

Episode 11 - Why Soil? with Finian Makepeace



FULL EPISODE TRANSCRIPT

With your host

Hayley Weatherburn

Episode 3: Why Soil? with Finian Makepeace

Welcome to **Thriving with Nature**, a podcast that gives you the tools you need to live a modern lifestyle that helps regenerate our planet. And now your host, Hayley Weatherburn.

Hayley: Hello Thrivers and welcome to this week's podcast. I am so excited to be sharing this podcast with someone who I have been inspired by and he's very profound. He's one of the leaders in the *Soil Advocacy Movement*, Finian Makepeace. Welcome! Welcome to Thriving with Nature.

Finian: Thanks for having me. I love the name of your podcast. It's great.

Hayley: Yeah. It's generally the mission, right? It's what we're all on. And I want to show people a little bit about you to the Thrivers out there. Finney Makepeace is the co-founder of *Kiss the Ground* that I've recently done in the *Soil Advocacy Training* and we're going to talk a bit about today. He's a renowned presenter, media creator and thought leader in the field of regenerative agriculture and soil health. He's dedication to Kiss the Ground's mission of inspiring participation in global regeneration starting with soil has motivated him to develop training programs, workshops, and talks designed to empower people around the world to become confident advocates of this growing movement. He's been to COP 22. And a random fact I found in my research (is) he's an amazing musician, playing many instruments and even collaborated with one of the youngest climate advocates, who I cannot say his name, on a song dedicated to healing the planet. You're amazing.

Finian: Xiuhtezcalt. He's awesome.

Hayley: Xiuhtezcalt. Yeah. Thank you. I've watched him for ages.

Finian: It's a tough name to pronounce it. It's not easy.

Hayley: Yes. So, welcome. Welcome. That's so awesome.

Finian: Thanks for having me.

Hayley: Yeah. For those of you who've been following me, in the last few weeks I've been sharing a lot about soil (and) a lot of the things I've been learning. Finian is one of the key players in all the information that I've learnt that put together his Soil Advocacy Training. That is absolutely phenomenal. If you have any interest in climate change or anything, it's definitely the place to go to. So Finian, what actually has driven you to take this path in helping the planet reverse climate change?

Finian: (In) this path particularly, I would say I've always been a pretty active person, a pretty strong environmentalist, a lot of stuff on helping people, with human rights and people's rights, race relations, public policy that's helping people. But this particular path came to me for two, what I think of is two moments. The first one was a setup of a kind of awake wake up call that I had that shook me out of my existence before that. Yes, I was an activist. I was a musician. I was "doing my part". But about eight months before I heard about this particular solution or path, I had this dream and I shared it with an advocacy program that I was this old man living in a refugee camp. So, my dream was about the future where climate change and the issues we're facing now had really spun out of control and billions of people had died, more misplaced. And I'm in this refugee camp in Brazil and my granddaughter wakes me up in the middle of the night and she sneaks me under a hole in the fence that she found. So, we sneak out of the refugee camp and we walk all through the night. And as the dawn approaches, we come over this hill and out in front of us is this city that's completely destroyed like many other cities around the world. And in the dream, she just looks up at me and there were tears down her face and she's just mad. And she says, 'why didn't you do anything to stop this from happening?' She's talking about the whole phenomenon really about humans burning out of the world and the degradation it caused. And so waking from that dream, having the sense that I couldn't live my life with that as a possibility, not that that might not happen, being fully well aware that that might be where we're headed. But what I got was that I can't say, 'I didn't try.'

Hayley: Yeah. Yeah. That's huge.

Finian: So, that was really the catalyst that set me up for knowing that I've had to do way more and whatever I had. About eight months later, I was lucky to have one of my best friends, Ryland Engelhart, who is the other co-founder of Kiss the Ground. He had been in New Zealand actually and heard this panel of scientists talking about 'can human beings sustain themselves on planet earth?' And the first five people spoke and

