

# Finance for resilience brought to you by CDKN- Ep.9

## Demystifying Adaptation Finance- Transcript

### GUESTS:

Malango Mughogho

Kathryn Bakos

[00:00:00] **Kamlesh Pillay:** [00:00:00] Welcome to the finance for resilience podcast brought to you by the climate and development knowledge network, or CDKN. If you're curious about policies, information, and solutions around climate change, you're in the right place. Listen in, as we discuss debate and look at real life practical changes that can be made for significant and lasting economic and environmental impact around the globe.

[00:00:27] The topic of this episode. Demystifying adaptation finance. Hi, I'm Kamlesh Pillay and I'm the host for this podcast. I work as the Climate Finance Thematically that CDKN at South South North, helping to shape the conversation and action around this fascinating topic. If this is your first time tuning into this podcast. Welcome. We're glad to have you here.

[00:00:52] In this episode, our goal is to demystify the topic of adaptation finance, what it is and why it's important to define. [00:01:00] The adaptation finance gap is noted by UNEP as being appreciable, which means that the current funds available and not sufficient to meet the adaptation implementation needs.

[00:01:12] The question is why is the so and what are the solutions to bridge this financing gap? We've decided to ask some non climate scientists what they think, adaptation finances. This is what they had to say.

[00:01:26] **Voice note:** [00:01:26] Maybe like a business adaption, finance. I dunno know, it could be finance that adapts alot or business called adapt finance.

[00:01:35] Adaptation finance or the costs that are put forward to change something from, as, from its existing state into a different form.

[00:01:45] I think that adaptation finance is probably allocations of funds, uh, or distribution of funds to some sort of change.

[00:01:57] Off the cuff. I think of adaptation [00:02:00] finance has been quite specific to climate change. And it's around projects that are funded to help vulnerable communities or countries to, to handle the impacts of climate change.

[00:02:13] I don't know what it means, but I can try and understand by breaking the words apart, adapt and finance. To me, it sounds like adapting your finance to your lifestyle.

[00:02:27] **Kamlesh Pillay:** [00:02:27] One thing is clear. This broad ever evolving topic is complex. And they say a lot of work to be done around informing people about the concept

and the implications of this area. There is no universally accepted definition of adaptation finance. We can go on be IPCC 2014 synthesis report where adaptation, finances, really the finance that is used to finance the future impacts of climate change.

[00:02:56] So it's really forward looking. Uh, to kind of [00:03:00] future climate scenarios. And then obviously the finance that's going to be needed to transition into that climate future.

[00:03:07] Let's illustrate this potentially tricky concept of adaptation finance with a practical example of implementation in the city of Venice. Picture, Venice, the beautiful Italian city, famous for its unique waterways and interesting city structure.

[00:03:23] On November 4th, 1966, abnormally high tides, rain and severe wind. Cause what was known as the Great Flood, thousands of residents lost their homes and over 75% of businesses were seriously damaged. It was a devastating blow to the city and its people. Consequently the city took action to prevent any future disasters.

[00:03:47] They initiated project modes, a series of physical barriers, consisting of mobile gates to protect Venice against coastal flooding because of this investment, the city and surrounds [00:04:00] have managed to save billions of dollars in avoided flood damages, not to mention protected stunning architecture and lives and livelihoods of its citizens. A proactive approach trumps a reactive one every time.

[00:04:15] Granted it took over 30 years from conception to construction, but the rewards are well worth the wait. In fact, this is often the case with adaptation finance. Finances, we'll focus on investment returns for a three to five-year window. Whereas the timeframe for adaptation finance is usually long-term. Joining me today to continue the conversation on adaptation.

[00:04:38] Finance is Kathryn Bakos and Malango Mughogho. Welcome, and thank you for joining me. Would each of you mind giving me a short introduction of your background.

[00:04:47] **Kathryn Bakos:** [00:04:47] Hello everyone. My name is Kathryn Bakos and I am Director of Climate Finance and Science at the Tech Center. Um, I come from Ontario, Canada, so probably a little bit cooler than some places.

