Transcript is based on interview on 24th of February with Nick Steiner through Teams.

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00:00:14,590 --> 00:00:21,400

Welcome to Ripple Effect podcast. I'm Kazjal, and here with me is Elviira, we are the hosts of today's episode.

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00:00:22,060 --> 00:00:30,070

We're producing this podcast today with Outi, Weizhi and Lina as student group from Hanken School of Economics.

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00:00:30,760 --> 00:00:36,640

The podcast is part of a project in the course of sustainable organising in times of crisis,

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00:00:36,910 --> 00:00:43,060

where we are interviewing the changemaker in the field to explore real world sustainability solutions.

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00:00:43,840 --> 00:00:53,110

In today's episode, we have the pleasure of speaking with Nick Steiner, an expert in ecological regeneration and water cycle restoration.

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00:00:53,740 --> 00:01:03,310

Nick is currently working at Water Stories, an organisation focused on restoring natural water cycles to revitalise ecosystems.

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00:01:04,390 --> 00:01:09,130

He has years of experience in the field and we're going to explore his journey,

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00:01:09,340 --> 00:01:16,300

the projects he's working on and how this vital work impacts both local and global communities.

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00:01:24,310 --> 00:01:32,260

Welcome to our podcast, Ripple Effect. Today we have a special guest here with us, Nick Steiner from Water Stories.

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Nick, welcome to the show. Hey,

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00:01:36,430 --> 00:01:41,530

Thank you for having me. Let's start with that introduction.

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Nick,

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can you tell us a bit about yourself and your background and what led you to work with Water Stories and what are you currently focusing on there?

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Yes. Of course. I spent, I think, pretty much all my youth, more or less outside in the woods.

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00:01:55,750 --> 00:01:58,989

So I've always had connection to the nature.

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00:01:58,990 --> 00:02:04,090

And I realized that maybe not everything is so great, and we should do something about it to protect,

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00:02:04,450 --> 00:02:08,170

the environment, since it's the basis for our livelihood.

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00:02:08,830 --> 00:02:12,190

And then I got really deep into water when I was studying.

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That was in 2012, and with a group of friends, we built an organisation,

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called the Foundation to fundraise money for water development projects.

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So we thought, like, hey, many people around the world don't have access to clean drinking water, sanitation, we should do something about that.

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So we organized lots of cultural events all around the world to fundraise for those projects.

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And during that time I already realised a little bit,

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it's like it's great to have wells and to kind of provide access to clean drinking water, but we should probably go a little bit deeper.

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And it was also around that time that I discovered permaculture and kind of region to agriculture, all these kind of things.

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And so I wanted to dive a little bit deeper into it.

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And I studied and in my bachelor it was international business, but in my master I did innovation and entrepreneurship.

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So I always thought like, hey, let's use business as a force for good instead of a destructive force.

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00:03:09,010 --> 00:03:13,600

And because I had discovered already kind of permaculture and this kind of stuff,

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00:03:13,600 --> 00:03:18,770

I wanted to learn more about it and get my hands dirty because, yeah, as you might know,

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00:03:18,770 --> 00:03:22,719

when you're studying all day and you're just talking about business and economics all day,

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00:03:22,720 --> 00:03:28,630

you kind of miss getting your hands dirty and actually creating kind of real value in the real world, I would say.

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And so after studying, I moved to Tenerife on the Canary Islands, and there I was volunteering for a few years on different farms.

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So there I worked on various farms was working there, getting my hands dirty, applying knowledge.

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And I did lots of courses. I read all the books I could find podcasts, everything around regeneration, soil and water.

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And also because here in Tenerife, when I moved here, it only rained around one week every year.

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Like that's all the water we got. And so I realised, hey, we need to do something about that.

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We need to use the water in a better way. And it was also kind of at that point that I wanted to get deeper into teaching,

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because there were lots of other volunteers, and I started giving workshops and all these kind of things.

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And then in 2020, a friend of mine with whom I had built up the organisation of studies, he said, like, hey,

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I have an idea for an organisation to support farmers and we want to support them in their transition to return to agriculture.

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So I thought, ah, great education is probably important for that. I would love to, to join and help.

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And so we built that organisation over a few years,

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and I was running for the whole educational side, and we built it to around 30 people, I think.

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And at that point I realized my job was just office all the time.

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As you can imagine, when you're building an organisation to 30 people, it was just zoom calls and emails and I missed the kind of active times.

