Transcript of ‘Nature Corridors and Connectivity’

Season 3, Episode 15, Transforming Tomorrow

[Theme music]

Paul: Hello and welcome to Transforming Tomorrow from the Pentland Centre for Sustainability in Business. I'm Paul Turner.

Jan: And I'm Professor Jan Bebbington.

Today we're going to find out who is and who should be leading the way on nature connectivity.

What do corporations need to do to facilitate nature corridors? And does it all start with the green spaces closer to home?

[Theme music]

Paul: How green is your garden, Jan?

Jan: Uh, the back garden is sort of a bit of a green expanse. And I've been, I've been talking to my neighbour because she, I grow vegetables, she grows flowers, so we do a bit of swapsies around, but we also try to put things at the boundary between our two places that kind of helped her flowers and help my vegetables, if you know what I mean.

So, yeah, it's, it's quite a nice, big space.

Paul: When you describe it as green expanse, I've now got you in mind as one of those problem neighbours who, it's green because you've just let it grow every day since you moved in, [Jan laughs] and haven't done any tending to it.

Jan: Uh, no, I do a bit of tending, but I like growing. Uh, I don't tend the, the lawn too hard 'cause we've got wildflowers growing through it. So, well, we hope we do, I planted, I planted, um, little things this year and hopefully it will come through next year.

So just sort of have it green, but it maybe is a little bit tatty.

Paul: Green and a little bit tatty. I'd imagine a little bit tatty is probably be better in keeping with what it should be. Not too manicured…

Jan: …yeah…

Paul: …my, my, my space would be described similar, both at the front and at the back of our house, yeah. Green and a little bit tatty, but manicured in places to be able to…

Jan: …well, I discovered a frog.

Paul: You discovered a frog?

Jan: Yeah. In the garden, which I didn't even know he was there. And so I buried a couple of, um, uh, ceramic things with water in it. So he, if, if it got really hot, he could go and sit in those. Um, him, her…

Paul: … you didn't bother to do a gender check on the frog while when you noticed him….

Jan: …no. So, so that was a surprise to me to find that there was, there was another, there was a critter living in there that I have no idea how he's got there, but.

Paul: Well, he's got there somehow.

Do you get hedgehogs?

Jan: Uh, yes, and I have a wee hedgehog house in case one comes by and wants to sleep there for the winter.

Paul: Do you have a way for hedgehogs to get into your garden?

This is going very intensive, discussion isn't it…?

Jan: …yes, it is indeed…

Paul: …do you have a way for hedgehogs to get into your garden, Ms. Bebington?

Jan: Um, I haven't deliberately built one, but maybe if I did, I'd see more hedgehogs.

Paul: I don't think you have to build it so much as just cut a little hole…

Jan: …aah…

Paul: …in the bottom of a fence just to create a gap. Or you may already have a gap that you don't know about that a hedgehog can already…

Jan: …exactly…

Paul: …squeeze under…

Jan: …exactly…

Paul: Because there's ways for hedgehogs to get in. But…

Jan: …why, why am I being interrogated about my gardening, um, habits?

Paul: I'm interrogating you this because this, at a very individual local level, might be considered ways of having a nature corridor or a wildlife corridor…

Jan: …oh yeah…

Paul: …from letting creatures get into your garden, find somewhere to shelter. I'm glad to hear that you're not just letting them get in, trapping them, and then eating them for your supper. [Jan laughs]

You are thinking of ways to help them, shelter, et cetera. And, in urban areas, it can be a bit difficult. You know, you'll see hedgehogs get run over on roads, you'll see frogs and toads get run over on roads.

We get lots of frogs and toads in our garden, yeah. Well, we've got a meadow out the back, so…

Jan: …oh, that's nice. So it's, sort of, nice and porous then…

Paul: …yes…

Jan: …for things to travel between the two places. I like that.

Paul: Yes. So having the ability to let little animals come in and come through and move and not just be met by a giant wall of urban expanse, and no way through it.

But it's not just something for people in houses, that they would want to consider. It's something that businesses need to consider.

Jan: That's brilliant. So how do we find out more about this?

Paul: I have no idea. What should we do?

Jan: [laughs] We should talk to our guest, Paul.

Paul: We should. We're gonna bring back our guest who was the first ever guest on Transforming Tomorrow. He was a guest on series one, episode three. After me and you had got through our arguing episodes where we did just [Jan laughs] lots of just discussion just among ourselves.

And he spoke to us then about business and biodiversity. Which is where wildlife corridors, nature corridors, when it comes to business, comes in

And it is Duncan Pollard who is, and I dunno if he was this when we last had him on…

Jan: …he was, yeah…

Paul: …he was, he was. Had you only just appointed him?

Jan: Ah, yeah I think so, it was quite early days…

Paul: … an Honorary Professorial Fellow in the Pentland Centre.

He's got years of experience working in the corporate and NGO sectors, principally on land use, food and agriculture.

And most importantly, he was though the first ever guest that we had. So that was it.

Jan: So, really pleased to see you back, Duncan. Welcome.