[00:04:59] Uh, [00:05:00] people may be listening to. For those of you unfamiliar with the Intech center, we are an applied research center at the University of Waterloo, uh, that helps homeowners communities, governments, and businesses, reduce risks associated with climate change and extreme weather events. So that's in relationship to flooding, fire extreme heat, and under my personal domain of engaging institutional investors.

[00:05:22] So those who invest pension funds to determine how physical climate risks can be incorporated into investment decision-making and ultimately how the performance of companies stock price and returns can be affected by climate change. So it's an absolute pleasure to be with you all today,

[00:05:38] **Kamlesh Pillay:** [00:05:38] Great and a pleasure to have you Catherine.

[00:05:40] **Malango Mughogho:** [00:05:40] I'm Malango Mughogho and I'm the director ZeniZeni Sustainable Finance and, uh, ZeniZeni is a sustainable finance advisory firm.

[00:05:50] Thanks. Malango and a pleasure to have you. Um, so maybe as a starting point for the conversation and, you know, considering that the title of the podcast is [00:06:00] demystifying adaptation, finance, I think a good starting point would be firstly, to understand the importance of this area.

[00:06:06] Kathryn, I can, I can pose this question to you first.

[00:06:11] **Kathryn Bakos:** [00:06:11] Well, I think it's a great question, but I believe to really understand why adaptation finance is so important, we really first have to understand why adaptation itself is important and then why it needs financing. This is where I would say work from organizations like the Intergovernmental Panel on Climate Change really comes into play.

[00:06:31] Specifically. There are 2014 synthesis report, which determined that global climate change in itself is effectively irreversible. So we can slow down the rate of change by transitioning to a greener global economy. In other words, mitigating against that change, but the manifestation of climate change as extreme weather, such as flooding, fire, extreme heat, that will continue to have a global scale impact on individuals, communities, [00:07:00] governments, and companies, which will ultimately translate into impact on company share price, industry sector and asset class performance, even the communities in which these companies operate will experience impacts such as credit rating fluctuations. So, and this doesn't even include the human impact of mental health and physical health. So that's kind of a, long-winded answer to say why adaptation measures must be operationalized and to do that must be financed.

[00:07:31] **Kamlesh Pillay:** [00:07:31] Um, yeah. And, and I guess traditionally we've seen a kind of disparity between mitigation and adaptation, and I think we'll go into that, you know, further on in the conversation, but before we get there Malango, I can ask you to comment on the need for adaptation finance and feel free to lead on from Kathryn comments.

[00:07:53] **Malango Mughogho:** [00:07:53] Yes. Some as Kathryn said, uh, it's critically important given that the impacts of climate change are being [00:08:00] felt today. And we have to adapt to those now, and there'll be more impacts coming in the future, depending on the degree to which we mitigate overall climate change. And then from a financial perspective, in terms of numbers, the global commission on adaptation has estimated in terms of the costs of adaptation over a period of between 2020 and 2030. They estimate those costs to be about \$180 billion dollars annually. So that's per year. So that's a huge amount and that's, those costs are needed to address adaptation across a whole range of areas such as. It making infrastructure resilient, new, and exist and existing infrastructure addressing agricultural production and making our ecosystems, particularly water resource ecosystems, more resilient. So it's not, there's a significant requirement of financing to address this.

[00:08:55] **Kamlesh Pillay:** [00:08:55] Malango. I think it feeds into the next part of the conversation, which is [00:09:00] really about. Why it's difficult in comparison to mitigation finance. So, um, before I, before I pose the question, um, to you, Kathryn, I think what I'll start off with is just defining mitigation, finance, um, as, as kind of contrasting the two to try and lead into this almost diagnosis of why there's a problem.

[00:09:22] So mitigation finance really deals with tangible emission reductions. So just to try and explain to the audience, maybe let's take an example of renewable energy. So, you know, solar panels or solar energy is a great example of this. And, you know, renewable energy is considered a mitigation finance option because the ultimate outcome is emission reductions or reduce CO2.