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And lots of people ask me like, hey, can you help me with water management on my farm or my land?

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And I didn't quite have the time because I was so busy with a Start-Up.

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And so I left the stop and said, like, hey, I need to go full on into water.

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And since then I'm working with lots of landowners all around the world with focus on Europe.

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yeah, with a lot of people around the world with water management, so helping them build drought resilient landscapes,

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00:05:17,500 --> 00:05:24,790

helping them also with water catchment systems, filtration systems, also supporting against flooding, all these kind of things.

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And so that's what I'm, I'm doing sometimes alone, sometimes with my colleagues.

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And a big part of my learning was also from Zach Weiss from Water Stories.

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So I had done the course with Water Stories as well.

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And at some point Zach wrote me a message and was like, hey, can you imagine working for Water Stories as well?

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And I thought, well, I learned so much from Water Stories, I think it's time to give back.

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So, I also joined Water Stories. And so now that's one of the things I'm doing is working with Water Stories in the educational side.

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So also, they're trying to reach as many people as possible around the world and teach them how to restore water cycles.

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A bit of a longer story, but that was an idea. That was very interesting.

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For those who may not be familiar with it, can you briefly explain what is meant by water cycle restoration?

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Yes, absolutely. So, I don't know if you might have seen those graphics,

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maybe in school or maybe near that time where you see basically landscape, you have the ocean on one side.

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and then you see these kinds of arrows going up from the ocean and onto the land.

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And that's kind of the water cycle we often imagine is that water evaporates from the ocean and then over the land, it comes down back as rain.

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And so many people think that's the water cycle evaporates and then it rains down.

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But actually, there's also the small water cycle, which is,

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I would say almost more important, in the large one where we also have lots of vegetation.

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So, plants and trees and others, they transpire water back into the air.

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So, through the leaves that basically similar to what we have when we're sweating.

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So, they're kind of giving off moisture into the air that then rises up.

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It's combined with microscopic

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organisms and some dust particles from the plants that goes up into the atmosphere, then forms clouds and rains back down.

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And so that forms a cycle where we basically have water going up in various ways.

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Then it moves further inland and then it rains back down.

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So that's a very kind of simplified way of what we have there.

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But this is kind of the water cycle.

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And so it goes, from the ocean all the way inland and then through groundwater and river comes back down.

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And we as humans, we have been really great at disrupting the cycle.

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So, we have destroyed vegetation. We have built lots of concrete channels.

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We got to kind of infiltrate, and we've just done everything to disrupt the cycle.

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00:07:48,090 --> 00:07:52,829

And so in our work, we are working to kind of bring the cycle back.

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So, to restore the water cycle and just kind of various ways.

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So, it's a very broad work it involves everything from restoring ecosystems and biodiversity back

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we're doing our best to get back to a state where these natural cycles work because they're so important for our livelihoods,

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for clean water availability, but also for the climate.

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And we're working on that. Thank you for that explanation.

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Your work focuses on restoring natural large cycles to support ecological regeneration.

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So, can you share a specific project where you've seen the most transformational impact and what made it so successful?

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Yes, we've just started or not just but last year we started working on a farm in Cadiz in southern Spain.

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And so, there is a five-hectare farm, which is quite big.

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And so, then we started working to restore water cycles.

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And so what we did so far is we spoke with the owner, Manuel, and he had some problems with erosion.

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In one part of the property, the water was washing away the road and it made it difficult to access.

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And so in that part we started working with the little terrace.

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So, we moved the road a little bit. And now that road is capturing all that water and bringing it into a different spot,

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where we will build a series of ponds and dams and all these kind of things to store that water.

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And the great thing is, while we were working there for the first time,

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as we just finished building the first terrace, we got a massive rainfall event.

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So we got in, I think half an hour, we got 25mm.

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So that means 25l/m^2 in half an hour.

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So that was quite a bit of water, and it just worked.

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And it all flowed exactly where we wanted and infiltrated. And it was just great to see that in a few days, you know, we could start this work.

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And now in the in the coming months, we're going to continue this with lots of other ponds and all these kinds of features,

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And you can see how green the area is around it and what a difference you can make with a little bit of work.

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And it only takes one rain event.

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And you already see the results and we've done that in various places.

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So, it's always like you shape the soil a little bit, you seed some vegetation,

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you plant some trees and then, as it rains one time you can already see the difference.

