Denise: Hi, and welcome to climate biz.

Shari: The podcast where sustainability meets smart business.

This is our first full episode of season four. We did a top picks and now we're back to bringing an interview

Denise: indeed. And of course, sustainability remains front and center of headlines with all eyes on COP 26. And I would say that all launch guest is apt at laying that foundation for the rest of the season.

Shari: He is! Our guest today made the threat of global warming and climate change cool enough to be mentioned alongside rock music headlines... About 10 years ago,

Denise: In the August of 2012 edition of the Rolling Stone Magazine, Bill McKibben's article global warming's terrifying new model, highlighted the very first analysis, introducing the idea of unburnable carbon, which was co-authored by today's guest, Mark Campanale.

Shari: So, this became one of the most read online articles of climate change. And it really kick-started the global campaign to shift capital away from high carbon investments.

Denise: And so our talk with Mark will hone in on the concept of stranded assets, why it matters, and what can or should be done.

Shari: We'll also discuss the new generation of investor action on climate change with mark Campanale, who is the founder of Carbon Tracker Initiative.

So let's jump into it. Let's go.

Welcome to the show. Mark.

Campanale: Thank you. Great to be with you.

Denise: You know, Mark, when the Climate Biz team we're researching the show, we just kept coming up with so much interesting things that you've done.
You are a very busy man. I must say the first of a hearty congratulations from all of us as Climate Biz, for the reasons.

**Shari:** What we're talking about is the 2021 Joan Bavaria award for building sustainability into carbon markets.

**Denise:** Did you forget about that?

**Campanale:** Thank you for reminding that was such a special thing to get that I knew John, when she was alive and I got very sick. Moments of working with, uh, series and others over the years at up to the ward.

So, yes, I was delighted. That was the huge, thank you for reminding me.

**Denise:** Brilliant recognition. Why don't we start from perhaps what one might describe as the second half of your career. Of course, you did celebrate a carbon trackers 10th anniversary.

**Campanale:** So much has happened in those 10 years. We all got together as a team and had a few glasses of champagne.

**Shari:** So can you talk to us a little bit about the genesis of Carbon Tracker?

Gosh,

**Campanale:** we'd have to go back a little bit. If we go back to the early 1990s, there was a, an analyst that I knew called Andy Rock and he. Taught me to think of climate, not as a, an emissions problem based on looking at what the emissions were in the past, but think of it as a problem with the future.

And it's all comes down to how much carbon dioxide is released from the burning of fossil fuels and looking at the reserves production. So I thought, well, that sounds, that sounds really interesting. So how much of the world's remaining fossil fuel reserves can we possibly produce before we go? These different warming outcomes in a one and a half degrees, two degrees.

And we didn't really know that, the answer to that question. And so the 1990s and the noughties were spent thinking about how we go about doing that. I learned, I think I only really cracked it. What the triggers were. It was in 1999, 2000. I read through the perspectives. It was a 300 page document and there were just 20 lines about climate risk and the feel, all they did was produce coal.
How could climate not really be a major risk? And then another company announced their plans to go to coal fired power station in Bangladesh. They described the coal as an alternative energy source. I looked at both of these and I thought, well, look has, has the financial community really understood the problem at the heart of the business models of the fossil fuel companies and could the financial community could really be a cynical as to think that what was happening in the business world and the finance world is not connected at all to what's happening in the physical world and what society is saying. So that really led into the noughties of trying to work out what the answer was to that problem, what we would do about it. And that's where carbon truck had got created.

It was Nick Robbins and myself saying, how do we answer? And we came with a very simple piece of math, which is you just take the list of the top 200 lists. Coal, oil, and gas companies. You look at the reserves, you work out how much carbon dioxide can be released to do burns or, and they've tested that against what we call the carbon budget.

How much CO2 can go to the atmosphere in fact, gives you the answer. So that led to the creation to Carbon Tracker.

**Denise:** I just imagine you pouring through those 300 pages, as you said initially, and rather prescient of, of you and Nick at the time to think in this manner. In fact, way ahead of your time.

**Campanale:** If you lived in London through the noughties, fossil fuel companies where some of the biggest IPO's in the city of London.