[00:09:50] Um, which is. Something that would have occurred if it would be the traditional fossil fuel systems. So if it was traditional energy produced [00:10:00] by coal, for example, that would have fielded emissions, uh, in the form of carbon dioxide, equivalent and mitigation, therefore is quantified in terms of, of tons of carbon dioxide removed.

[00:10:13] And that is the kind of contrast between adaptation and mitigation, where adaptation deals more with future climate impacts as opposed to tangible emission reductions. So, Catherine, I can, I can now post the question to you about why there's such a problem with adaptation as opposed to mitigation, and why do we see this problem translated in the finance space specifically?

[00:10:38] **Kathryn Bakos:** [00:10:38] I believe if we're looking at why mitigation gets so much attention compared to adaptation, I believe that the conversation itself that surrounds the two tends to focus mostly on mitigation. You have governments, international agreements, such as the parents, Paris Accord, uh, various media [00:11:00] sources, I would say 80%. And I think I'm being generous there probably more than, um, of the conversation regarding climate change, uh, within political financial capital market worlds. Consider climate change almost exclusively, as you were saying, from a perspective of a cost on carbon, a carbon tax or mitigating greenhouse gas emissions.

[00:11:21] But we must take into consideration that there are multiple steps to solving the climate change equation, mitigating through a carbon tax or beginning of transition. Um, transitioning our industry is one investing in innovation for carbon capture and sequestration is another very important one, actually getting the carbon out of the air.

[00:11:41] And, but we must also pay equal attention to adapting against climate change and extreme the extreme weather risks that will continue to have increasing impacts. Physically and financially on a global scale. So adaptation is also key to that equation and must become a much more significant part of the conversation.

[00:12:00] [00:11:59] So I'm very happy that we're having this conversation today.

[00:12:03] **Kamlesh Pillay:** [00:12:03] Just to tag on to that. Kathryn, I think the aspect of tangibility is really important here for adaptation, right? It's um, I think generally we've seen the skew towards mitigation because. Sometimes the climate impacts, uh, seem to be, you know, in the future.

[00:12:20] And when, I mean, in the future, I mean in 20 or 30 years time, and I think what we're seeing, especially in the last five years is that the climate impacts are becoming more apparent and more visible. And therefore we're seeing more heightened focus on adaptation because there's, um, Significant economic losses that are now visible.

[00:12:41] And I think that that has, has helped shift the conversation at least in the policy context, but Malango, maybe I can, I can bring you in here to kind of understand why there's a problem with financing adaptation.

[00:12:54] **Malango Mughogho:** [00:12:54] Yes. I mean, I think the visit, as you both mentioned, the historical focus has always even on [00:13:00] mitigation. And I think that's because whenever the UN Convention on Climate Change was signed, that was about 30 years ago. It was thought that we can easily address it. We had many years to do it, and I remember once a quote from somebody working for WWF, actually on the advocacy side often said, The best form of adaptation as a mitigation.

[00:13:18] So that used to be the focus. But I think now, as you say that we have these impacts that were being felt and in many different ways, people realize we do need to address adaptation investments, but historically, because the focus hasn't been on adaptation, there's a lack of understanding, um, of the, the mechanisms that cause that allow you to understand how to measure the adaptation costs.

[00:13:41] I think it's a very complex process. And also adaptation is needed across, could argue every single sector of any particular countries, um, economy. So it's, economy-wide uh, whereas mitigation in most countries only covers a few sectors, energy transport, and perhaps forest management, [00:14:00] depending on where the country is.

[00:14:01] So it requires policymakers, the private sector, civil society to focus across an entire economy that makes it very, very complex. And I think. That makes it hard then for finance leaders who typically like to have the boundaries of what they're financing and why, and to understand exactly what the impact is of that financing would be, it makes it a little harder for them to grapple with.

