

# TRANSCRIPT

## LEGISLATIVE COUNCIL ENVIRONMENT AND PLANNING COMMITTEE

### **Inquiry into Ecosystem Decline in Victoria**

Melbourne—Tuesday, 11 May 2021

#### **MEMBERS**

Ms Sonja Terpstra—Chair

Mr Clifford Hayes—Deputy Chair

Dr Matthew Bach

Ms Melina Bath

Dr Catherine Cumming

Mr Stuart Grimley

Mr Andy Meddick

Mr Cesar Melhem

Dr Samantha Ratnam

Ms Nina Taylor

#### **PARTICIPATING MEMBERS**

Ms Georgie Crozier

Mr David Davis

Dr Tien Kieu

Mrs Beverley McArthur

Mr Tim Quilty

**WITNESSES**

Mr Rowan Reid, and

Mr Andrew Stewart, Otway Agroforestry Network.

**The CHAIR:** I declare open the Legislative Council Environment and Planning Committee public hearing for the Inquiry into Ecosystem Decline in Victoria. Please ensure that mobile phones have been switched to silent and that background noise is minimised.

I would like to begin this hearing by respectfully acknowledging the traditional custodians of the various lands which each of us are gathered on today and pay my respects to their ancestors, elders and families. I particularly welcome any elders or community members who are here today to impart their knowledge of this issue to the committee or who are watching the broadcast of these proceedings.

I would like to welcome any members of the public who may be watching these proceedings via the live broadcast as well.

At this point I will just introduce the committee members to you. I am Sonja Terpstra; I am the Chair of the Environment and Planning Committee. Mr Clifford Hayes is the Deputy Chair. Up on Zoom we have Dr Matthew Bach, Dr Samantha Ratnam and Ms Nina Taylor. Back in the room we have Ms Melina Bath and Mrs Bev McArthur, and Mr Andy Meddick will be back in a second.

All evidence that is taken today is protected by parliamentary privilege, as provided by the *Constitution Act 1975*, and further subject to the provisions of the Legislative Council standing orders. Therefore the information you provide during the hearing is protected by law. You are protected against any action for what you say during this hearing, but if you go elsewhere and repeat the same things, those comments may not be protected by this privilege. Any deliberately false evidence or misleading of the committee may be considered a contempt of Parliament.

All evidence is being recorded. You will be provided with a proof version of the transcript following the hearing, and transcripts will ultimately be made public and posted on the committee's website. If I could just get you, for the Hansard record, to state your name and any organisation you might be appearing on behalf of.

**Mr REID:** I am Rowan Reid. I am here on behalf of the Otway Agroforestry Network.

**Mr STEWART:** Andrew Stewart. I am here on behalf of the Otway Agroforestry Network.

**The CHAIR:** Great. Thank you very much. With that, we will hand over to you for your presentation of just 5 to 10 minutes maximum. I will give you a 2-minute warning as we approach the end of that time.

**Visual presentation.**

**Mr REID:** Okay. My name is Rowan Reid. I am a forest scientist—20 years as an academic at Melbourne University but a family forest owner. Andrew Stewart here is an agricultural scientist. We have been working together for about 35 years trying to address problems in both our sectors, dealing particularly with the family farming landscape. We actually had a visit by an earlier version of this committee, I think, who came down. I am not sure how that all fits in and what the changes are.

The Otway Agroforestry Network, I suspect, is possibly one of the largest Landcare groups in the country. We have over 150 farming families who are members, and they all pay more than \$60, so they are true members in that. Their motivation and our message is about growing trees for the reasons that farmers actually want, family farmer owners, because they make decisions about how land is used on about 60 per cent of the Australian landscape.

A little case study from both of us: my property, which I purchased in 1987, as a forest scientist, was expressly about trying to adapt forest science to suit the family farming landscape. Clearly that land needed trees. And that was 14 years later. This is just to stress that it is not what you might expect of a conventional forestry operation, but 30 years later we are now harvesting Australian indigenous and native plant species for timber. That is a 31-year-old messmate that I have managed. We are harvesting it using farm-scale equipment, milling it up on very rudimentary machines, because four sawmills in the area have closed down since I planted—

because of closing of the state's forest. So we have to prove its potential in other ways. We dry the timber in a solar kiln, and we sold that tree—\$2000 worth of wood from that single tree got converted into \$25 000 worth of furniture in Mark Tuckey's showroom in Melbourne, including beds and tables. That is really proof of concept.

