



TONY RINAUDO

THE FOREST MAKER



unstress

WITH DR. RON EHRlich

Podcast Transcript

Dr Ron Ehrlich: [00:00:00] Hello and welcome to Unstress. My name is Dr Ron Ehrlich. I'd like to acknowledge the traditional custodians of the land on which I am recording this podcast, the Gadigal People of the Eora Nation, and pay my respects to their Elders - past, present, and emerging.

Dr Ron Ehrlich: [00:00:21] Well, we have explored regenerative agriculture in many episodes over the last few years, but today's episode takes it to a whole new level. My guest today is Tony Rinaudo. Tony is a Natural Resources Management specialist and an agronomist. In the early 1980s, Tony and his wife, with the help of local farmers in Niger, began implementing a conservation farming system, which we know today as Farmer Managed Natural Regeneration (FMNR). This approach has been so successful that it's been applied to at least 24 African countries.

Dr Ron Ehrlich: [00:01:05] Now, Tony is famously known as The Forest Maker and he... well, Tony Rinaudo's inspired farmers have helped transform, well, millions of hectares of dry land in Nigeria. In fact, he's been linked to the regrowth of over 200 million trees without planting a tree, a new tree, and regenerating 5 million hectares of degraded farmland in Niger alone. Now, for many people, Tony is certainly an environmental hero.

And after making a positive impact on food security, environmental sustainability, and resilience for thousands of vulnerable communities around the world. And I love this sort of, if you like, mission statement or vision. And that is: "Restoring hope by restoring landscape." Now, if that isn't a message for us all, I don't know what is. I hope you enjoyed this wonderful conversation I had with Tony Rinaudo. Welcome to the show, Tony.

Tony Rinaudo: [00:02:08] Thank you. It's a great pleasure to be with you.

Dr Ron Ehrlich: [00:02:11] Tony, I have heard of your work over the last few years and I have been so looking forward to having this conversation with you. I wondered and your title, of course, is The Forest Maker, and we want to go into what that actually means. But I'm intrigued to hear a bit about your background, what laid the foundation for this, and what turns out to be a global movement.

Tony Rinaudo: [00:02:33] Thank you. I grew up in a beautiful part of Australia, Myrtleford on the Ovens River in northeast Victoria. I love the bush. I walked over many of the hills around the town and climbed some of the trees, swam, and fished in the river. But what I saw happening around me, was deeply upsetting. I was angry. They were bulldozing the hills.



At that time tobacco was the main crop and they sprayed chemicals like DDT from aeroplanes the spray drift would go into the river, sometimes killing the fish. My brothers came home one day, they'd been swimming and big trout were floating downstream, belly up. And that happened a number of times. And I couldn't understand the values. Was making money so important that we destroyed the scaffolding that life depended on?

Tony Rinaudo: [00:03:32] The second thing that impacted me was I'd watch the news, I'd read newspapers, and I was very upset that children just like me, who know through no fault of their own, happened to be born elsewhere, were going hungry, going to bed hungry. While in our valley they were growing tobacco, this noxious weed, this air toxic in the in the growing of it to the environment.

And I guess my mum's faith as well had a big impact on me that we do have a responsibility for those less fortunate than ourselves and the responsibility to care for creation. So those things were all stewing in my mind that I felt powerless as a child. What could I do? I had no voice and I wasn't a particularly communicative child, but I just grew up as a child's prayer asking God to use me somehow, someway, to make a difference.

And that's what I, you know, why do I do what I do? How did I end up in Africa? I trace it back to those early impressions of what was happening and what I was reading and seeing.

Dr Ron Ehrlich: [00:04:38] I mean the clearing of land in Australia, I mean, you haven't even got to Africa yet, you haven't even started yet. But what you are observing going on there is still going on to this very day.

Tony Rinaudo: [00:04:50] What I read is amongst developed countries, Australia still takes that number one place and to me, that's absolutely shocking. And in light of what we know from the dustbowl experience in the US, from our own periods of land degradation, erosion in the Maleny and the outback, and what's happening all around the world and in Africa, it's just inexcusable. How can we continue to act in such ignorance and blatant denial?

Dr Ron Ehrlich: [00:05:27] I think when I was looking at your book, it reminded me of a book by Bill Gammage called The Biggest Estate on Earth. And I'm not sure whether you're familiar with it, but the images, some of the images you show there of the 1830s in Australia, our landscape that had been managed for 65,000 years looked very different.

Tony Rinaudo: [00:05:51] Yes. Isn't it sad that Westerners came in with their assumptions of what good land management was totally disregarded, what the indigenous people were doing, and even misunderstood that? They thought it wasn't being managed at all. And yet in the early part of my book and in researching it, I discovered the early explorers talked about English parkland, French gardens, and so on. It was so well managed.

Dr Ron Ehrlich: [00:06:21] Yes. Yes. And I think if we needed a reminder of how badly we have managed at the fires of 2018-19 was a shocking reminder of that. But you went on then to study and you went up to New England and tell us about that. How did that prepare you for your journey?

