



STATE DEVELOPMENT AND REGIONAL INDUSTRIES COMMITTEE

Members present:

Mr CG Whiting MP—Chair
Mr JJ McDonald MP
Mr MJ Hart MP
Mr RI Katter MP
Mr JE Madden MP
Mr TJ Smith MP

Staff present:

Ms M Telford—Acting Committee Secretary
Dr K Kowol—Assistant Committee Secretary

PUBLIC HEARING—INQUIRY INTO THE IMPACT OF CLIMATE CHANGE ON QUEENSLAND AGRICULTURAL PRODUCTION

TRANSCRIPT OF PROCEEDINGS

Monday, 11 September 2023

Brisbane

MONDAY, 11 SEPTEMBER 2023

The committee met at 10.30 am.

CHAIR: Good morning. I declare open this public hearing for the committee's inquiry into the impact of climate change on Queensland agricultural production. My name is Chris Whiting. I am the member for Bancroft and chair of the committee. I would like to respectfully acknowledge the traditional custodians of the land on which we meet today and pay our respects to elders past and present. We are very fortunate to live in a country with two of the oldest continuing cultures in Aboriginal and Torres Strait Islander people, whose lands, winds and waters we all share. With me today are Jim McDonald, the member for Lockyer and deputy chair; Jim Madden, the member for Ipswich West; Michael Hart, the member for Burleigh; Robbie Katter, the member for Traeger; and Tom Smith, the member for Bundaberg.

This hearing is a proceeding of the Queensland parliament and is subject to the parliament's standing rules and orders. Only the committee and invited witnesses may participate in the proceedings. Witnesses are not required to give evidence under oath or affirmation, but I remind witnesses that intentionally misleading the committee is a serious offence. I also remind members of the public that they may be excluded from the hearing at the discretion of the committee.

These proceedings are being recorded and broadcast live on the parliament's website. Media may be present and are subject to the committee's media rules and my direction at all times. You may be filmed or photographed during the proceedings and images may also appear on the parliament's website and social media pages. I ask everyone to turn their mobile phones and computers off or to silent mode.

MEHMET, Mr Russell, Account Director, Risk and Broking, Willis Towers Watson

CHAIR: Russell, would you like to make an opening statement of about three minutes? Then we will move on to questions.

Mr Mehmet: Thank you, Chris and committee members. I am an account director with Willis Towers Watson, based in Brisbane. WTW is the trading name that is now used. I have been there for about 18 years and, particularly in the past five or so years, I have been working very strongly in research work and agriculture, particularly with the Queensland Farmers' Federation, the University of Southern Queensland and CSIRO, on innovative insurance products for agriculture, which, as we will talk about, have been very elusive to find so far. As we all know, Queensland certainly has one of the most volatile climates in the world. Not only do we have drought and flood; we also have the challenge of tropical cyclones that others miss out on in a lot of places. It is a real challenge.

Unfortunately, the insurance industry really has not come to grips with providing a worthwhile strategy for insuring agriculture. Probably the main reason behind that is cost. They really struggle with paying for what a perceived cost would look like, remembering that all insurance is based on probability and some profit, of course, but the probability really is the basis behind the cost. That is the big struggle for insurers. In other countries, there is the advantage of having subsidies from government—in many other countries. In America it is 65 per cent, and 90 per cent participate in insurance and those sorts of things, whereas Australia relies on government grants for natural catastrophes, which have a range, as you know, or government loan concessions. Farmers feel that they can be comfortable with their own risk management work and what they will be paid out from the government should a natural catastrophe occur. In the event of major natural catastrophes this is not really sufficient to meet their needs, as we well know, such as in big cyclones.

I want to demonstrate that there is really a place for government, science and the insurance industry to work with agriculture to help reduce the effects of not only that volatility but also climate change, which is now making things so much worse. The opportunity is there to work with those industries to improve and reduce the financial cost to the agricultural sector.

There are three things that I would like to propose as recommendations to the committee today. The first proposal is the abolition of stamp duty. I am sure you have all heard it before. It has been brought up many times. It would be an immediate 10 per cent saving for farmers. Most states provide that benefit, but Queensland still does not. I am sure there are reasons for that, but if others can do it then the thinking should be, 'Why can't we?' That is the first one.