Duncan: Well, it's nice to be here. I had no idea I was the first. I, it's back in the annals of time, yeah…

Jan: …yeah…

Paul: …yes, yes. Me and Jan have aged considerably over those two years…

Duncan: …just as young as before… [Jan laughs] …come on.

Paul: Any aging we have done, I feel is almost definitely related to the fact we have been doing this podcast. Um, but there, that's, uh, that's by the by.

Well, thank you for coming back, Duncan.

Duncan: No, it's a delight to be here.

Paul: Yeah. So, yeah, we are gonna talk about wildlife corridors and nature and everything.

So, I'd like to speak first of all, of how you might be defining nature and wildlife corridors and getting a picture overall of what they mean. 'Cause they're not just little holes in the fence for a hedgehog to come through.

Duncan: No, they're not. And, and you know, this, this work has come about, uh, well, obviously the Pentland Centre, we've been for the last, uh, three, four

years been, you know, annually working on this analysis of companies, and understanding how they're approaching nature and biodiversity.

I don't know if we want to get into a definition of nature versus biodiversity, but I'm kind of probably gonna talk about these two things kind of interchangeably.

But, nature's the big thing and biodiversity is kind of the diversity within, within that.

The, latest piece of work that I've done together with Jan and colleagues at, at the Pentland Centre has been about how do we make nature a little bit more understandable for business?

How do we get business to focus more on corridors, uh, within that. And, and, uh, we, we can talk about the, the nomenclature and terminology and whatever, but I think one of the learnings from what I've, I've done over the last summer is, is that we've built up a lot of terminology and complexity around describing what nature is and isn't.

And I think business has also had, in its desire for a reductionist approach to approaching topics, has also characterised nature in a, in a very, very simple way.

Um, you know, and I'm, I'm, I'm reminded of, of the Gary Larson cartoon, if, if I may just lower the tone of this…

[Jan laughs]

Paul: We don't get much lower than where we 're already at…

Duncan: …no, no. But I'm, I'm sure your listener, uh, know, will remember this cartoon. But it's, it's, you know, it's, uh, it's, the sheriff stood outside, uh, the, the, uh, you know, his, his place and there's just this pile of outside, of, of horses and, and cowboys. And there's horses' hooves sticking out and, and cowboy hats here and there and, and there's, there's poor Matthews there and the sheriff says to Matthews 'so you just threw everything together, Matthews, you can't do that. A posse is something you have to organise.'

[Jan laughs]

Duncan: [laughing] You know, and, and I think it's the, it's the same a little bit with nature because for decades, nature's been a thing or a place, let's say. And it's been a special place.

And, and nature's more than that. Nature, you know, is dynamic. And as soon as you bring in the idea of dynamism, you've got movement. So yes, you make hedgehog holes to allow corridors.

How did your frog get there? Well, it moved [Jan laughs] and, and nature likes, is dynamic, because it moves, because it needs to find homes, it needs to find food, it needs to find mates, it needs to interact.

And importantly in, with climate change, with stresses on the system, it needs to adapt to stresses and move through the countryside to find better places for food and better mates and whatever.

So, so this, this need for movements then suddenly brings you to and, and connectivity, suddenly brings you to corridors as being a fundamental aspect of nature.

Paul: Just quickly before we move away from what a nature corridor is, sorry, a wildlife corridor is, is it the same as a nature corridor? Is it the same as a green highway? Are these just interchangeable terms that people are using?

Duncan: Yeah, that's a good point. And, and you know, when I started this, uh, the client that I worked for was a, you know, a scientific based organisation, and you, you dip into the science and you start with ecological corridors and, and then, and then people say, well, it's not actually about corridor, it's about connectivity. And, well, no, it's not about connectivity, it's about permeability. And I'm going, whoa, just a moment.

How do we, if we are gonna make this meaningful, and capture the attention of boards of directors. We need to put this into simple language. And so I insisted on calling this nature corridors, but in, in actually, the, your point is a good one, Paul, because, you know, nature highways, whatever terminology resonates with people.

But don't get stuck into this, I, I don't. [Lowers voice] Can I be critical of academia and say this academic…

Jan: …I think we're all…

Duncan: …it's, it's ecological…

Jan: …Paul will encourage…

Duncan: …ecological corridors and permeability. No, no, no, no. I'm sorry. Let's keep it simple. It is that, Paul, yes.

Paul: Yeah. And again, just another point on this, are we specifically gonna be talking today about artificial ones that knit, that businesses are creating, or are we talking about natural ones as well…?

Duncan: …whatever…

Paul: …because they, they've existed…

Duncan: …whatever…

Paul: …forever…

Duncan: Whatever helps, whatever helps species move.

Paul: Mm-hmm.

Duncan: And that's, and that's the point. And, and, you know, to pre-empt your next question, I, I'm sure, I'm sure a bunch of people have, have come up with a definition of corridors, but, but in essence, there's no right and wrong on this.

There's no, there's no great way to, to, to define them, quite frankly. They are as broad or narrow as it is needed to allow, um, you know, uh, species to move…

Paul: …mm-hmm…

Duncan: …and, and if you are a bird, then actually, you know, stepping stones might be enough. A mature tree in the environment and, and one that's flyable to is, is, know, and, then another one, which can connect that bird from one patch of habitat to another is, is in that case a corridor.