Tony Rinaudo: [00:06:44] Well, you mentioned Bill McClymont much earlier, and the words that stick in my mind to this day is when we graduated, he said, "Now, you don't know very much, actually, but what this degree has given you is a licence to learn how to learn." And that really stuck with me, I think. Yes, there's a scientific foundation there.

And you've got some of the principles of soil science and livestock production and so on. But it didn't mean much when I landed in one of the poorest countries in the world that had minimal to no access to finance and modern inputs. And I had to go about asking questions Why? Why do you do it this way and what's the benefit of that? And so on.

I learnt so much from the local people that help for my approach to land restoration. So yeah, what I benefit from most in university was learning how to ask questions. But it's also where I met my wonderful wife.

Dr Ron Ehrlich: [00:07:56] Okay. And she, similarly to you, did the rural science?

Tony Rinaudo: [00:08:03] Yes, yes. We were in the same year. In the same degree. Yeah.

Dr Ron Ehrlich: [00:08:06] Wow, because when I heard that you were up at New England, of course, at that time, and we were similar contemporaries in age. Bill McClymont was the dean of the faculty there. And Vicki, his daughter, has been a huge influence on my professional development and introduced me to holistic land management. But ag-science, I mean, in the 70s, I'm guessing you were doing that in the seventies. And was that kind of regenerative approach to land? What was being taught in rural science then? Because they would stay with you as they were spraying DDT in your hometown?

Tony Rinaudo: [00:08:48] Yeah, I there would have been certain lecturers that, you know, I can't remember if they talked about conservation, agriculture or not. But there would have been certainly lecturers with a bent towards regenerative agriculture. But it certainly wasn't the mainstream of what was being taught.

Dr Ron Ehrlich: [00:09:40] Mm-hmm. And then tell us about what took you to Africa and what your early experience there was.

Tony Rinaudo: [00:09:12] So it was that that early calling that I mentioned, that sense that there's a lot of things wrong with the world and wanting to do something about it instead of being part of the problem. While I was studying, I met people from a Christian organisation serving in Mission who was working in West Africa at the time, and I began to read their literature and correspond with people it was through that connection we ended up going to Niger.

Tony Rinaudo: [00:09:44] And you know, talk about being totally unprepared. When we arrived there, the landscape confronted us. And you've got to remember, just 20 years before, when I was growing up in Myrtleford, this had been more or less a biodiverse dry land landscape with trees, patches of farmland, even wildlife, and springs.

When we arrived, it was on the point of ecological collapse at a point where it was barely able to support life on Earth. People were hungry. People were leaving home. Sand dunes were rolling into villages up to the windows and so on. It was in a terrible state. And what did I know? You know, this kid went behind the years, straight out of university.

Dr Ron Ehrlich: [00:10:35] And how did it get to that point? I mean, you know. Yeah. How did it deteriorate? What were the forces driving it?

Tony Rinaudo: [00:10:42] So a number of different factors. The population was growing, so there was more and more demand for farmland. And the traditional way of farming was to clear land, farm it, until the soil was exhausted, and then move on. And then over time, maybe ten, 15 years, that would regenerate. The trees would come back and you'd rotate and come back.

However, the large number of people made that rotation impossible. At the same time, Niger Republic had been a French colony, and the French wanted to modernise agriculture and generate export industries and so on. So they were heavily pushing the use of steel ploughs, oxen and donkey-drawn steel ploughs, fertilizer, and chemical inputs.

And so people were actually shamed into believing if you are practising agriculture the old way, you are old fashioned. You know, they would always leave some trees in the fields. You can easily hoe around the tree. It wasn't a problem, but the modern approach was to shame them to think, "You are old fashioned. You traditional. Get with the programme."

Tony Rinaudo: [00:11:55] Probably the third biggest factor was periodic hunger. So we didn't realise it at the time, but climate change was kicking in and in retrospect, we now understand the region has experienced a 25 to 30% drop in average rainfall and you know, there's no Social Security, there's no fallback. If your crop fails, you go hungry. Full stop. And nobody wants to die or watch their children die. How do we survive? Let's chop down the trees and sell the firewood to the growing cities where there was enormous demand. The insatiable demand for firewood.

Dr Ron Ehrlich: [00:12:34] Wow. So you arrived with a plan or was there a plan?

Tony Rinaudo: [00:12:40] Well, roughly, of course, I didn't know the full extent of the problems. I had a superficial understanding, but I walked into an existing project and it would have been completely in line with anything I would have cooked up. This was called the so the district and the city that I lived in was called Marathi, and the project was the Marathi Windbreak and Woodlot Project.

So it was a tree planting project designed to work with communities to restore some level of tree cover, meet fuelwood needs and break the winds, the strong winds that were blowing the sand off their farm. So it was pre-existing, but I wouldn't have done any different. It's all I knew. There's this paradigm in nearly all of this. If you see a barren landscape automatically we think have to plant trees.