So the biggest IPO in the year of 2009, it was, it was a coal company. This initial public offering. And so if you're an analyst or a fund manager, you notice these things and they just came one after another one, more than another, and then another in defined civil, the climate science. And of course you sit up and notice.

**Denise:** And after all of that, you started the concept of the carbon bubble and unburnable carbon. Could you explain to our audience what these are and how they are interrelated with standardized?

**Campanale:** Yeah. So if you can't burn all the fossil fuels and companies are spending, you know, 10, $20 billion a year, trying to find even more fence, huge percentages of these reserves are literally on burnable.
So that's what the. Unbelievable comes from. And then the carbon ball was trying to sort of do an analogy with a bit of history. You know, we've had chiller bubbles and tech bubbles. And so we weren't trying to say, look, there's a financial crisis of this, these companies over valued. It was 20 question that the city and wall street was pouring hundreds of billions and trillions into expanding fossil fuels at some point that was going to stop.

And so that led to this. Of the report on vulnerable carpet and other financial markets, caring with carbon bubble. And it wasn't too long after we launched the report that people like Mark Carney started to refer to unburnable carbon in his speeches. And going back to the same question, what are companies doing?

What a pension funds and investors doing, expanding the supply for some fuels when we should be constraining it, there was a mismatch between the science and what the financial markets were doing. And then.

**Shari:** And, you know, I figure bringing this mismatch concept into focus. And I think that as we're walking into COP 26, this concept of the science mismatching, not just the corporate action, but also some of the government action.

I know that Carbon Tracker really carefully tracks this gap between where we need to be scientifically and where the NDCs are. And so. I'm curious to know, how are we doing there? You know, 10 years after you started carbon tracker on the carbon market side and the global capital market side. Are we still seeing this carbon bubble?

**Campanale:** Well, you started the question by talking about the COP and what most people don't realize. Even government ministers that are negotiating the climate treaties is that the Paris agreement, the Paris Climate Agreement doesn't mention fossil fuels anywhere. So no mention a coal or gas. And the reason for that is that the Paris agreement is an emissions reduction treaty.

It's not a fossil fuel supply treaty. So governments talk about reducing emissions. They talk about sending capital to projects to reduce emissions. What. Have any space for is to say, should we be suspending the financing and support for fossil fuels until just recently with the powering POSCO Alliance and the announcement from all the proclamations from the UN secretary general about fossil fuels is that it's just seemed to have been off topic.

Nobody really wants to talk about it. And that's what you've got this paradox that the leading countries supporting the Paris agreement all at the same time,
handing out new coal and gas exploration licenses. So having a new coal permits and every year they're handing up more. Oh, the gas, uh, licenses through licensing routes.

And it's not just a paradox. I think it's a, it's a fundamental problem. I think at the heart of the Paris Agreement that you can be aiming to be net zero. It can mean to be Paris compliant in terms of the goals and still allows a country to massively expand your supply of fossil fuels. Then your question.

Well, what are we tracking? So Carbon Tracker we analyze and the team about, you know, 20, 30 analysts who just look at numbers and research. And what we're seeing is still in our last reports that we published just a few weeks ago, called adapt to survive. We analyze that there's a trillion dollars being invested now by the oil and gas companies in expanding supply.

That will take us way beyond one and a half degree. So, that is where the financial risk comes in because, of course, investors are taking on that risk, not just companies, but the investors, the banking system, and the trillion is just the oil and gas companies. So as we look at that, are there any signs, but that is changing well, I mean, the truth is, is, and this is where the United Nations production gap report comes in.

There's 120% more supply available out there being deployed than we can possibly burden. Has that changed very much? Not really.

**Shari:** 120% more supply than we can burn in order to keep inside of our carbon budget. Is that that's right.

**Campanale:** And even now, you know, the companies are pushing up into the Arctic and if you look at the scenario it's produced by the major or the gas companies, they've got 20% more demand for oil and gas in the next decade or so.

And so they're planning for expansion. So, how can you produce more in useful and still be net zero,

**Denise:** Which has ever been a conundrum? Isn't it? It is sort of staring out to what seems to be obvious and scratching your head and wondering, what am I missing here? Why is this not so clear? And in the last six years, we've seen a lot of focus now on quantifying climate related financial risks.
How do you think we're doing on this? I mean, are you seeing. There are assets that continue to be valued in a manner inconsistent with the expected future scenarios.