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what a wonderful story. What's the most surprising benefit of restoring water cycles that people often overlook?

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I think the most surprising one is actually the cooling effect.

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So, when we think about it, I mean, it's kind of obvious.

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It's like, okay, when we build a pond or a different kind of earthen feature, when it rains, we can store water.

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So, this is great. where it gets a little bit, I would say more interesting,

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but not so obvious is also the way that water infiltrates into the soil moves in the soil for potentially years.

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So actually, we're restoring the groundwater, which is also a little bit less known.

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but we're also refilling rivers and potential springs that are there.

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So, there it gets even more kind of away from the classical.

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We build a dam, and we store water. And the climatic impact for me is the biggest one where when you have trees and

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other vegetation and because of the transpiration that I spoke about earlier.

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he tree is basically giving water up into the atmosphere in that process.

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They're also taking up heat. So basically, with that water, the that transpiring the heat.

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The trees sweat, bringing water further up into the atmosphere and this cools the surrounding area.

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And for everyone to imagine it on a really hot day, if you can choose between, you know,

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walking in a concrete city or walking in a forest, you will immediately imagine kind of the difference in cooling effect this forest has.

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And by bringing water into the ground, the trees with their roots have much more water available to transpire and to kind

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of move this heat around and to have this natural kind of air conditioning effect.

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And so by bringing more water into the ground, the trees have much more water available to transpire so they can cool much longer.

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They can keep their processes functioning. And as another benefit, it also prevents wildfires.

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because when the trees are really wet and have enough water, it's much harder for them to stop burning.

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So quite afew things come out of the work we're doing.

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Yeah. Thank you. That's very inspiring. Did you talk about the project you had last year, or you started last year?

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But are these projects always successful, or are there areas where it's impossible to restore the water cycle?

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Or could you mention some common challenges you're facing, namely that implementation projects and how you've overcome tools?

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There're different types of challenges.

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So in in some areas the main challenge is just that there is not a lot of rain coming down.

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which is, you know, of course, of course, the problem.

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But it's also great inspiration to do this kind of work.

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So I think one of the best examples is one by Neil Spackman.

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he did it in a data in Saudi Arabia. They built a project where they wanted to re green the area,

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and they did lots of earthworks and lots of preparation, and they had some irrigation for their plants there.

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but at some point, they decided, okay, let's stop the irrigation.

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Let's see if natural processes can do this. And after that point, it didn't rain for two years.

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So not a single drop in two years, which was really, really tough.

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And so of course, not all the trees made it.

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And they were thinking, hey, we succeed, what can we do? But in the end, it rained, and the system survived.

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And so now actually, it's still getting greener every year.

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They're not working on it actively anymore. But when they're analysing the data with like satellites and seeing it's still getting greener every year.

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And so I think this is the big challenge is like, okay, what if it doesn't rain long enough?

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Like how can we still overcome that?

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And the way to do it is really being selective in which kind of plants we work with, what kind of structures you build.

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And it always depends on the location that you're in.

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But this is a great example of, of the big challenge is when it really doesn't rain for, for that long.

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In other projects we face a lot of challenges also when it comes to regulation,

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because many of the rules were made for kind of these traditional kind of when you when you hear the word dam,

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you think maybe you have a concrete structure that blocks a river or these kinds of things,

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but it's as far as you could get from the work that we're doing,

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what we're working on valleys where you don't have a river that's flowing, but it's just when it rains, the water just goes down.

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00:15:06,110 --> 00:15:10,009

It cuts these channels. And so we're working in these areas just with clay.

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00:15:10,010 --> 00:15:15,560

So just the soil that we have available there. And it's benefiting greatly the areas below.

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Because the water moves into the ground, it moves slowly underground.

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But regulation is made for these more like destructive and kind of large construction projects.

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And it's really difficult to get permissions to build these structures and to restore natural ecosystems,

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00:15:36,590 --> 00:15:42,890

because in the eyes of many regulatory bodies, we're doing construction work.

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And so many of these rules are made to not disturb natural ecosystems, but we're actually creating more life.

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00:15:48,500 --> 00:15:55,370

We're creating more ecosystems, but we have to jump through the same hoops as, you know, a big construction project.

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And it sometimes makes it a really long process to get all the permits and to really get the work done.