And whether you're a major donor, a government and non-government organisation or an individual, I found this is an almost universal global principle. We have a mindset to plant trees. Nothing wrong with planting trees. However, in many contexts, it doesn't work. It was expensive. It has a very high failure rate. It's slow, and that was my experience in Niger.

I was very, very discouraged in those early years. The total failure of that approach in the Sahel region, where drought, high temperature, unlimited grazing, and human need, people themselves would cut these trees. So there were so many things working against it. I was a very discouraged young man.

Dr Ron Ehrlich: [00:14:26] And how long did that period go on for you before you had your epiphany?

Tony Rinaudo: [00:14:33] So about two and a half years, I had reached the point of thinking this is quite hopeless. I'd be better off giving up and going home. So about two and a half years. And I, you know, I threw everything that I could think of that this I questioned anybody with experience in tree planting. I read whatever journal article or book I could get my hands on. And we experimented. We introduced different species from overseas. We experimented with indigenous species, many of which were actually quite difficult to germinate. We tried the ridiculous thing they had National Tree Day, the 3rd of August, which is nearly the end of the rainy season.

That's when the whole country would go out and fanfare and flags and music plant trees, which you knew very well. 90-95% would die because when those rains stop, there's an eight-month dry season well and very few people have the energy or the time to water these trees. The wells there were 30 to 100 metres deep. For most communities, there were no pumps and no mechanised transport.

Often they'd have to carry the water on their backs, or if they had donkeys and so on, just wasn't going to work. But that was the directive from the government down we plant on the 3rd of August. So I started planting at the start of the rain. I even started planting before the rains with a little bit of supplemental irrigation so that we could get the roots down a little bit to better benefit from what rain fell. Total failure. Total waste of time. Nothing worked in a sustainable, economically viable, or satisfying way. I tell you, I was a grumpy man.

Dr Ron Ehrlich: [00:16:23] Wow. Well.

Tony Rinaudo: [00:16:24] And to add injury to insult, the things I got, the people call me 'the crazy white farmer.' Who in their right mind would sacrifice valuable farmland to plant trees? Goodness, this guy's been in the sun too long.

Dr Ron Ehrlich: [00:16:40] Well, I know then, but here you are, some 30 or more years later with a different story, and something changed that. Tell us. Tell us what happened then.

Tony Rinaudo: [00:16:51] Yeah. So it's probably one of those days when I could have just walked off the job and left, but I was driving a vehicle, had a ute and a trailer load of tree seedlings and the roads were very sandy. So at a certain point, I had to stop to reduce the air pressure.

And, you know, I did that and I'm looking up over the top of the back of the ute, north, south, east, west, barely a tree in view, thinking this is hopeless. How many million dollars, how many decades using these methods, and how many hundred staff? And even with all that, you still barely make a dent in this vast landscape.

Tony Rinaudo: [00:17:32] Niger's enormous. It's the size of the Northern Territory. And so I was feeling sorry for myself, but I did feel, no, there must be a reason God doesn't make mistakes. And I remembered that child's prayer. Everything in my life had led me to this point. There must be a solution. And I threw up, I guess, a prayer of desperation, just asking God to open our eyes, show us what to do, but also to forgive us for destructive practises. We brought this on ourselves. There's no question. It's not an act of God.

And, you know, the strange thing is I've been travelling on this bush trek for two and a half years, almost weekly. Eyes open, but totally blind to what had been there all along. And on this particular day, this useless looking what I thought was a bush caught my attention and I normally I'd jump back in the car, and race off to get the job done. But on this day, I took the trouble to walk closer and take a better look. You know, the leaf of every species is like a signature. And as soon as I saw the very distinctive shape, it was a kind of camel hoof shape. It's lobed.

Tony Rinaudo: [00:18:46] Bingo! That's not a bush. That's not an agricultural weed. It's actually a tree. And you bend down, brush away the sand, you can actually touch the stump. And it had been cut down and every year it was re-sprouting prolifically. 20-30 stems from this one stem and immediately in my mind I realised that's the answer to my prayer. That's what I've been looking for. I'm not fighting the Sahara Desert. It's not a question of my budget or a miracle species of tree.

Everything I need is literally at my feet. And the real battle, if it was people's false belief about the value of trees on farmland and negative attitudes and certainly destructive practises, if that's what brought the landscape to its knees, then that's where the battle is. Mindsets. And I think you mentioned earlier that I'm the forest maker and so on. You know, I work for World Vision, and the marketers and the media people, they have great fun at my expense inventing these names. And another one was The Tree Whisperer.

Tony Rinaudo: [00:20:00] But they're quite surprised when I tell them actually 95% of my job is to re-grain mindscapes. And if I win that battle between the ears, convincing farmers and communities that it's in your best interests, that you have a better future and your land will be more productive if you work with nature and allow the right trees, the right number of trees in the right manner, the way they managed.

If you allow them to come back, your land will be much, much more productive than what you could ever imagine. And you'll create that future that you want for your children. That's most of what I do. Talking to farmers, I asked them why they were doing what you were doing, and what their land will be like. Will that provide for you in 20 years if you continue business as usual?