**Campanale:** So evaluations have changed. I, as investors are beginning to price the risk, but there's no stoppage on coal oil and gas IPO. So if we just look at the initial public offerings on the stock exchanges of the world and secondary placements in the last 10 years, there's been two and a half thousand IPO's in the fossil fuel sector, they've raised over 600 billion. And then if you look at the debt that's been raised on top of that, you're going to add another couple of trillion. I mean, on our study, this is Carbon Tracker study called A Tale of Two IPO's. We looked at the performance of renewable energy companies versus the performance of fossil fuel IPO's. And if you'd invested in one, you typically lost half your money. Um, any renewable energy, you would have done a lot better. But you see, as soon as you get a prospectus authorized as a company, and the exchange wants to take you on. And if you're large enough, you immediately go into these index or indices that are offered to investors and a lot of IPO support by the large passive managers.

And even now I'm looking at. A couple of oil and gas companies that want to list on the London Stock Exchange. And because they're so big, there we'll go straight into the what's called the FOOTSIE 100, the top 100 companies. So it's in a sense, every single pension fund and passive management ended up buying them regardless of the risk, because that's the way passive management works, but it could have something like 70% of capital under management is either explicitly or implicitly following an index and would mimic the market. And so unless you're a fund that says we won't invest in fossil fuels, or you have a low carbon strategy that significantly underweights fossil fuels, you're just going to be buying these countries.

And that's.

**Shari:** So I'm wondering along this, you know, when now we have the TCFD, as Denise mentioned, and you alluded to as well, and that's voluntary, but as these mandatory disclosures start happening, we're seeing them in the UK and New Zealand and the sec in the United States is considering them. What do you think the impact of that is going to be?

**Campanale:** That's a good question. And of course, more information enables investors to have a better understanding of risks and to get a more rounded understanding of what the companies are doing, but Carbon Tracker we've been
analyzing the disclosures made by companies both to the TCFD and in their normal financial reporting.

And what we're finding is that significant under-reporting and in some cases, misreporting of climate risk. And if you think about it, if, if you'll say a coal company or an oil company, To be Paris aligned you have to say something on the lines of the world will be using a half less of our products in the next 10 years, because we have to reduce emissions by 80% every year, and then half it again, after 10 years, if you were to do that in your TCFD report, that's foremost akin to giving up profits warning to the market. And so arguably, if you say to investors, we're going to have to write down half of our fixed assets. Our sales will drop by half in the next 10 years. You would pour that first to the stock exchange, not to the TCFD. So are companies reporting into the stock exchange? No, they're not. And when you look at the TCFD disclosures, you have this thing called scenario analysis, where companies. Scenarios, which they think is plausible for what will happen to them. None of them that we see are using in this scenarios, anything which is Paris aligned, particularly this is the fossil fuel companies.

It says, yeah, there'll be a drop a path in use of our products. In fact, let's say the opposite. This. That there'll be continued growth in demand for our products. So what we think should be made mandatory is companies to report some actually truly consistent with the Paris goals of one and a half degrees.

And what should be mandatory is look, we're going to have to write down our fixed assets, the oil pipelines that refineries, the rigs, the coal-fired power stations and the use of our products were heart from that. If that was made mandatory, then I think investors would react very, very differently.

The cost of the debt would go up. The credit rating agencies would probably shake a little bit and equity investors would probably get to a proper market valuation. And some of these companies now that hasn't had.

Denise: So Mark, we've seen a lot of focus on the conversation regarding divestment or engagement and in particular divestment from fossil fuels.

And, uh, you know, I'm a firm believer that the financial capital markets are a major lever of change. And so do you then see, I mean, for all that has worth, and then, you know, we had the story of engine number one and Exxon recently there's a lot of litigation in this for as well. What, if any progress is there?

And I guess perhaps what would carbon tracker like to see you.
Campanale: Yeah. So at Carbon Tracker, we support the work of Climate Action, 100 and our analysts do the modeling fall against some pan utilities and other sectors that are crucial to the engagement approach taken by one. And of course it was a lot of.

