The Brookings Institution
Center for Sustainable Development
and
The Rockefeller Foundation

17 Rooms Podcast
"Optimizing the 'True Cost/True Value' of food"
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Co-Hosts:

John McArthur
Senior Fellow and Director, Center for Sustainable Development
The Brookings Institution

Zia Khan
Senior Vice President for Innovation
The Rockefeller Foundation

Guests:

Jane Maland Cady
Program Director, International
McKnight Foundation

Pradeep Prabhala
Partner
McKinsey & Company

Episode Summary:

In this third interview of the "17 Rooms" podcast, Jane Maland Cady and Pradeep Prabhala discuss frameworks for investors to channel investments into the food system in a way that optimizes for the "True Cost/True Value" of food. Cady, program director at the McKnight Foundation, and Prabhala, partner at McKinsey & Company, moderated Room 2 focused on Sustainable Development Goal number 2—on Zero Hunger—during the 2021 17 Rooms flagship process.

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MCARTHUR: Hi, I'm John McArthur, senior fellow and director of the Center for Sustainable Development at Brookings,

KHAN: And I'm Zia Khan, senior vice president for innovation at The Rockefeller Foundation. This is 17 Rooms, a podcast about actions insights, and community for the Sustainable Development Goals and the people driving them. How are you doing this morning, John?

MCARTHUR: I'm good, thanks, Zia. How are you?

KHAN: Very well. Very well.

MCARTHUR: Zia, I have a funny question. What did you have for breakfast this morning?

KHAN: John, I'm not eating breakfast these mornings. I'm trying out intermittent fasting.

MCARTHUR: Oh, so modern of you, I love it. I had a bowl of cereal. And I think the bowl of cereal is relevant for what we're going to talk about today, which is food. And specifically the unintended consequences of our food systems and the hidden cost to individuals, families, and societies that are embedded in the way we grow and consume and even throw away our food.

So, if we consider that bowl of cereal I ate this morning—for example, the milk I used likely came from some irrigation-intensive farm contributing to water scarcity. It was then probably processed in a factory that likely contributed greenhouse gas emissions. Any sugar in that bowl of cereal probably increased my likelihood of diet related diseases, although I try to keep them low sugar, and that has health care costs over time. And there is probably some fertilizer used to grow the grains that went into the cereal. And those fertilizers, good chance they ended up in the runoff in the water system and all sorts of problems there. So, the true cost of my bowl of cereal goes way beyond what I paid for it to get that bowl.

KHAN: And that's exactly what we're going to explore, John, the true cost of food that factors in all of these costs that go above and beyond our receipt at the grocery checkout. In fact, our team at The Rockefeller Foundation put out a report earlier this year on the true cost of food in the U.S. and we found that while we spend as consumers about $1 trillion on food, when you factor in all those costs you mentioned—the health costs, the environmental costs, and everything else—the true cost is actually three trillion dollars a year.

MCARTHUR: When we talk about that three X factor, we talk about all these costs. As an economist—and I spent a lot of time wondering about how growing food fits into economic development—this is so interesting because it seems like it's an early stage question. It's a massive topic. It's so complicated. But like you said, there are big efforts underway to try to map it out and figure out how we can address it.

And that's why I'm actually excited about today's episode. We're joined by Jane Maland Cady and Pradeep Prabhala to learn about their efforts to develop and mainstream an impact assessment tool for investors to optimize for both the true cost and the true value of food. Jane is the program director of international programs at McKnight Foundation, where she oversees grantmaking focused on equitable and sustainable livelihoods in more than 15 countries across the world. Pradeep is a partner at McKinsey and Company, the consulting firm. He works in the agricultural practice and leads the firm's initiative for food security in the U.S., which of course reached crisis proportions over the past year and more than year, as the pandemic has gripped the United States and so many parts of the world.