[00:14:22] **Kamlesh Pillay:** [00:14:22] The one statement that you mentioned in there that really speaks to the heart of the issue is really this management of uncertainty in the future. I think one of the issues that I've typically experienced in my practitioner work is this, um, almost making the case for adaptation, noting that some of the impacts are yet to be felt and, you know, also the economic costs associated with that. Um, and I think it's something that really makes it difficult for practitioners to watch trying to, you know, um, almost demonstrate why adaptation is [00:15:00] needed now rather than, you know, being focused on in 20 years time.

[00:15:04] Um, Kathryn made from, from a private sector point of view, noting some of your, some of your previous work. Can I get an example of just how you've managed to create this message or communicate this message towards investors?

[00:15:21] **Kathryn Bakos:** [00:15:21] Well, I think if you're comparing between the public and private sector, I think the best place to always start. And as we've been talking about is the financial side. So what are the costs now? Malango talked about global adaptation costs, but if we look at what the costs alone from the physical impact. So if I. The industry sector that's very easy, um, who can calculate that very easily is actually the property and casualty insurance sector.

[00:15:48] And so global in the past decade has been the costliest, uh, decade due to natural disaster. Uh, tallying approximately \$3 [00:16:00] trillion us globally, which is \$1.1 trillion

higher than previous decades, uh, from flooding alone, the United Nations actually projects that damages could be as high as 27 trillion per year by 2100.

[00:16:15] So if we're translating that into economic loss, that would account for a 3% drop in global GDP. Now to clarify, these are insured losses. So if we take those amounts and multiply it by three to four times, or even greater, depending on where you are in the world, you'll get uninsured losses, physical climate risks as the cost of damage.

[00:16:38] Uh, this comes out of taxpayers' pockets and government budgets specifically for budgets, for hospitals, schools, and infrastructure development. So from a public sector perspective. That's why we need to focus on it, but the same can be said, and it must be acknowledged that the physical impacts of climate change will also have, and [00:17:00] potentially have already have an impact on the private sector specifically companies within the private sector could suffer disruptions to the continuity of their operations. And this is how I interact more with institutional investors in specific companies and industry sectors. Because it is the company's responsibility to disclose that risk and then invest in measures that will help protect against those risks.

[00:17:25] So I can give you a quick example that if you have an extreme weather event, such as flooding, that truncates the supply chain, which subsequently impacts the longterm cash flows of the company, fiduciary duty, which is acting on behalf of another interested party. Would require that this information be disclosed as it could affect the decision of an investor to buy, hold, sell stock in a company.

[00:17:50] So the private sector is also responsible and by investing in these types of changes at company level, investors will [00:18:00] begin allocating capital towards companies that have not only identified climate risks. But if implemented adaptation measures to protect against these impacts. So it's the companies themselves that will begin mobilizing adaptation finance, in my opinion.

[00:18:16] **Kamlesh Pillay:** [00:18:16] Kathryn you've touched on. So two issues there that are really key and it speaks again to the barriers. The first is this problem with tracking adaptation finance, and, you know, my question to you would be, or response to you would be okay. So if I'm managing future climate risk, so that's just good business, at least from a private sector perspective.

[00:18:38] And I think it leads into this problem of tracking because as a business, I am not going to tag. You know, I'm investing in a seawall as you know, I'm an adaptation measure. And just going to say, it's going to protect my assets. So it's just a good business decision and I'm not going to allocate it to that, um, that project [00:19:00] category.

[00:19:01] And I think if you had to use that example and kind of scale it upwards, it's, it's the kind of underlying reason why we have such a problem with tracking adaptation finance is because initiatives are sort of embedded in everyday operations. And also, you know, coupled with the fact that, you know, organizations really, uh, you know, maybe have limited understanding of adaptation, it causes this difficulty of really getting an accurate assessment of exactly what we're spending currently on adaptation.

[00:19:33] So I think, you know, to, to go back to Malango to your point there's, there's this dual problem it's. Firstly quantifying the adaptation needs the cost, the cost of

implementation. And then there's also the problem of understanding exactly what we're spending currently. And, you know, if you put those two problems together becomes very difficult to firstly, develop a financial model for a finance year that can adequately prove your, your business case.

