

DECODING IMPACT
DECODING CLIMATE FINANCE
WITH VARAD PANDE

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Acknowledgements

Contributors

This podcast was arranged by the **Capital for Impact Team** in Sattva Knowledge Institute and was hosted by **Rathish Balakrishnan**.

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About Sattva Knowledge Institute

Sattva Knowledge Institute (SKI), established in 2022, is our official knowledge platform at **Sattva**. The **SKI** platform aims to guide investment decisions for impact, shedding light on urgent problems and high potential solutions, so that stakeholders can build greater awareness and a bias towards concerted action. Our focus is on offering solutions over symptoms, carefully curating strong evidence-based research, and engaging decision-makers actively with our insights. Overall, SKI aims to shift intent and action toward greater impact by influencing leaders with knowledge. All of our content proactively leverages the capabilities, experience and proprietary data from across **Sattva**.

***Introduction:** You are listening to Decoding Impact, a podcast by Sattva Knowledge Institute hosted by Rathish Balakrishnan.*

Welcome to Season Two of Decoding Impact. Every fortnight we will engage leading thinkers and practitioners to understand what it takes to solve systemic problems at scale. For all the curious changemakers committed to understanding the trade-offs and incentives to make this world a better place, this one's for you.

Highlights:

So, you know, climate change requires, therefore, a fundamental retooling of our entire way of life. I think that's what makes it really hard.

...She says the funding needs for climate change are in the trillions and we are talking and having conversations about billions.

...But adaptation, resilience and loss and damage, I would argue, are the stepchild in the climate finance debate.

...The developed countries owe India 15 trillion USD on account of indiscriminate use of carbon space. So the numbers are not small.

...India needs to act on climate change for its own sake and not because somebody else is telling us to do it.

...What would your message be for an industrialist, or a government bureaucrat, and for a philanthropist?

...I land a little bit more feeling that it's a spring of hope rather than a winter of despair. If we can bring the best of human ingenuity to address this problem over the next decade.

Rathish Balakrishnan (RB): [00:01:28] Joining us on Decoding Impact today to explore the topic of climate financing is Mr. Varad Pande, a climate finance and investment expert. It's no secret that climate change is one of the key challenges confronting humanity today. The scientific evidence is clear, our planet is warming at an alarming rate and we are on the verge of exceeding the 1.5 centigrade limit established by the Paris Agreement in 2015. If we persist on our current trajectory, the consequences of breaching the limit could be catastrophic. Now, as India assumes the G20 presidency under the theme of One Earth, One Family and One Future, it is an opportune time to discuss the intersection of finance and climate change, and the role India can play in the global agenda. Finance has a crucial role to support mitigation and adaptation actions that are necessary to address climate change. These financial resources are especially important to some of the most vulnerable nations who have fewer resources to fight climate change. There has been a lot of signaling from leaders across governments, businesses and philanthropy towards the cause, but there is a need for sustained support and actual commitment of resources. So how much money are we talking about? What institutional structures do we need to put in place to accelerate action? To discuss these in detail with us, we have with us Mr. Varad Pande, a social impact and public policy professional, currently Partner at BCG, shaping their work in climate and

sustainability. Varad has held diverse roles across government, multilateral and investment organisations working on issues of economic development, social impact and base-of-pyramid business models. Thank you so much for joining us, Varad.

Varad Pande (VP): [00:03:16] Fantastic to be here. Thank you, Rathish.

RB: [00:03:28] Varad, for me, as I was reading your introduction as well, I was thinking that you've had a more long-term view to this problem, than many of us who have recently just joined this conversation. And, you know, when you look at something for time, it builds perspective. It builds perspective on what has changed, you know, and has surprised you and actually what has remained the same. So I'd love to first hear from you what has changed over the years that you've been a part of this conversation, and what has remained the same? And why is this such a difficult problem to solve?

VP: [00:03:59] Yeah. Thanks, Rathish, and great to be here and thank you for taking on this topic of climate change, which I think now a lot of people believe is sort of the fundamental problem we have to solve in our lifetimes. And I think in particular we'll go into this, but the topic of climate finance, which I think is really the central elephant in the room in this whole discussion. So let me just firstly, just start out by saying that, you know, you asked what has remained the same, what has changed? I'll list out some dimensions of what makes this problem so hard, and then I'll tell you which ones stay and which ones look a little easier now, right? So I think there are I would call this like the mother of all wicked problems. And I say that for three reasons. The first is just the fact that this is truly an existential threat to humanity. Right. Many people have now argued that we are probably reaching past the red line and at the same time, there are no obvious answers, right. So we are seeing the effects of climate change are now being felt, whether it's heat waves, extreme weather events leading to droughts or even this whole notion of tipping points, which was a recent learning for me, but actually quite scary, which is abrupt, irreversible changes with domino effect. So for example, with the Arctic ice caps melting, they might change the pattern of the water currents in the Atlantic Ocean, which might change the monsoon patterns, which might lead to droughts and floods. So now the interconnectedness of these problems is also coming to the fore. So it's an existential threat to humanity. The second is, I think it cuts across every sector and every human activity. You know, very often we are used to think in terms of sectors, but this is not a sector problem, right? It's about everything we do. Bill Gates in his excellent book, *How to Avoid a Climate Disaster*, which I recommend everybody should read, puts it very simply and very nicely when he says that, you know, emissions happen when we make things, whether it's cement, steel, aluminium, when we plug in electricity, when we grow things, agriculture, forests, when we get around, cars, vehicles, and when we try to stay warm and cool. So, you know, climate change requires, therefore, a fundamental retooling of our entire way of life. I think that's what makes it really hard. And lastly, I would say, you know, the the issue at a conceptual level is what economists call the tragedy of the commons. Right? Or in simple words, there is an incentive for everybody to free-ride. So, you know, mitigating climate change, reducing emissions is a global public good where the benefits flow to everybody, irrespective of how much you contributed to it, which means as an incentive to free-ride on the action of others and leads to overall suboptimal action. Right? So to break that, we are stuck in a tragedy of commons we have to break. So I think

the this is why this is such a, such a difficult, monumentally difficult problem to solve. Now, to your question, you know, and I'm delighted as somebody who has seen the climate space closely now for the last 14-15 years, you know, what was a conversation which was essentially in the negotiating rooms of a UN COP process has now become a mainstream conversation, right? Even if you see the participation in the COPs (the UN COPs), earlier it used to be negotiators and some people protesting from civil society. But today, every sector of the world is represented in climate conversations, whether it's in the UN process, whether it's in World Economic Forum, whether it's in the G20, et cetera, et cetera. Right. So it's become truly a mainstream conversation, which is delightful to see, because recognising the problem is the first step in solving it. That's one change I see.