And, and clearly, you know, plants and, and animals that, that rely upon wind for dispersion. Um, you know, they're, what does the corridor mean for them versus an earthworm or a, or a mouse that doesn't want to be exposed, uh, to a bird of prey above it.

You know, you, the look and the feel of a corridor will be different, uh, in different places. But, but of course we're talking about rivers and streams. We're talking about hedgerows. We're talking about patches of, of forests. We're talking about, know, uh, borders to farmland.

Paul: And I guess you're talking on different scales as well…

Duncan: …yes…

Paul: …'cause we're talking about the, the little things, in having a hole in a fence or having the stepping stones across a river.

You've got the great migrations that take place in nature across continents sometimes. And there's corridors there that creatures are migrating on that are hundreds, thousands of miles. And so it's, that's a huge corridor as opposed to the small ones you can get locally.

Duncan: Yes. And, and, uh, and that's, that's exactly the point.

In fact, um, you know, to, to approach this in a, in a credible way and, and, you know, kind of bringing it back to, to how companies can, can look at this, of course if you are a, if you are a forest company and you've got your own forest, uh, area that you are looking at, of course you can create corridors within that, but it's actually a connection within the landscape that's important...

Paul: …mm-hmm…

Duncan: …uh, and if you are a, if, if you're, uh, Network Rail, for example, in, in this country and you've got a rail track or, or a network of rail tracks, 32,000 kilometres I think of, of rail across the UK. They've got a track that's going, or tracks that are going all over the country, cutting across different landscapes. And, and connecting those landscapes as well in, in some way.

So yes, this is, this is, there is a scale, there is a scale issue here in terms of, of how we think about this.

Jan: And they're really sort of lively examples that I think our listeners would immediately sort of see and understand in wherever they live and wherever they're looking out across the landscape.

So why do you think that this idea of corridors has been historically neglected by, by government, by businesses, and perhaps by NGOs as well? Why, why is this interest coming to the fore now and, and is it a new interest or a reinvention of an older interest?

Duncan: I don't think we can, we can claim that, uh, connectivity in corridors is something new. But, but I, but I think that, that, whether it's governments or, or NGOs, um, they have concentrated in terms of, of addressing nature and, and biodiversity loss by focusing upon the creation of protected areas. And that's been something that's, that's, you know, been pushed at, at scale for more than three decades.

Um, now connectivity is really increasing importance and I think there's been an explosion, if you look back at the academic literature, has mean explosion of academic articles in the last decade on connectivity. But it's still, whilst practitioners and, and ecologists might, might say, well, no, we've been working on this for decades. They have, but, but actually it's still below the radar.

And let, let me illustrate that with, with two, two examples. Um, the first one is that the Convention on Biological Diversity, so at the United Nations level, the highest level, is, you know, we, the, the latest set of global targets that were set on nature. Um, there's, there's one that's, that's actually 3,0 known as 30 by 30. So the aim to get 30% of the world's, uh, land and sea, under formal protection by 2030.

Actually, if you go in detail and look at that, it's 30% of well-connected, protected areas by 2030. But it's simplified to 30 by 30. In other words, the well-connected is left out.

And then secondly, and we can back this up with the, with the academic literature as well, which is, which we found going through this survey. But, but I was, I was told by someone who was very close to that, uh, that process, that actually governments don't focus on the connectivity bit. Because they can't agree how to define it, and therefore measure it.

Now there are measures by by others of connectivity and that will tell you that whilst there's about 18% of the world land cover now protected, formally designated as protected, only about half of that, so only about 9% is well connected.

So we are lagging behind on that. And so, you know, one of the foremost scientists in the, in this area has, you know, made, made the point that the last 30 years has been about creating new protected areas. The next 30 years has go, uh, the next 30 years has gotta be about connecting them.

Jan: And that…

Duncan: … if we bring that, sorry, I just want…

Jan: …sorry…

Duncan: …if we bring that back to the UK, most government, 80% of governments have translated that UN CBD, Convention on Biological Diversity target into a national target. And 80% of those national target, national,

national governments have got connectivity included in their national biodiversity action plans.

In the case of the UK, you will find that in an annex of the national strategy on, uh, of biodiversity, national biodiversity strategy and action plan. Uh, the irony is that between the word well and connected, you've gotta turn a page over.

Jan: [laughing] No, that's even, that's ironic beyond belief…

Duncan: That's ironic beyond belief.

What's worse beyond belief is that the executive summary, which is pretty much the only place I'm sure your listener will go to, amidst the word well connected…

Jan: …oh, heavens.

Duncan: So, so the 30 by 30 just gets, just gets imprinted in people's mind and connection gets left.

And so it's no surprise that companies are not paying attention to this, because governments are not, aren't.

Jan: Yeah.

Paul: It doesn't surprise me. You see similar things, so many international discussions, agreements. You go to the COPs and words that are left out of final statements that are issued because there's, people object to it and there's certain people want certain words using not, and therefore the message that finally comes out and that people read and hear isn't necessarily the message that people wanted it to be in the first place.