said, 'no, At this rate, we're pretty doomed.' And the last gentleman said, 'yes, that's true, but we've all kind of overlooked this big potential solution which is the availability and the potential to rebuild soil, to recreate healthy soil. And it just so happens that the substance that makes up the healthy part of soil, well, the carbon that makes it all work, that makes all the life function, comes from the problem that we're facing, called too much carbon in our atmosphere.' So this was a revelation to Ryland and he came back really excited to the US like, 'Oh, did you know about this whole new solution?' And of course, everyone he talked to was like, 'no.' And then, he convinced Graham Sate, this gentleman who spoke to stop in LA and he and I put together this little auditorium full of people to watch. And I wasn't totally sure what to expect here. I was just like, 'okay, I'm open to this.' Ryland was pretty convincingly saying, 'you're one of my friends who's like always on the ball with climate and activism and telling us who to vote for and everything.' So, I was like, 'alright, let's see what this was.' And four hours later, it was just so profound. As someone who's always been like, 'okay, I get what's happening. It felt pretty confident in my understanding of the trajectories that we were on.' Here comes this idea and this set of possibilities that I had no idea about and I just was entirely moved in such a big way that that very night, we went back to Ryland's house, a few of us. And it was the handshake agreement of like, 'if this is all true, we have to dedicate our lives to getting the word out about this.' Because at that time, just over seven years ago now, very, very little information, media, true form media, infographics, ideas about it (and) consolidated versions of it were not available. We basically said, 'we have to help however we can.' And we didn't know what that was going to look like. We didn't know it was going to be our nonprofit, Kiss the Ground. We just dedicated every Monday night to meeting and for a year we just said, 'we're going to figure out what to do.' And what came out of that was the first dedications of making something called *The Soil Story*. And then, (we were) trying to start helping with policy work at the state level. And then, looking at (it), we started a community garden at first. But it was basically like we got to do something here. [Yeah.] And that was the story of how it got started. That's why this path to me was so needed was basically I got or we collectively got that, 'Oh my gosh, humans actually can shift the trajectory of where we're going'. Because before it was kind of just like, 'how much slower can we go off the cliff, right? How much less are our grandchildren going to suffer [yeah] versus we may have a possibility of shifting things back and not just in the area, very back to the land type of way that some of our parents were promoting, but not necessarily having the availability of the science and the pioneering agricultural expertise to say, we can actually regenerate land. We can actually make it all better, faster than we ever thought possible.' It was kind of like marrying the dream of, 'yeah. Wouldn't that be cool if we could do that,' with, 'no, we actually can do it.' [Yes.] We actually can. We didn't know.

We didn't know the soil science. We didn't know the microbiology science. That to us was just, the case was made and it changed the rest of our lives.

Hayley: Yeah. What an absolutely phenomenal journey it's been. And I can say being in Soil Advocacy, you can tell the use that you've put into the work and what you're sharing right now is phenomenal. And I remember during the course, there were a lot of people having 'aha' moments about soil, I think. I can't even remember now how it sort of got into and soar Kiss the Ground and why I was excited about soil, but I didn't really know why. I've been going on and on for weeks in the podcasts about soil and it'd be great. Why is soil such a significant, simple, simple way that we can fix it? It doesn't mean that it's easy because we're going shifting, you know, a lot of behaviors. But, why soil? Why is it the most amazing thing that can happen for us right now?

Finian: I liked the way you pose that question. It's never been posed quite like that so I'll see what comes out here. Well, (the) first thing that came to mind was it really is the essence of life on land. So when we start to more fully grasp how life functions on land and understand that, at a rudimentary sense, the basis of soil's ability to function is how much everything, all living organisms are going to be able to function. So when we grasp that from a totality perspective, like without soil, life on land doesn't work, right? When we grasp that. So, to dig into is that a little deeper, most of our conception of soil has been from our eyes to the ground [yeah] and sometimes, when they put her hands in the ground. One thing I like to do when people are merging into this conversation is reminding them of what our perspective was and why our perspective was like that. One of the ways that this is so profound and one of the 'aha' moments that I think is so amazing is when we look at the top six or 12 inches of soil, when you put your shovel in there, you put your hands in there, most of our conception of how that was formed was by things that fell to the surface: leaf litter that fell to the surfaces, grasses that decompose, branches that fell, stumps that were there decomposing and mixing with the sand, silt and clay that had eroded from the mountain side over time: weathering of rocks, erosion, creating the particles of sand, silt and clay, and they mix with the decomposing material. [Yeah.] That conception is proof predominant in a lot of our agricultural textbooks still and a lot of our soil textbooks. Now, that is a portion of what makes up the soil. That is depending on where and when and how you're measuring it, that could be anywhere from eight to 30% of the soil organic matter or the stuff that's making the "soil." A big thing that was missing was the big revelation that we're so excited about that we didn't really grasp. Humans didn't really understand how much soil was formed and created by plants. This plant here is pumping carbon from the atmosphere, right? We have carbon dioxide here. The plant pulls it in through its leaf. In