The second change I see is, you know, negotiators back in the days when I was part of climate negotiations, used to play a lot of defense and say, 'oh, this we can't do this, we can't do this, we can't do this. This is a red line'. That was the that was the primary mode of engaging. I think people are now playing a lot more offense. People are coming up with solutions. People are coming up with, you know, ways in which they can contribute collectively, et cetera. I think the appetite to collectively contribute to solutions has gone up. So I think that's the second thing which is changed.

And the third thing which has changed, I think is, you know, for very long it was a threat framing. This is an existential threat, as I said, for the various reasons. I think there's a lot more energy around the conversation today on how this is an opportunity, something you also referred to when starting this out. Where we are, you know, this is not just about preventing ourselves from cataclysmic disaster. It could be an entirely new way of thinking about how we construct the world for the next few centuries and the opportunities that have in terms of competitiveness, jobs, a better way of living, higher standards of, and quality of life and so on. So I think that's sort of the good thing. I mean, the bottom line, unfortunately, what is not changed, is the ticking time bomb continues. It is a ticking time bomb. There's a limited window in which we can act. The numbers are looking more and more difficult each year. The carbon budget is getting filled up as we speak, so that's not changing. The tragedy of commons element of the problem, which is a conceptual problem, is not changing. So the takeaway for me from both of these interplays is that, you know, traditional ways of solving this problem will not work. We need to be open to and look at much more creative, innovative solutions to solve the problem.

RB: [00:09:18] No, no, thank you Varad. And this is very, very well-framed. Just two reflections from my side as you were talking. I think the first one and I was recently, you know, talking to somebody and they were talking about how tribal communities have always taken care of their natural resources. And we haven't. And I said tribal communities have a much smaller feedback loop that if they cut the forest, they cannot live. We are living in economies where the feedback loop is much longer and it sort of speaks to your tragedy of commons conversation, saying I don't recognise what I do to the quality of my air when I make the consumer choices I make, and they seem disconnected today. And to connect that I think is much more difficult. And given where we are today, it is extremely critical. And for me, the conversation that India's spearheading around the LiFE conversation, which is Lifestyle For Environment, speaks to this choice. And I think the Bill Gates articulation is very

interesting, which is the choices we make, which is what we buy, where we eat, how we live, how we heat our rooms are actually going to make a significant impact on what we're seeing in the climate and environment. And the second reflection is, and again, building on what you said, a lot of times money is spent in making a problem, a real problem for a lot of people. And that seems like the insurmountable challenge. I know you know this for education as well. For the longest time we said getting children to school is the problem. Now children are in school. How do they learn? Similarly in climate, I think now we've got, made sure everybody's attention is there. Now what do we do with it, I think, is becoming critical. And that sort of speaks to the elephant in the room conversation that you said. Why is climate finance so hard?

VP: [00:10:49] Yeah. So I think let me start by a quote by Janet Yellen, who's the US Treasury Secretary. I think she summed it up in one line. She says the funding needs for climate change are in the trillions. And we are talking and having conversations about billions, right? So we need two more zeros to be added to this conversation. We are negotiating about billions here and there, right? So I think that's really the the problem. And there are two aspects to this, to this piece. You know, the one is just this financing gap issue. Lots of studies have now been done on how much money does the world need to address the climate problem, to become net zero by 2050, to stay under 1.5 to 2 degree Celsius temperature rise. All of them say we need something in the region of 3-5 trillion dollars a year, right. And currently, if you see the numbers, if you add up everything that is being spent on climate-related stuff, it's about 600 to 700 billion dollars. So we are off by a magnitude of five. We need to scale up climate finance by an order of magnitude of five. Not going to be easy. The second aspect of the funding problem is the misallocation of capital. And I'll tell you 3 or 4 dimensions which which are, I think, fascinating.

The first is that 80% of climate capital today is going to just two sectors - electricity and mobility. And these contribute about 42% to 45% of the emissions. So you could argue 80% of money is going to solve 45% of the problem. Other high-emitting sectors such as agriculture, industry, whether it's steel, cement, aluminium, are deeply underfunded and very, very hard to change. So there's a capital misallocation problem from a sectoral perspective, even in the early stage investing world where I said, you know, two-thirds of the capital is going to just mobility, right? And there are a plethora of climate tech incubators, accelerators, but there's this whole valley of death. They're not getting venture capital funding beyond beyond a certain stage.

The third aspect of misallocation is the developed country-developing country, or what is now called the Global South piece. 80% of climate capital is still going to the developed countries, while the social return on investment is much higher in the Global South. Why? Because these countries are not yet locked in to the high carbon pathways that the West has used over the last hundred years. And so there's an opportunity to help them or us rather, avoid the mistakes that have been made by the others. Right? So this you would have heard this number, which is often cited, that 70% of India's infrastructure needed by 2050 is still to be built. Now, what choices will we make about that? Infrastructure depends on climate finance being available to us. But right now, 80% of climate finance is going to developed countries.

And the last piece of the misallocation is the piece on adaptation and resilience. So, you know, the climate debate has these three categories. There's mitigation which is reducing the emissions to meet the 1.52 degree goal. It has adaptation and resilience, which is really about accepting the fact that we are already locked into some really bad things. We need to prepare ourselves to those, whether it is early warning systems, whether it's better seeds, which are more drought resistant, whether it is seawalls and mangroves to protect our cities from floods, etc, etc. So there's adaptation, resilience. And there's a third thing which we can come to later called loss and damage. But adaptation, resilience and loss and damage, I would argue, are the stepchild in the climate finance debate. All the attention and focus and 90% of the money is going to mitigation. So we have two levels of problems. One is just the absolute money problem where we are 5X off and the capital misallocation problem, which is whatever is coming in, is not going to across all the things that really matter.

RB: [00:14:39] And it seems like a criminal waste, when you have less money to solve a very large problem, you solve it. You invest that money in the wrong things. Right? Because you're already dealing with a scarcity issue and you're being, you know, irresponsible with the capital you have. This actually is a great framing for our entire podcast. So I want to sort of pick each of these and then go deeper. I want to start with the developed and developing conversation, partly because I think starting from the most broadest conception of capital finance then helps us drill down to India, then helps us drill down to where to invest and so on. Forest and Climate Change Environment Minister actually quoted that developed countries owe India 15 trillion USD on account of indiscriminate use of carbon space. So the numbers are not small. I mean, this is a significant chunk of numbers. The first question that I have is this global North-global South dynamic is a fairly old one. It has shifted in the sense in the last few years, but it's still a fairly old one. Do you think there is a way to skew this balance today in the context of climate?