Jane and Pradeep co-moderate Room 2, a working group for SDG 2 on zero hunger, within this year's 17 Rooms process. For our new listeners, 17 Rooms is an approach to spurring action for the

Sustainable Development Goals or SDGs. It convenes 17 working groups, one per Goal, and asks them to focus on an area within the goal that is ripe for action, and then to define some concrete next steps that can be achieved within 12 to 18 months to make progress. It's quite an interesting topic, Zia.

KHAN: It is, and quite interesting moderators who came to food from very different directions as we'll soon learn. Jane and Pradeep are co-moderators of Room 2, the working group for SDG 2 on zero hunger. This is their story.

MCARTHUR: Jane, welcome to 17 Rooms.

CADY: Thank you very much. Great to be here, John.

MCARTHUR: And Pradeep, terrific to have you here, too.

PRABHALA: It's my pleasure, John.

KHAN: Well, thank you both so much for joining us. And where we'd like to start is with your personal stories of how did you arrive to the issue of food as something that you're dedicating a lot of time to. And how did you get to 17 Rooms? Maybe, Jane, we could start with you.

CADY: I actually originally come from a farm in southern Minnesota. My father was a farmer and generations before him were farmers. And so agriculture and food have been a part of my life since before I was born, really. It's baked deeply into where I come from and what I care about.

Throughout my life and career, I've worked in all parts of the organic and natural food value chain, really, from research to production to organic certification, retail, wholesale, for example. And over the past 13 years, I've been working as a funder of agricultural research.

Over ~~my~~ 30 years of my life, I saw erosion of the rural vibrancy, rural exodus. I saw larger and larger farms, fewer and fewer trees and animals, and it just didn't seem right. And so about 10 years ago, I was engaged with helping establish the Global Alliance for the Future of Food. And we started talking about true cost accounting at that time, so I was able to fund some of the early efforts in that area. And for us as a research program, that was very important because we wanted to look across economic, social, and environmental outcomes over a timeframe of short, medium, and long term. And so through that work, I came to 17 Rooms, and I think it's really important to point out that last year, one of the recommendations that came out of Room 2 was to advance work in true cost accounting. So that's how I got here.

KHAN: And how about you, Pradeep?

PRABHALA: I started my career in consumer products and I worked at Unilever for a few years. Admittedly, I now tell the story that I started my career in food at Unilever, which is partly true. But that isn't the motivation to get where I've got to. I think when I was consulting in the early part of my career, I got really excited by this notion that there is fortune to be made at the bottom of the pyramid. And back in 2007, everyone seems to suggest that there are big businesses to be made in low income markets. And we got quite intrigued by the idea and I said, why is it that our clients don't seem to be making a billion dollar business out of this?

And I started my journey in understanding market-based approaches to solving issues of poverty. And I traveled extensively in Africa and worked in over 40 countries. And I think when I look back, that's when most of my work in agriculture and food started because it's one of those sectors where there's a deep intersection between livelihoods and impact and economic viability. So, I spent a few years in Africa then I, without realizing developed some expertise around food and then moved to

the Middle East, worked with a number of governments there on the issue of food security. And then by the time I realized it's been five or 10 years and I've been exclusively working on food as an industry. But admittedly most of that has been focused on improving productivity and addressing livelihoods, just given the focus of the countries and their agricultural sectors.

But over the last few years, I think I've started realizing that the pursuit of productivity and gains in productivity are sometimes coming at significant expense to the planet and society. And I think that's more been an organic discovery as we work with science and discovered that the new issues that around climate and nutrition that are often getting understated. So therefore, for the last two years I've been trying to figure out ways in which we could help some of our clients in my day job and navigating, I think, the climate crisis through the food sector as well as nutrition crisis.

And then one other thing that I'd say is, I think I'm now so deeply excited about this topic and the opportunity that the food sector presents that I'm leading a lot of our work at the firm, and I've stopped doing any other book outside food, and I truly believe that this is a sector that's ripe for disruption and opportunity to have great impact on people, planet. And I'm excited to continue to do that.

