydroelectric plants or to cool nuclear and fossil fuel plants)
- Increased capital costs (e.g., damage to facilities)
- Reduced revenues from lower sales/output
- Increased insurance premiums and potential for reduced availability of insurance on assets in "high-risk" locations

to make risk-modeling platforms more universally available by the Oasis Loss Modeling Framework.

2. The credit-rating agencies are well-positioned to incorporate both climate risk and climate resilience in their municipal and corporate bond ratings. This would take a significant change in a sector that is strong in part because of its consistency. The Global Accounting Standards Board offers one place in which to create a framework to incorporate this risk, very likely initially as a part of rating reports. For now, it is encouraging that Standard and Poor's is looking at climate adaptation valuation with its Green Bond evaluation effort.

3. Cities can and should borrow more. Credit rating weighs heavily on cities' decisions to increase their capital available for infrastructure projects through bonds. But, we still live in an era of historically low interest rates, which should inspire more of these longer-term investments in modernizing or new projects. Especially if cities have a clear resilience plan that spells out how their debt will lead to a more secure future for their city. Even facing a changing climate, they can turn their capital expenditures into stories about resilience, potentially without a downgrade.

The fact is that cities, in contrast to companies, possess remarkably consistent and high credit ratings, and a credit rating report that acknowledged the proactive move of a city to think about its financial and economic future through its resilience plan is likely to be considered a prudent leader, not a risky bet.

CCBJ: One of your fans on LinkedIn says that you have "extraordinary skills at engaging stakeholders." What are some principles or methods for engaging climate change skeptics in dialogue about resilience investments?

Coffee: We owe it to ourselves to acknowledge that adaptation is not a red issue or a blue issue, it's a red white and blue issue. I have had some very productive conversations in the U.S. with climate skeptics when I could meet them where they were and address their worries and hopes for the future of their businesses and community.

It is a challenge for me to avoid the word 'climate,' and I have been very intentional about this, including it in the title of my company. The biologist in me wants to start from the science whenever I can. But hard- won experience underscores that if I want to better understand how to save more lives and improve more livelihoods, leading with "climate" in conversations and presentations can derail opportunities for finding shared goals, identifying existing progress and dreaming about—and then strategizing to get to—really innovative, progressive and pragmatic actions that save lives and improve livelihoods now and in the future.

CCBJ: What are your growth targets for Coastal Resilience Consulting?

Coffee: At the close of 2016, Klaus Radunsky, a member of the UN Framework Convention on Climate Change Adaptation Committee, mentioned to me: "There are many relevant slow onset events—including sea level rise, loss of snow cover, loss of permafrost, loss of glaciers, desertification and ocean acidification that have significant impacts in the long term and need to be addressed now to keep the challenges manageable."

Many of us spend our days working to be better prepared to resist the worst impacts of disasters. It's my charge at CRC to help translate both those slow onset events and increased extreme events into action for corporate and city leaders.

In the near term, that means making these changes real for experts. The first order of business is to show how those slow onset and extreme events matter to all of us, wherever we are in the world. I think the best way to do that is through the financial markets, and my moonshot for 2017 is that the financial services industry begins to account for climate risk in its economic and financial models. ☼

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