VP: [00:15:42] You know, I've been in some of these climate negotiation discussions, so I've seen this issue firsthand. And I completely empathise with the view of the developing countries or the global South on this matter. I think the term 'climate justice' is often used. I would say it's a legitimate demand of developing countries. Right. And for two reasons. Again, India and the developing world has made this demand of climate justice for two reasons. First, this is a problem of the stock of emissions, which have happened roughly since when Industrial Revolution began in 1850. So to say, oh, India is today the third or fourth largest emitter means nothing. You have to see what is been the cumulative emissions done by countries since the Industrial Revolution. Right. And we have a fixed carbon budget. So there's a fixed carbon budget beyond which we will breach the 1.5 and eventually the two degree threshold. And that carbon budget has already largely been used up by the the more developed countries of the West, right. And now we are being asked to share whatever is limited and let's share it between ourselves, right? So I think it is a little unfair given the growth, development, poverty eradication continue to be really important and central priorities for the global South. And historically these have been linked with higher emissions, right? So I think that's the argument. That's point number one. Point number two is this point on per capita emissions, right? So you could argue that if all of us

have the same right to carbon space, then, you know, again, saying India is the third largest emitter is unfair because on a per capita emissions are something like two tons per capita. EU and the US are more than 15 tons per capita, right? So it is again unfair to sort of put countries like India in the same bucket and think there too, there's a very strong climate justice argument. And the Barbados Prime Minister, Mia Mottley, who has emerged as a really strong advocate of the voice of developing countries, recently, put this really well when she said, you know, we were the ones whose blood, sweat and tears financed the Industrial Revolution. Are we now to face the double jeopardy by having to pay the cost as a result of those greenhouse gas gases from the Industrial Revolution? And this is fundamentally unfair, right. So I think the developing countries are being thrust into a double jeopardy situation, as Prime Minister Mottley argued. Right. And it is for this reason that the principle of common but differentiated responsibilities was enshrined in the UN Framework Convention on Climate Change, UNFCCC, right. And a matter of principle, we managed to get it in. We have struggled to operationalise it in its true spirit. So, you know, short answer to your question is, I think there is a lot of legitimacy to this demand of climate justice. But at the same time, the reality is that we are all hurtling towards, you know, a bad outcome. And so we need to find a way out rather than just restating our positions.

RB: [00:18:46] And I was thinking about it that given this is a situation and it's an underlying dynamic issue as well, you know, and I'm sure the developed countries are also facing their own internal political questions on what they pay for and what they don't. And in the light of what is happening in Europe and the US today, which is the market situation that isn't pretty. Are there ways to frame this problem towards a solution? You know, are there sectors where we can go deeper in? Are there ways in which this transfer, just transfer of resources can actually happen between developed and developing countries?

VP: [00:19:21] So you're absolutely right that the appetite to share large amounts of resources with the global South is not there in the West or the global North, right. And this is a big problem. I think, you know, taxpayers are not willing to take on large amounts of burden and politicians are not willing to get taxpayers to take on that burden. So a lot of the conversation has moved in two directions. One is that, hey, this is an opportunity for us to become more competitive, create more jobs, etc, etc. If you see what the US has done with the Inflation Reduction Act, which was passed last year under President Biden, the whole pitch was this is a jobs plan. This is a jobs plan. It was called Inflation Reduction Act, had nothing to do with inflation. It had everything to do with climate change. And the pitch was about jobs. Right. So it was it was very interesting in that sense. So in the West, thing is changing towards jobs. The other shift which has happened is, much more spotlight and expectation and reliance that the private sector will need to step up because government funding and government-to-government funding is going to be a drop in the ocean whether we like it or not.

You know, there's this long standing number which has been floating around in the climate talks since 2009, Copenhagen, which is that developed countries will make available \$100 billion a year to developing countries as climate finance. We are in 2023. We are still not, we've still not even reached 100 billion. Right. And remember where we started? We need 3-5 trillion dollars a year. And we are talking we are not reaching 100 billion which the

developed countries had promised the developing countries. So unfortunate, but a lot of the conversation has now moved to, okay, we'll try to push that. Maybe 100 will become 200 at some point or something. Nick Stern has done an excellent piece of work recently where he's argued that for a country that is, you know, rich countries whose per capita income is \$40,000 per person, all we are asking you to is to write a cheque of about \$700 a year to the developing world. And now put that way, it sounds like a small amount of money, but it's still politically untenable.

RB: [00:21:31] Oh, absolutely. And wanted to reflect on something that you said earlier, which is and I've never seen it framed that way. You know, this whole third largest emitter conversation, you know, is something that everybody quotes today. And I think it's interesting to ask ourselves, is the unit, the country unit is a person, right. Because if the unit is a person for 1.4 billion people, we are not doing too bad because a lot of our people don't have the resources to spend as much as most of the developed nations do. Before I come to the the market behaviour and the role of industry, which I think is a very important one, I wanted to talk about the loss and damage fund. You highlighted that in the introduction as well, and it was discussed in the COP 27. I wanted to see how that fits into this entire dynamic. And where do you think that play is today?

VP: [00:22:11] So the loss and damage fund is almost like the third pillar of climate finance. The first pillar, remember, is mitigation, which is how do we pay to reduce emissions by, for example, moving from fossil fuel-based energy to renewable energy. So that's mitigation. The second pillar is adaptation, which is to say, unfortunately we are already locked into bad things. Temperature is going to go up already. Bad events are already happening. So we need to be prepared for a different planet. So we need to invest money in adapting, adapting our communities, making our communities resilient to what's going to happen. And the third is this very interesting concept called loss and damage, which is really this idea of reparations or compensation for losses already caused in the past because of actions unrelated to actions that I took. So remember the floods in Pakistan last year, which affected one-third of Pakistan? I mean, it's a mind-numbing statistic. And, you know, large amounts of that is attributed to climate change. None of it is the fault of the people of the country, but they had to face the brunt. So Pakistan is demanding loss and damage for the losses caused through the floods last year. Right now, this has been almost like a third least-discussed pillar of the climate finance conversation.

The good news was in last year's climate summit in Sharm el-Sheikh in November 2022, this finally got some some airtime and some place in the sun. And a framework agreement on a loss and damage facility was agreed upon. And a little bit of, tiny little bit of money was put into it. Now, like with all UN processes, I would say that this was the start of the journey rather than the end of the journey. There are a number of detailed design decisions which need to be taken with respect to the loss and damage facility, such as who will pay, how much will people pay, what users will be allowed under this facility? Who will administer it? Will it be debt or will it be grants? Will it replace...this is a big worry of developing countries. Will it start replacing traditional aid or traditional overseas development assistance because it is just replacing, then it's not additional? Will it truly be additional? So all of these detailed design questions still have to be worked out, but it's at least the fact that the issue of loss

and damage has been accepted by parties and a framework agreement has been signed, is a step in the right direction.