The second one is the concessionary support to a unique new product called Nitrogen Risk Insurance. I have some brochures here to leave with you because I will not go into trying to explain it. Really, there are benefits for the Great Barrier Reef. This is a project funded through CSIRO Research. We have come up with a commercial product available to farmers, only within the last year, to cover them for the loss of yield for sugarcane farms in the event that they reduce the amount of nitrogen they apply to their sugarcane. For example, if they use 120 kilograms per hectare but do not need 120 kilograms then 100 might be sufficient. If you work across the whole of those regions—and I have the estimated numbers—that would mean a substantial saving. However, again, there is a cost—it is not a significant cost—that they are required to pay for that basic cover and it is a challenge. It is also about the awareness. It is a way to help farmers be far more aware. There are a couple of thousand of them across that area so they need to be aware that this cover is available. That is the second way that I think government could greatly assist. Not only would it assist the farmers in saving money from reduced costs of nitrogen fertiliser; it is the economy and protecting the region within the Great Barrier Reef. Again, I have numbers of what that benefit would look like. It is substantial even with a proportion of farmers taking up the cover.

The third thing is the actual saving to the environment from climate change. I have a very short paragraph that I will read from a science paper—

Nitrogen is a key contributor to climate change

When nitrogen in its active form, such as in fertiliser, is exposed to soil, microbial reactions take place that release nitrous oxide. This gas is 300 times more potent at warming the atmosphere than carbon dioxide.

Not only is this about the protection of the Great Barrier Reef, which the crown-of-thorns starfish thrives on; it would also protect the immediate environment. It can be applied to not only sugar cane but also other forms of crops. It is unique. I think it is a standout opportunity for Queensland to be noted globally as CSIRO has come up with a product to protect farmers against loss of yield if they are willing to reduce nitrogen.

The third proposal, if I do it very quickly, is capitalisation, a discretionary mutual. Again I am talking about sugar cane only because we have done the preparatory work on what that would look like. That would be for farmers who are prepared to contribute for cyclone cover for their regions, the 12 mill regions in North Queensland. If a cyclone passes within 50 kilometres of their property then they would receive an immediate payout. The attraction here is doing it in a mutual approach. What we are looking at is capitalisation. The cost, again, is too expensive for farmers to buy that insurance. Keep in mind that it does not have to only apply to the loss of cane. The 50 grand, if that is what is taken, can be used for any other purpose whatsoever, but it is designed for agriculture and costs.

The thing about it is that it is protected. The fund component is protected by reinsurance. For example, in a \$5 million fund, \$1 million is contributed by the farmers who participate and \$3½ million to \$4 million is to pay for the cost of setting it up. Should there be a major loss in the first year, it needs capitalisation. Above the \$5 million the insurers pay for it. The attraction is that if the loss does not occur—if there has been no cyclone in the past 10 years—then there would be surplus within that fund that could be paid back to the government on a loan basis over that time. Eventually the fund would become self-sufficient—again, if there are no cyclones. If there are then the fund is designed to give them that protection.

Those are three things that I thought I would recommend today that the government could consider to reduce the exposure of climate change on the agriculture sector.

CHAIR: My question flows on from what we have talked about previously. Do we have our risk and financial framework—even our mental framework—wrong? Instead of paying after the event, should we be investing more in these various financial products, including parametric insurance and that fund? Is that where we need to invest our money because we know what is coming? Do I have that right?

Mr Mehmet: That is an absolutely perfect description of it, Chris. As I have said, that is what so many other countries do that run these sorts of programs, depending on how they are subsidised or capitalised or whatever you want to call it. That is a common way to approach it. Australia relies on government natural catastrophe payouts and so do farmers. We have talked to many of them and they say, 'Why should we spend money on insurance if we're going to get that payout from government anyway, even though it might take a year'—incredibly. This is instant. This is paid within two weeks so they can do something about their losses.

CHAIR: Obviously, when you talk about these proposals the government says that that is a cost. Are we sufficiently contrasting that cost up-front with the cost that we pay after the disaster? Would it be more efficient, as I said, to make sure that we are investing in resilience and financial products, knowing that it is going to happen?

Mr Mehmet: Yes. I wish I had that number to give you, Chris, but I know it is a significantly higher number in those natural catastrophe situations. I think Robbie might know that sort of number. For example, we are talking, with that canegrowers mutual, about a \$10 million up-front cost that is able to be paid back over a five-year period. Based on the estimated numbers that would join, that would be sufficient to capitalise the fund through that period, depending on what the insurance market finds and what the costing is. That is pretty close to what we think and what our modelling is worked on. Compare \$10 million to a major catastrophe affecting that whole area and it would be a significantly higher number. I could come back to you on that. I am sure those numbers would be available—the difference in the two.