The 50 trillion of supporters behind Climate Action, 100 that supported the engine one campaign to like 10 independent directors to the board of Exxon. So I think we support it. And I also believe that the shareholders ultimately are the ones that hold the ball to account. And in particular, for that transition strategy, whether it's climate or Paris aligned, I think that's important and they will continue to be important in the future.

The only thing why slightly hesitant. It's to do with the technology. What we're talking about really is we were the first generation, I think, in human history that won't have to burn something either to heat ourselves or to move ourselves, you know, ever since the days of the Neanderthals and the cave, we burn something to eat and in modern years…. The last 200 years, we use internal combustion engine to move where we don't actually need to. We don't need the internal combustion engine to move. And so when you say to them, we say, well, what's the future of the oil companies without the internal combustion engine? And I say, well, exactly. That's, that's my point.

This is an industry that actually doesn't have a future. So it's a bit like saying to an investor in blockbuster, you know, the video store, we're a long-term shareholders in blockbuster. We believe in the future of the video just as Netflix arrived. And of course the rational investors. Oh, you know, Netflix, you don't need to take a video of town to shop anymore.

You could use live streaming through the internet to watch a film. And you've got a choice at 20,000 to choose from. And exactly the same analogy can be applied to engaging with the fossil fuel industry. Now that you've got cheap renewables around the world, you've got the rapidly declining costs in electric vehicles.

It would be foolish to engage with a company that has a broken business model. I've

Shari: Got a lot of places to go on this point. I mean, first I wanted to hone down on this concept of, I guess, of risk and timing and, and I fully agree with you that the technology. Is fully there. And in the fight, he had an interesting study out a bit ago.
That was basically saying like most of the technologies we need to get to the climate goals by 2030, we have commercially already and a little bit that we don't have could be commercial. So, so we've got the technologies there and we know that we have the investment committee. I think pretty advanced on understanding some of these risks.

They've got the tools, we've got green bonds, we've got a lot of different ways of moving capital into the greener markets and it feels like, and kind of get to get to your very point. In the very beginning, the policies are not quite there to. This shift that you're talking about. And so I'm wondering whether you see these governments and policy action catching up more rapidly because without government action, it's just going to be really market forces.

**Campanale:** I mean, the wonderful thing about markets and investors that they're free to act and they can make choices today and without governments telling them what to do. So when it comes to analyzing climate risk, I think if investors see something. They can actually jump and I make choices themselves. But having said that, of course, everything exists within legal frameworks and policy is so important.

I mean in our work at carbon tracker, we did a report called the sky's the limit and looked at the great renewable energy resources around the world. And that the global South Africa, as a continent has a thousand times greater availability of renewable energy resources than actually can ever possibly.

Yes, but the problem that's keeping it back is a lack of the right policy framework, the right incentives, the right power purchase agreements that are in place to support renewable energy onto the grid or the right energy departments that have admittedly been running the last 20, 30 years, supporting fossil fuels those energy departments of government not set up really to support.

The clean energy revolution. So they have to learn this all and develop new ways of working. So policies is holding us back, but going back to your point about investors and making their own choices, we have seen an uptick in funding by institutional investors that renewable energy infrastructure, and it all boils down to a superior returns and getting these longterm, particularly in north America, Canada, these long-term power purchase agreements that are generated.

Low double digit returns, longer term. And if you think that government bonds are yielding less than 1% or zero, some places, and you can get what looks like
a good corporate backed power purchase agreement for 20 years yielding 8, 9, 10, 11%. Then it looks very attractive. Then of course, investors are.

**Denise:** I love what you said earlier when you talked about the difference between a business risk and essentially a risk that is fundamental and peripheral to the business. And so of course, energy use being huge in terms of RGG emissions. Well, 73% or so, but then pivoting to the real sector. You recently, co-founded Planet Tracker, which focuses on agriculture, seafood, forestry, et cetera. Could you tell us more about this and the work you're doing in that regard?

**Campanale:** So everything I'm interested in and do is to look at the world through a particular lens. And the lens I look at the world is through the lens of sustainability. And so when you look at stock exchanges in both markets, you'll see companies, whether it's fossil fuels or water or forestry, which are raising money and yet financial markets haven't quite yet found ways of understanding ecological boundaries or knowing what companies do.