RB: [00:24:40] Yeah. And as you're speaking, I realize that some of these are done step by step. You know, we love this big bang transformational change that one day it'll all be different. But given the number of countries involved, it is built step by step. I just hope the glaciers in the Arctic are going to wait for this to happen, because that is the challenge, because always the problems run much faster than the solutions. But let's come to the part around just making the pot larger because the developed nations-developing nations dynamic is one thing. And ideally at some point they're going to pay up and that's going to provide us more capital. But India has to take care of what it has to do. Right. And even for us as a country, there is about \$110 billion a year requirement that we have to be able to solve the problems that we have to. As you're looking at this problem. And I think you made the point right in the beginning that we can allocate this money as much as we want, but we are talking dimensionally lower capital than what we need. And I think the point that you made when you started this conversation is there needs to be a different way and a more novel way to solve the problem than doing business as usual. Tell us more about it. Where is this money going to come from if this is the amount of money that we need?

VP: [00:25:48] No, I wish I had a credible answer to that question. I think what we can lay out is, you know, it has to be a workmanlike approach, which is to say we have to knock on every door and we have to try and get as much money as we can source, right. And that's governments. That's private sector. That's one typology. There's international flows and domestic flows. That's another way to look at it. There's also the role of philanthropy, which we can come to at some point and what role they can play. But I think the most important thing is that we have to sort of work on all of these together, right? So domestically, look, India is doing what it can do in the budget that that was a couple of weeks back announced by the finance minister. There was an outlay, a new outlay of INR 35,000 crores for energy transitions. We already have something called a National Green Hydrogen Fund, which is with a budget of about INR 20,000 crores. So some big numbers are being talked about domestically. Right? But as we discussed, the global South will always have massive budgetary constraints and we will need a massive increase in international flows, partly because of the constraints in resource mobilisation, partly for the climate justice argument that we discussed earlier in the discussion. And as I said, the developed country governments are stepping up a little bit, but we haven't even reached that \$100 billion number. So the big hope then rests on the private sector, right? And despite bold pronouncements by private capital providers and there have been several, I'm sure you would be seeing that as well, we are not seeing flows commensurate to what is needed yet, right. Especially when it comes to the global South. One of the reasons that is offered is, oh, in the global South, the perceived risk premium of investing in climate infrastructure is very high due to reasons of regulation, political risk, currency fluctuation, etc etc. Right. So business as usual, private capital is severely constrained in coming to the global South on this particular area.

So a lot of people have been arguing and I'm a big supporter of is that we need a new paradigm of public private partnership. So we've had this phrase now going around for

several decades. But this version of public private partnership should be about getting public funds as catalytic capital. And private funds then to come in to take advantage of that capital and those private funds can be 8-10X of the catalytic money that the public sector puts in. So let me give you an example right? Today, funding a solar power project in many parts of Africa is hard. Private sector players are not ready to do it and they give the same reasons. The risk premium of investing is very high. The Economist last week had framed it really well when it said, you know, a solar farm in cloudy Germany needs a return of 7% to be viable. Whereas one in sunny Egypt needs 28% to be viable, right. So, and this is, of course, not unfortunate because Egypt has much more sun than Germany, but the higher risk premium of investing in Egypt makes the expected rate of return much higher. Right. So, in such a situation, if public or concessional capital could come in, right. And provide, say, a guarantee to cover for losses that might arise if certain events happen, for example, a payment default by the utility, or currency fluctuation, or you know, whatever the tariff arrangement is that being changed, right. Or power purchase agreements being rolled back, etc. So the kind of risks that private sector is not comfortable with taking. Then if somebody is willing to cover this through a guarantee, then it may be possible to convince a large private investor to invest in that plant because it reduces the risk premium and cost of capital and makes the project viable. So that's really, I think, the heart of the kind of transformation we need. This approach is being called by different names catalytic finance, blended capital, etc. It is beginning to catch on. The latest numbers, I'm told, are something around \$1.5 billion a year. But again, remember, we are we have to get to 3 to 5 trillion. We are very, very far. But that journey has begun, right? We need this kind of stuff to happen at a massive, massive scale. If we want to get that kind of private money leverage to be able to reach somewhere near the trillions that we are that we are beginning to talk about.

RB: [00:30:21] And I want to spend a little bit more time on this because I've always also personally felt that the promise of blended capital and blended finance is always significant. Then what is unlocked on the ground, right. And the problems are many. And I will state the premise that I start with, and I'd love to hear it from you as well. One is that every problem has parts of it which have low returns and parts of it which have high returns, and we expect the same capital to solve all levels of risk. You know exactly what you highlighted right now that the 28% that the capital is expecting is covering for risks beyond what the private player is willing to solve for, which is effectively running and producing electricity through a solar farm. And they're blending the capital of public. And then the private makes sense. And that's exactly what we would need to do. Theoretically, it makes a lot of sense. In practice, however, the transaction costs of making it happen have always been very high. You bring in the mediator, the structuring of this, the intermediary calls that we have to pay and so on. I wonder if there are ways in which we can reduce the transaction costs and two, simplify the imagination that is required to make this happen. Because for me, the problem with blended cost is almost always it starts off with the first person on Moon. You're going to start thinking of every problem and then increase overheads. I don't know if this has been your experience as well, and I don't know if you had any ideas on suggestions on how we can unlock this and make this happen.

VP: [00:31:40] Absolutely, I think and you know, this links to even the discussions that happen on results-based financing, right like development impact bonds and you know great idea, outcome-linked. But if the cost of administering a DIB is like 25% of the project, then you know, it's not going to scale beyond a point. So, a similar notion I think here as well. I think there are few things that are needed, right?

One is, I think, like you said, firstly, having clarity on what kind of capital can play, what role in the financial structure. We need much more clarity on that. The second is we need to move somewhat more from a project mode to a product mode. And by that, I mean that can we create almost like templates of, say, solar farm projects of 100 MW, right. And the World Bank comes in and says this is the standard agreement. You know, this has already been tested, vetted by all parties and now let's just get going. So instead of spending 12 to 18 months negotiating with the World Bank as a possible guarantor, we can get started now. Right? So, we need that to change. And thirdly, unfortunately, and this is a hard one, is we need to change mindsets of funders, right? For the longest time, there's a big discussion going on right now on how the multilateral development banks, the World Bank, the African and Asian development Banks and so on, should really switch from being lending banks to being leverage banks, right. But it's very hard. It's very hard for many reasons. They have a certain governance and decision-making framework, which is hard to move with. They have, you know, staff who know how to do lending. You know, leveraging is a very different ballgame. Right? And the mindset, really, of making that radical shift is not there. So we need to also change the mindset of how we even think about these problems and the role we can play around them.