And they know full well, even the uneducated ones, they know for full well, they're on a fast track to hell. They're destroying their livelihood in the way they use their land. And then asking the question, well, if you know where that's heading and you don't want to go there, can we go on a journey together? I don't know all the answers.

I know it's worked in other places. Would you experiment with me even on a small portion of your land and see where this takes? And so that's the journey that I invite them on. And I must add, it's not like the great white saviour riding in on his horse. No, this is a curve learning event.

In every country I go to, I'm an absolute dummy. Don't know the species, don't know the history very well, don't know what the farmer's objectives are. And so I'm obliged to listen very, very closely and to, in a sense, humble myself to be the student. And that's powerful. I'm not just saying that to build myself up. These people rarely get an audience. They feel like they're not even on the bottom rung of this of society's ladder. They're unimportant, unknown, and forgotten.

And here's this Westerner who's come and he's listening to them. He's put them in the state of being the experts, and he wants to hear my view. Immediately, you've got their attention and whether they think you're a fool or not, whether they think this is something to do or not, and out of mutual respect, they'll start to respond to that and we go on that journey.

Dr Ron Ehrlich: [00:22:34] Wow. I mean, you've said so much there that resonates with so many episodes that I've done. And, you know, one, for example, with Charlie Massy, who talks about five cycles - the solar, the water, and soil mineral, biodiversity. But the biggest challenge is the human social cycle.

Tony Rinaudo: [00:22:55] And you know you're saying exactly that. And I also love the fact that he talks like you do about enabling rather than domineering nature.

Tony Rinaudo: [00:23:05] Oh, yes. We have to learn as a species. We have to learn to work with nature. It wants to give and give and give until we're tired of receiving and we have this predilection to take and take and take without giving back. If we only give a little bit back and work with nature, it's so abundant, it's so capable of self-healing and providing if we were just trying to understand it and work.

Dr Ron Ehrlich: [00:23:34] So you're on that track. You've uncovered something that you've driven past for years and you have this aha moment. How does it take off from there?

Tony Rinaudo: [00:23:45] So it's one thing to have what you think is the solution. That's quite another to convince people that you might be right. And as you could imagine, there's a lot of resistance. People have always done things the way they've done them. Their forefathers had drilled into them that a good farmer is a clean farmer and I think this would resonate with many of our Australian farmers.

It was just the done thing and so I guess you look for the positive deviants in every village, in every town there's somebody who does something different. And I ask for volunteers in about ten villages who would like to come on this journey and try this thing on a small corner of their land. It will remain your land and your trees.

So if at any point you feel it's not working for you, you're free to cut them out or to do what you want. But would you humour me and we'll try this thing together. And it was working! Six months, eight months into the programme it was working, the trees were growing and I knew, yes, this has got so much potential, not just in Niger but globally. We're kind of really nailing this thing.

Tony Rinaudo: [00:24:55] But, you know, there are severe needs in these very poor villages. And out of desperation, some people would cut those trees, maybe under the cover of darkness for fuelwood. Remembering the women were working three or 4 hours just to collect the day's fuelwood. And often there simply was none.

They were burning straws for cooking. They were burning cow manure if they were wealthy enough to have cows. Most people were sweeping up goat pellets. So imagine the indignity of having to do that, cook your meal and goat manure. And then there were jealousies, there were paybacks.

And so long and short of it, that experiment would have failed. Through discouragement. Those volunteers were ridiculed and laughed at. They were the village idiots for listening to this crazy white man. Who on earth would sacrifice their land and risk losing their crop when we're already hungry very often? And you know, again, it could have been a point where you throw in the towel. I've tried everything. I found the solution. They still wouldn't listen. That year, the rains failed.

Almost total crop failure and it was on the heels of some of the previous years that weren't great. So people had no reserves. There was hunger. The men started to leave. The village is in search of work and food to send home. And so desperation was setting in and we were running around like headless chooks, trying to get money, trying to get grain and permission to distribute food.

Tony Rinaudo: [00:26:28] When we finally secured that and the government made a decree. No free handouts. If people are able-bodied, they must work. We don't want our population to be a dependent society and that ruling works in our favour. We had, in a sense, and in the best meaning of the term, we had a captive audience and we were able to draw good from a very bad situation by creating a Food for Work programme.

If you want the food and most people really needed that food, one of the requirements is you have to regenerate at least 40 trees per hectare on farmland. And imagine again, "Tony, how mean!" And they were screaming and resisting to the end. But at the end of the day, they were hungry and we had volunteers and staff counting the trees before every monthly food distribution to make sure they were there.

By the end of the six or eight months of food distribution, there are roughly 500,000 trees across villages, 100 villages. And we were so happy. As it turned out, 1984 had an excellent rainy season. Then they received a bumper crop of grain. As soon as they started harvesting their own food and we discontinued the food aid, 75% of the farmers said "Finish off that idiot Tony will get on of their lives, then we'll cut the trees out."