[00:20:00] [00:20:00] Um, but I think what I want to go towards is just this perception of responsibility. I think Kathryn, you've spoken about, you know, healthcare and water and some of the more, um, you know, social good type of, um, economic sectors. Malango, I'll ask a very pointed question just about, you know, whose responsibility is it to undertake adaptation.

[00:20:25] **Malango Mughogho:** [00:20:25] Because we're all affected by climate. It's a, it's a joint risk. So it's, it's the, that everyone's responsibility. And when I say everyone, I mean individuals, governments, and business, but of course, governments play a very, very important role because they, they can take a broader view and, and have a different risk appetite. To say to the business sector, but interestingly, because certain in certain sectors, they are closer to seeing the impacts and feeling the impact. And then most of the impacts that are currently have felt through, through weather related events, [00:21:00] such as flooding or drought. So for example, businesses and the, and the agri business chain.

[00:21:06] Have already started making investments in recognizing, for example, one of the large brewers in the world, AB InBev for short recognizes the importance of securing water. So adaptation making investments in water adaptation in the catchments where they grow hops, which is a very important crop for beer, for example.

[00:21:24] And they're already making investments in that sort of intervention because they have seen that that has an impact on, on their supply chain. So a lot of businesses are beginning to see this, but when it comes to particularly public infrastructure, Health or, even for example, energy, electricity. Uh, we seen in California, for example, that electricity supplier has been interrupted by wildfires, which have been exacerbated by climate change.

[00:21:49] So there needs to be adaptation in that area that is clearly in the domain of argue a public sector response, even though perhaps the electricity companies [00:22:00] themselves are private entities. Because it requires a, a non-company specific response. It has to be a regional or localized response that governments are more able to respond to.

[00:22:13] So I do think that the responsibility is across the board and particularly in countries where the. Governments are not able, they don't have the capacity, whether financial or even human capacity to respond. That is when the private sector and individuals have to have to step up to the plate as it were, and take on a role that perhaps governance is traditionally seen in the, in the government's domain.

[00:22:41] So in many developing countries, this is the case. And, and that's where the private sector, I believe, needs to play a much, a much stronger role.

[00:22:49] **Kamlesh Pillay:** [00:22:49] One of the things that you touch on that that really is the, almost the elephant in the room when it comes to adaptation of particular sectors is the issue of cash [00:23:00] flows and revenue streams from, from adaptation projects.

[00:23:03] And. I think it's the reason why there is this perception that has developed about the responsibility being more on the public side, rather than the private side. Even though I agree with you completely, that it's definitely going to take a joint effort and maybe, you know, there is a case that private sector is already adapting towards climate change, but they're not, as I said earlier, tagging it as adaptation, but I think there's this problem of, of revenue where.

[00:23:31] There are certain sectors like Disaster Risk Management, for example, building a seawall or, um, implementing some kind of resiliency towards a climate hazard. That is not going to generate cash flow or revenue. And in that sense, those types of projects or adaptation projects are going to continue probably to be the responsibility of public sector, at least at a broad [00:24:00] level.

[00:24:00] I think at, at a localized scale, there is a possibility that a company who is exposed to a particular flood could take action. And that could be. You know, one of, uh, that could be an example of private sector adaptation, but typically I think because of the issue of revenue streams and this, I mean goes back to our accounting systems about how we quantify vulnerability.

[00:24:22] Um, you know, and, and the fact that we don't, uh, you know, making it very difficult for us to actually generate revenue around adaptation and that really limits adaptation in the private sector context to sectors like agriculture and water, um, where at least there is a possibility of generating revenue from enhanced crop yields, for example, or enhanced water security and the sale of water, for example.

[00:24:49] But, you know, moving on, I don't want to dwell too much more on the barriers, because I think one of the focus areas of the podcast is really to try [00:25:00] and come up with solutions because I think this is a problem that I think has been acknowledged globally as being a real issue and will continue to be. So for the next part of the podcast, I'd really like to focus on, on what can we do?