the stomata under here, it sucks in CO₂. And then using the sun's energy, it takes the carbon from carbon dioxide; breaks it off; and combines that carbon with hydrogen and water that it's pulling from hydrogen and oxygen, sorry, that it's pulling from its roots, H₂O, right? It's pulling up water and the sun's energy is combining that energy. The energy bod is the sun's energy. So, it bonds those together. It creates carbohydrate chains. This is the liquid sap. If I tap this tree, a bunch of milky stuff is going to come out. Those are the carbohydrates that's flowing through the plant. That's what the plant builds itself out of. I've watched this plant grow every day in my house. [Yeah.] It's growing from those carbohydrates. So, what we didn't grasp was how much are those liquid sugars, those liquid carbohydrates, if my fingers are the roots, were being dripped out of the roots to feed the micro organisms in the soil. So, imagine all these microorganisms, yum, yum, yum, eating. Their populations are growing: the fungi, the bacteria, the other organisms, and so as the food web are eating those organisms, et cetera, et cetera. In the process, many of those organisms are creating gluey substances, gluey stringy substances, either on the outside of their bodies or their bodies themselves and they're made of carbon. They ate the carbon. They were built from the carbon. They eat the carbon sugars. They were built from the carbon. Their sticky substances are aggregating the soil together. So now, this is a lot in a little bit of time. So the plant just pumps in liquid sugars; the organisms eat the liquid sugars, which are carbon, they are made of carbon; the organisms make sticky substances and those sticky substances are binding the soil together in structure. (It's) like a house starts out with brick, right? [Yeah.] There's a pile of bricks. Then, you take your mortar and you glue your house together to make a structure of a house. [Yeah.] The mortar, the glue that those sticky stuff are, they glue the soil particles together: the sand, silt and clay, the other organic matter and they make this structure. Those structures are called humus. And sometimes, they're called some of the globulin from some microbes and fungi. Those gluey structures can hold 20 times their weight and water. So nature has designed themselves to be a super sponge for water. Now, imagine how brilliant that is. The base of all your plants in your soil have these super structures that not only hold water, but can hold billions of organisms of biology that are the ones that are actually using their enzymes to harvest the minerals in the sand, silt, and clay so the plant can access them. You've created a perfect condition for life to thrive and actually regenerate. So, here's the kicker. When there's more biology in the soil, creating more glue, that's creating more structure in the soil. It's creating more life and availability for the minerals, for the plant, and more water availability for the plant. That means the plant that can access that water and those nutrients and photosynthesis even more; grow bigger plant leaves, which means more carbon captured from the atmosphere, which means more carbon pumped down, which means more life, which means more aggregates, which means more water holding capacity. This is the regenerative cycle of

life that's created by working with the biology in the soil and the plants and jump-starting the regenerative impact with more and more increased life capacity.

Hayley: Yeah. It's amazing. I'm feeling people having 'aha' moments right now because...

Finian: Hopefully they're not just like, 'ah'...

Hayley: But those of you on the podcast, you might want to watch the YouTube video because he's pointing to plants and using his hands.

Finian: Sometimes, I don't know when to stop because it's just so continuous. It's such a continuum that there really is no end point. So, it's really hard to stop.

Hayley: It is. Well, like what you were saying, like the actual words you were saying, how it starts regenerating, it starts to get more exciting. The energy of these, of your conversation, I was getting more and more, more excited. It's such a regenerative process and that's why I've called this **Thriving with Nature** because nature actually has a succession towards abundance. It's naturally thriving. And if we step away from nature and just be providers, nurturers, caretakers and give it what it needs and let this life in the soil rebuild, we don't have to work hard to bring back our planet in some sense. There's a lot of mental and emotional challenges for people to get there. But the actual action of it is really quite simple. And I mean you said you've met quite a few farmers out there. I mean there's Gay Brown. I'm reading the book, *A Call of the Reed Warbler* by Charles Massey. Some of these farmers have surprised themselves how quickly they've been able to regenerate, right?

Finian: Yeah. And Haley, it does vary because there are so many different climates around the world [yeah] and so many different levels of degradation that we're dealing with. [Of course, yeah.] And so sometimes when we're taking some perspective on it, when people are able to have significant regenerative impact in a dry place in Australia, we should be really giving them 'hurrah. That's amazing.' Some of these other places, the ability to help the land regenerate is much easier when you have consistent, not so heavy rainfalls. For example, in the Northeast, some of these areas where the setup in the feedback loop, the positive regenerative feedback loop, if it's set up properly can be unbelievable. Like we've seen cases of grazing practices in Minnesota, I believe it was,

where they got to paddock, meaning where they're bringing cattle into. I think they had gotten to seven rotations a year. So what that means is the same plot of land is growing, being grazed, growing down, growing again, being grazed, growing down. And yeah, we can see that same phenomenon be like, 'Oh yeah, I mow my yard a bunch of times throughout the year too.' When you have cattle and you're able to feed them on one piece of land because you're regenerating it and you're grazing properly. Compare that to a regenerative effect happening in the Mojave Desert or New Mexico where some of these places are much drier, someone's going to be still regenerating their land but not necessarily at that type of pace where they're able to have that significant growth with that much, much carbon going in, with that much more biology being restored. It's variable but it's all possible to regenerate.