Dr Ron Ehrlich: [00:28:05] Wow.

Tony Rinaudo: [00:28:07] But I had a critical mass. I had the attention of 25% of the farmers who said, "No. The guy is a bit strange, but it did no harm. In fact, we got a bumper crop which surprised everybody. And did you notice some of those species are photo trees? We'll have some extra food for our animals in the dry season.

Some of them are wild fruiting species. We'll have wild foods to harvest. Some of that, well, all of them will provide us with fuelwood. We noticed some of them. They're actually fertiliser trees. They fix nitrogen or they drop leaves that put organic matter back into the soil." So they were thinking this was a thinking minority that said, "No, actually, there might be something in this. We're going to take it another year and see where that takes us."

And certainly, we kept our active involvement well beyond the Food for Work programme, advocating, teaching, having exchange visits, and so on. But the real champions of the story are the farmers who grasp this thing in defiance of common wisdom and ridicule and so on.

In defiance and said, "No, we're going to do it." And even I would say, for the most part, without my knowledge, for the next 20 years, this method and I don't think we've even labelled yet Farmer Managed Natural Regeneration (FMNR). This method spread across that desert country at the rate of a quarter of a million hectares per year.

And after 20 years, if you do the maths, there were 5 million hectares sporting 200 million trees without planting a single one of them. So when I talk about the power of working with nature, I don't say those words lightly. It's enormously powerful, it's willing and waiting, and has the capability to restore itself if we will allow it.

Dr Ron Ehrlich: [00:30:10] Well, I love also the fact that you are talking about restoring hope by restoring landscape.

Tony Rinaudo: [00:30:16] Well, it shouldn't have been a revelation to me, but it was. And of course, it makes perfect sense. And now in my role in World Vision, I have the privilege to revisit villages that have embraced this in various countries. And yes, I love to see the grain and the restored trees and so on. But the biggest change that I see is this restoration of hope. And I can give an example.

Tony Rinaudo: [00:30:45] When I visited Ghana, I think it was the first trip was in 2011 and people were in a desperate state. This is the northeast, an upper eastern region of Ghana. And the old chief said to me, if things get any worse, you know, the winds have become so strong, they blow our roofs off. We can't predict what to do in any season. One year it will be flooding. The next year, droughts. Our children aren't in school. We need their labour to fetch fuelwood and help with the chores. And livestock is so desperately hungry.

We walked them to those distant hills where often they're stolen from us. And because of the energy taken to get there, when we bring them back, they're skinny when they arrive home than when we left. We can't even sell them. It turned from that desperate situation to women having fuelwood within a ten-minute walk from the village.

Children were back in school because the land had become more productive, and wildlife starting to return. The humidity and the organic matter increased in the soil so you have this natural buffering effect. The high rainfall didn't necessarily translate into flooding. Low rainfall didn't necessarily translate into crop-killing drought because you have this buffering occurring and people were just ecstatic.

Tony Rinaudo: [00:32:16] And the old chief said, you know, we two years later, two years into the programme, we had a field day and we invited the officials in the neighbouring communities and we did all the functionary stuff in the morning, the speeches and so on, had a meal together and then the World Vision staff left, but the party continued and we came back the next day and the chief said, "Tony, thank you, because of you, everybody loves me."

And after half the formalities, we danced and sang up until midnight. You could just feel this sense of hope. What had been this downward spiral? Degradation. Lack of productivity. Despair had been reversed into an upward spiral of restoration. Relative prosperity, but significant hope. And it's not just one of these warm, fluffy concepts. Hope is actually a very powerful tool and a human being and if that person has hope, they will take positive steps.

So educate their children. They'll invest wisely in improvements to agriculture and their living standards. They will plan positively for the future. A person without hope says, "Well, what's the use of trying? I'll just give up now. Because I've been beaten down so many times. I know what the result will be." I think it should be in every agriculture and development textbook to teach hope.

Dr Ron Ehrlich: [00:33:51] Yeah. No. And what could be more fundamental than growing something which we all need for everything?

Tony Rinaudo: [00:34:00] For everything. You know, I think in the West, we've been so duped to believe our food comes from supermarkets.

Dr Ron Ehrlich: [00:34:06] You talked about the intelligent minority. When people say this in one village, is there this role on effect like, "Hey, look what's going on down the road here? What's happening?" Is the adoption... Is it snowballing now?

Tony Rinaudo: [00:34:26] Well, this is a powerful thing. And I remember an old farmer in Niger saying to me, "Tony, you're a nice bloke, but at the end of the day, we don't really believe you, because if your advice is wrong, we wear the burden of it. You get back to your plan and go back to a comfortable life in Australia. But we suffer." "If you're paid staff tells us something. Even then we don't really believe them because whether or not it's correct, they'll still get their salary at the end of the month. But if a farmer does it, we know their livelihood depends on it. It must be true. We're much more likely to follow their example."