We also grow bush foods such as mountain pepper here, which is another native species. We also provide habitat. That is a sugar glider on an introduced New South Wales tree species that I grow for timber. We have sugar gliders prolifically now, and they feed on the silky oak for winter feed that carries them over.

I would argue that a lot of my work is orientated towards exploring and demonstrating how the active management of trees for timber production on farms can actually enhance biodiversity through improving waterways and cycling nutrients and providing light for understorey. There is a lot of opportunity for production to promote conservation, and I have written about that in a book hereabout forestry for conservation and profit. I suppose what we are orientated towards is how we can actually bring that dichotomy together and look at that huge landscape that needs management in some way.

This is Andrew's.

**Mr STEWART:** I am a fourth-generation farmer down there at Deans Marsh. There is a lot of girl power in our family, and our girls were interested in our property and worked with us in one way or the other. We run a prime lamb operation where we produce about 1800 prime lambs per year, and that is our main production focus. But we have taken our farm from 3 per cent woody vegetation in 1991 to 18 per cent which is now under farmed trees and that sort of integrated biodiverse planting that you see there, because we were facing a lot of issues. Here are a couple of slides of what the farm is like now and what the farm was like before. But let us look at these issues that we were addressing.

These were the issues that we were addressing: erosion—stream bank erosion, gully erosion, tunnel erosion; exposure, the lack of trees and shrubs to protect the landscape; poor paddock design with waterlogged areas and also salinity raising its head as well. So this is the sort of landscape that we were faced with—down to 3 per cent woody vegetation after European settlement and clearing in the 1800s. That in fact used to be wetlands, but it is now an incised creek because of poor management. We have transformed that into this biodiversity-rich area here, which has a lot of plant species for diversity and bird habitat and as part of our integrated pest management, by having all sorts of shrubs to harbour the beneficial pests, for example. We use trees there to help stop the erosion, and we are also looking at managing some of those trees for timber—for tree products—which is part of the incentive that we have to plant more trees on our property, because that is what we like to do.

We have also planted blue gums. But instead of planting the whole farm out with blue gums, which is what unfortunately happened up in many parts of Victoria, we planted our 20 acres of blue gums in shelterbelts along land-class subdivisions, about 10 to 12 rows wide. It ended up about being about 3 kilometres of shelterbelts along the land-class subdivisions. That was addressing salinity, providing shade and shelter for the stock and also reducing wind erosion on the property. The trees were harvested after 14 years, but they have grown back. We are managing those trees now for a coppice regrowth, and there will be another crop.

We have also used our biodiverse plantings to protect our waterholes. We have a policy to fence out all our dams and to put trough systems on or to have stock access points, and then we look at the opportunities in what is happening there. This was a dam which was highly eroded. It was very deep, sandy, acidic, exposed soil—very bad for agriculture. The cattle were eutrophying the dam and mucking it up. We fenced it out, and then we planted 28 species of banksias, which love very deep sandy, acidic soils and an exposed site—bad for agriculture, fantastic for biodiversity and plants. There are about 80 species of plants there now. It is a bit of a food forest as well. My wife now harvests banksias, and it has become quite a good little enterprise within our family's system, using the banksias for cut flowers.

We have also had a big focus on biodiversity and bird species. We love the birds. What we have found now is that we have got 113 species of birds that have been identified using Birds Australia methodology over a five-year dataset of bimonthly observation rounds. These sorts of plans we have been doing have given us the diversity to attract the variety of birds into the system.

**Mr REID:** That demonstrates that, as landholders, family farmers are going to be interested in a whole range of different things, but production has clearly got to be part of that scenario to make the farm viable—and there is no reason why conservation could not also be a driver of profit through the use of native species as well and

vice versa. The Otway Agroforestry Network uses a farmer education program that we have developed and run around the world now—the Australian master tree grower program. We are really about informing and improving farmer decision-making about conservation initiatives. Just for our example, there are our two farms, but in our vicinity the majority of the farmers are now planting trees for some mixture of conservation and profit on their property—and the majority are funding these plantings themselves. We have a scale of landscape change to that. I travel the world a lot; I have not seen, in terms of the diversity of landscape, adoption of tree growing and the range of different activities.