My personal view, if you ask me, is that a lot of hope from the multilateral development banks, but they will reform at a glacial pace and we need something new. I'm writing an op-ed on this, which is that I think we need some sort of a new global climate finance agency, which is from day one, focuses exclusively on leverage instruments only. Right. So I'm talking about things like the first loss guarantee, mezzanine capital, project insurance, which also sometimes comes up, technical assistance to do the kind of getting quickly through templates, etc. So all of these things which I can I would bucket under leverage instruments, let there be a bank or an agency that focuses only on leverage instruments and really help unlock, you know, private capital by doing all of this stuff really efficiently, which currently is not being done.

RB: [00:34:14] What you're saying resonates on two counts, and I want to build on that with one more point. One is expecting existing institutions that are responding to a certain pace of change to respond to a crisis that's running much faster is not going to happen. I think organisations have over years established an operating rhythm and changing that operating rhythm for a new crisis. You know, most organisations just operate and then we see new ones. So I think the point of building new institutions to solving these problems I think makes sense. And I think the second part is, and this I've seen in practice as well, that existing ecosystems optimise for existing behaviours, you know, and we have to build a new ecosystem. And after a while, traditional ecosystems move in, you know, so there is what in the ecosystem is called ecotone where ecosystems actually blend, right? So it will be good

to see, establish a certain norm and see them move to that rather than change the existing ecosystem. Sort of respond to that.

I want to build on the points that you made beyond mindset and others as well, which is really infrastructure, you know, and your idea of an institution speaks to that is that one part of it is to see this as projects to products. The other is to see this as infrastructure that we build on, top of which these products run so that every product is not solving for all problems, you know, and carbon markets is an example. An effective carbon market exchange is a great infrastructure on top of which the things can happen and we can potentially create infrastructures that can attract and regulate capital flows, resource flows, transparency, et cetera, which creates an effective environment for people to operate. I don't know if that idea resonates with you, and any examples that you can highlight as well.

VP: [00:35:49] No, absolutely. I think we need to do a lot more of collective infrastructure to aid a lot of this, right. And I think the you know, you and I have spoken about the whole notion of digital public infrastructure, right, in many other contexts. But I think we need that is one area of genuine infrastructure. On measuring emissions in a consistent, low-cost, aggregatable way. And that, by the way, is also an important unlock for the carbon markets because the, you know, almost like a necessary condition for a carbon market, is high quality data on emission reductions, right? So I think that's a great example of the kind of infrastructure we need to put in place. There's also soft infrastructure. So for example, I think we need to create, you know, more forums for countries to exchange how some of this stuff is done. So there's a whole topic of discussion these days called the Green Taxonomy, which is the idea that investors need to have a clear sense on what is considered green, what is not considered green, etc. And that discussion every country is trying to create their own green taxonomy. You know, reinventing the wheel kind of thing. Can we create like almost like a base green taxonomy? Right? And then, of course, others can countries can build nuances and specific specifications and flexibilities around it. But can we have like a common green taxonomy, which can be led through a collective action approach as an infrastructure for the climate change space? And last, I'll give you the example of the carbon market since you talked about it. I think, you know, massive opportunity to unlock, both money, but also getting businesses and industries to change their carbon emission patterns over time. And that requires, you know, a really strong one national level regulators that are professional, adept and understand the dynamics of a market. India has been lucky that we have had a few experiments in the past on environmental markets, something called the PAT, the Perform, Achieve and Trade scheme that was administered by the Bureau of Energy Efficiency, which led to something like a 17% decrease in emissions of industries over the last 4 or 5 years. And so we need those kind of regulatory playbooks, both at a national level and at a at a global level to make all of this happen. So I think those are just some few examples. I think your broader point is well-taken, that we need that infrastructure to come together and we need to do it in a way that doesn't get stuck with the UN consensus-building approach because as you said, we are not you know, the Arctic ice is not going to wait for us, right? The fundamental challenge with the UN approach is it's a consensus-based approach. Everybody has to sign up to everything on that sheet of paper, right? And then that that takes a long time. So I think there is an opportunity there for

plurilateral approaches where you don't need to take everybody along. But can like-minded countries come together and do things right? The International Solar Alliance, which India and France started a few years ago and that today has 113 members around the world, is a great example. If India and France had gone to the UN and waited and let's negotiate an international solar alliance, we would still be talking about the text of the treaty. Instead, we got started, put some money in, did some pilot projects, showed interest. And today there are so many partners who are willing to take that forward. We need to change that approach of how are we getting to these things, not relying on the traditional approaches of either a UN-based approach or the traditional MDBs expecting them to take the leadership or even traditional private finance, which are also not just the MDBs, but traditional private finance is also caught in certain ways of making decisions. We need to think of new ways and then try to see if they can scale.

RB: [00:39:50] And as you were speaking, Varad, I was making a stack diagram of sorts for myself. Right. Like what all are we saying should fall in place for private capital to come in and want to play that back to you and then see what are we missing? One is this the underlying foundation, this emergent ecosystem which is agile, climate-focused and has a bias for action, you know, that allows for international cooperation. On top of that, we are creating systems that provide the foundation, such as data that we need and, you know, provides the fact of truth in some sense, which allows us to have honest conversations. We are looking at infrastructure of institutions and, you know, exchanges etc, that you highlighted are necessary that allow for fair transaction with very low friction. There is a soft infrastructure on top of it which allows for forums, knowledge exchange, etc. If you set all of this up overall, that provides a foundation for a country. The country then layers this with patient capital, public capital that reduces the risk of operations for private capital to play in. On top of that are products that come in. And I want to come to diverse sectoral products, you know, mobility to agriculture, to all of that, that ensures that capital flow is balanced. And if we lay all of this up, the market capital starts to come in because it has the product where it has to play. Its risk is covered through the patient capital the government provides. It has a transaction system that is regulated and transparent with the infrastructure we set up, and hopefully the opportunity is large enough, given the ecosystem of multiple countries coming together to create a chance. Does that stack sort of make sense? Anything that you think that is missing in sort of putting this all together?