MCARTHUR: Jane and Pradeep, the "true cost of food." Such simple words, but a lot of complicated concepts behind it. I'm wondering, for our listeners, how would you describe the problem you're trying to solve in its essence? What is in that true cost?

PRABHALA: I agree that it's simple in concept, but complex in execution. But the way I tend to think about it as the act of production, transportation, and consumption of food comes with a number of unintended consequences, both positive and negative. And today, the food system fails to recognize some of those consequences. I think they don't get credit for the positive externalities that it creates, and they don't often get to bear the cost of unintended negative externalities that the food system creates, whether it's things around environment, whether it's things around nutrition, whether it's things around equity. And I believe that the first step in trying to solve these externalities for the food system stems in starting to measure what those externalities truly are, both positive and negative, and true cost is an accounting method that allows you to do that effectively.

KHAN: I'm curious, there's something about the word "true" that implies that there's more value and more cost than may be currently accounted for. And I'm wondering, do you feel that that's just oversight, and, you know, some new analytics are now revealing that? Or do you think there's kind of a status quo that would much prefer to be with the not true cost of food, and there's going to be a debate around whether there are true costs, as you've sort of identified or as people are talking about, is really true or not?

PRABHALA: Zia, I believe that, fundamentally, the values that we place on things like environmental capital and human capital has changed significantly over the decades. Right. I think when the food system was designed early in the century, I think it is primarily doing two functions. One, it was trying to get food at the cheapest possible price, and then the food companies were trying to maximize returns on financial capital. It makes sense at that point in time, given that the world was faced with hunger and especially after the world war, people had to be fed. And then I think the financial capital was in scarcity at that point in time, so not surprisingly, people optimized for returns on financial capital and food insecurity.

But then I think the dynamics of the whole system have changed. Right now, I think the financial capital is in abundance, but natural capital and human capital are increasingly getting scarce. Therefore, there's a realization that we need to really account for impacts in those areas because I think both companies and players in the ecosystem are now being judged on not just the returns that they deliver on financial capital, but on other forms of capital. So for me, I think it's less about not

having the tools, I just think that there weren't enough incentives in the ecosystem to focus on some of these costs before, which are becoming increasingly important now.

CADY: Yeah, I tend to think along similar lines in that I have seen over the past 10 years that I've been engaged with this that more people are waking up to the fact that we have to understand these externalities. Climate change is forcing people to wake up. Private sector is having to respond. It's impacting their bottom line and also consumers. And we as citizens all care if there's fires burning all around us, et cetera.

The role that ~~food,~~ agriculture and food systems play in climate change, as you know, at least 33 percent plus contributions to greenhouse gas emissions. That's an externality that people are recognizing we have to count. You see that in some of the ESG work, people are starting to bring in some of these concepts, and that was actually something we were after in the Room.

But you see people waking up not only in the investment world and private companies, and slowly in the research world as well in policy spaces. However, I do think that not enough people are embracing the systems-oriented approach. Just for example, in the agriculture research and development world in Africa, there was a recent report that came out a year ago—2 to 15 percent of all dollars go to support agriculture that's more ecologically oriented, and that means if you believe the concept we are what we measure, if we're not measuring from a systems perspective, we're going to keep reinforcing the dominant model which has produced the food system and the externalities that are impacting a lot of us. So yes, people are waking up and there's a lot more to do.

MCARTHUR: I'm curious, I in a former life spent a lot of time looking at how to improve agricultural productivity for the poorest of the poor in Africa. And one of the big great breakthroughs of the 20th century, of course, was getting fertilizer to poor farmers so they could grow more food and water and improve seeds. And one of the parents of the so-called Green Revolution, Norman Borlaug, had this famous line, "hard to be an environmentalist on an empty stomach." And I'm curious if you think that argument still holds. Because it is one that was used over and over again in terms of the need to help people get out of poverty in order to take these issues on. Especially because so much of this is also about what's happening in the rich countries and how they're approaching their food systems. What's your take on the evolution of that debate?