And so, you know, I've mentioned this already, that the real champions of the story of the farmers, I really, really mean that. If there's going to be global restoration, it's going to be from the bottom up, not the scientists, not the governments, not the big donors. It's not going to be bottom-up farmers talking and listening to farmers. And when I design a project, a big element, maybe the biggest element in the whole design is facilitating exchange visits, enabling farmers to talk to farmers.

Dr Ron Ehrlich: [00:35:33] Yeah. Yeah. Wow. And then, hence, the Farmer Managed Natural Regeneration (FMNR).

Tony Rinaudo: [00:35:41] Yeah, it's a real mouthful. I didn't invent that term, but it is exactly what it says. It's not Tony-managed, it's not World Vision or government-managed, it's farmer-managed. And you know, I'm at the moment I'm doing a number of talks around Australia and I'm anticipating, well, how will I answer farmers when they ask me about this thing, you know, who's got the right to come onto my land and tell me what to do with trees and clearing and so on? Well, actually, in my view, nobody. And this time is very deliberately farmer-managed and no farmer in their right mind is going to make decisions to their detriment.

Tony Rinaudo: [00:36:20] And so again, even in Australia, I believe it's a journey. Let's experiment on a small area of our land. How we do it in Australia is going to be very different to how it's done elsewhere. But can we work this thing to help you achieve your objectives? Whether that's a windbreak or higher crop yields or better livestock production or a more beautiful landscape, I'm sure that you've got the ingenuity to manipulate this very flexible concept. Farmer Managed Natural Regeneration (FMNR). So work in your favour.

Dr Ron Ehrlich: [00:36:54] And it's that resistance, though. It's interesting, isn't it? Because you can drive. I mean, I was visiting a farm up in Uralla in northern New South Wales at the height of the drought and we were driving down a road. This was with Tim Wright, who is a cattle and sheep farmer, and on one side of the road was a barren landscape. There were a few sheep and cattle scattered around, but the dustbowl was.

On the other side of the road was Tim's farm, which was covered in trees, and shrubs. Yes, the grass was dry, it looked dry, but there was ground cover and yet both properties were exposed to the same rain. And my question to Tim was, what is going on in your farm, in your neighbour's mind when he stands on this road and he looks left? And he looks right and he knows the rainfall has been the same in this part and yet the landscape looks so different. What's going on in that? Farmers. You know.

Tony Rinaudo: [00:37:56] Yeah, I don't pretend to understand it all, but there's this saying and I forget who read it originally. But we see what we believe. We don't believe what we see. And this is the power of paradigms that farmers to the best of his ability, he's doing what he thinks is right, what he's been taught, and what he believes is right. And it could well be that he thinks the guy if Jesus is a bloody idiot.

I've heard this before. The oddball who's doing this tree thing must have lost his marbles. And in all sincerity, think that. And so I think what's the role of government? What's the role of non-government organisations who might want to bring about a better outcome for the landscape and for society in general? I think can we create mechanisms that bring people together to simply talk, ask questions, and project into the future. This is the question that I mentioned earlier: "If we continue business as usual, where will we be in 20 years?" It's actually very, very powerful.

And it's the starting point for all my workshops. Wherever I go, I don't come in both guns blazing, telling people what to do. I ask questions and people, whether educated or not, are not stupid. They know what's happening and really they answer those questions. And that's maybe it's maybe they've never articulated before. If I continue this where am I heading, something and bringing people together and posing the questions very, very powerful to get them to think, draw conclusions, and then hopefully, if you're a good facilitator, hopefully, lead to some action points.

Dr Ron Ehrlich: [00:39:43] One of the things that intrigued me about yours, the story in Niger and in other places, is that the forest is there underground. But what about when you see the landscape cleared where a chain is put on either side and the whole tree and the roots and everything get pulled out? What happens in that kind of landscape?

Tony Rinaudo: [00:40:03] Well, we definitely had an advantage in that farmers didn't have heavy machinery and for the most part, they cleared by hand. And yes, the tree stumps were still in place. However, you know, some of the modern farming ideas had penetrated Niger, and there were farms where the farmers had been very thorough. And bad up the roots as well. Now, even in those cases, often there were seeds in the grounds, and in the drier climate seeds tend to be hard-coated and they last for decades until the right conditions occur for them to germinate.

Tony Rinaudo: [00:40:39] So you'll have natural seeding even in the cases where, you know, some soils in Niger were laterite soils and when you expose them to the elements, they actually turn to rock. And I don't think there's any seed in that. And another project came in and taught pitting. So you dig these small half moon water catchment basins, very shallow water catchments and pits called holes, so just small holes and the farmers would put organic matter cow manure, compost if they had it into these holes.

And you know, wherever there was remnant vegetation and the animals had browsed on the seed pods, the seeds passed through, they got into the manure placed into the hulls, trees were German and again, it became more a question of mindset change. Farmers are saying these things that look like weeds popping up, are they just going to throw them out or plough over them or recognise them for what they are and allow some of them to regrow?