VP: [00:41:27] Yeah, it's a multi-storey building and I think we need to build all the floors of that building. And, you know, my bias, having seen this space again for a long time, is not to get into analysis paralysis, but just start some of these things, right? Like, let's say, you know, there's a good discussion now happening on a climate NITI Aayog, right? Which is let's and again, let's try and create a create a prototype, see if there are some states who are willing to start using it. And let's you know, let's get going on those. I think I'm sort of a little bit fatigued with the forums to discuss a lot of these ideas, much more, I think, biased towards let's try out, show proof and then try to create a momentum around it approach.

RB: [00:42:18] And I think it goes back to the example you gave of the challenge we are facing, Varad, in the sense that just as glacier and Arctic melting changes the monsoon patterns, sometimes introducing an item like a DPI changes things in a way we can't even

imagine. These are open systems and I think we are trying to engineer the whole thing and let it go. But those work for closed systems like buildings, they don't work for open systems like international cooperation. And I think that's a fundamental difference. I'm tempted to spend a little bit more time on carbon markets. In another forum you had highlighted that it is a complex problem, very hard to do, but is very necessary and I think we touched upon it. But I don't know if you want to add a little more to that, because India is experimenting with carbon markets ourselves and I want to double down on carbon markets also because of agriculture. It is one of those cases where there is this economic equity conversation that happens with farmers coming in. Agriculture being one of the largest emitters and, you know, an industry of concern and the value that this infrastructure can bring in, in tying two different industries together, for example. Right. So just talk to us about it. I don't know. I'd love to hear your thoughts on that.

VP: [00:43:21] I think the, you know, this is one step back is the idea of carbon markets emerge from the idea of a carbon price, right? Because we have not priced carbon correctly. That's why we are all making suboptimal choices. So we need some carbon price. And when you have the carbon price discussion, there are two options. You can either do a carbon tax or you can do a carbon market, right? Carbon tax politically palatable is difficult even in the West. Carbon markets, if well designed, can send the right price signals required for climate transition. Right? And then within these two there are two types of carbon markets. There is a compliance carbon market which is, you know, regulator comes and says, we got to do this, here's your roadmap over time and here are your quotas and then you have to come down over time and you can trade in the market. If you are not being able to achieve your quota. Then there's the voluntary carbon market where your point on agriculture actually comes in and becomes really important, which is now that many organisations have made net zero pledges, some of it, or a lot of it, hopefully they will do through the internal actions. They will not be able to get to net zero entirely on their actions. So they will have to buy some credits to meet their net zero obligations from the carbon markets, from the voluntary carbon markets. And there I think it's a massive, again, opportunity to unlock climate finance for a lot of livelihood kind of things that, you know, people like us work on, right? So in the agriculture space, one area I'm very excited to see is this whole how do you get people to move from traditional agriculture to regenerative agriculture and the soil sequestration of carbon can then also be monetised as an income stream from the voluntary carbon market and make that available to the farmer. So you have both an ecosystem level. This is a biodiversity type of benefit, which is you're moving farmers from a bad practice to a good practice. You're also creating an additional revenue stream for the farmer and you are doing carbon mitigation at the same time. So I think that's sort of very interesting. I'll just tell you my you know, I was on a conversation last week at the World Resources Institute on this topic. I've taken away like to design good carbon markets, you need 3 or 4 things. And I sort of call it the four C's.

The first C of this is just *credibility* in the measurement system, which is, you know, setting a cap whose integrity is being maintained, ensuring that any carbon permits being bought and sold in the market are backed by robust measurement system. And this is where all our discussion on the digital public infrastructure comes in.

You know, in Gujarat many years ago, we started something called an emissions trading scheme, which was not for carbon, but for an ambient air pollution called PM 2.5, which is the dominant ambient air pollution in India. And the idea was can we take the city of Surat and do a market to see whether we can actually reduce emissions there? And that experiment has now been studied very widely, including a randomised control trial and the results are stunning. The results say that there's been a 23% reduction in emissions with zero additional cost to industry. And it's happened because, you know, the Gujarat ETS was backed by a measurement system, a new measurement system called the continuous emissions monitoring system. And only those units which had that could participate. So credibility of the system is very important.

The second is the *coherence* of the market. And by this I mean that the sources of carbon regulated within a market should be comparable and credible. So when you're starting out, don't put very disparate kind of organisations, institutions, plants in the same market because they must be comparable and compatible. You can over time get more breadth to the market, but don't do that starting out. And both the Gujarat ETC scheme and the PAT scheme I talked about earlier in India did that quite well, where they started with certain units and then they gradually expanded the web. So that's the second, coherence.

The third is *consensus*, which is that you have this is a new area, right? And you need to take everybody along. And so start small. Do some pilots, create more confidence, momentum. In the PAT scheme, the designated units that were part of this initially were very few, then went up to something like 400 units over time. Once the market had trust in this whole thing and even the caps should be decreased slowly, right? First you learn how the market is working. Then you can have real caps that can bite over time. Don't start with very high targets. So consensus is very important.

And lastly, of course, the *capacity* question, which is the fact that it's a complicated thing, regulating an emissions market is not easy and we need a national carbon markets regulator that can take a cross-sectoral view because it's not a sector problem. Professionally staffed, has the right kind of expertise and connected to the global discourse because these markets will hopefully eventually get joined as well. So I think these are sort of the big learnings and we are lucky that India has had two of these great examples of the PAT scheme and of the Gujarat ETS that are giving us some of these lessons as we chart the path forward credibility, coherence, consensus and capacity.

RB: [00:48:21] And the point that, you know, for me and it's always why carbon markets with all its complexities interesting for me is that we expect the farmers to do the right thing without ever giving them the incentive for doing the right thing. You know, making the soil regenerative is good for the world, what is good for the farmer? But by carbon markets, you can actually transfer the incentive right down to the farmer and say, 'hey, you get money if you do this'. And that form of incentive transfer I think is very, very critical. I want to touch upon two more things before we close. I know it's been a great conversation so far. The one thing that you touched upon earlier, which I think is important, is shifting from a mitigation mindset to an adaptation and resilience mindset. You know, how do we do that? Tell us

about it, and what are some of the big bets in adaptation and resilience that you think is not getting sufficient attention?