And I can fully believe therefore, that when you have something like this framework and these, these papers, these documents, yeah. That people are gonna read what they want to read from it sometimes, almost.

Duncan: yeah, I mean, so, okay, so we shouldn't be completely negative on, on this, so…

[Jan laughs]

Paul: …that's my role. [laughs]

[00:18:28] **Duncan:** I don't, well, yeah, I, but I don't want your listener to, to you know, [laughs] to get all depressed about, about this.

In the, the corporate world it is catching up to this, and as I, as I said just now, the science is, is exploding with, with scientific papers about the importance of, of connectivity, uh, as, as part of, as part of nature, uh, you know, and understanding how nature functions.

Um, and so we have two of the most important, uh, reporting frameworks that, that have actually recently, in the last couple of years, explicitly mentioned connectivity within the requirements of reporting by the corporate sector.

Now, of course, it's one thing for, for that to be stated in the, the reporting requirements, it's, it's another thing for companies to, to understand what that means and to start to think about what it means for them and how they would go about it.

Jan: So let's focus in on business then…

Duncan: …yeah…

Jan: …and particularly, um, could you share with us how businesses might either disrupt or enable corridors to function well?

And in particular, what, you know, I'm sure your examples will pull on particular types of business that might have different chances to either enable or to disrupt corridors.

Duncan: Yeah. So, throughout this work, we, we really decided to focus down on, on four, four business sectors, let's say. So agriculture is one, forestry is another, and lineal infrastructure let's say, uh, so that's power lines and rail lines and, and road lines. Uh, those, those, um, lineal infrastructure which cuts across landscapes.

And then, and then kind of underpinning all of this is, um, let's say the, the asset owners. So, um, and, I, and I won't say asset managers, but I will say asset owners. So the long-term owners who take who, who in essence are owning pretty much, they're universal owners. They're owning pretty much shares in, in all, uh, types of, of businesses across the, the economy.

And they see, uh, as do central banks, and possibly stimulated by central banks, they see biodiversity and nature as a systemic risk. In other words, you know, one, one failure, in, in nature can have this domino effect that that cuts across and undermines all of the economy.

So, so the big pension funds, the big asset owners are viewing nature as this systemic risk and starting to, to try and understand how they can deal with that, and they can approach that. So, so those are really the four sectors, I think, that are really taking an interest, who are probably furthest ahead, in understanding, what, what connectivity is all about, why it's important and why therefore investing in corridors is important.

Paul: They're the four sectors that *are* leading the way. Are there other sectors that maybe have more relevance to it that should be leading the way, industries, et cetera, where they're having a potential big impact in this, but then just not doing it yet?

Duncan: Look, I, I think, I think there are three reasons why companies would take corridors seriously, um, and, and start to, to either work on it or, or report on it.

And, and the first is, is that need to ensure that their business models are resilient, and that they are working then in harmony with nature. And we can come onto how that, how that manifests itself. Um, the other reason why companies might take corridors seriously is that they've, they've set a, a corporate target on, on nature, and they have to be able to demonstrate.

And these corporate targets are generally something like nature positive or, or, you know. And so they will need a way in which to demonstrate that they're doing that. And that they are achieving that. And the third reason is that they have to report to these, um, legislative requirements on, on nature or voluntary requirements on nature, like the Global Reporting Initiative, which requires, uh, reporting on, on corridors.

So those are the three reasons why, why they might. Now, we have found other examples from, and those three sectors then, you know, become, you can understand a resilient from, a resilient, a business resilience point of view, agriculture and forestry and, and lineal infrastructure. That, that's why they've picked that up.

But you will find that some other business sectors have invested in corridors, but that's really from a, I might say public relations rationale for it.

Paul: Mm-hmm.

So it, it does then make sense that those four would be the areas that are leading, is the, the point I'm getting to…

Duncan: …yes…

Paul: …It's not like there's other areas where you think, hang on, they should really be involved in this, but they're not.

Duncan: Well, I, I've maybe picked the obvious ones and I'm sure your listener will be able to, uh, write in, uh, and, and explain that, oh no, you know, the telecoms industry or, or, you know, I dunno…

Jan: …yeah…

Duncan: …when I put agriculture, I, I do include kind of apparel in terms of the fact that they're using cotton and things like that…

Paul: …mm-hmm…

Duncan: …so, so land-based are the obvious ones.

Paul: Yeah, agriculture was certainly the one that would've come to my mind…

Duncan: …yes…

Paul: …and that obviously you would come up with forestry, Duncan, given your background, forestry…

Duncan: …yeah, yeah…

Paul: …but as soon as you said it, it makes an obvious amount of sense, 'cause forestry is more than just looking after a tree in your, you know, local forest. There's a lot more to it than that. There's lot more to the forestry sector there…

Jan: …and I, and I think the linear infrastructure is a, it's all around us, but we probably don't see it and don't realise it's maybe like a, you know, the Highways Agency…

Paul: …mm-hmm…

Jan: …all of those, those things on the side of the motorways, yeah.

Paul: Yes. And previously the telecoms industry would've had more of an impact in that…

Jan: …yes, indeed…

Paul: …the uh, telegraph wires that carried your telephone [Duncan laughs] are, are now many, many, many miles above our heads, rather than a few yards above our heads.