And then I guess a further continuation of that line of thinking, even in the absence of pitting and placing the manure on the land, if our behaviour, our management of the landscape changes and we don't plough every square inch of land, in the case of Africa, don't burn the stubble every year and the grasslands.

Don't graze the land within a millimetre of its life continuously, day after day, month after month. If we change those practises, nature still has ways to reseed the land in the wind, in bird droppings, water can bring seeds in, you name it. Nature has means and ways of repopulating if we work with it. But too often, it's our practises and land management methods that prevent it from self-healing.

Dr Ron Ehrlich: [00:42:41] I mean, this comes back to what we've already mentioned, and that is enabling rather than domineering nature. One thing I wanted to ask you as you visit all these places in Africa, animals are an important part of the human experience. Is that a fair statement to make? Or you know, because we're very preoccupied in some circles in the West with moving animals out of our experience, you know like we shouldn't be eating them, we shouldn't be using the products, Veganism is where we should be heading. in Africa, where food is not as abundant. What role do animals play?

Tony Rinaudo: [00:43:19] Oh, absolutely critical. And there are many places where you simply can't farm. It's too dry, too rocky, hilly, and so on. The only way of harvesting food from such landscapes is through animal protein. And so for many poor people and, you know, the countries that I've worked in, Niger is always in the bottom ten countries for poverty, often at the very bottom. Having even a goat, that's your lifeline. It's your insurance policy.

If everything else goes bad, if your husband is dying and needs medical treatment, you sell that goat and pay for the medicine. Or the milk from that goat is what keeps your children alive because it's still able to produce something - eating dry leaves and whatever goats eat. When the mother's breast milk has dried up, it really is everything to them. To have a chicken, you know? Most people didn't even have goats.

Many would have chickens if they could, when everything else failed, you sell that chicken and buy what you needed. Hmm. So, yes, I have. I have empathy for animals. I eat meat, but I think we have an obligation to treat them humanely. But to rule that categorically nobody should be keeping or killing animals. It's very hard to come to terms with when people are actually starving.

Dr Ron Ehrlich: [00:44:52] Hmm. Yes. Well, to quote a mentor legend in my mind, Allan Savory, don't blame the resource blame how the resource is managed. And I think that's a really important message. You're now involved in World Vision. Can you just... You mentioned it a little briefly. Tell us about that role now. What is that role in World Vision?

Tony Rinaudo: [00:45:15] So my role is Principal Climate Action Advisor, but primarily I have the wonderful freedom to be the advocate. The voice piece for this method. Farmer Managed Natural Regeneration (FMNR). And not just locally, not just in Africa, but globally. And so a lot of my time now, as much as I love the hands-on stuff and certainly visiting the projects, more and more of my time is drawn into speaking to donors and policymakers.

You know, if I can crack the policymakers, many people in developing countries still don't own the trees on their own lands. And if you remove that rights, what incentive is there for you to sustainably manage that tree if you can't even legally benefit from it? I might as well cut it out today before somebody else does or before, you know, if it gets destroyed, in some cases you can be fined even if you didn't destroy it.

And so my big push is to work on that policy level, where certainly in the case of private lands and community-owned lands, people at best have ownership of those trees and at the very least have user rights legally binding user rights, giving them the confidence that if I invest my time in protecting and caring for these trees, then I know I will benefit.

Tony Rinaudo: [00:46:44] And the perverse thing, the amazing thing for years, Niger had copied the French forestry code, and all trees in the landscape belong to the government. And while they followed that policy, nearly every tree in the landscape disappeared. That well-meaning policy with the opposite effect. If it's not yours and it's not mine, better take it today.

I approached the local foresters, so we had no authority over national policy. But I approached the local guys who I knew, and I said. "What you're doing isn't working. You've got a rope across the road at the entry of every city. You confiscate firewood. But the damage has already been done. There's hardly any trace left. Let me try this." If we say to the farmers, "If you regenerate these trees, you can do what you want with them. Would you just allow us to experiment? Nothing in writing. They gave me the nudge. Go on and try it."

Within just a few years, there were more trees in that landscape than what had been there for two decades. So what do I do in my role? I advocate. I try to raise awareness. I try to break this dominant tree-planting paradigm. Hey, in most cases, it's not working. You're spending millions and millions of dollars. You happily fly the flag. Today we planted 10 million trees. You never come back and count them. Most of them died. I'm trying to get their attention to say, don't stop planting, but give this method its rightful place in the equation.

Dr Ron Ehrlich: [00:48:25] Yes. Yes. Well, let nature give nature a rest and give it a chance.

Tony Rinaudo: [00:48:31] Give it a chance. Work with it. And I guess what's wonderful now is World Vision is fully intentional about supporting and promoting this work. And we're about to launch a major climate initiative, primarily supporting land restoration worldwide.

Dr Ron Ehrlich: [00:48:48] Wow. Well, that is, you know, to restore hope by restoring landscape. I mean, I think we're living in a world where a lot of people are feeling a little hopeless. And to focus on landscape regeneration of that landscape is a win-win if ever there was one.