Mr McDONALD: Thanks again, Russell, for coming to talk to us. I have a couple of questions for clarification. Firstly, at the start you talked about subsidies around the world. Were you talking about subsidies for insurance?

Mr Mehmet: Yes, insurance.

Mr McDONALD: You talked about the concessionary support for nitrogen reduction.

Mr Mehmet: I just use that word as an alternative to ‘subsidies’ because I know that it is not that popular a word, so I thought I would come up with something different: concessionary support.

Mr KATTER: They are getting more comfortable with the word.

Mr Mehmet: It is the same thing.

Mr McDONALD: I understood the proposal of 120 kilograms dropped to 100 kilograms. Where does the government come into that in that recommendation?

Mr Mehmet: It has not really been thought through, Jim, as to how that would apply at the moment. At the moment we are selling policies to growers. It is all online and the most simple thing, as you can see from the brochure, for them to do. Getting it out there and getting the word out there is a challenge.

Mr McDONALD: But that is the principle of it?

Mr Mehmet: That is the principle. Either some or all of it would make them say, ‘What do I have to lose? I should take this cover up.’ We need to look at how much the total is and if a percentage took it up then the same sort of thing. That is the principle: either some or part of the insurance premium.

Mr McDONALD: Obviously, as you have mentioned, it is the combination of working together with government, science and insurance. I know that some of the farmers in the Lockyer have been able to reduce their use of nitrogen 10 per cent from what they used to do through some smart composting and different processes. Obviously, that is where the science comes into this because otherwise they are not going to be productive.

Mr Mehmet: Yes, that is right. Peter Thorburn is the man from CSIRO who leads the project and he would be very happy to explain more the science that sits behind it, but the science he is particularly talking about is a modelled outcome; it is a simulated yield result. This is based on many hundreds of thousands of calculations that have been done over 50 years of when a farmer reduces a yield by 120 to 100 and all the soil type and the mapping that is provided to farmers—he has identified his particular paddock when he goes online—for that farm, for that soil type and then the rainfall over the last 50 years—not only rainfall but also temperature and everything else that BoM can produce—the outcome would have been, if he reduced it from 120 to 100, that he would have had a loss of yield of so much per hectare. If the output is the same as what it records for the year that he has the cover, then he is paid that amount. That amount goes straight into his bank account. The correlation has been so close because of all those years of experience. So when I take the science, it is more the science that sits behind it rather than what it actually does.

Mr McDONALD: Another clarification: with regard to the 50 kilometres through the cyclone discretionary cover, 50 kilometres is pretty close.

Mr Mehmet: Yes.

Mr McDONALD: A lot of damage can be done while the cyclone is 75 or 100 kilometres away, so how did they come up with 50 kilometres?

Mr Mehmet: That can be changed. That can be changed to 100. We have been advised that 50 is a comfortable figure. That is where they get the largest damage. The other thing to mention on that is that the cane growers themselves said flood is often an issue that comes out of it. They might not have had the cyclone at category 2. This is category 3 and above. At category 2, they might have had a massive flood level. A mutual can be done to look at rainfall above a certain level in those regions—an either/or. Either take the cyclone singularly, the flood singularly, or take both. That option is available.

To add, from your side of things, Jim, I know that with that sort of concept, we are thinking pilot there. There is no reason it cannot move across to other crop types and be available for horticulture, for rainfall and drought.

Mr McDONALD: Great.

Mr MADDEN: Thank you for coming in today, Russell. I notice in your report you talk about parametric insurance. Does your research suggest any particular areas of agriculture would benefit from taking up parametric insurance? I am thinking we have fairly broad agriculture in Queensland from growing cabbages in the Lockyer Valley to cotton on the Downs.

Mr Mehmet: Yes.

Mr MADDEN: Is there one area in particular that would benefit from parametric insurance?

Mr Mehmet: All areas, but horticulture would be ideal because it is in a closer area. We are looking at hail as a cover for all crops, but it is a challenge for cotton because it covers such a wide area. It is the same for broadacre. They put in sensor plates to read the level of damage and the size of the hail. That only covers a maximum of 15 to 20 hectares, so that is usually not enough for a big property, but it would be fine for horticulture. It is the same as the rainfall reading. If you can get a rainfall reading on the property, it is much easier and avoids the basis risk problem of not having a reading in that area. It suits the smaller areas, but it can be applied to any area.