PRABHALA: I think that question implies that there's a fundamental tradeoff between solving poverty and solving issues of climate. And I don't quite think that's a fact, right, in the sense that I think in some cases it's true, and in other cases it is not. We've recently done some research on climate support practices on the farm that could reasonably reduce carbon footprint of agriculture. And we found 25 practices that are material to how we could reduce carbon footprint.

I think what people don't recognize is if you get a farmer to adopt regenerative farming practices, you effectively would increase incomes and deliver the same level of productivity with a period of time. But there are transition costs to be bought. So for me, the question becomes, how do you therefore bear the transition costs so that you're helping the person earn a livelihood by not burdening them with the costs of transition?

Having said that, I think there are places where there are inherent tradeoffs, but then the question becomes who's actually the custodian of this planet and who pays for it, right? And in cases where it doesn't make economic sense, you really need to find ways to deploy public and donor capital in a way that allows you to alleviate some of those short term costs, or in some cases, long term costs.

CADY: Very deep and profound question, John. We fund in 10 countries in Africa, as well as the High Andes, and then of course, Minnesota and the Midwest. And I in one way I absolutely agree with Norman Borlaug. If people don't have food to eat, that's fundamental. You have to find a way to do that. But the way in which we grow our food, as I go back we are what we measure, the

dominant dollars that go to measure and create technologies in that agriculture and food system are towards an industrial model. And so people are going to make the argument that it won't be as productive if we don't use fertilizers that improve seeds, et cetera. There is an element of truth to that.

But when you factor in the externalities, that sort of economic dominance, productivity dominance, and you get to the true value, there's a leveling out there. A specific example is hedgerows and the role that they play in ecological pest and disease management. If we go in and spray a field and kill all the insects, the beneficial insects are gone and crops can be less productive, they can be more vulnerable, etc. So we're doing a lot of work around co-creating technological solutions with farmers that are productive, but also build soil health, build resiliency in pest and disease management, as well as create and support rural agency rural vibrancy.

And to your point, Pradeep, on supporting the transition—that is critical. We funded a study in Minnesota on the true cost of maize, and with conventional organic maize in southern Minnesota, as well as one on an individual producer's farm. And farmers are trapped in the industrial model. And if we want to move to a more regenerative approaches, there are transition costs that need to be borne. And the argument is, with true value, true cost is you can actually look at who's paying to build a more healthy system or who's paying to reinforce a system that's out of balance, which one can argue that the dominant maize system in the Midwest is producing lots of environmental costs, as well as health outcomes, and it's subsidized by the U.S. government. So, it's trying to unpack some of those things that this allows us to do.

KHAN: You know, I wanted to probe into this idea of transition and change. And I've always thought it's one thing to quantify an economic opportunity, it's another to start creating the financial motivation for change. And one dimension might be the cost of transition. And how can we help those transitions? But I'm starting to think about, you know, in the analysis of the total cost of food, health costs come up as a big part of that. But the bearer of the health costs would be the health system, the insurers, as opposed to the food companies. And so how do you start to think about converting that economic opportunity into financial motivation? Is that like a policy question? Is there a sort of a reframing of market rules? What are some of the levers that you've thought about to motivate change now that we know and have the awareness of what the total cost is?

PRABHALA: I think the answer is all of them, Zia. There is increasing amount of innovation from insurance companies and healthcare companies that have started to figure out ways in which they could address diet-related diseases and investments that they'll have to make. Rockefeller Foundation, as you know, has been innovating around food as medicine initiatives, and a lot of them are being piloted increasingly by insurance companies. So there are some market based approaches that allow you to get at some of these issues.