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And then of course, it's always also, people can always have projects where you have many people who need to make the decisions,

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00:16:08,420 --> 00:16:14,180

and maybe one is really on board, the others are not. And so sometimes it can just take really long to get the decisions made.

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And also funding, you know, it's always a thing where it's like motivation is there, but maybe the money isn't quite there.

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There's lots of different challenges. But what we found to work best is that we work with decentralized, smaller systems.

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So instead of just trying to build one massive pond or lake or something, we just build lots of smaller, decentralized, little pond systems,

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terraces or these kinds of things, because that way it's much easier to say like, hey, let's build 1 or 2, let's see how they function.

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00:16:46,790 --> 00:16:51,470

And if they perform well, we can build more. And so that way we can get people excited.

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and generally, people really like this approach because it's much cheaper from the beginning.

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We can get going in kind of tomorrow instead of waiting years to it to get the permits.

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And I think that way is really, really great small stuff, experimentation and then just seeing what works.

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Right.You mentioned earlier that you're living in the Canary Islands.

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So you're in Tenerife. As I have understood correctly, there are a lot of droughts in

drought is severe.

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So are there any special things you need to consider when doing water restoration project in areas with,

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00:17:35,550 --> 00:17:38,970 long, low rainfall like the Canary Islands?

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Yeah, especially for us here at home. I like a good challenge.

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And so, this place is no other. So, we are living fully off grid with only solar panels for electricity and water.

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We only have a roof, so we don't even have the well.

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So other places, you know, you might have your water connection from the city, or you might at least have a well.

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And for us, we only have the roof. So, if it doesn't rain at all, we're completely screwed.

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And normally here we get around 280mm of rain every year.

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00:18:11,100 --> 00:18:15,060

So, it's 280l/m^2 per year.

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But last year we were in a severe drought, and we only got around 80mm in 12 months.

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So, in the whole year, which is really nothing, you know, in parts of northern Europe that could easily fall within one day.

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And that's what we got to be in the whole year. And it made it really challenging and especially for me, like, I would love to plant lots of trees,

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but also, veggie garden and all these kinds of things in the garden.

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00:18:40,200 --> 00:18:49,260

But I can't because I know now everything is kind of green because it's the rainy season, but usually after April it just stops raining.

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And then sometimes we don't get any rain until September or October.

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00:18:55,290 --> 00:19:03,240

And so, we have to choose, okay, do we want to be able to wash our plates in August or do we want one avocado tree more?

196

00:19:03,690 --> 00:19:07,920

This is kind of the decisions we have. We have to make and it's really tricky.

197

00:19:08,460 --> 00:19:14,880

Whereas if we get a normal you of rainfall, I've designed everything now that we have enough storage to get to it.

198

00:19:14,880 --> 00:19:20,910

But yeah, over the last year we've been in a drought, and we don't have enough water stored to get through that time,

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00:19:20,910 --> 00:19:27,330

which makes it really challenging. And so, in these situations, we really need to be careful about what we plan for.

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00:19:27,660 --> 00:19:31,500

So, everything is designed in a way that it can handle large rain events.

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00:19:31,500 --> 00:19:37,140

And if it rains enough, we can store everything, but we can't just go out there and plant whatever we want,

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00:19:37,710 --> 00:19:43,380

because you need the first few years of irrigation to get things off the ground and the waters are just not there.

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00:19:43,980 --> 00:19:45,570

And so, it depends on the project.

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00:19:45,570 --> 00:19:52,830

You know, some have a different source of water, and they can subsidize and off city water and that we can work differently.

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00:19:52,830 --> 00:20:00,989

But here you basically need to design in a way that it might not get any water for months, and then it still has to function.

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00:20:00,990 --> 00:20:05,010

And when it rains, we might get tropical storms that sometimes come over the Atlantic.

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00:20:05,400 --> 00:20:08,010

And then the system also needs to be able to handle these.

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00:20:08,010 --> 00:20:13,920

So the spillways, the overflows, all the safety features need to be big enough to handle that.

209

00:20:14,670 --> 00:20:18,450

Yeah. So, it's definitely much easier to work in areas where it rains all the time.

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00:20:19,320 --> 00:20:23,880

But also those areas don't need to work as much as these dry places.

211

00:20:25,520 --> 00:20:35,190

You know. Thank you for that. I think it's evidence that you had a long experience in water cycle restoration.

212

00:20:35,730 --> 00:20:40,800

So, have you seen a change in farmers' attitudes towards restoration in recent years?