Duncan: Yeah.

Jan: But that also makes me wonder, is it, you're talking about people maybe doing this for public relations reasons, so they've got their little bit that they're doing.

But also when I think about the linear infrastructure, because they sort of touch on the edge of lots of other people's places to, to create really, you know, robust corridors that really do their job. Is it, is it more of a collective game?

So everyone in a, in a county or in a place or maybe everyone alongside the rail tracks that has some, some land and some ability to join things together, is it, is it a hold hands and get on with it together game, or is it much more go alone game?

Duncan: Well, I mean, it's, it's go alone, go alone to the extent that you can in your own land areas. But, but yes, indeed. If connectivity is important, then connectivity doesn't stop at, at the fence line. It is a landscape level thing.

And, and as soon as you get into the, the, the landscapes, then it is about the neighbours. You can't do this alone. You have to start engaging with the neighbours.

You know, the, the, coming back to the lineal infrastructure and, and Network Rail in this country, in the UK, 32,000 kilometres of track, they've mapped what is the vegetation one kilometre either side.

So as they start to manage the corridors that they own, or that's within their fence lines, they can take into account the, the vegetation that's either side. And the moment that you know the vegetation either side, then you have to start talking to your neighbours and start saying, how are you managing this, and how can we help? You know, how do, how, how can we all be in this together in of, of thinking through connectivity.

Jan: And perhaps a very unusual, uh, example that I, I remember from years ago is that, uh, the golf courses were, were popped down where they all were. Then I, I know that some of them then looked for where were the Sites of

Special Scientific Interest. Maybe a bit close to them or maybe joined up and could they use the golf course as a conduit for, for wildlife as well…?

Duncan: …yes, yeah…

Jan: …so I mean, that's kind of, I don't know about you, Paul, but that's kind of like an unusual suspect in a way. But they've got big patches of ground…

Duncan: …yeah…

Jan: …which they can make either more or less open to biodiversity, but then also can join up in greater or lesser ways.

Paul: I did used to be a golfer.

Jan: Did you? [laughs]

Paul: Not, not professionally, I, I need to stress. And it sounds like some kind of confession, doesn't it? When you, you say, it like that?

[Jan and Duncan laugh]

Paul: Uh, no, but I played on, on a links course on Walney Island, where I'm from, and there's a lot of nature just embedded in links courses. It's the, the fact is they're right up against the sea.

And some parts of it, you'd look at it and think that's just taken away the potential for nature there 'cause you've got the well mown fairways and the greens. But beyond that, you've got the rough, which is just allowed to grow wild on a, uh, a links course, which is different to some of like the parkland courses and the courses you might see in places like America. Although we don't get alligators, which you do get like, a lot of in, uh, Florida.

But you can see all the nature there. You've got birds, you've got butterflies depending upon the time of year. You get foxes clear as, you know, going across the courses. You get badges, you get signs of nature all around you there.

So in my mind, golf makes sense, uh, as nature, depending upon where it is in the type of course that you've got there.

Jan: Yeah.

Paul: Uh, I'd imagine that certain places, like you see a lot more golf tournaments now internationally played in the Middle East. And the only green

area for miles around is where they're pumping lots and lots of water onto the golf course. Whether that can serve as a nature corridor, given that everything around it is just barren, sandy, or you've got the ocean, I don't know.

But, yeah, [inaudible] different…

Jan: …I suspect the nature that likes the sandy bit probably isn't so interest in the green bit… [laughs]

Duncan: …well, I was gonna say, I, I'm sure, I'm sure when, you know, if you go into deserts and, and someone shows you, you know, first few times I went and they are, they are barren to the, the, the first, the first glance.

But as soon as you know where to look, there's an awful lot of nature there.

Paul: But not necessarily the creatures who are used to, so yeah, bathing, uh, uh, you know, in, in a little pond or going on the, on the greens.

Jan: Yes.

Paul: Maybe they'll like the bunkers. [Jan laughs]

Maybe all the creatures that live in the desert, like the bunkers on golf courses…

Jan: …and they eat golf balls, ah well. That's how, well, I'm, I'm getting off track, aren't I?

Paul: Well, can I take us back on? I, I'll take us back on track…

Jan: …good on you…

Paul: …because the question I'm wondering about, we're talking about the need for collaboration. So, are there funds set up to help with this kind of work then, to help companies who maybe have no idea of what they're meant to be doing, figure out what they should be doing and to make progress, albeit maybe the initial steps, but to assist them in that?

Duncan: Yeah, I mean this is, this is one of the fascinating, um, parts about, about this in terms of how do you build these kind of landscape level, um, connectivities, and as soon as you do that, there are, there's a whole set of different stakeholders, a whole set of different neighbours needed to be, to be, um, involved.

And inevitably, doing things at a large scale you are starting to get into delivering upon government policy. And governments have an interest, and so governments can come in and, and fund part of this.