Mr HART: Russell, coming back to the nitrogen reduction insurance, did you say that if somebody insures for a certain reduction and their crop outcome meets the prediction, they get paid, or if it is worse—

Mr Mehmet: Does not meet the prediction.

Mr HART: How long has this insurance been available?

Mr Mehmet: This is the first year; it is just on the market now. We just sold our first policies last year and the first claim has come through for this year, because it takes 12 months for the outcome for that particular season to know whether or not there has been a loss. We started in June last year. The first loss was recorded for July and the claim has been paid. It has only been in place for this first year. It is new and has not been done before.

Mr HART: Did the outcome meet expectations?

Mr Mehmet: Yes, it did. It was a very small amount, to be honest with you. It was more a test case, I think, from what the grower did. He was pleased to see he did get an outcome. That is fair enough. He realised that he might have had a slight reduction, but in the bigger picture you would be able to see it better.

Mr HART: I can see a great scope for this sort of thing, I really can, and the government's involvement in promoting the use of this as a tool to reduce nitrogen use.

Mr Mehmet: Yes.

Mr HART: Are many people taking it up?

Mr Mehmet: That is the slow part. It is new. It is something that they would like to see more of.

Mr HART: Are you using the person who made the claim as a poster boy sort of thing?

Mr Mehmet: Beautiful. That is it! He is waiting for his acknowledgement and he is happy to provide acknowledgement, because he had the payment in his account within seven days of the BoM reading, so he could not be happier.

Mr HART: Does it work out to be expensive?

Mr Mehmet: It is pretty inexpensive, if I can say that.

Mr HART: So it is a no-brainer then. That is interesting.

Mr Mehmet: It is the numbers and getting people. We are talking thousands of farmers. Apart from paying the money, to go online, get in, identify their paddock and make a decision of going from 110 to 90, it is a bit of work to go through.

Mr HART: Do you have to change the basic psyche of the farmer to take out insurance?

Mr Mehmet: That is it. Training, education and awareness—that is vital.

Mr HART: You are starting with the peak bodies then, I assume?

Mr Mehmet: Peak bodies, very much, yes. Canegrowers are there, but they are a little bit hesitant.

Mr HART: I have met plenty of cane growers, don't worry.

Mr Mehmet: I am talking about Canegrowers as an organisation. From their point of view, you have to be aware that the mills potentially see that as less yield going through their mills. They think, 'If a yield gets reduced, even though the grower gets paid, there is less cane coming through our system.'

Mr HART: But you have done modelling to show that?

Mr Mehmet: Yes.

Mr HART: It is not as bad as what people assume, I assume?

Mr Mehmet: Exactly. The good thing about it is you might not get a payout, but that means you have the yield you wanted. They get the same outcome. But if you did not, and the weather in that 12 months did not stack up—drought, flood, sunshine or whatever the reasoning might be—and you did not get an outcome, then you do have insurance to cover you.

Mr HART: Would that become complementary with the rest of the insurance you have been talking about, the cyclone—

Mr Mehmet: That would be a separate insurance platform, yes.

Mr HART: But complementary to it?

Mr Mehmet: Yes, sorry. Yes, I am looking at the spelling of 'complementary'. 'Complementary' with an 'e'.

Mr HART: Yes.

Mr Mehmet: Got you. Liberty are the insurer for this. They have come on board and they very much like it. They would like to see the pool of premiums increase, but that is the sort of global insurer that are interested in these sort of things, whereas it is not for the local insurers.

Mr HART: Why is it not for them?

Mr Mehmet: It is that parametric type of insurance.

Mr HART: The size?

Mr Mehmet: Not so much the size. It is the parametric concept. They want to see what is called indemnity insurance. You have a loss, you get damage, you are going to get it fixed up and you get paid when it gets fixed up. That is the sort of insurance we see day to day. This is a payout based on a simulated yield and trust in CSIRO's data to be aligned to what you are likely to have had. No assessor comes out to see; it is all based on the simulated outcome.

CHAIR: We will table that pamphlet as well, if you do not mind.

Mr SMITH: Russell, I will try to keep it concise because I am aware of time. Effectively, the growers say, 'This is the average of nitrogen that is produced through my average yield. I will drop my nitrogen usage by X amount.'