But what I want to focus on today is the impact of some of the government policy—and this will be coming up—and the clearing regulations. As an illustration of how a lot of policy instruments are very old-fashioned and they try to save things and they are not actually encouraging or assisting us in promoting this approach that we have adopted, take the native revegetation rules, for example. Native vegetation is very common on farms, but once it is over 10 years old the farmer loses his right to cut that vegetation at all, even if it involves improving the biodiversity, let alone any timber production or improving grazing on that site. If you fence off an area and assist natural regeneration by choice, that is still considered natural and you do not get to own that after 10 years. You cannot change the management of that system in the future.

This is Andrew's spotted gum shelter belt for biodiversity, for profit and for animal welfare, but he has used a species called spotted gum, which does have a small location in East Gippsland, so it is considered native to Victoria. And having been native to Victoria, if those trees drop seed and that seed grows, once that regenerated plant is 10 years old he cannot touch it for any purpose in that sense. And in the recent regulations that came out in that document, if you received a Landcare grant, they have retrospectively introduced a regulation saying for any funding of any amount in the past for a conservation-type project, you cannot touch those trees if you find that they were not in the right place or you need to change the management to improve biodiversity. So landholders are in a really tough spot.

Yet in Victoria you can graze your cattle in amongst your trees and kill the trees. You can graze your cattle in the waterways and pollute the waterways. So the perverse outcomes we see are the clearing of natural regeneration before it is 10 years old—it is just a rational thing for farmers to do—and the planting of trees rather than actually using natural regeneration processes. It is rational for a farmer not to grow a Victorian native species on their farm in order to retain the rights. They neglect their existing native trees because they have lost any prospect of owning those, and they regret accepting a Landcare grant because they now find they have been restricted in what they can pass on to their future generations in some way. So in an attempt to save every tree on every farm, these regulations have destroyed or threatened what we are talking about, which is creating new and future forests on farmlands.

**The CHAIR:** Great. Thank you very much—and brilliantly timed. Ms Bath.

**Ms BATH:** I am about to say, holy gosh! I just tried to take all of that last little bit in. Thank you very much for coming, and what a great example of the symbiosis between agriculture, forestry and farming and the practices that we need to adopt, are adopting and have been adopting, it seems like, for 30 years. Look, can you just unpack some of the regulations that exist now? If you could just unpack that a little bit further, please, and the negative impact that is having, the disincentivisation, really, to actually plant native trees, Victorian trees. And then what do we need to do? Who is doing it better? Is anyone doing it any better anywhere else in the state? Where do we look to?

**Mr REID:** Okay. So we read the documents, and some of our members have actually come to us and said they wanted to move some trees and change a fence line, but because it was not a boundary fence they were not actually allowed. The council has said they cannot touch those trees even though they planted them—it was their revegetation project. So this has popped up from members quite a bit as a result. I identified those characteristics when I read the report, and just last week I sent my assumptions, that list, to the DELWP office, and I funnily enough got a reply. I have spoken to the person since, and I checked with him: 'Am I right to say this, this, this and this?', and he said, 'Yes'. Every one of those statements has been tested against the DELWP Biodiversity unit. For example, I said, 'If you planted a Victorian native species, even if it was not indigenous to your region, and it dropped seed and that seed grew, who owns that tree after 10 years?' and they said, 'It is a native to Victoria, so therefore it falls into natural regeneration'.

**Ms BATH:** On your land?

**Mr REID:** On your own land. You did it, you are managing it and you take control. So I am very concerned about it. Even if they say, 'Oh, you can apply for a permit', we all know that when a farmer applies for a permit to a council, to a biodiversity officer whose role it is to save vegetation, that they do not really want to be in that situation.

**The CHAIR:** Perhaps if I can just interject. So what should happen? Because, you know, you are sort of saying a lot of these people are saying to you this is a sort of perverse outcome, really, what you are talking about. So in your view what should happen?

**Mr REID:** Well, I think we should first of all acknowledge that the most degradation, the biggest conservation issue in the landscape of Victoria, is happening on family farms. The loss of vegetation, the biodiversity loss and everything has actually happened. We are dealing with a highly degraded landscape with highly degraded forests—if there are any remnant on that. There is not much more we can do to make it worse, but if we provide the motivation and confidence to landholders to act, we will have the sort of innovation you have seen in our area in the Otways. So in New South Wales, for example, they actually have a mapping project. If you have a property and it has got some remnant forest on it, you can get the map from the government, which will say, 'This is the old growth, these are the sensitive areas'. Then you negotiate and you agree, 'Yes, we agree to that map'. Everything outside those areas is therefore yours, because you have identified what the—

**The CHAIR:** When you say 'yours', meaning—

**Mr REID:** Yours—you can manage that, and—

**The CHAIR:** The landowner.

**Mr REID:** Yes, the landholder. And then they can manage it in confidence, saying, 'If I encourage biodiversity, if I provide habitat, it doesn't matter; I have done that, my family has done that and it should go on for those generations'. So people have got the confidence to actually plant and support. Because of course, you know, I have got old-timers who have said to me and possibly to Andrew, 'You know, I wouldn't plant native trees. If you get a koala in it, then you won't be allowed to cut them down', and this is a very strong attitude within the community.