Actually the exciting things on, on corridors is, is where companies are doing it outside their fence lines. Outside their own land holdings. And the best examples actually come from, uh, forest companies in South America, in Brazil and Chile. Uh, where, you know, a company like Suzano in Brazil has got huge, uh, corporate targets now for, uh, establishment of corridors and connectivity, uh, across landscapes within which it is embedded.

CMPC in Chile are doing, doing the same. And you start to look at, at, you know, why is that? And, and why has that happened? And, and of course there's history involved in this. And, and there's two aspects to, to history. Uh, the, the first is that, uh, these are companies that have, uh, and forests that have been established on, on land, uh, quite recently in, in recent, recent history. Uh, and it's come with land conflicts associated with it.

The, the second kind of historical thing is that, um, uh, these are, these are places where the climate used to be quite good and climate is changing now and fires are becoming more prevalent.

And, and, and so you kind of put these things together and these are companies that have got well organised systems for fire control within their land holdings. And these are, these are companies that own hundreds of thousands of hectares of land. So, you know, they've, they've got pretty sophisticated, uh, ways of controlling fire.

But now the fires, of course, are starting outside. They're starting in the landscapes way, way away. And, and why are they starting? Well, there's, there's still conflict. They don't like to talk about this. They, you will never find this written in their annual reports as to, as to why they're doing this.

They've, they've got a nice story that they're doing corridors from the point of view of, of biodiversity and whatever, but actually there's, there's land management issues and there's climate change issues. Fires are more prevalent, they're happening more and more.

So how do you deal with this? Well, firebreaks and, you know, lineal infrastructure through the landscape, can be very good ways of breaking up fires, and well, well established techniques. So riverine systems, uh, how can

we build those up and, and restore natural, natural firebreaks across the landscape?

How do we start to do that? Well, we've gotta start working with our neighbours and, uh, oh, that suddenly starts to build, you know, lower the tensions on the conflicts that were there and whatever. And, uh, well this is a pretty big scale, isn't it? Can we do this by ourselves? Well, no, but there are people that are in, we, we are creating these permanent structures, which will save carbon and store carbon.

Oh, just a minute. There's, there's a value we're creating here. Is there anyone interested in funding carbon? Well, yes. So, I'm coming to your funding thing slowly.

[Paul laughs]

Duncan: [laughs] There's different ways of funding things. So you might, yeah, you might be funding things and getting government grants because you're delivering on government policy. Uh, but you're also creating a value, which is a carbon value which, which, uh, people, people are willing to put money into.

And indeed, uh, Suzano in Brazil has created, uh, a very big fund called, uh, Biomas which has, has raised money from a lot of companies as, as one way in which they are funding this massive commitment to connectivity across the Atlantic Forest and across the, the Amazon, in the landscapes, in the areas where they themselves have forests.

Jan: And, um, dear listeners, we'll make sure that those examples are in the show notes. 'Cause they're in the public domain, so you'll be able to read them and, and, you know, learn from them for yourselves.

So can I just do something slightly geeky? 'cause, uh [laughs] 'cause…

Duncan: …by all means, yeah.

Jan: Surprised?

Paul: I'm, no, just gonna let you go with it. Has it got anything to do with accounting?

Jan: [laughing] No, not this one.

[Everyone laughs]

Paul: Alright. Okay. Well, it, it's geeky, but non-accounting…

Jan: …yeah…

Paul: …then by all means. Has it got anything to do with either DC Comics [Jan laughs] or anything like that, that kind of geeky?

Jan: No, no, different kind of geeky.

Paul: Ah never mind, then.

Jan: So, you, you talk in your work about two sorts of resilience and we, we all love resilience…

Duncan: …we do…

Jan: …we know it's there, we know we need it…

Duncan: …yeah…

Jan: …I wonder if you could distinguish between absorptive, um, resilience and anticipatory resilience? 'Cause it seems to me…

Duncan: …yes…

Jan: …that that's really important in this context.

Duncan: Yes. Especially when it comes to, to nature. Yeah. So, um, resilience is one of these, uh, I was gonna say buzz, buzzwords and concepts in the business world. I was gonna say at the moment, not really at, yeah, at the moment. People are, people are talking about it.

It's, I would say companies will always say they're resilient. Uh, but, but resilience, um, is generally understood as, you know, some event comes along, some crisis happens. How good are we at bouncing back from that? And so, and so that's resilience and, and what does that mean? Well, how agile are we?

And if so, imagine you are a, you're a big food company. You're buying, you're buying wheats from either across the world, or across the UK. There's a drought in one part of the UK or there's a flood in, in, you know, one part of the US. Well, we're agile, we're resilient because we can just shift our, our procurement somewhere else where there's, you know. So that's, that's absorptive.

Actually, these, when it comes to climate change, there's this realisation, uh, that first of all, it's not going away, but actually this is not something that's

happening in the future, it's happening right now. And it's happening increasingly frequently. Droughts are happening more frequently, floods are happening more frequently. And so this is not, so, agility is not enough anymore.

If you're spending, if you're a company, spending time and effort driving traceability, so you know where your material comes from, you are starting to work with your farmers more, you're investing in them, you're there for the long term. It's no good if that farmer gets wiped out by the next drought that comes along.