Mr Mehmet: Correct.

Mr SMITH: 'If I still produce my yield, happy days, no payout, but if my yield drops and it is because of that'—

Mr Mehmet: Can I just interrupt you there? It is not your yield. It is the simulated yield; it is the modelled yield.

Mr SMITH: So, effectively it is about WTW trying to reduce the amount of nitrogen that is created through the farming process. I am wondering, because it seems it is only a WTW form of insurance and it is brand new—I was just reading your press release from June—why is WTW getting into this? Is it an environmentally moral ground you want to take? Is it leading ground? What is the reasoning behind wanting to be involved in this space around the environment?

Mr Mehmet: That is certainly easy to respond to because it is part of a project with CSIRO. The Great Barrier Reef Foundation funded CSIRO to come up with an insurance product—had no idea what it could mean—to help protect the Great Barrier Reef. It was that half-million-dollar project. This was just one part of that.

Mr SMITH: It is their idea and you are willing to back it as an insurance company?

Mr Mehmet: Absolutely. It is very much CSIRO. I was with them when Peter Thorburn first raised the subject and the insurance market said, 'You have got to be joking. This is not an insurable proposition. Reduce nitrogen, reduce yield—it is a certain loss. It is not a place for us. We deal in risk.' However, when it was made a parametric approach and weather came into it and the different soil types came into it and the data that CSIRO had sitting behind all of that, they were comfortable. It was not only Liberty; four other global insurers were willing to participate. Liberty turned out to be the most competitive. They are based in Brisbane and they have an agriculture chap in Brisbane, so we are able to take him to farmers et cetera. It was very much driven by CSIRO.

Mr SMITH: Wonderful. Thank you.

Mr KATTER: As a bit of background, Russell, I do not know if you lot put a bit of effort into this with the rural taskforce—this was a fair while ago now.

Mr Mehmet: With DCAP? What was the government department—

Mr KATTER: I could not tell you, but it got the funding and QFF took it.

Mr Mehmet: Oh, yes.

Mr KATTER: Southern Queensland, and I lost visibility of it all then, so I am not up to speed on where it is—

Mr Mehmet: Yes, that was the cyclone one. We approached government—

Mr KATTER: One part of the argument was what money goes in for flood damage and things on crops.

Mr Mehmet: That was the cyclone one.

Mr KATTER: That is a bit of background, really. I thought one of the barriers back then was empirical data around production—so what do we expect—because farmers would not be forthcoming, did not want to really tell government what they are making or what their production is, and that helped bring the risk down if you knew more about the industry. I thought that was one of the barriers. Is that still the case?

Mr Mehmet: I do not think that was part of what we were looking at. It could have been someone else because parametric, the simplicity of it—

Mr KATTER: That was talking about multiperil insurance.

Mr Mehmet: Yes, multiperil is a totally different ball game. When I said at the start there has been no real appetite for insurance to be involved, we found that through multiperil crop insurance. I talked about this last time. Some insurers came in, and they went out just as quick within a year because it covers such a wide range and it is expensive and you have to be able to prove your loss in many cases. This is not designed to pick up what we are talking about—nitrogen. If there is an outbreak of pig attacks in the cane or something else that is outside the weather, then it will not be covered. That is the thing. Multiperil insurance covers all of those exposures—pests and pigs. Proving that sort of loss, getting details from farmers, how many pig losses—that is a big challenge.

Mr KATTER: You talk a lot about sugar, but what other industries do you see it lending itself to?

Mr Mehmet: I can see it lending itself to any agriculture sector, any crop that has suitability to it. You have to think about how big grain could be, trying to bring it together. Sugar cane is simple because you have 12 locations all close to the mill and therefore it is easy. Your side of horticulture, pretty much in the Lockyer Valley, you have it in a certain area. With broadacre, it is very big. It potentially can be done; it just needs to think about things like satellites, measuring soil moisture—a fair bit of research would need to go into how a discretionary fund could work for broadacre. But other parts—

Mr KATTER: Livestock?

Mr Mehmet: Livestock is the same sort of thing. You need to get broad coverage, but there is definitely potential. Looking at bigger areas, particularly feedlots—anything like that—it is easy when you think about excessive rainfall in a little area. However, the spread of broadacre and moving cattle

into areas after they have problems, taking them up off the ground, as you know, different methods of risk management—that makes a difference. But absolutely with that sort of data, it can be done. Data from the farmer, as far as auditing is concerned, that is not required.