But I also think that markets cannot solve all of these problems. I think you need to really change the rules of the game in some cases, right. And today there's no reason why certain products that are unhealthy for you should cost the way they do or are the price the way they do. So there is fundamentally a case to be made on, how do you make sure that people that are putting out products that have larger costs in the society are being held to account and therefore use of government policy instruments might be an effective way to address that.

I also think that there's a case to be made for cross-sector collaborations. I do think that right now we sort of think about health system and food system as different systems, and increasingly think about opportunities when you have players that are working across these systems to address issues in specific areas. And that's another huge opportunity to think through, whether it's investing in science to lower cost of ingredients and should health care companies, for instance, bankroll some of the ingredient innovation at food companies. It's a provocative question and I think people say as

to why should they do it? But if you can reap the long term benefits and if you can re-craft incentives, I think it actually is a powerful case. So I guess the answer is all of them, Zia.

MCARTHUR: There is a very common public perception that the problems in the food system are the big companies, they're getting bigger and bigger, they control more and more of the market; and their behavior isn't always perfect, and in many ways they're easy to not like. And there's another piece of this, too, which is the essence of externalities, which is private markets don't capture externalities almost by definition, which means there needs to be public investment in regulation. In your Room, you're talking a lot about private sector metrics, as I understand it, to capture these costs. But the reality is the true cost is probably more than people are paying in many cases. And so, is the suggestion that the companies should carry that cost, that the government should carry that cost? Who's the good guy? Who's the bad guy and who has to do more?

PRABHALA: I think it's a complex question, and I guess the answer is not that straightforward. But to the extent that companies can bear costs, right, of some of these externalities while not compromising on their fiduciary duty to their shareholders, they should, right? And today there are a number of opportunities like that which companies genuinely don't invest because in some cases they don't know, and some cases there's just a huge profit pool that they're sitting on, which they don't want to disrupt by themselves.

But there's a growing realization among a lot of companies that there are ways to really address some of these externalities by investing in innovation, and a lot of companies are doing so. So, I want to give credit where it's due.

Having said that, I think companies in some cases would not have the incentive to address those, and the governments have a critical role to play. And I do think that a significant part of the health externalities cannot be solved without really changing some level of incentives in the system, and therefore I think the public sector has a really important role to play in crafting those incentives.

I think we were trying to evaluate if investors should proactively shape incentives so that private companies would behave differently by altering cost of capital. And the big learning, I think, through our process is that, yes only if the investors could meaningfully measure the impact of these externalities on the returns they are willing to do. Today, I think a lot of investors are including metrics on climate because it makes sense and climate risks are affecting shareholder returns. But I do sort of think that the investors would not really prioritize other metrics just like private sector wouldn't in the absence of meaningful incentives, change in the ecosystem level.

CADY: I think the only thing I would add to that is that another place where incentives, I think, have been felt is through the consumer. And in the work that I do, we often talk about consumer as co-producer. What people are waking up—and particularly I'd say in the USA, or global north—to what they do with their dollars has big impact. And that's an incentive. And a lot of people are caring about the environment, they're caring about their health outcomes, caring about climate, and realize that food is a solution to that and where they put their dollars. So that has a different kind of incentive for companies to respond.

Another thing that's really happening quite a bit, too, is that all the interest in impact investing and more philanthropies are ordering their endowments to really align with their values. So, that's another place where people are starting to ask about more systems-oriented analysis, particularly around climate, but not only. And so I think that's another place in the private sector that people are being incentivized, and I do think it's a cross-sectoral response.

KHAN: I'd like to bring us now to 17 Rooms more specifically and what you landed on in Room 2 as the action or the solution and what are some of the next steps that you're envisioning coming out of that process?