You have to stay with them and, you know, but you've got a supplier who's not supplying you. So anticipatory resilience is where you are building in the capability to be not affected by these shocks in the first place.

And that's where you come onto the idea of, um, of regenerative farming. Where there's a change in which farmers are using less chemistry and more biology, if I simplify it down, in the way they manage their land. And what does that mean?

Well, it means that the soil is more able to absorb these flash, these heavy downpours. They're more able to save and store moisture in the soil through droughts. They're less likely to be impacted by these extreme events. And so that's what I mean by the anticipatory resilience.

And so that's really where we should be focusing more effort. Um, and it's where if you wish to work with nature, that's where you can work with nature, because nature can help you build this anticipatory resilience. And that's where the corridors come in because they can help in this buffering process.

Jan: When you're talking about this anticipatory resilience, it tucked away in my mind, is the wee bell going, oh, dependency. And because the nature dependency from a corporate perspective is starting to be a narrative that we're seeing, do these things link together?

Yes, they do. And, and you know, the, the, research that we've been doing for the last few years, uh, Jan, you'll know that, um, companies have, uh, have been asked to talk about risks and dependencies on nature, and we haven't found a single good example of a company reporting upon dependency.

And, you know, are we dependent on nature? Well, yeah, we, we're dependent on nature, but, but don't worry, we, we're saving that bit over there. Yeah?

But during the course of this research and uh, an interview I did with, with a group of accountants, actually…

Jan: …aah, thank goodness…

Duncan: …you wouldn't believe this…

Jan: …the accountants…

Duncan: …they, they, said, they said that that the way that they like to, to, to talk about dependency with their clients is, is supply and demand.

So, uh, and at, at least, you know, in, in the corporate, in their corporate clients. And, and, and so the, the, you know, the best example of this is, again, coming back to regenerative agriculture, as farmers use less chemistry and more biology, um, they are putting more demands on nature.

Um, so, so they're, they're, they're wanting nature to, to provide more to them. Meanwhile, you've got climate change coming along, which is adding all of these stresses, which is reducing the supply of these services. So depend, why a company's not interested or, or not really getting or understanding dependency. Well, because in the past, nature has been in abundance.

Jan: Mm-hmm.

Duncan: And you don't need to worry about abundance. You don't need to worry about dependency if there's an abundance. Suddenly, if you are changing the supply demand equation, you might want to start to think a little bit more about it.

Now, I agree. It's, that's very difficult to, to elaborate to, to think through, but, but thinking through is really crucial.

Jan: And I suppose, um, and we have spoken about in a past podcast, the Taskforce on Nature-related Financial Disclosures, and some of the reporting we are seeing around that people are doing climate and nature together. I think for exactly that reason…

Duncan: …yes…

Jan: …which is really wise because it's not, you know, nature is not sitting alone…

Duncan: …exactly…

Jan: …it's in a, it's in a climate system as well…

Duncan: …yeah…

Jan: …and vice versa…

Duncan: …yeah.

Duncan: But, but just the, you know, to, to add onto that. Unfortunately, the Taskforce on Nature-related Financial Disclosure does not mention connectivity…

Jan: …it doesn't, yeah…

Duncan: …it does not mention corridors.

Jan: Yeah.

Duncan: It's not part of it. And, and the, the major business platform that brings companies together to collaborate, uh, and work together on nature, so Business For Nature, doesn't mention corridors either. Doesn't mention connectivity.

So there's a, there's a, you know, there's a way to go. So, you know, if I come back to where we started with, with governments mentioning well-connected in their long documents, but not in their, their short documents. Not understanding how to, to measure connectivity and therefore they're not reporting upon it.

The Global Reporting Initiative and the, the European Commission suddenly starting to add connectivity as a, as a requirement for reporting. But then the main, the main corporate thinking and approaches to, to nature, which is TNFD and, and Business For Nature, not looking at, at corridors and connectivity.

We've got this, we've got, we've got a long way to go to, educate and inform. Now, as I said, the academic world has, there's been an explosion, half a million, I think, academic articles in the last decade on corridors and connectivity. So there's a wealth of, of knowledge and information there.

What we have to do is, is simplify this into a language, that the, the corporate world and, and, and, and boards will, will understand.

Jan: And then also to make sure that those standard setters, whether they be voluntary or mandatory standard setters, also understand it…

Duncan: …yes…

Jan: …and bring it into their work, so…

Duncan: …yes, indeed.

Paul: So I guess that brings us then towards the end, and just to ask then, what is coming next? Where do you see the next evolution of this work on wildlife corridors, and how they come into existence and how companies work with them and build them into their plans? What do you think is coming next?

Duncan: Yeah, so, um, look, as I said, this was a, this was a piece of work for, uh, for a client and I'm, we're just in this period now where they're, they're working out exactly how they're gonna go public with this and, and present it and, and start advocating, uh, for this to be, be taken up.

Uh, more so I'm, I'm, I'm kind of, uh, handcuffed a little in terms of what I can say and how I, how I can say it, because I want, I want them to get all the glory for this. But, but you know, having gone through this and having learned so much and, the scale's almost fallen [laughs] from, from my eyes in terms because I've been, I've been working on this for 30 years as well.