CHAIR: Member for Traeger, we might ask Russell for a letter on the status of multiperil insurance, if we could. That might give you the numbers that we need.

Mr Mehmet: Yes, absolutely.

Mr McDONALD: Russell, could you include in that—and the secretariat will give you some information about this—whether multiperil insurance has not been successful because of the broad range of disasters or is it because it was covering some of the potential yields rather than the input costs?

Mr Mehmet: Both I would say across the board—and the cost of then covering it.

CHAIR: We will get some extensive written information on the status of multiperil insurance. The other question was about the difference between the cost of government providing the post-disaster payment and investing in those financial models up-front such as the capitalisation fund et cetera.

Mr Mehmet: I will include that as well.

CHAIR: Could we have that by 5 pm on 18 September?

Mr Mehmet: Yes. That is manageable. Project life—that is what it is about.

CHAIR: Thank you very much, Russell. We always enjoy having a chat with you.

Mr Mehmet: It was great to be invited.

LORD, Mr Bruce, Principal Scientist, Sustainable Agriculture, Healthy Land & Water

McLELLAN, Ms Julie, Chief Executive Officer, Healthy Land & Water

ROBERTSON, Mr Stephen, Chairman, Healthy Land & Water

CHAIR: I now welcome our representatives from Healthy Land & Water: Julie McLellan, CEO; Stephen Robertson, Chairman; and Bruce Lord, Principal Scientist, Sustainable Agriculture. Before we start, the member for Ipswich West has noted that he was on an NRM body.

Ms McLellan: Health Waterways.

Mr MADDEN: I was previously a member of Health Waterways that led to Healthy Land & Water.

CHAIR: As a council representative, I was on a body a while back.

Mr McDONALD: Likewise, I was proud to be a local government member on the Western Catchments, which became Healthy Land & Water eventually.

CHAIR: We appreciate you coming along. I invite you to make an opening statement of no more than three minutes and then we will move to questions.

Mr Robertson: Thank you, Chair. I will hand over to Julie, the CEO of Healthy Land & Water.

Ms McLellan: Thank you very much for inviting us here today. As the committee is aware, farming is pretty risky at the best of times, and now with climate change and the impacts and the uncertainty it is getting harder for farmers to manage their productivity. Combined with the requirement now from, in particular, international purchasers around having to have ESG components in place and ESG strategies, we are finding that in order for farmers to remain productive they really do need to start to look at how do they implement an ESG strategy. Having actually done one myself for Healthy Land & Water, I can tell you that it is not cheap and it does take a good 12 months. In E, S and G, we are almost experts, so it does take quite some time.

What we are advocating for and part of the submission, which you will have read, is that we fundamentally believe that if the Queensland government can support some continuity of our extension services—which all NRMs across Queensland provide, so it is truly a statewide activity and has been in place for quite some time—then we can build up relationships. Many of you will know that relationships with landholders are vital for us to make some inroads into changing practices. Across Queensland itself we have quite an extensive array of what we would call extension officers but they work for NRMs now.

You do not need to just take our word for it. We have run our five-year program funded by the Australian government over the last five years. I think I put the results in the submission. In excess of 90 per cent of farmers we have engaged have implemented climate change adaptation strategies. They have been able to notice quite a difference and are starting to look at biosecurity as well. It is proving to be quite a valid and reasonable response.

The other thing I put into the submission was not just problems but three solutions and opportunities for ways that we fundamentally believe would support landholders into the future and their adaption including productivity be it through whatever means, through some of the biophysical as well as—and I was listening to the gentleman before around nitrogen—starting to improve soil carbon.

We are happy just to take any questions. I have notes. I can expand a little bit more if you wish. I will hand back to the panel.

CHAIR: I will start by asking about extension services. It is something we have been turning our mind to because it is very clear that Queensland has had a very good tradition of excellent extension services and extension officers. When we are adapting to or mitigating climate change, the role of extension officers is critically important. There is so much innovation. There are so many products. There are so many tools already out there.

Is your model—if you are funded, you provide those extension officers and you work with those broad range of stakeholders—a better model than traditionally the Queensland government just employing more people and calling them extension officers? Is it more responsive to have the bodies that you represent providing those services and the Queensland government and the department coordinating that and being involved to make sure it happens?