[00:25:16] So maybe Kathryn, I can ask just from your experience and your work, um, that you've currently undertaken in, in Canada, um, what kind of solutions are you seeing? And, um, speaking about the instrument context, like the financial instrument context, but also just generally in terms of the systems and measures and initiatives that are coming about.

[00:25:38] **Kathryn Bakos:** [00:25:38] Of course, I think from a global perspective, at least I would focus on some of the frameworks that are coming out and, and Malango. And you both really touched upon, um, the, the need for information and that disclosure in a sense. Um, and the lack of information of what to disclose. So I think there are [00:26:00] specific frameworks that are out there, specifically the task force on climate related financial disclosure.

[00:26:05] The acronym is TCFD, the Global Reporting Initiative to name a few. These are great places to start in catalyzing adaptation reform and encouraging assets to allocated towards adaptation. Um, you can see with the TCFD, it allows for kind of widespread information. So investors, and this is more from an investor standpoint, investors understanding what the financial implications of climate change actually are.

[00:26:33] Um, the type of frameworks, uh, this type of framework, it emphasizes transparency. So allowing companies to say, do you know what I want to be disclosing this risk? Um, not because I don't have any risks. Uh, but understanding that risk and, and being able to disclose it. Uh, and ultimately this will hopefully lead investors to allocate capital towards companies.

[00:26:58] As I had said before, to those [00:27:00] who have implemented measures to protect against these risks now specifically in regards to my own research and what's happening in Canada, I believe these, these frameworks are a great place to start. But what I see is that there is no way to actually operationalize on it.

[00:27:16] So again, it's well, let's disclose risks. Well, what where's that information and what should I be disclosing and what is considered risk? And so in my specific, uh, research with the Intact center, What we've done is created a globally scalable framework, which can be applied across industry sectors.

[00:27:35] Now, this is based on recommendations from the TCFD, and this is a climate risk framework that prioritizes the top one to two means by which extreme weather. So if you're looking at flood fire, extreme heat and how that could negatively impact the operations of the company within a given industry sector, while simultaneously identifying actions that an investor should expect a company to [00:28:00] take, to mitigate against that risk. Now you had mentioned instruments and there are, and we noticed within the industry that there are a lot of instruments that are being created. So you could look at green bonds or derivatives, but one that I'm actually quite fascinated on and Kamleshan you, you spoke about it, but insurance, uh, I think insurance is a great place to start because in its simplest form, it literally is written protection against risks.

[00:28:28] Um, parametric insurance in particular. Agrees to make a payment. Once a triggering event, usually a catastrophic natural event occurs. So insurance not only is very good at tallying the impacts of climate change as they manifest as extreme weather. Again, flooding, fire, extreme heat, but insurance also assesses and communicates and signals risks while generating incentives for risk management.

[00:28:56] So as an example, here in Canada, the greatest loss [00:29:00] due to extreme weather is from flooding. So if a homeowner, uh, incorporates measures around their home to protect against risk, they can actually be charged a lower premium. Now, if I extrapolate this and think further down the way as risk management evolves, You can actually see another option in this regard manifesting, which would be if these measures are not implemented the payout, when a loss does occur would be lower.

[00:29:26] So now it's incentivizing those to actually adapt. Um, ultimately what we have here is insurance transferring the risk from the insured to the insurer. Now the European commission even believes that the, that insurance is a great tool, as it ensures that the financial damage does not turn into long-term economic damage.

[00:29:48] Say if a house or a business is damaged and needs to be rebuilt or compensated. However, and I I'm really going to emphasize this. Do we want this just for a global [00:30:00] society to have this damage and to rebuild the same as before. Um, I believe what we want is to build back, as they say, build back better. We want to incorporate resilience and adaptation into the system.

[00:30:14] We need resilient infrastructure. And Malango had mentioned this before resilient infrastructure. We need to maintain natural ecosystems and land cover to protect against the future impacts of climate change.