**The CHAIR:** Sorry, Melina.

**Ms BATH:** No, it is a really interesting point. And so to that, if we go to Mr Stewart—on your farm the seed has dropped and it has grown up. What you are saying is that there would be zones where he has full right of claim to do whatever he wants on that section, but council, DELWP, have already sectioned off, put a circle around, some other more fragile or older trees that you are not going to touch. Is that what you are doing? You are—

**Mr REID:** Well, I think we would just acknowledge that older trees like the ones on your place are in decline. They are not going to be around much, so let us stop trying to save the things in decline and try to create a new forest, like Andrew has done on their property.

**Mr STEWART:** So I think that we need to come up with a system which actually encourages farmers to participate in innovative and creative ways of managing their landscapes. If we have these protocols in front of us, they are a disincentive to a lot. Yes, okay, you say, 'Well, yeah, you're doing it'—well, we are doing it, but we are the very small percentage who are really passionate about having a biodiverse farm where we are still producing, you know, animal products and wool, but we really want to address all those environmental issues, we want to address the land degradation, we want to address the salinity, the waterlogging. We want to plant our trees along all our land-class boundaries and around our salt-affected areas, around our waterlogged areas and around our remnant vegetation areas to protect them and then link all those up into a web of connected trees across the farm, but not only that, to link the farms next to us with the farms in front of us in our wildlife corridor that you saw on the huge aerial photograph there. We probably had about eight farms in that particular photo. To get all these outcomes that we want to get, we want the birds. We have had a guy down there for five years doing bird surveys so we can find out about this sort of thing. So we need to think clearly about how we can actually support the farmers.

**The CHAIR:** Can I just interrupt you there perhaps with another question, because I am interested in this area you are talking about. But do you think it is maybe because at the time an assessment is made that it is a

static point in time and perhaps there need to be other times where your land is reviewed? Like you were talking about, some trees might be healthy at one point but then over time they may not be healthy anymore or they decline or whatever. Is it because it is only a static point in time that something is assessed?

**Mr REID:** I described how forests or landscapes are as fluid as the ocean.

**The CHAIR:** Yes.

**Mr REID:** We tend to look at landscapes like—

**The CHAIR:** Point in time.

**Mr REID:** a point in time and say, 'We've got to save what's there'.

**The CHAIR:** Yes.

**Mr REID:** But if we understand the dynamic nature of it, we start freeing ourselves up to think, 'Well, what are the natural processes, and what do we need to be able to identify as the natural processes for driving positive regeneration and carbon storage and value and biodiversity habitat rather than going back?'. It is really part of the mentality that comes through the title of that report—this idea that we have got to stop the destruction and lopping of vegetation. This is a piece of drooping she-oak. Drooping she-oak is one of the she-oak family, a critical species for the habitat of the red-tailed black cockatoo. But the yellow-tailed black cockatoo had learned to adapt and eat pine cones, so they are not an endangered species. As a result we have got down in western Victoria lots of rules about saving every single she-oak to the point that a farmer would not plant a she-oak because they do not own it. Whereas we could actually have something positive and promote a she-oak timber industry, and farmers would be planting it because it is beautiful timber. It is worth four or five times what eucalypts are worth, and that could drive the planting en masse of a whole range of different things, similar to the banksias that have been planted and the bush foods that were planted. If the government actually promoted native product industries, we would not have a shortage of so many of them, and if it helped us find industries for the other native species. Because forestry, my profession, was not about taking every tree out of the forest. They only took the ones that were market ready. The reason there were no red cedars left in the rainforests of northern Australia is that the navy said, 'Every red cedar belongs to the navy'. So what did the farmers do? They cut the red cedars out.