Ms McLellan: That is a great question. I am going to say yes, but it is proven. Having the extension services funded through NRMs provides that leverage. A couple of years ago Ernst & Young worked out the value add figures for the state government. For every dollar invested in us you get about \$4.20 return.

CHAIR: That would be a great report to see.

Ms McLellan: I am happy to circulate that. It will be floating around somewhere but I will make sure the committee gets a copy. In addition, it is about jobs. Wherever we are it is about local jobs. Again, I think there is about a 2.4 multiplier on jobs. For every person we engage in our organisation the flow-on effect is about 2.4 jobs in the local community. My team who are extension officers are not solely extension officers. The state gets value for money. You talked about innovation. They are constantly aware of what is happening globally and what is happening around the place. They have built up long-term relationships. Indeed, many of them are landholders themselves, so they live and work in that community. They do not, and I mean no disrespect, just work for government. They are not bureaucrats. We are an independently owned organisation, so we are more flexible and light of foot. I do not know whether you wanted to add anything else, Bruce, with your extensive experience.

Mr Lord: We work collaboratively with those government extension officers where they exist. We have tended to fill the gaps where some of those extension services have been withdrawn over a number of years in particular fields. I am hopeful for that ongoing investment. It was pleasing the other day to sit on a panel with state government employees looking at putting a bid in to the feds for the National Soil Strategy in terms of a collaborative effort between industry, NRMs and government. They particularly identified soil conservation. If we are looking to preserve and conserve our soils, as well as make them healthier to be able to feed the world, it is critical to have that collaborative effort between all parties. Soil conservation has been a real gap that NRMs and others have had to pick up recently. It is a huge threat both to our agricultural environment and the environment, and to our water quality here in South-East Queensland.

CHAIR: It is the element of trust that we have talked about at all of these public hearings. People on the ground need to have that element of trust with whoever talks to them about innovations and new tools. Locally based extension officers—however they are sourced or funded—are probably the most important element. They hold that trust perhaps more so than many other people locally. Would that be correct?

Mr Lord: Yes, definitely. All the studies and our evidence has shown that it is a long game. Practice change takes time. Landholders are dealing with a whole heap of other risks and issues. It is not as though you get the conversion and instantly go home and do a whole systems change. That is something we raised in the submission as well. The impacts of natural disasters and significant events obviously cut across well-laid intentions and plans and make that a lot longer haul.

It is about trusted local advisers and continuity and a length of program that is more fitting with what you are trying to achieve. Natural resource management is a long game, seeing that biophysical change takes even longer, particularly in our soils and our grazing lands. We need that long game. Also, for measuring and evaluating change, with stop-start programs you just start to achieve things. We need legacy support to be able to go back in five years and look at the biophysical changes and do the cost-benefit analysis and see what the long-term impacts are.

Mr Robertson: That also goes to the issue of recruitment and retention of qualified staff to perform those extension roles. Where there is a lack of security for a position, particularly in parts of the state like the north-west, that can really impact on how—and I do not want to speak for the north-west NRM—NRMs are able to provide that continuity that Bruce mentioned because of the lumpiness and uncertainty that programs have, whether they be at federal, state or even local government level.

CHAIR: I think that it is a good point. Certainly those five-year contracts are quite useful.

Mr McDONALD: Those farmers who are meeting the ESG requirements of the market are being driven by that. I would argue that there are a lot of farmers out there who are not being driven by that: they are just doing what they have always done. You mentioned your extension services and extension officers being able to bring those people on a journey. How do we bring those farmers who are probably creating most of the problems, whether it be with nitrogen application or poor water use, on board? How do we grab them?

Ms McLellan: You have probably tackled quite a few of them, Bruce, over the years. I might start with the concept of leading by example. In the regions we are constantly on the ground. If you think about the flood impacts—and particularly where you are from—we have invested a significant

amount of dollars in rehabilitation of waterways to slow the water down and to spread it over the land. When we went back in 2013 to try to broker those outcomes with some of the major landholders, yes, we had some who were willing but we had plenty who were not. We went with the willing and had a fantastic demonstration project.

As you know, Jim—you have been out there many times—they gave up some of their productive land so we could batter back and slow the water down. Then came ex-TC Debbie and it held up. What we found was that the landholders across the road were ringing us asking, 'Can we have some of that too?' I think it is case by case but it is demonstrated. Where we can demonstrate where we have a positive impact, people come across. There have been plenty of snake oil salesmen out there over the years for landholders. It is about being there. We are constantly there. We do not run away. We are not salespeople. We are living in those communities. They can be quick to say, 'Oi!' It really does come down to demonstrable outcomes that can be proven time after time.