CADY: As I mentioned before, the importance of advancing true cost accounting frameworks came out of 2020 17 Rooms—they had two or three recommendations and this was one of them. So that was super exciting to carry forward. And in the early days when we were trying to conceive of what could we accomplish in that Room and with who around true cost accounting, we had a pretty broad idea, initially thinking we can invite research folks, we can invite in investors, we could invite policymakers, et cetera. And we really wanted to focus on something that was practical and could be utilized now, and that was also responding to a real need. There's folks out there working on true cost accounting in the various sectors and investment space. And then really the connection came through last year's Room moderators Ruth Richardson and Ray Steiner. And then Pradeep and I met in that, and of course, Pradeep brought his deep expertise in investing, in the private sector, and all the work you've been doing.

PRABHALA: And this year, I think we started with this interesting premise that asset managers and asset owners could recraft incentives for private sector players and therefore change the way private sector would behave if the investors really changed the way they invest. And the questions that we were trying to answer were, One, is it a viable pathway? And two, is it possible to address all the externalities that we've uncovered through the true cost work through this channel? And three, if either of those, or both of those, are true, what needs to be done in order to really progress this pathway?

We had a cross-section of players from public sector, private sector, asset owners, and asset fund managers. And it was an interesting discussion the general realization was that, yes, you could really use this pathway to incentivize change, but only in very narrow circumstances.

There's also an equally good realization that listen, if the companies themselves don't bear the costs of these externalities, then it's unlikely that investors, by measuring some of the externalities, are going to affect change. For instance, to your point, Zia earlier, a third of health externalities are borne by insurance companies and not by food companies. So if an investor in a food company tries to measure health externalities, yes, it's nice to know what the externalities are, but it really doesn't translate into any changes in return or risk expectations for the investor. And as such, right, unless I think that consumer demand changes, which I think which could happen over a long period, there's no real investor pathway to that question.

But there's sort of interesting questions in between, right? There are certain externalities which people want to address. But people can't be sure as to what those externalities are in the system, either because of lack of measurement or lack of data. Like, for instance, when you think about biodiversity and deforestation, a lot of companies genuinely don't know if there is illegal deforestation that's going on in their supply chains. So therefore, if you can really unpack the data on that issue, investors could meaningfully shift incentives.

In short, I think our conversation is a lot about how do you really figure out what metrics should investors incorporate into their decision-making? How does it impact externalities and their returns and risk? And which ones are they likely to progress? And if so, what needs to happen to really progress those metrics and narrows the conversation? I do sort of think that we ended up in a good spot with some specific opportunities to pursue, but this is not a solution for everything that needs to be sorted the food system.

CADY: Another thing that happened in the Room was that many of the attendees had been working in various aspects of true cost accounting. And there are some standard frameworks that have been developed, the U.N. has developed TEEBAF, the Economics of Ecosystems and Biodiversity, Ag and Food framework, that many people have adapted and furthered their work on. And there was a lot of conversation about what is the framework, what are the metrics, what examples do we have out there? And there are examples, but they aren't all aligned. So, some of our work was discussing

what that would look like and particularly related to asset owners and managers in the investment space.

MCARTHUR: You have in this big, multidimensional set of questions around the environmental aspects. You mentioned the different adjacent sectors, transport and so forth, there's so many aspects of the food system. And one of the interesting things about the food system is that ultimately it affects every human being because every person hopefully is eating some food. The scope of this problem is so broad. Do you have one or two things at the top of your personal priority list that you'd like to see get measured sooner than later to help advance this agenda? Just some bit that you think that people should be looking for that should be measured sooner than later to start capturing a broader cost and value of food.

PRABHALA: I think, John, the health care costs come to mind, I think the true cost work that Rockefeller Foundation did in the U.S., that health costs are significantly higher than planned costs. And I keep saying it to my colleagues and friends that often we talk about climate and the impact of our food system on the climate or the climate on the food system, but I think nobody talks about the impact on health of the people as much and doesn't get measured. And it's really challenging to understand what food does to people. It's actually hard to say what is actually good food and bad food, because what's good for you might not be good for me, but what's bad for you might not be bad for me.