**The CHAIR:** So some of the things you are speaking to are about the tension between, I guess, the framework and how people want to manage their land. You are just saying no-one wanted to plant those trees because they did not belong and they created all these other issues. So I guess from a practical perspective, what would your recommendation be to us as a committee if we did look at the native reveg rules, for example? Tell us in practical terms what would work. You have got the floor, so what should we do? How would it work? What could we do?

**Mr REID:** Well, first of all, we agree with the goal, and I think we have demonstrated through our own land that we agree that biodiversity is critical and can be supported, and we would prefer more native veg on farms. But if the idea is that you are going to achieve that in a modern economy by going back to 1755 and locking up forests in these remnants as little postage stamp scale operations funded by Landcare, we are not going to achieve the goal. We have a huge landscape to change. We as a community have given the decision-making rights to the family owners, and whether we change that and take the land off them because we do not trust families, it just happens that we allow families to decide what to grow, and because of where they are they have actually got this right. So we have got to turn around the thinking and say, 'Okay, there may be small areas'—as I said—'worth saving, but let's get really positive about driving a type of landscape change and acknowledging that production is not always a negative. It can actually be the driver that we have been looking for for that'.

**The CHAIR:** All right. Thank you.

**Mr STEWART:** Further to that, one of the slides up there was of our place, shown later in the presentation there, of an area that we had revegetated. It was suffering from dieback and we fenced it out and we direct seeded with a Greening Australia machine with 19 indigenous species there, but we also scarified one lane back the other way because there were a few odd remnants and we wanted to try and enhance the regeneration of those trees, which we actually did, around the drip line of those bigger trees. We were starting to get a lot of trees. We actually had too many. Now, we would really like to get in there and thin those out to improve the

forest to allow more light in for the understorey to get a healthier ecological system happening, but we are not allowed to do that. You can do it up to 10 years of age but after that you cannot get in there and do that sort of management. So it restricts our ability to get better biodiversity outcomes and even maybe a few production outcomes, because if we could thin that area out a bit, get more understorey and bigger, fatter trees, we could do a selective harvest of 'Maybe let's select this one out in 25 years time and turn it into something like this', and that is a practical example on our property.

**The CHAIR:** I understand, yes. Okay, thanks. Mr Hayes.

**Mr HAYES:** Thank you. Thanks, Chair. Thanks, guys. It is a breath of fresh air to have you guys in.

**Mr STEWART:** Oh, good.

**Mr HAYES:** But I have got to admit that I know Andrew and Rowan from many years ago when I lived at Deans Marsh.

**Mr STEWART:** That is right, Cliff.

**Mr HAYES:** And I have visited both of their farms and can attest that that is how they looked and that is how they look today. What we are really faced with is how to carry out species restoration and biodiversity on private land in Victoria and also on public land too. I think you both present a viable option for the future. I just wanted to ask you a couple of questions. On your farm, Andrew, you talk about 3 per cent of tree cover going to 18 per cent.

**Mr STEWART:** Yes.

**Mr HAYES:** Has productivity increased or decreased over that time? Are there other agricultural pursuits on your land?

**Mr STEWART:** What we have found, Cliff, is actually we are still producing as many sheep and as much wool, but we have changed our management too. We have got to be fair in our assessment of this. You know, we are using different breeds and different grazing strategies and so on, but we are still producing the same amount of livestock and wool coming off the property. However, we do have these other products. Those blue gums, for example, have been harvested, and we have had round timber which has been used in farm construction. We have sold some of the round timber for construction in Melbourne here and in playgrounds. And also seed—we have got a seed orchard as well and we have sold some seed. We now have beehives. So we have got more biodiversity there—we have now got beehives there and producing honey as well and with the cut flowers providing really quite a good sort of income. With our *pinus radiata* plantation, the thinnings of that we sold for Christmas trees.

Before we were doing any of this planting none of those products were there, so therefore you have got to say that the property is more productive. Now we run farm tours. We have had more than 5000 people visit our farm in the last 25 years: education groups, universities, farmer groups, Landcare groups and the like. So that becomes another little industry within the farming system itself. So, yes, the farm is more productive, it is a better place to live, it is better for our psychological and mental health. Rural depression is a big thing in Australia and if you have got a beautiful environment to farm, well, you are going to feel better about it. Our daughters now are all involved in the farm in one way or the other. So there are social benefits that come out of this diverse way of managing the landscape, but we need to free it up so more people will do this, so it is easy for them to do it and they do not say, 'Oh, yeah, I'm going to plant that tree and I'm not going to be able to harvest it'. We have just gone ahead and said we are going to give it a crack and see how we go.