[00:30:26] **Kamlesh Pillay:** [00:30:26] Thanks, Kathryn. And I completely agree with you that insurance is probably the best financial instrument to demonstrate adaptation or elements, thereof. Um, you know, it's future looking, it's risk focused and it's almost planning for uncertainty, you know, or these kinds of future impacts. And I think it demonstrates the adaptation case, especially with climate insurance products that are coming on. Um, but I'm glad you focused on the risk mitigation side or at least the incentivizing of adaptation, because I think the one thing I'll [00:31:00] clarify is that insurance is a useful instrument at catalyzing adaptation, but one is focused on reactive, um, reactive financing. So, you know, waiting for a flood to happen and then financing the cost thereof. Whereas adaptation is slightly different where we're focusing on proactive investment that is occurring before

[00:31:24] these hazards occur, so there's just a slight nuance there, but I think your point is definitely taken about demonstrating adaptation quite effectively. Malango I really want to focus on your work experience and project experience from a practitioner point of view. And just, um, how have you seen the adaptation finance landscape developing in terms of you know, solutions and initiatives that have allowed us to progress in catalyzing these flows of adaptation.

[00:31:57] **Malango Mughogho:** [00:31:57] What I'm going to speak about is not traditionally thought [00:32:00] of as finance, but it is a significant part of the overall financing of any project or program or, and that's the project preparations process.

[00:32:10] Uh, I always say that finance has many good and bad things about it, but one of the good things about it is that when finances are on the table, it can bring other people around the table very quickly. Because everything needs funding. And so using that as a lever early on in the project preparation stage, finances can insist that research has been carried out or data is gathered that is needed to make, say a particular project.

[00:32:34] More resilient. So from the very start resilience is one of the key goals and project design, for example, and in some of the work, I do quite a lot of work around water infrastructure, for example. And recently those, uh, dams built in, uh, designed, um, in the country. And this is early stage pre-feasibility feasibility stage of the dam.

[00:32:57] And when the climate lens was applied to that to [00:33:00] say, well, how do we make this dam more resilient? The climate data was not very specific in terms of giving a direction to say, well, there's likely to be more rain or less rain. It said it could be quite variable. So in the design, the engineers then had to consider this and say, well, how do we make this stand resilient?

[00:33:18] You don't want to overinvest because from an economic perspective, that is not a good use of money. So what they said is that the dam had to be able to cater for higher precipitation rates, but not at the moment. So the solution then was to design a dam wall, um, that could be made higher. Should there be more when I say precipitation, I should say rain more rainfall, so it could gather more rain, but you didn't want to make that investment right up.

[00:33:46] But the wall was designed. So that it could easily be extended. And that for me is those sorts of interventions. Although they are not, it's not traditionally financed, but it's project preparation that has to be funded as well, that sort of [00:34:00] research. And if that budget is put into, and this is all for new projects, obviously, but if that budget is for taking a climate lens is taken up front.

[00:34:09] And included upfront then the outcomes will be much better because I think one of the key things about adaptation while the climate in general is that the degrees of certainty are quite, uh, quite wide. In certain instances, there's some things that we know that. So the IPCC research and climate models where there's high degrees of certainty on certain impacts, but there's less in terms of certainty for other sorts of impacts.

[00:34:34] So actually a lot of adaptation finance needs to build adaptive capacity into whatever is happening, whatever it's being focused on. And I do think finance needs to go, go towards that. It's not sexy. It doesn't project preparation is not something that people stand up and say, Oh, look how exciting I've given X million dollars for project preparation.

[00:34:55] But I think it's really, really critical. And even the process of arriving at [00:35:00] the decision of the dam are speaking about. Gives the methodology to gather research around other different areas. When you try to take a climate lens.

[00:35:08] Malango I think this integration of climate risk and resilience into decision-making paradigms is so critical. And I understand, you know, it may not be, you know, a specific insurer, um, you know, insurance product or, you know, financial instrument, but really it's speaking to governance, which is probably the most important part in, in, in the financial process. We're coming to the end of our time together. And I think to be proactive, um, About, uh, some of you know about the area and where we go to in this area, I'd like to pose one last question to both of you.