So therefore, I think there's going to be a real game changer if we find ways to objectively measure what good food and bad food means, and how do you sort of then start measuring the impact of food on human lives and diet-related diseases. This is going to be a game changer, in my view. I think at a macro level, we understand that diet-related diseases are huge and we know that they need to be addressed. But at the individual level, we don't really have the science or the metrics to do that effectively. So for me, I think if I were to have a wish, I wish we could really solve this challenge and start measuring the impact of food on human life and diseases.

CADY: I really think we have to be very clear on the measurement of the food systems' contributions to climate, to greenhouse gas emissions. And an aspect of that is soil health. And measuring carbon in the soil, it's trickier than it sounds. But it's a really important indicator of what's happening around greenhouse gas emissions. So, I think the two together are really important. And another piece I would say that's also equally important are some of the social outcomes around ownership equity in economic systems for producers and all along the food system chain, I'd say.

MCARTHUR: I know we're going to have to wrap up in a moment, but this is a unique conversation in 17 Rooms this year because the issues are so big and they're so increasingly recognized, but it's also probably pretty early in the journey. I imagine 10 years from now we'll be having a pretty dramatically different conversation about how to measure the true cost of food because there is so much work underway, but also work to be done. I'm curious how you in your innovation hat see this pipeline process and how we might all think about next steps.

KHAN: It's a really interesting question, John, and there's a lot of systems change theory that talks about different levers for change. And one of the levers is how you measure things. And so what I find so compelling is a lot of people can lose hope when it comes to changing food systems. It just feels like there's so many forces in play and even just in our personal lives. But the idea of triangulating on something that can have so much leverage and touch so many parts and help reorganize the system, like the true cost of food, I find very compelling and very exciting. So I'm really excited to follow this work, and I know it's been a bit of a journey and there's a journey to go down the road.

MCARTHUR: And I would just add there are some extraordinary scientific breakthroughs, I think Pradeep was referring to this earlier. We've recently put out a book where someone talks about new micro biology based technologies that are likely to replace fertilizer, which in the near term could be a massive step forward for reducing some of the negative externalities given all that the environmental cost that can come with intensive fertilizer use. So just as one example of these big leapfrogs of technology that might change certain components of a much bigger system that needs to be measured much better, too.

PRABHALA: I think consumers are getting increasingly savvy about health and environment, And I think the consumers of tomorrow would prioritize these issues and start penalizing companies that don't really deliver their products with the right environmental footprint and right diet quality, right? And I think that's going to change.

There are also new markets for natural capital that are evolving, I think carbon markets are getting increasingly sophisticated, we'll probably have soil nitrogen markets. So we'll start getting new incentives into the markets that we haven't seen, which are going to sort of shift the conversation.

And I also think that in some ways, things are going to get bad before they get better. And I think once they get bad, I think governments would be forced to act as well because I think even in the U.S. right now, you could argue that health care costs are at unsustainable levels and diet-related diseases the largest component of that cost. The hope is that we'd be living in a market that's markedly different and therefore the dynamics would force a change. And therefore, I have a lot of hope and optimism for the future, although it's a complex and a systemic issue.

CADY: I wanted to offer, if I can, a hope that I am seeing as well. And I think coming out of the pandemic in some of the global challenges that we're facing is that a new look at how economic systems and food systems can be shifted to be more inclusive and equitable. You can see a lot of examples of re-regionalization going on in the USA. You see regional economies being fortified in places where they already exist in the global south. And to your point, things got tough. They're tough during COVID. It's still going on. And food systems are greatly impacted, and we've had to shift and adjust. And there's a whole new group of smaller, more regional, locally controlled, managed economies that are emerging, and I think we need to make more room for those, particularly if you're looking at a true cost accounting framework and the externalities that come from them.