Dr Ron Ehrlich: [00:49:05] Tony, you've written, you've just published a book and the book is called Hope for Planet in Crisis The Forest Underground. Tell us a little bit about it.

Tony Rinaudo: [00:49:15] So thank you, Dr. Ron. And it's I guess it's my biography, my life story. What was my motivation for going to Africa in the first place, the struggles that we encountered there, and how those were overcome? I guess it's a story of faith. There are a lot of points in my life where really the only explanation I have for the things that happened is God's intervention. And it's a story of hope. And I think this is a message that's desperately needed today in light of climate change. And I see so much hopelessness amongst particularly youth, say they feel we've lost the fight.

So if one of the poorest countries in the world on the edge of the Sahara Desert, with minimal external help, can reverse an existential threat. Desertification, degrowing of the Sahara Desert. If it can reverse that. What about us? What's our excuse for giving up on the fight against climate change? So at the end of the day, it's very much a story about hope and a call to action. Don't just sit there, then just watch the news and get depressed. For goodness sake, let's do something and beat this thing.

Dr Ron Ehrlich: [00:50:27] Well, that's a great note to finish on, Tony. And so thank you so much for everything that you've done. The book, I've already started reading and it is very readable and it's very inspiring. And as you say, we all need to get on board and restore hope by restoring landscapes around the world. Thank you.

Tony Rinaudo: [00:50:45] Thank you. My pleasure.

Dr Ron Ehrlich: [00:50:46] Now, Tony used the expression, the thinking minority. And I think there are always the early adopters which are open to change, which have an internal locus of control and a high tolerance for ambiguity, and are willing to explore new ways of dealing with old problems. So that is an important thing. I think it dovetails, as I mentioned, into what Charlie Massy has referred to as the human social cycle. The five cycles that he talks about are the solar cycle, the water cycle, and the soil mineral cycle.

Dr Ron Ehrlich: [00:51:21] So the solar cycle is putting vegetation on the ground to use as solar panels and to also reduce ground temperature. We did a wonderful episode with Dr. Christos Miliotis, who had that wonderful and memorable slide, which showed a bare piece, a piece of ground that was bare, had no coverage at all, and was 42 degrees centigrade. Next to that was a piece of ground that had light vegetation cover, which was 25 degrees centigrade, and next to that was complete coverage of the ground and which was 19 degrees centigrade.

So within two metres of ground space, depending on how much coverage there was, that is the solar cycle. Depending on the organic content in soils that is determining how well water is absorbed and retained in the soil or is it just washed off with the soil? High organic matter in the soil is all about the water cycle. Having microbes within the soil and mycorrhizal fungi delivers minerals and vital minerals to plants, making them more nutrient-dense. So the soil mineral cycle is really important.

Dr Ron Ehrlich: [00:52:38] And with all of that comes biodiversity. And the more diverse, the more biodiverse an environment is, the more resilient it is, and the healthier it is. But as Charlie has pointed out, and as Tony has reinforced today, the human social cycle is perhaps the biggest challenge for us all. And that is not just the farmers, but we as consumers who support them in the way we spend our money.

Dr Ron Ehrlich: [00:53:04] It is so interesting to look at the human social cycle and also to ask Tony about the role that animals have played in Africa, in human health, and in human existence. The important role that they play in it reminded me, as I mentioned, of Alan Savoury, don't blame the resource, blame how the resource is managed. It also takes me back and this really is why I think the work that Tony is doing is just so important.

When I wrote my book, I was reflecting on the last century as the century of the revered economist and financier. We live in a world of financial deregulation, of available credit, less so now than before. And in the night 20th century, particularly the last 30 or 40 years of the 20th century, was the year of the revered financier and economist. And I think you could reflect on the type of world that we live in now as to whether that was worth revering.

Dr Ron Ehrlich: [00:54:10] I said in my book, and I will say it again now that I hope the 21st century is the year of the century of the revered farmer, because not only do they provide us with the food that we need to exist, but they nurture the land that we need for generations to exist beyond that. And Farmer Managed Natural Regeneration (FMNR). Yes, it may be a mouthful, but it's a mission statement all in one.

And I hope this coming century is the century of the revered farmer. And this is one way for that farmer to change the world in which we live. We'll have links to Tony to his new book, [The Forest Underground: Hope for Planet in Crisis](#), and the website where [Farmer Managed Natural Regeneration \(FMNR\) through World Vision](#) is being promoted. I hope this finds you well. Until next time. This is Dr Ron Ehrlich. Be well.

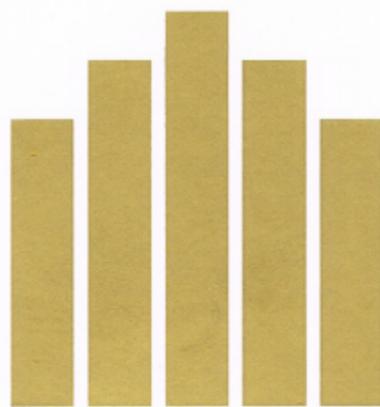
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