VP: [00:49:06] So firstly think, you know, there's a nice phrase. This is called the carbon tunnel vision, which is, you know, like everybody is so focused on carbon that it's like, you know, you only see one. You're seeing a lot of things there, but you're only you're only seeing carbon because that's what you're focused on. And every adaptation, biodiversity, air quality, water pollution, all of these things get shortchanged, right? And so while, of course, it goes without saying that mitigation is extremely important because we have to change, bend the curve on emissions, I think we are getting somewhat fixated. The challenge is that, look, mitigation is global. The tragedy of commons issue is for mitigation. So really that's the problem in which we are truly all together. While adaptation is local, right? Like beyond a point, selfish individuals may not care if somebody else in some other part of the world is getting affected by lots of floods or droughts. So and that's one of the reasons why we have so much money flowing into finance, relatively speaking, compared to adaptation. The other issue, of course, is the bankability of projects, right? Like we had this discussion on blended finance. Most of these projects have to be revenue generating projects and a lot of them are mitigation projects. Adaptation is much harder to create revenue streams where the private sector can come in. So adaptation will have to be led a lot more through government financing, through international overseas development assistance, etc. And that's just a reality, as far as we can tell.

I think the menu of things to be done are a lot. And to your earlier point, we have to adopt a co-benefits lens, right? Like the farming example you gave, you know, the moving towards seeds that are more resilient, right, are not just good for climate change adaptation, but are good for various other reasons. They consume less water and and so on and so forth. So we need a lot of that. The one, I must say, the example that I feel...Really I'm still learning a lot more about this, but the power of things like mangroves. Mangroves are a very interesting thing. You know, they're very fast growing. They are both mitigation and adaptation. They're mitigation because they sequester large amounts of carbon very quickly and they're adaptation because they are also bulwarks against floods. You know, Bombay has fantastic mangroves. A delight to watch. If you ever take a boat ride outside in the Thane Creek area. And so it's magic. It's like I like, you know, both adaptation and mitigation and they're source for biodiversity because a lot of birds and fish use them for nesting, right? So there's a broader nature piece which is also being met by, by mangroves. So I think we need to find these kind of things and give them much more prominence in the discourse than they currently have.

RB: [00:51:50] I was actually extremely happy to see mangroves explicitly mentioned in our budget this time. So there's actually an allocation around the mangrove investments, which I thought was and like you said, it's one of the most thriving ecosystems we can create with multiple benefits, which sort of segues to the last thing I want to talk to you about, which is India, right? And I want to talk about India purely from an opportunity lens, because the risks we've already talked about, we've covered. We are at a point in time where the multiple questions that India is asking itself, which is on jobs, equitable growth, right. Building engines of growth that can actually move us forward beyond the digital revolution that we

have seen and to a certain extent the pharmaceutical conversation, etc, where 'India for the world' story can become real. All of which has some answers in the climate change conversation we have. I think what's been inspiring is to see the kind of commitments we've been able to make at the global stage. The International Solar Alliance is a great example where we didn't wait for something to be set up and for us to join. Beyond the, you know, the position that we are taking in global stages, how do you see this climate change conversation as an opportunity for India?

VP: [00:52:56] So before coming to it, I'll just mention we tackled this in many places, but I think I find it very useful to just emphasise the point that India needs to act on climate change for its own sake, and not because somebody else is telling us to do it. And we have very unique vulnerabilities. We have the sea level issue. We have a 7000 kilometer coastline. Right. We're already seeing a 33% erosion in our coast. We have the melting glaciers. Two thirds of the Himalayan glaciers could disappear by 2030, 2100. Now, imagine the consequence of that in terms of flooding in the Indo-gangetic Plain, which houses 500 million people. We have the disrupting monsoon patterns, right? Which don't have to tell anybody in this podcast how dependent we continue to be on the monsoons. And lastly, we have the energy access issue. In fact, it's an energy trilemma. We need to create more energy. We need to create greener energy, and we need to create more affordable energy. Right. So I think there are reasons, clear reasons why we need to act for our own self from a vulnerabilities perspective. And then that comes to the opportunities piece. Right. And this is, I think, you know, a lot of the discourse in India has changed over the last ten years where we used to play defense, but now we are saying we want to do these things because, you know, for our it's not just because of the vulnerabilities and the threats, but as an opportunity. You know, one way to think about this is, it's going to open up new areas of competitive advantage. Right? India has missed the traditional manufacturing bus. We often say our manufacturing as a percent of GDP is very low. Good climate, tech, good things like green, hydrogen etc on which we are putting a lot of emphasis. Give us that boost that we missed out in the traditional manufacturing bus. Right? That's a really interesting opportunity and it's new. So everybody will try, but at least there's some sort of a level playing field. You know, we're not trying to compete in semiconductors, which Taiwan has been doing for 30 years. So I think there's a competitiveness opportunity around new areas that will become more and more important from a demand perspective where we can take leadership. There's obviously the jobs case, and I was seeing a recent report by Deloitte which says that India could have something like 70 million green collar jobs by 2050. So that's a lot, seven and a half crore, 7 to 8 crore people through green collar jobs. So I think that's a big opportunity. No bigger issue than jobs in a country like ours. Right. And I think it's good to see India is both in the international negotiations, going with a much more positive framing around 'we didn't cause the problem, but we will be part of the solution'. We have given ambitious commitments at Glasgow, which the Prime Minister called the Panchamrita, and we are doing action at home because of the reasons that we just discussed competitiveness, jobs, in addition to the specific vulnerabilities that India has. So India has done a lot. India has done more than its fair share and we should continue to globally play the role of a confident deal maker and domestically continue to pursue these things in our own self-interest.

RB: [00:55:55] Related question to that. I feel like we talked about how new capital and new ways of working has to come in. I also feel the new innovations have to come in for us to spur that manufacturing growth. And right in the beginning, you talked about the valley of death, which is very, very real, which is that great ideas, lots of money in university level R&D get to one pilot and then there is just this complete death before they get to actually scale in the market. And there is a role to finance in that part of the game as well. And I think that's part of the last puzzle on the climate finance piece that I wanted to touch upon. How do you see that play out?

VP: [00:56:29] Yeah, absolutely. I completely agree with you. I think we have to find a way to take a lot of those ideas to the next level, right? So I almost see like there are three arcs of climate-tech finance, innovation, finance. You know, one is, of course, the ready to scale stuff like solar, which is now well-proven. Cost curves are now less than fossil. And there you just need conducive policy environment. And that blended catalytic capital that we talked about. So money to flow in, right? Then there is promising technologies that have shown initial promise at, let's say, demo level. And it's very clear that once we can reduce the green premium, then there will be a major part of the solution - batteries, maybe green hydrogen a little bit. These need a combination of policy support, early incentives. Some would call them subsidies, but they are important, like the US has done with the Inflation Reduction Act. The EU has done through something called a Fit for 55 programme. India is trying to do within its own financial fiscal constraints. So those are the second set where you need to now just take them. They are sort of, it's very clear that they will play a role, but they need a support, a nudge to take them up.