KHAN: This is an interesting note to maybe bring this to a close, and I'd love to ask you both two questions. One, what would you hope to see in 2030 as a concrete sign that we've made a lot of progress in better factoring the total cost of food? And then secondly, for our listeners who are all consumers of food, what might be one takeaway for them around this general idea of total cost of food that they might be able to apply in their day-to-day decisions?

CADY: So, in 2030, what would I like to see? I actually would like to see 80 percent of the way in which we grow food using ecological and regenerative approaches. I think that is going to do a huge service to the planet, to people on it. And I think that by using true cost, true value frameworks, it's also going to help us see how to get there and how to leverage that. And then what can I say to consumers? There's a local restaurant in Minneapolis that has a Buddhist prayer on the wall that goes something like, Know how your food has come to you. And so really, people, pay attention, know how your food has come to you, how has it being grown, how has it been processed, how has it been transported to your door. What is happening to your health, to the health of the community, and health of your family, friends, and children? That's what I would say. Just deeply think about that. That's the invitation.

PRABHALA: I would imagine, I think, the health system taking a greater interest and ownership of social determinants of health, including food, is a good sign. I think are already in the

preliminary stages, and I think there's a lot of early stage innovation, but by 2030 I'd hope that there's a greater integration between the health system and the food system, and health system is actually trying to address some of these challenges by incentivizing consumers differently. That I think could meaningfully shift the true cost of food.

MCARTHUR: Well, this has been an amazing conversation, thank you both so much for what you're doing within 17 Rooms and of course, what you're doing beyond the Room in both bringing these issues together, but also crucially, helping to move them forward with so many collaborators around the world. So we're honored that you're able to join us today and really grateful for the insights you've been able to share and look forward to seeing all the next steps as this continues to move forward on such a vital issue for all of us, each individual human being around the world and, of course, the environment that we live within. So thank you.

PRABHALA: Thank you, John. Thank you, Zia.

CADY: Thanks to you both. And 17 Rooms.

KHAN: John, that was a fascinating conversation, but I have to admit, I've been thinking about that apocalyptic bowl of cereal that you had the morning every time they mentioned the dangers of food.

MCARTHUR: Cereal itself didn't feel apocalyptic in the moment, but if one takes a step back, at a minimum, I think, is came up in this conversation, it's really hard to tell sometimes what's good food for the world and what's bad food. We can think about what's good for us, but it's a bigger question what's good or bad for others?

KHAN: And one of the benefits of the true cost of food is at least we can start to understand that and we can put dimensions on it and we have something to debate. But as we've learned, even if we can do those analytics, even if we can come up with the definition, and even if we can come up with the numbers, how do we go about changing things is really hard. But that doesn't mean that we shouldn't try. And that's been one thing that's so impressive about this Room is they've planted some concrete next steps so that we can start to make progress and ideally make progress next year.

MCARTHUR: This story isn't going away. This issue isn't going away. It's only going to become bigger and bigger in the world in our public conversations, I anticipate.

To learn more, find this episode at "Brookings Dot Edu Slash 17 Rooms podcast." Coming up in our next episode, Room 12 with Matthew Bishop and Raj Kumar on a campaign for higher quality ESG reporting in the media to promote corporate accountability. We'll see you then.

MCARTHUR: I'm John McArthur.

KHAN: And I'm Zia Khan, and this has been 17 Rooms.

MCARTHUR: Our thanks go out to the guests you heard today, and also to the production team, including Fred Dews and Alexandra Bracken, producers; Jacob Taylor, associate producer; Gaston Reboredo, audio engineer, and Nicolette Kelly, audio intern. The show art was designed by Katie Merris. Additional support comes from Shrijana Khanal, Ian McAllister, Soren Messner-Zidell, Andrea Risotto, Marie Wilkin, Chris McKenna, Esther Rosen, David Batcheck, and Caio Pereira at the Brookings Institution, and Nathalia dos Santos, Sara Geisenheimer, Hunter Goldman, and Miranda Waters at The Rockefeller Foundation.

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