213

00:20:40,890 --> 00:20:43,980

And what about the shift in attitudes in general?

214

00:20:45,760 --> 00:20:50,110

Yeah, I think there's a big change happening over the last few years.

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00:20:51,100 --> 00:20:59,620

When I first moved here in 2017, I started speaking about water kind of a bit more frequently and openly.

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00:20:59,620 --> 00:21:04,899

And I said, like, hey, water is super important, especially in agriculture and in all these areas.

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00:21:04,900 --> 00:21:09,370

We need to focus more on water. We were like, I don't know, maybe.

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00:21:09,730 --> 00:21:14,170

Let's do carbon stuff. It's more exciting, more important.

219

00:21:14,770 --> 00:21:23,380

And as the weather patterns kept changing and got more extreme, people are realizing that water is so important.

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00:21:23,890 --> 00:21:26,890

What we're seeing a lot now is a longer drought.

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00:21:26,890 --> 00:21:32,860

So, we have longer periods without any rain and then heavy rain events that often lead to flooding.

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00:21:33,310 --> 00:21:36,549

And we're seeing this all over the place now all around the world.

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00:21:36,550 --> 00:21:44,200

So, when we were working on a project, in Marbella in southern Spain a few months ago,

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00:21:45,250 --> 00:21:49,680

While we were there, a massive rain event hit Malaga as well.

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00:21:49,690 --> 00:21:54,549

So close by. And we saw the kind of destruction that is caused by this rain event.

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00:21:54,550 --> 00:22:01,450

And it was great that we were then we could document, and we could motivate that we were working to marvelous.

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00:22:01,750 --> 00:22:09,040

And I feel like the general public is realizing that water events are getting more extreme.

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00:22:09,670 --> 00:22:13,600

And I think that it's also important that we adjust our own kind of language,

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00:22:14,080 --> 00:22:19,270

because we often just speak of climate change as this ominous thing that's happening.

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00:22:19,810 --> 00:22:25,150

And in many people's minds, climate change is equal with, okay, it's just carbon dioxide related.

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00:22:25,150 --> 00:22:28,150

t's just about how much carbon dioxide we have in the atmosphere.

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00:22:28,570 --> 00:22:34,180

And that's kind of moving the needle. But what I think people need to realize,

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00:22:34,180 --> 00:22:43,600

and what people are realizing likely is that maybe climate change is also much more related to how we use our land and how water cycles are disrupted.

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00:22:44,050 --> 00:22:50,620

And there, especially on LinkedIn a few years ago that were following me, we were kind of the only people speaking about water.

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00:22:50,620 --> 00:22:53,859

And now LinkedIn is full of people saying, hey, water cycle is important.

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00:22:53,860 --> 00:22:57,999

We need to work on water cycle restoration, which is fantastic to see it.

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00:22:58,000 --> 00:23:01,100

Like, okay, there is a change, there is a change happening.

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00:23:01,120 --> 00:23:06,520

People are realizing it's important, but I still feel like it's still too slow.

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00:23:06,970 --> 00:23:13,210

So many people get excited about it but are not so excited to spend money on it yet.

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00:23:14,080 --> 00:23:16,030

But I mean, that's how things start.

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00:23:16,030 --> 00:23:24,280

And as these extremes will get more, we will also see a much more kind of finance move, move into this because,

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00:23:24,820 --> 00:23:30,760

it's so much cheaper to build landscapes that can handle these extremes than to repair the damage that is caused every year.

243

00:23:32,020 --> 00:23:38,079

So, you mentioned it's very slow. For the listeners who want to get involved in water cycle restoration efforts,

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00:23:38,080 --> 00:23:44,710

What are some simple first steps they can take in their own communities, for example, to make a tangible difference?

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00:23:46,370 --> 00:23:53,750

I think the great thing nowadays is the internet and there's so much available online to learn,

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00:23:54,290 --> 00:23:57,680

and that's also a big part of what we're doing with Water Stories.

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00:23:57,950 --> 00:24:02,960

On our Water stories on our website, what's there's a common also with the community.

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00:24:03,260 --> 00:24:07,850

We have countless free resources but also on YouTube.

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00:24:07,850 --> 00:24:13,100

So also, that's where I'm working a lot on social media, to provide a lot of free content.