And then the third is the, you know, the big bold bets. You know, like we still need a few earth shots or moon shots in this space. How are they going to come from? Are they going to fall down the valley of death? I think this is where the patient capital piece comes in. I think the stellar example of this is the Breakthrough Energy Ventures, which is seed-funded by Bill Gates. And he got a bunch of his friends to set up. I think it's like now like a \$200 billion fund. I love their mission statement. They say, look, we are we will invest only in technologies that if they succeed, can solve at least 1% of the emissions problem. Right. So that's huge, 1% is huge. And yet we'll back 100 bets, but we need only 5 or 6 to succeed. So that's the kind of mindset, I think, where, you know, new age impact capital, patient capital needs to come in because you still need those moonshot things, those five moonshots, which will help us get to our very, very ambitious targets.

RB: [00:58:40] I'm going to close with one question, which is all of this is fantastic. If we were to have, you know, people from industry, government and philanthropy, listen to this. What is the one thing that they should do differently? And we're talking to leaders of organisations. You know, what would your message be for an industrialist, for a government bureaucrat and for a philanthropist?

VP: [00:59:01] I think none of these are in listening mode. I think they've heard enough, they're all in the 'do' mode. I think my only encouragement to them would be to continue to, you know, take the risks that it will require over the next few years, keeping in mind the

longer-term price. And, you know, there are already pioneers who are doing that both within government, within industry, within the startup world, and also, like I would say, citizen groups who are now sort of coming together to sort of make this an issue. So I think I would say just, you know, go from listening to a do mode and, you know, and be willing to take some of those early risks, which will be important to get the price that we are seeking in the medium term.

RB: [00:59:46] I'm going to push you still one step further, but on the philanthropy side, which is an ecosystem that you deeply understand, having been a part of it. What should philanthropy do for climate change?

VP: [00:59:55] So philanthropy is, I think, a massive part of this spectrum of capital thing, right? And I think like the example I gave you about the Breakthrough Energy Ventures, right? That is the kind of bold stuff, I think philanthropy should come in and fund. I think it should do two things. One is those kind of earth shot-moon shots backing, you know, a lot of credit to people like Bill Gates and Jeff Bezos, who set up this Earth Fund. John Doerr, who used to be the partner at Kleiner, who has become a big climate philanthropist. And he's, you know, put a billion and a half dollars to set up a new climate innovation school at Stanford. These guys are really setting the tone on the, you know, the kind of stuff that will not be done that easily by governments or by the private sector. The second part for philanthropists, I think, is, you know. Creating more of the parts of the stack that you were describing? You know, I think some of the parts of the stack, again, will not get built on its own, whether it's the data infrastructure, whether it's the, you know, forums for, you know, learning, whether it's the playbooks that can be used in other contexts, etc. So I think that's the second part that one is, you know, go for bold bets, back them. You have to think differently here because it's not going to be, 'I spent one crore and I'll get so many children who will go to school', that'll be very different mindset. And then go for some of these parts of the stack that you were describing which are essentially collective infrastructure for the climate problem.

RB: [01:01:23] Varad we've covered a lot of ground. So before we close, I'm just going to summarise what were my takeaways from this conversation, and I'd love to have your thoughts as well so that, you know, there is that summary that we can take. Firstly, for me, one of the big learnings today was the inequalities in capital that we are talking about, the developed to the developing inequality, the sectors like electricity and mobility versus the sectors that actually are causing emissions are not getting the right amount of capital. The inequality of solutions that are at the end of the funnel where they are already developed to those that are dying in the valley of death and the inequality with that. And the inequality of funding in mitigation to adaptation. So these four inequalities of capital, which is where we are misallocating capital on issues that matter, I think is one very important learning for me. The second big learning for me is that even beyond this misallocation, the size of the pie that we are talking about is not large enough, dimensionally large enough to solve for the problem. And the stack that we need to build, that will ensure we attract more capital and we deploy that capital fast enough to solve the problems that we have to solve is very, very necessary. And starting with the ecosystem, we build the data, we bring on board the hard and soft infrastructure. We set up the patient capital that mitigates risk, the products that

will enable faster execution, and then the private capital that has to come in. I think that's the second part of the play that I thought was important.

And the third part of the play is the orchestration of diverse forms of capital, public, ODA, markets, philanthropy that has to come in and especially find the right problem they can solve within their means, and bringing their ambition to play, I think is extremely critical. That was the third one. The fourth one really is how do we build systems like carbon markets in a way where we learn from the experiences that have already worked? And your 4C structure for the carbon markets for me is an example of how to think about some of those things.

And the last thing that I will stop with is the example of the mangroves, right? Sometimes a lot of these ideas seem such pie in the sky, people sitting in rooms and building things. Nature is the best solution to some of these problems. Just finding solutions that work for us and then investing in them to solve for ecosystems that solve problems I think is a good way to think about nature, but also a good way to build countries and people together as well, which is create thriving ecosystems of solutions rather than this one big monolith of solution that we're going to build. But I'll pause there and hear from you.

VP: [01:03:51] It's a fantastic summary, Rathish. I'll just add two things. One is we didn't touch on this directly, but I just wanted to also say that the G20 platform is a great opportunity for some of this work. As you know, India's logo for the G20 presidency, we've got One Earth, and not World. I think there's a message there. And the Prime Minister also wrote an op-ed where he mentioned climate as an important priority. The uniqueness about the G20 is, you know, it has the best of not the UN with 194 countries and states, it's 20 of 20. It's a combination of the developed and developing countries on the same table with relatively the same weight. And there's currently a troika of developing countries who have the leadership. So it was Indonesia, then India, then Brazil. So an opportunity for, you know, and these are the countries which are really the flag bearers of the developing world. Right? And can we play a role? And 85% of world's emissions come from the G20 countries. And this is one unlock feel they can do, is on the multilateral development banks that we talked about, the governance of multilateral development banks are almost entirely in the hands of the G20 countries. If you can change that, that could be a major unlock.

And lastly, I would just say that, you know, to sort of sum up what you said, I'm often asked like, you know, it's such a complicated topic and, you know, you can come away feeling like you're completely screwed or you can come up with feeling, you know, where do you where do you land on all of this? So I always say I take license from Charles Dickens, who in The Tale of Two Cities, you know, he said it was the winter of despair and it was a spring of hope. And I land a little bit more feeling that it's a spring of hope rather than a winter of despair, if we can bring the best of human ingenuity to address this problem over the next decade.

RB: [01:05:38] On those words, we should stop. Varad, thank you so much. It's been a wonderful conversation.

VP: [01:05:43] Thank you, Rathish.

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