So Planet Tracker was born out of me discovering an Asian seafood company listed on the London stock exchange. And of course in the global north, this happened at bleeding. Um, other countries for that bat behavior towards the oceans. And yet this was a company financed through London. And so we were equally culpable for what these companies were doing.

So it's telling me if there's one seafood company in London, how many seafood companies are they listed on stock exchanges and to up this and went away and we found over 200. Worth about $500 billion. They turned over $80 million a year in seafood revenues. And when you go to what those companies were doing, so you could find nothing about species, you could find no information about what volume of catch, of seafood they were catching or where they were operated.

And so climate tracking was set up to investigate that and to make a link to. The research that we're doing on what these companies involved it and connecting it back to the bankers and to the shareholders and to financial regulators. And that's where climate tracker was conceived. And just recently I set up a new tracker group called industry tracker industry dash tracker.

Which is looking at all the stock exchange, listed cement and steel and aviation and shipping companies to look at decolonization challenges for stock exchange listed heavy industry. So we now have a tracker family
Shari: Mark, that sounds like you really scanned the entire landscape. And you're putting under your family umbrella, all these different pieces, the hard to abate sectors and the agriculture piece.

I mean, this is all what is on top of mind of investors and other companies. And I'm curious to see, is there anything going on across all of these that is particularly encouraging?

Campanale: I mean, I, I sometimes think of the world as slightly half empty, rather than half full. It's not a great habit to be, but it's just maybe the way I analyze and see things.

But of course there's some fantastic news and, um, progress. And what I find amazing is the numbers of what you would think of mainstream investors and also company boards coming out. Absolutely. To Nancy are absolutely committed to making the transition happen. The numbers of webinars I've been in with Bernard with huge asset managers, where people are not just talking the language, but really asking about questions, exploring how they can price the challenge.

And I'm thinking that just speaks to this idea of humanity that people share. They see what the planet is facing and they want to find ways of dealing with it. So I'm not cynical to think people are just doing it because they think they can get higher fees from being a green banker. I do think genuinely think that people want to make a difference.

So now. Throwing everything. They've got, trying to find answers to the benefits of humanity. And that is to me, greatly encouraging, compared to where things were 20, 30 years ago. And just even in the last 24 months, isn't it. There's no doubt about it and you can't help it be encouraged by it.

Denise: I like that.

And it truly has been transformative, but just looking at the progress that we've made. And initially there was a consolidation, I think in terms of just even the nomenclature in green finance, responsible investing in that entire umbrella. I wonder just given what you just said, are there any steps that you're seeing right now that might seem well-intentioned, but you don't think would work or might move us backwards?

Campanale: I mean, people tend to make some overstatements and overclaiming, and I just to give an example, a lot of investment managers want
to integrate environmental and social and governance factors into investment decision makers. What's called ESG integration. And what that typically means is you're buying a research service from a major provider, good company, like an MCI or Sustainalytics.

And then you try and ensure that this information is used by where your farm managers. And if they do, you can then say to the world, we have integrated ESG into all of our investment decision-making and if you open today's financial times, you'll see adverts from companies that say exactly that we integrate a USG.

We care about the planet. And I think that's where greenwashing actually can come in. And what you should really be looking at is how, how would decisions change? And in, in reality, we're dealing with flawed markets and flawed people and, and markets. We're not set up with the goal of making the world a better place.

They cost companies to transact raise capital. So, and yet there's full of contradictions, the interests of the shareholders and interest of management. Let alone the interests of the workers and society may not necessarily align it, that they're in constant tension. And having ESG data isn't necessarily going to change that that tension is still going to be that people are going to want to take shortcuts.

And so when I think of responsible investment, I actually think of if you're a shareholder in a company and the company's polluting as a responsible show, the data might tell you, oh, this company's polluting, but what should really be doing is raising this with the board, challenging the board and you can't, as an investor, say, we have a climate.

The investment policy. And yet, if you say, for example, look at oil and gas executives are compensated on the basis of not on return on capital they're compensated on the basis of how much are the guests do you find? And yet when it comes to voting these same compensation or remuneration policies are voted for again and again, by the largest shell, instead of shareholders throwing them out, it comes, it's the same thing with auditors'.