Hayley: It is. I get my brother's always laugh at me because I get very excited very quickly and it's good to bring it back to that reality of the fact that there are different, like you said, variables. But the ultimate at the end of the day, it's all regenerative. So, it doesn't matter how fast or slow, if you switch towards these regenerative principles, you're going to rebuild the soil and start to sequester the carbon. So, yeah. I've always got lots of people bringing me down, not bringing me down as in just calming me down a bit, because I can get too excited very quickly. The soil sequesters carbon which is what you were highlighting really well. It holds water. And what people may not realize, and this is something that I had some 'aha' moments, was that when the soil can hold water, that is going to reverse the effects of drought and floods, which seem ironic that droughts and floods are together but it's all the same. It also adds, it means that the food that is grown in the soil is more nutrient rich. Yeah. And I mean as a sort of bonus, a lot of those farmers that have switched to regenerative have ultimately improved their bottom line because their expenses, there are beheads actually reduced and their vegetables and they have the quality of their food or whatever they're producing is higher, right? So, those are the many different benefits.

Finian: Yeah. Many different benefits. I would, for people out there, it's always great when you can clump them together when it makes sense, but try to separate some of these discussions [yes] whenever, whenever you can. Because they're slightly different but they're also simultaneously connected. To talk about the water one and I'm sure you will do this on your podcast and is doing a bread and flour test. [Yeah.] We can just tell people to close your eyes. Imagine a plate with a cup of flour on it. Okay, now imagine the plate to the right with two slices of bread on it. Now, imagine you pour some water ever so slightly lightly onto the flour. What happens? It starts to beat up and flow down and off the top of that flour because it doesn't permeate the flour, right? And so, it takes

with it some of the flour particles. And all of a sudden around that mountain flour, you have a bunch of runoff from your flour taking with it the particles as opposed to the bread where you pour it on top of the bread and it just absorbs like a sponge. That example is so phenomenal and profound because it is quite literally how the soil is operating. The flour, being the till dispersed state soil where when water hits it, it doesn't permeate. It doesn't infiltrate. It doesn't get absorbed. It runs off and carries with it. In the United States, four tons of topsoil per acre per year. That's the rate of soil loss because of erosion. So, we're leaving our soil vulnerable to wind and water erosion when we till it and leave it there and then, in that dispersed state like the flour as opposed to building back those glues. [Yeah.] Like I said, the glues that the plants pumping in, the microorganisms are creating, they're making that bread sponge. When we have healthy soil, when the water hits the plant and then seeps into that bread, you can imagine, 'Oh wow, that's a reservoir there that the soil is creating where all that water can be held, maintained.' They feel plants covering it. It can stay there shaded for quite a lot of time. That's creating so much more water for the roots of the plant and plus it trips down through that bread and that's what inevitably creates our springs and our underground aquifers being recharged. [Yeah.] So, there's simple ways that we can start to think differently. A lot of people have been trained to think about water and its current state as this is just how it is. But we ask ourselves as we started this conversation off, what is the basic function of soil on land? Why was it evolved to operate the way it was? It's not evolved to have water off of it. If it was, we would have no soil and we'd have no life on land. It has been evolved to be spongy and aggregated so that water infiltrates. It sort of becomes so logical once you get the 'aha' moment where you're like, 'Oh, nature designed itself to work in this fantastic way.' How then can we help nature work in that fantastic way or even make it the Olympic athlete of nature? Because what we know now in soil science, we can help it sometimes perform even better than it would have in its natural state. That's what's really exciting. It's that we're opening up the door to a new room that many of us haven't even known existed. Knowing that we could create these conditions of saying, 'well. Hey, we're dealing with flooding and drought.' You're like, 'well, are we or are we dealing with an infiltration and absorption problem?' Right? [Yeah.] Those are two very different questions, and have very different trajectories of action. [Exactly.] If we just say we're dealing with flooding and drought, that's going to lead in our current paradigm of what do we do about how to bail people out? How do we help people? Climate change is causing this and this and this. [Yeah.] Oh, how are we going to help people? Oh, we've got to get funding for them. We've got to have drought resistance. We've got to send in food aid. We're dealing with an infiltration and absorption problem. That's going to set on a completely different cascade of actions [yeah] that we don't even know what's possible around the world. Those are two different (things). The difference of regenerative thinking, of

convergence, of the developing, but the regenerative thinking pathway versus the old school psy-logged mechanical mind pathway.