**Mr HAYES:** I think those are really important points about the perverse outcomes. We had the VFF in here before alluding to those things, but you have fleshed them out in more detail. The thing about trying to get more people involved, do you see that this could flow through to Landcare groups all over Victoria and possibly involve Indigenous land management and get unemployed people to work on revegetation projects?

**Mr STEWART:** Exactly, and also not only just look at the regulations, which have been a highlight of this presentation here, but look at clever extension methodologies to engage people. See, with Landcare there has been I think too much of a wait-around and hand-out mentality: 'We won't do something unless we get a grant'. But what we are talking about with our Otway Agroforestry Network, with our extension program—we look at doing site visits as community capacity building. Any moneys we get from the various organisations we

put into education. It is about the software. Let the farmers invest in the hardware—the trees and tree guards—and we can invest in the software. Better education outcomes, you know, bring the science into it, community capacity building, peer group mentoring, site visit programs, field days—these are all the sorts of things we do with our Otway Agroforestry Network. We need to be smarter about our extension methodologies to enthuse people about the great advantages of biodiversity in our farming system to get multifunctionality out of our landscapes throughout catchments.

**Mr HAYES:** Can I just have one more question? That is fantastic stuff, but what stage are we at with plantation-grown timber, including agroforestry timber? When could we move from the native timber industry as it is into plantation—

**Mr STEWART:** I will defer that one to Rowan.

**Mr HAYES:** for all our timber needs—you know, the hardwood and softwood.

**Mr REID:** When I bought the farm, this was my passion. As a forest scientist and an academic my research was orientated towards this question. I think it was Dr Rob Baines or something, head of the National Association of Forest Industries, who stood up and told conference after conference that plantation timber could never replace native forest timber because it took too long, and at the same time we have now demonstrated that you can do it in a third of the time it takes to produce a similar quality timber—a third of the time from eucalypts if you manage it effectively. He was able to deny that experience because it was considered uneconomical to actively manage forestry on the basis of individual trees. What we are doing is pruning and spacing around individual trees to promote their diameter growth by increasing their canopy area, without fertilisers, without any water. So it is clearly possible, but we have lost 30 years because the industry felt threatened that they would lose access to native forest, which obviously there were going to because they were not going to win that debate, and now they have in our area, in the Otway Ranges.

So now we are set back to, 'It's just about scale'. People say, 'Well, forestry on farms is too small'. The cattle industry has thousands and thousands of farmers who are too small to produce and supply an industry, but collectively they do, and we need to acknowledge that unless farmers sell their land to the forest industries—and it is too expensive; they will not buy it anymore—the only option is to produce timber of a range of species that we are talking about, not just *pinus radiata*. You can get a range of species off family farms without undermining, as Andrew said, the agricultural productivity of that landscape.

It cannot happen for a long time, and the transition argument—that we are going to transition to plantations and farm forestry—could not happen because the forests were locked up too quickly. It is just a shame. We are now importing the quality of timber that we could have been producing from these farm plantations, which are also mixed species, biodiverse and controlling land degradation.

**Mr HAYES:** Okay. Thank you.

**The CHAIR:** Dr Ratnam.

**Dr RATNAM:** Thanks so much for your evidence here today. I just want to follow up on the discussion that was being had earlier about some of the rule changes that you would like to propose. You were kind of making the argument about there are some rules now having a perverse impact in the kind of sense that the rigidity is having these poor outcomes for biodiversity when people are actually trying to do some conservation work. Presumably the ethos behind those rules was to actually get good conservation outcomes, but as you have highlighted, if it has these things that people can undermine—cut down those forests just before they are 10 years so they do not get snagged by those rules—then that is maybe not an unintended consequence but a consequence that we should look at.

So I am interested particularly around the process issues around this, because we have been hearing throughout this inquiry about there are things we should be aiming for that might improve biodiversity conservation. Some of it is about funding, some of it is about laws, but some of it is about implementation. I am interested to know: this argument that has been made, have you all advocated to levels of government for change and not got a result? Where are the optics? I am interested to know where are we hitting the walls of change. If you have got a good idea to say, 'Well, this would actually improve biodiversity outcomes' and it is not being heard by the people who should hear it, what has happened there from your perspective, and how could it be improved in future?