What does this assigning of books, which don't necessarily tell the whole picture about climate risk shareholders should be voting out of the auditors if they're not giving a true fair picture, has that started happening yet? No, it hasn't been. So I think the greenwashing comes from an absence of you can have the
right policy, but unless your actions follow your policies, then that's really where the greenwashing begins to happen.

**Shari:** We're nearing the end. And I want to have a second to last question for you, which is just looking forward. If there was a fairy godmother that came down and said to you, you have one wish to kind of increase. I mean, your, your remit is pretty large. So I will just say to increase, to put all of these different industries on the right trajectory… Well, on the trajectory toward a 1.5 scenario, what would that wish be?

**Campanale:** Yeah, so it's a very simple one. And what carbon tractors work is really pointing to is getting companies to cut the production of fossil fuels. We need a global registry of all fossil fuel production, and we then need to have what we're calling a fossil fuel nonproliferation treaty, fossil fuel treaty.org, an agreement by all countries and all countries.

To cancel all exploration licenses and coal permits to get us back in line with one and a half degrees of supply. And that's the one major change that I'd like all countries to agree together, to cut the production and financing of fossil fuels. That's the one major thing that will change investor behavior, corporate behavior and hate will actually in my view, get the planet back onto a one and a half degrees.

**Denise:** From your mouse to the policy makers ears. It has been utterly fantastic having you, Mark. And I think sincerity that we could continue this conversation.

**Campanale:** I mean, tweet on it pretty much every day. My twitter handle is @campalemak. And if you follow that carbon bubble from carbon tracker, you'll hear a lot of these ideas tweeted out a few times a day.

**Denise:** Terrific. Thank you very, very much. So I found that really fascinating. And I'd say Sherry, the main takeaway for me was really what's the value of reporting is, and mark had mentioned, we are seeing some significant under reporting and in some cases, misreporting and climate risks, however, reporting in and of itself doesn't necessarily change.

**Shari:** I think that's exactly right. The reporting is necessary, but not sufficient in order to have the change that reporting would bring around. You certainly have to have the transparency. I think it's an important step, but then you have to have either the underlying policy or some other type of pressure.
That's making people want to act upon the data that then they're being, given that they want to then change their behavior based on the data that would be. Policies that would strand the assets and without those policies or without the anticipation of those policies, we may not be seeing change or we may, if people are anticipating them.

**Denise:** You're absolutely right. I think of it as the carrot and the stick, because what the reporting brings is transparency. So if you are mandated to report and then investors have a true reflection, of what it is that is underneath your sheets, so to speak. Now they can choose to pull off the sheets, right.

And leave you where their investments or keep you more. Fortunately, this is how the free market operates and the investors with the pressures that we're seeing, we'll make the right decisions with transparency to.

**Shari:** I think to the piece though, that I feel like about the transparency, that's really important.

And the shift that I think that we, we touched upon a little bit is that a lot of the other financial mechanisms allow you to identify what you're doing. That's good. But what this transparency does kind of should somebody care to look at pulls the sheet off of your entire portfolio. So it doesn't allow you to say, look, I'm doing all this good stuff on this hand, but then I'm doing high carbon or non resilient investments.

On the other hand, its meaning across your portfolio. Should somebody care to look and act upon it? Your entire investment strategy is more transplant.

**Denise:** And thankfully, we're going to dig into this a little bit more when we speak to Paul Dickinson on our next podcast, where we look at, in fact, the progress that's been made in reporting, and some of the upcoming changes in regulatory reporting, and we can be helpful, right?

At some point in history, even the accounting standards and reporting that we currently enjoy today. Well, not standardized. And so perhaps that there is a reason for optimism.

**Shari:** Right. I love that. Quote, unquote, enjoy our reporting requirements that we really enjoy

**Denise:** enjoyable.
**Shari:** Yeah. So certainly stay tuned in for Paul Dickinson.

**Denise:** Thanks to all our listeners for joining us. If you enjoyed the show, please do review us on iTunes, Spotify, or wherever it is. You're listening to your podcast. We love to hear from you. So please do send us your comments. You can find our show notes, bio's and leave us messages on our website, which is www.ifc.org/climatebiz.

And that's climate B I Zed one word.

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