[00:35:45] And that really relates to just maybe one recommendation that you and I know one, uh, one recommendation is a tall ask, considering that there could be maybe, um, around what do you think [00:36:00] needs to be done differently in this space? Um, Kathryn, let's start with you.

[00:36:04] **Kathryn Bakos:** [00:36:04] Well, I think it's actually going off of what Malango said, and that based on the industry sectors and the examples that she gave, it's the acquisition of knowledge. And so if it's an industry sector that's being impacted now, again, if we're talking about physical climate risk, based on geographic range, those industry sectors are going to be impacted differently depending on where in the world they're located.

[00:36:29] But I think it's. Industry sectors that can mobilize and to acquire information and where are we going to be impacted? Um, and by acquiring that knowledge and understanding that, and then dispersing that information, I believe it will be very powerful. So that companies within those sectors can begin to adapt and investors, as I've said a few times throughout this podcast, that we can allocate capital towards the companies that are implementing [00:37:00] those adaptation measures.

[00:37:01] So I think it's almost a dominoes effect beginning with the industry sectors in the companies to understand what the risks are and then implementing change from there to begin adapting. Um, I believe that would be a great place to start.

[00:37:16] **Malango Mughogho:** [00:37:16] I fully agree with what's happened and said about the information side. And for me, I think one of the key areas where this could make the worse, a difference could be made, is it financial regulators taking, allowing the sector to take a pre-competitive approach to the issue and the increasing incentives from a regulatory perspective. So it affects everyone equally. And the sector, when I say everyone, I mean all the different financial institutions, they regulate to be able to respond more effectively.

[00:37:47] Because as you mentioned before, the revenue generation ability of some projects isn't there. So there has to be a financial incentive somewhere. And I think regulators can do this very easily and it's not normally their domain, but some regulators [00:38:00] are looking at this and I do think it would make a significant difference almost immediately.

[00:38:05] **Kamlesh Pillay:** [00:38:05] And I think to end, I'll also pose a recommendation and that's really that. I think one of the things that we're missing is. Um, comprehensive guidance about the initiative specifically needed for adaptation and resilience. And because of this issue that everything is quite localized or, you know, is very site-specific.

[00:38:29] We run into this problem that the initiatives are very different. You know, wherever you go, what is, what is being implemented in Canada is very different what is needed in South Africa and Sam and the like, and I think that causes a real problem for, you know, coming up with, with initiatives that can be implemented.

[00:38:50] Um, Uh, at scale, you know, or without taking local context into consideration. And I think moving towards a future [00:39:00] where we have greater knowledge, as, as you've mentioned, Kathryn, that really collates all of the experiences that we've managed to implement currently. And then obviously investing further research into the questions that we are not asking yet and getting answers to those questions.

[00:39:15] I think it's going to be really important in the future. Um, so lastly, I'd just like to thank both the few for, for joining me today. I think it's been an amazing discussion and I hope our listeners have managed to gain some insight, at least a starting point for insight on the area. In summary, we started off by discussing why adaptation finance is important, noting the future climate impacts, which are likely to be exacerbated under future climate scenarios.

[00:39:46] We thereafter focused on some of the barriers, which included definitional issues, tangibility of adaptation benefits, revenue streams from adaptation and resilience implementation, and the difficulty in making the case for adaptation. [00:40:00] Lastly, it is acknowledged that there are initiatives that are assisting us in integrating adaptation into financial processes, such as UN PRI GRI and TCFD, however governance and political buy-in perhaps, remain the most crucial factors in determining how we finance adaptation comprehensively at scale.

[00:40:23] Thank you for joining us for this episode in unlocking climate adaptation. We hope you feel empowered and able to create a culture of resilience in your world. Join us again. As we continue to explore climate and development challenges within and across our borders, if you would like to find out more, please visit [CDKN.org](https://www.cdkn.org).

[00:40:43] You can also follow us on Twitter at CDKN network or at South South North. Make sure to check out our show notes of this podcast for more.