**Mr REID:** Thank you. Every time we have politicians there—we have had Greg Hunt and Tony Burke and Christine Milne and Richard Di Natale, who is a member of our local network and a tree grower himself, we have every side of politics down, and I think when we were talking about trying to get common sense and identify where the middle ground can work, this is where most people with an interest can see something occurring which is positive to them. But if you talk about the perception that a forest is better if people do not touch it, right through New South Wales and half of Victoria, a lot of Gippsland, the regrowth of eucalypt forest on private land, which is natural when the land was not grazed heavily enough, comes up very thick and dense and it is dominated by a single species. What eucalypts do is they lock up. So you could go in there with a measuring tape every year and the trees would not be any fatter because they cannot share their leaf area. So what that requires is—and foresters would use the term—‘it needs a really good thinning’. The thinning would actually start releasing the natural processes of growth. For example, to get a hollow in a tree for biodiversity, the tree has to be growing in diameter. You cannot get a hollow on a dead tree. It needs to grow over a dead branch and for that branch to decay. So understanding that, if you want a hollow, you would go into a forest and identify a branch of the size you want on the size of a tree at the height above the ground for a sugar glider, and you would say, ‘I’m going to kill that branch and I’m going to thin the trees around it’. It will grow six times faster in diameter because you do that thinning—which is why I have got trees a metre in diameter in 30 years. This is not magic. It is a medium-rainfall, low-rainfall area compared to high-rainfall forestry, and you can promote diameter growth and you can achieve that.

The danger that we have and the passion I have for my science, forest science, is that it is being used in a certain way in the landscape—and it is possibly the same with agriculture science—and then the community says, ‘We don’t like what you do with your science. We reject all the science’. But the science of forestry is exactly the same science used in the botanic gardens down here to produce beauty, attractiveness and recreation. The science is not under question—like climate change; it is not under question—but what is under question is how we apply that science in the landscape. The problem we have is that we have a profession—mine—of which it is being said, ‘We don’t like you because we don’t like the application’. We have been kept out of the debate and I worry that we are hearing the same thing about agriculture: ‘We don’t like what you’re doing with agriculture so we’re going to reject the agricultural science’. We are both scientists primarily, working in a physical landscape trying to understand these natural processes that are occurring. I think that is why we are passionate after 30 years, because we are starting to see that you can drive landscape change, and communities have to come on board.

We are both involved in many Landcare groups. We set them up right back from when Landcare was first formed. Landcare has been stifled by the control of the funding which has been directed by saying, ‘You can only use this funding for a salinity control project’ or ‘for a biodiversity project’, and then there was some other funding just for a farm forestry project. The silos that come from that mean that none of those outcomes match with a family needing a whole range of different values to reduce the risk and to get all the benefits they can out of the landscape.

We were the first group to turn it around. We have had over \$3 million of public funding and not \$1 has been spent on a tree or a fence. We pay farmers to talk to farmers—and it works—and other Landcare groups are not doing it because they are not able to articulate and redirect that money. We went without money for three years as a group because we could not argue the case. They offered us money to plant trees, but we said, ‘We don’t want money for tree planting because someone else decides what gets planted and where’. Now in retrospect we find that we were right, because they have changed the rules and said, ‘If you took that money, you can’t do what you were planning to do with those trees anyway’.

**Mr STEWART:** I think what Rowan highlights there highlights the problem we have with our government, institutions, research silos—two new silos not talking to each other—and that is where you get those specific grants for the salinity or biodiversity or whatever the flavour is. Farmers have got to join all the dots, we have got to join all the silos together in an integrated landscape to develop a biological infrastructure of trees and shrubs and biodiversity not to replace the agriculture but to support it and to address environmental issues and manage some of those trees for tree products. But if we are constrained by regulatory activity and protocols, it stifles your creativity and the flexibility with the wonderful opportunities we could have right throughout our farming landscapes throughout Australia.

So we have got to think about connecting the silos, and the farmers need the confidence to operate like that. And in organisations like the Otway Agroforestry Network, where we have forest scientists and farmers and we have conservation people—and we are conservationists too—people from various walks of life, we come together and we share our knowledge and information to cut down those silos and to end up with biodiverse,

multipurpose farming landscapes, which is good for food security, good to address climate change and good for the environment and the wellbeing of the people and the animals living in it, let alone connecting the farms so we have got robust and resilient pollen and DNA moving longitudinally and laterally across landscapes for adaptation in the face of climate change. We have got to break the silos down and free that so that farmers can be creative and support the farmers so that they have the confidence to progress and express themselves in the landscape in the way they would like to.