Hayley: Yeah. Well, it's like treating the symptoms and not what's actually going on. It's putting a bandaid on it. 'Alright, let's manage where this water floods rather than actually why it is flooding.' So, yeah, it's huge. There's so much. I know we're coming to the end of our time, but there's so much in Soil Advocacy Training. We just stayed seven weeks. There was more than enough information. Even, there's still information I'm looking at going back into the course. There's videos. You don't only teach about soil and all these amazing things. And we go every week, we go into one of these areas. I've tried to squish a couple into these 20 minutes. But you also help people to learn a bit more about presenting so you can become an advocate. You can become a confident person speaking, presenting. The training is absolutely phenomenal. I mean, you've spent five years probably gathering all that information and gaining an amazing network that helps support this as well, right?

Finian: Yeah. I mean that was really an honor and a privilege of mine. Starting this organization, we were starting with a lot of media creation, simplifying the message for the masterminds who are behind the thoughts. And that's always such an amazing position to be in because you have access to people's ideas and you're helping to make them more available to a larger, or a more layman perspective. And so, I felt really honored to be able to pull off people's ideas and translate them some way so to speak. So, that's been amazing. And really for me the reason for the soil advocate training was just having a moment of like there's a lot of places that we need to be getting this message out to. And there's only about 20 people I can think of right now who are ready and prepared in the global movement to be representatives coherently about this message in totality. So, we need way more people [yeah] who can represent this total message. Because some people have sections of it but how do we multiply? How many people can start to take this whole perspective and be more confident? I just want to say, for your listeners, you did a fantastic good job on your presentation. We all love it and it was really great. [Thank you.] So you should share it with folks. It was really, really inspiring.

Hayley: Yeah. I plan on doing a video to share definitely. Yeah. Thank you.

Finian: Yeah, it was really wonderful.

Hayley: I was going to say, for those of you who are interested, I mean that's what I was going to say as you were talking about your Soil Advocacy Training and how you've flipped from you being the one person or a few of you out there switching to finding the many who are also interested. You've actually created a regenerative business. It's a regenerative model, right?

Finian: We're sort of multiplying. We don't need the human species to keep regenerating but we need all those other organisms to regenerate. But yeah, it's the multiplicity effect. [Yeah.] How do we create more self-generators of regeneration?

Hayley: From the ones to the many. And that's with Thriving with Nature every week. We're trying to show how we can live more regenerative lifestyles. For those of you who are interested, I'm definitely going to be putting a link down for the next (training). When's the next Soil Advocacy Training coming?

Finian: We are building out the new platform for it. [Oh, special.] So, it's really exciting. Right now, it's just a wait list that people are getting on at kisstheground.com. But we don't have the date yet. We wish we did but we're spending a lot of time to build the next model of it so that as the film comes out we have the capacity to handle more folks to get more of this material. Plus, I think for people like yourself watching the entirety of the videos on playback versus having it all segmented in like, 'Oh here's that 20-minute segment or 15-minute or 10-minute version of that idea to play that on loop' versus having to go through. So, it's going to make it much more user friendly for any of the past advocates as well.

Hayley: Yeah. Well, that is super exciting. I mean how you already had it was phenomenal. The fact that you're improving that is even awesome. So I say, get onto kisstheground.com. I will have a link so that you can go and sign up and be on the (waiting list.) I was on the waiting list for about a month or two before it became on the list. So, it was very exciting. And they've also got other training. There's the regenerative gardening one that I definitely want to be doing with Rishi. Yeah. And also, there's a film coming out, which we're all the soil advocates very, very excited about. So stay tuned.

Finian: With the situation we're all dealing with right now, so, you were slated to be at the Tribeca Film Festival on Earth Day presenting with some of the stars of the film as well as some key celebrities who are in the film with the panel and everything and

unfortunately, that's not happening. But we're crossing our fingers and if everyone out there puts out the energy, it looks like there might be something even more magnificent in the cards.

Hayley: Exactly. Well, fingers crossed. I can't wait to hear all about it. Thank you so much for your time, Finian. I really appreciate it.

Finian: Thanks for having me and thank you for what you're doing. This is advocacy in a nutshell here.

Hayley: Awesome. Thank you so much. And Thrivers, you have a wonderful week. Thank you.

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