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00:24:13,490 --> 00:24:21,710

And so that's what I would recommend. Everyone is like find kind of people who were teaching, find the free resources that you can get.

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00:24:22,220 --> 00:24:28,250

And that way you can get a little bit of an introduction to like, okay, what works what can I do?

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00:24:28,670 --> 00:24:36,740

And then it's all about experimenting, and I'm not sure how it is with other people, but for me, as a child, I played a lot in the sandbox.

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00:24:37,040 --> 00:24:41,930

And so, building little channels and then pouring some water into it and seeing how it flows,

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00:24:42,470 --> 00:24:45,800

At least in my childhood, that was a very common thing.

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00:24:46,010 --> 00:24:47,110

Um, yeah.

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00:24:47,270 --> 00:24:56,810

And I can recommend that to people to just do much more of that, because if you play now, kind of also, it's great to get away from the computer,

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00:24:56,960 --> 00:25:02,200

you know and playing around in the dirt a little bit and seeing like, okay, when it rains, where does water flow.

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00:25:02,210 --> 00:25:08,780

Observing just outside is the water just going down into a drain, or is the water going somewhere where we don't want it?

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00:25:09,570 --> 00:25:13,550

Maybe some people have some plants in the garden and water is not getting to them.

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00:25:13,940 --> 00:25:19,669

And then just with a shovel making a little like few little changes to get water more

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00:25:19,670 --> 00:25:23,300

towards the places where we want wanted and less towards the places where we don't want it.

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00:25:23,780 --> 00:25:26,930

And from that you can learn more, you can build some models.

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00:25:27,800 --> 00:25:36,170

And I think that's the easiest. Like just going out with a shovel when it rains, seeing how water behaves and seeing what you can do about it.

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00:25:37,180 --> 00:25:49,360

Thank you for those tips. Very, very great tips. Nick, thank you so much for sharing your incredible insight with us today.

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00:25:49,420 --> 00:25:53,950

It's inspiring to hear about the impact of water cycle restoration,

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00:25:54,460 --> 00:25:58,600

and I'm sure our listeners are motivated to take action in their own communities.

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00:25:59,050 --> 00:26:03,730

And before we close, is there anything else you'd like to share with our audience?

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00:26:03,730 --> 00:26:11,709

And also, where can listeners find and follow your work? First of all, thanks so much for having me.

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00:26:11,710 --> 00:26:15,340

And I think it's super important for all of us , to learn a bit more.

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00:26:15,850 --> 00:26:24,130

As motivation, I would just invite everyone to think a little bit about what water plays in their lives.

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00:26:24,490 --> 00:26:30,940

I guess all of us need to drink water, which is the first one, but just think about how much water you're using on a daily basis.

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00:26:31,300 --> 00:26:36,870

Think a bit more about where that water comes from and what you can do about that.

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00:26:36,880 --> 00:26:44,670

If you have, you know, access to a roof, could you capture some rainwater, but you maybe infiltrate some of that water into the ground?

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00:26:44,680 --> 00:26:48,300

Do you know someone who has some land and could benefit from this?

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00:26:48,340 --> 00:26:54,700

And so it's basically just starting to ask questions and not just taking it for granted that water comes out of the tap.

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00:26:55,030 --> 00:27:02,540

I think that's a great starting point. And if people want to learn water stories?

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00:27:02,560 --> 00:27:06,090

Definitely. If you google water stories, you should find us. But waterstories.com

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00:27:06,100 --> 00:27:11,100

is kind of the teaching side. but also, I'm very active on, on social.

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00:27:11,120 --> 00:27:19,569

So, permanick is my handle there. So if you look for permanick water you will definitely find me, on LinkedIn also.

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00:27:19,570 --> 00:27:21,730

And I'm always happy to share and all that.

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00:27:22,150 --> 00:27:28,410

And yes, if some of you maybe know people who are struggling a lot with any kind of water projects, I want to improve them.

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00:27:28,420 --> 00:27:32,020

Always feel free to reach out and we can see if we can help there.

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00:27:32,860 --> 00:27:37,599

Great. Thank you, Nick, again and to our listeners, thank you for tuning in,

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00:27:37,600 --> 00:27:42,610

and we hope today's conversation inspired you to learn more about the importance of

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00:27:42,610 --> 00:27:47,980

water cycle restoration and take steps towards creating a more sustainable world.

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00:27:48,430 --> 00:27:48,970

Thank you.