**The CHAIR:** Great. Mr Meddick.

**Mr MEDDICK:** All of my questions have actually been answered.

**The CHAIR:** Okay. Dr Bach.

**Dr BACH:** Thanks very much, Chair. Gentlemen, in your presentation you spoke just very, very briefly about how your approach to the management of your farms intersects with pest control. And my ears really pricked up at that point because I am fascinated by pest control. Would you mind explaining to us in a little bit more detail exactly how that works on your properties?

**Mr STEWART:** Well, we need to know a lot more about it, because most insects have not been described properly, but we do know some things. We know, for example, that *Bursaria spinosa*, which is a beautiful native shrub and great for bees as well, will harbour parasitic wasps which will parasitise cockchafer grubs, which are deleterious to the root structures of pasture plants and therefore farm productivity. That is an example. The other thing about good plantation and tree management and so on and having areas organised is that you can protect the predatory spiders which can have a big impact on the redlegged earth mite, which is deleterious to clovers and legumes. So that is another form of using biodiversity in farming systems to improve the integrated pest management throughout a landscape, and so the list goes on. There is a lot of good research backing this up now, but we need to be far more cognisant and active in this area.

**Mr REID:** When we started planting native eucalypts we had a lot of problems with Christmas beetles and gum moths. We do not have that anymore. The amount of sugar gliders that eat insects, the amount of bird species we have on the farm that are controlling insects—we do not have that issue anymore. So you start noticing things that were very apparent in a barren landscape just do not occur here. It is sort of ‘What happened to that?’. It is sort of a story of the past.

**Dr BACH:** All right. That is fascinating. Thank you both very much.

**The CHAIR:** Mrs McArthur, you have got about 2 minutes—1½.

**Mrs McARTHUR:** Thank you, Chair. Gentlemen, great to see you. I think you have demonstrated that foresters and farmers are the best environmentalists—

**Mr STEWART:** We are still friends.

**Mrs McARTHUR:** and the most innovative and productive, and finding solutions that actually do not necessarily need government—in fact government is getting in the way—so thank you very much for that. Can you just also explain one thing. If a farmer or forester plants a native tree, that tree is their own. They can do what they like with it. It is only the seedlings that sprout up that we cannot remove after 10 years. Is that correct?

**Mr REID:** Yes. The rules say that you retain the rights to manage a tree if you plant it or it is direct seeded.

**Mrs McARTHUR:** Okay.

**Mr REID:** But it does not include facilitating natural regrowth.

**The CHAIR:** But is that if you get Landcare funding for it? If you just plant it yourself—

**Mr REID:** If you get Landcare funding and that was conservation funding, you have to get written permission from where you got it in retrospect to say that it was okay to do that.

**The CHAIR:** But if you plant it yourself without the funding—

**Ms BATH:** No, no—

**The CHAIR:** That is what I am asking.

**Ms BATH:** No, I did not mean no. I think they are two separate things, aren't they?

**Mr REID:** Yes. It is a different category, the funding. The funding could have included non-native species for conservation.

**The CHAIR:** If there is zero funding—

**Mr REID:** Well, almost everything I do is zero funding. The other point is about Victorian native species, which is interesting. With climate change we have had almost 1 degree in our area in just the 33 years that I have been there. Clearly it is going to be another degree before there is any significant change in human activity, and as a result of that we are both adapting our species selection, as the discussion came up earlier. I am predominantly using New South Wales species, which are both more drought tolerant—even the rainforest species have strategies to deal with intense heatwaves that our native species do not have. Locally our blackwood and manna gum and peppermint are all being affected by heatwaves more so than drought and the heatwaves are going to clearly take out or change a lot of the native vegetation, which raises issues that we are exploring about the ethics of introducing species from other areas and in terms of adapting our land management. Recently we found that in the Victorian government biodiversity unit and nature conservation section—

**The CHAIR:** I am sorry, we are actually out of time. I will give you a minute if you want to wrap up.

**Mr REID:** are actually suggesting now that it is okay to plant about 10 per cent non-native species in your plantings in order to try and work out how we are going to adapt, and that is acknowledgement that our landscape is in trouble and we need to be more innovative rather than going back to what used to be there in the past.

**The CHAIR:** Great. All right. Thank you very much for your evidence and contribution today.

**Committee adjourned.**