And, and suddenly it, it gave this whole new understanding for me. Um, so I, I, I certainly wanna work more on this now. I was just at a conference the last two days, uh, actually on, on, uh, where we were talking about corridors. It was fascinating to, to bring in a few insights to that and to, to try and try and help researchers in the UK take, take this forward a little bit further.

But at Lancaster, I'm, I'm very much hoping that we're gonna continue on this. We've been reporting upon, uh, business and biodiversity now for the last, uh, four, five years. Uh, and so this, this, I think can take us off in a, a lovely, interesting, uh, direction. But, uh, I, uh, it becomes a personal mission of mine now for, for, to really take this forward.

Paul: Well, we look forward to hearing what comes next.

Thank you very much, Duncan, for joining us again.

Duncan: Thank you.

[Theme music]

Paul: So it turns out, Jan, there's a lot more to wildlife corridors than just that little hole in your fence for the hedgehog. Although the fact that you're talking with your neighbours about how your gardens connects and stuff is a very good sign. 'Cause as Duncan says, it's not just an individual effort for one company. You need to be working with others that are around you, otherwise, what's the point? There's no corridor, it's an enclosed space.

Jan: And what I liked is his description of looking at the landscape level. So actually understanding things on larger scales.

Paul: Mm-hmm.

Jan: But then actually thinking about your role within them.

So the essence of system science, which is really fantastic to see it coming through in this area as well.

Paul: Yeah, and you talk about large scale, he talks about the work that's gone on with regards to the railways. 32,000 miles, uh, kilometres, sorry, of railways in the UK, a kilometre either side. So that's 64,000 kilometres squared of land that they're doing the surveying on and figuring out how everything is connected there nature-wise and, oh, biodiversity-wise. That's, that's a big, that's a big scale plan.

Jan: It is indeed. And, uh, the road agency, um, in the UK and elsewhere in the world as well, it won't be a, just a UK level activity, are also looking at the same kind of things.

And in particular, you know, where roads intersect there's little patches of ground that maybe aren't disturbed, um, because no one can get to them, but also don't have pesticides on them, haven't been sort of managed in any way.

And, um, I mean, we've gotta be cautious about the term 'wild', but, but they're places where things can flourish because they're not being disturbed. And so scrappy bits of land that you sort of think, oh, that looks a bit ugly, may be doing something really good for us.

Paul: And it was positive to hear, albeit with the caveats that Duncan placed on it, that South America is playing a leading role, Brazil, Chile, and the companies there.

Like you say, that he did mention some of the issues that are ongoing with regards to fires and conflict and stuff that's going on. But the fact that parts of the world where you wouldn't necessarily think would lead the way on things like this are leading the way.

And especially a country like Brazil that's got so much biodiversity in the form of the Amazon, then, brilliant that they're doing that.

Jan: Yeah. And um, just at the edge of it, and it will be a topic that I think we'll come onto in the future, dear listeners, um, in around like transition plans. So how do you sort of link to that idea of anticipatory resilience? That you have to have a plan about where you're going into and what you're going to do in this new regime.

And that would include how you're going to think about nature. Are you going to try to be nature positive? Which is a really tricky phrase to even know what that means, and there's lots of rows about it, as you can imagine. But these aspirations for what it will look like in the future is also there.

Paul: So what have we got coming up next, Jan?

Jan: Oh, if only I could remember. You've got the form you do it.

Paul: We haven't got any green corridors, but we have got a green two acres of grass.

Jan: Oh…

Paul: …yes.

Jan: I get a sense that there's gonna be some footy talked about.

Paul: Yes, football…

Jan: …football… [laughs]

Paul: …or soccer, depending upon where you are in the world. Soccer, by the way, short for association football, in case you ever wondered…

Jan: …oh, is it? I didn't know that…

Paul: …yeah, association, soccer. That's where, yes…

Jan: …oh, wow, there we are…

Paul: …that's where the soccer part comes from…

Jan: …every day's a school day in this podcast studio…

Paul: …it is indeed. Yes. We're gonna be joined by one of your friends. Idlan Zakaria is gonna be here with us, talking to us about football and sustainability, and I've got lots of questions to ask her.

Jan: I'm sure you have, and you'll be very pleased to know that some of my friends are football mad and Idlan will be one of those people.

Paul: Yes. Being from New Zealand football was not really a consideration.

Jan: Well, we kind of know what it is. Well, in one way…

[Paul laughs]

Paul: …you kind of know what it is…!

Jan: [laughing] …also we're lousy at is as well. But anyway, that's, that's for the next podcast, not for this one, I think.

Paul: I'll have you know that someone who played for the New Zealand international team at a World Cup also played for Barrow AFC.

Jan: I think you now understand our national level. [laughs]

Paul: Yes. That, and that was when Barrow AFC weren't even at the level they're at now. So yes, there's all that.

Paul: I, I really do look forward to that, that conversation. Although that makes it sound like I don't always look forward to other ones. [Jan laughs] But no, I am looking forward to that conversation.

Until then, thank you very much for listening and goodbye from me, Paul Turner.

Jan: And it's goodbye from me, Jan Bebbington.

[Theme music]