Mr McDONALD: Did you have anything to add?

Mr Lord: No, just the power for those demonstration sites for, I suppose, improving resilience and showing that investment in the longer term, having those longer term case studies and an example where there has been that investment over time because, obviously, different farmers are at different stages of the journey. Some are keener to adapt and change and are in more of a position to adapt and change than others. It is working with those who are willing and using those good examples and trying to, I suppose, show both a positive natural resource management outcome and, hopefully, a positive production outcome.

Mr McDONALD: I think that is really the key, the positive production outcome. There is the 10 per cent of innovators who are already addressing this and then there are those who say, 'Don't talk to me about that climate change thing; it's all a load of rubbish.' They are regularly some of the ones who are the worst offenders in this space. If they are able to produce in climate variable conditions, whether it be drought or flood, you can produce some good outcomes. I was just talking about that challenge. Can you expand a little more on land use planning regarding the fragmentation of land, particularly in South-East Queensland?

Ms McLellan: With the new regional plan—it is not really new; it is the revised 2031 regional plan—I think there is an opportunity for government to really look at that to make sure we do not continuously fragment that land from both a biodiversity perspective, which is probably some of the lens that we look through, which is vital, and also from a landholders' perspective. Research has demonstrated that, obviously, the larger the tract of land that you have the more productive, rather than having lots of little pockets. That is what we have put into the submission. As you know, in South-East Queensland with urban really sprawling out into the peri-urban and then the peri-urban pushing out into the more rural areas, we are seeing a lot of that land used up although maybe not for highly productive farms. I did not want to offend anyone and call them 'hobby farms'—especially my chairman. Of course, they can do good from an environmental perspective, but from a farm productivity perspective you are probably not getting those outcomes.

Mr McDONALD: I understand that. One of the challenges in rural communities, though, is that you have these little hamlets or townships. I am thinking of Blenheim, Ma Ma Creek and Forest Hill. They have areas on the ridge that are zoned rural because of their location and not because of the productive capacity of the land. We talk about the sustainability of rural communities. If there were an ability to say, 'That's actually not good agriculture land; it's a bit of ridge country that does not grow anything but houses' then potentially we could be really sensible about that and produce an outcome that protects rural productivity while letting people live in those rural hamlets.

CHAIR: We are running out of time so I will extend this out by about 10 minutes.

Mr MADDEN: It is great to see three very familiar faces. It is great to have you in here today. I was very interested in your submission where you say there should a greater focus on climate research in sown pastures and legumes in southern coastal Queensland, which I take to mean the farming land east of the Great Dividing Range. Can you explain why there is not a need to focus on that particular area of agriculture?

Ms McLellan: I am absolutely going to defer that to Bruce.

Mr MADDEN: I was almost going to direct it to Bruce.

Ms McLellan: I know, but thank you for directing it at me, Jim.

Mr MADDEN: I gave you the opportunity, Julie.

Mr Lord: We identify that as a need in terms of improving land condition and resilience and some of those strategies as we move from a subtropical environment to a bit more tropical. There has probably been a lack of follow-up research into new pastures and legume varieties in the coastal area in South-East Queensland. Most of the work that has been done by the department is out in the Brigalow Belt. Obviously, you will appreciate the scale of areas out there.

These are highly productive areas close to the coast and, as Julie said, it is not just South-East Queensland; it is up through the Wide Bay and Burnett and up into the Fitzroy. There is a lot of interest in tropical forages and things like leucaena and desmanthus that would have application in the region and that have different soils and slightly different climate and rainfall patterns. It would be beneficial in terms of the area in which we work a lot—that is, in grazing, mixed grazing and cropping, which is common across SEQ—to have that follow-up research that was so well done in the past by our department of primary industries.

Mr MADDEN: Bruce, when you are talking about legumes you are talking about the full range of legumes with leucaena and not just—

Mr Lord: Yes, not just those shrubby legumes although obviously there is a fair bit of interest in those because of the spectacular results in other parts of Queensland and they do grow here. Yes, a range of other legumes and pastures that have been looked at.

Mr Robertson: In terms of the vegetable growing areas, not just of South-East Queensland but also the Burnett and other areas, a changing climate also has an impact on current growing seasons and the strategic place that various regions in Queensland have in terms of producing, particularly for southern markets during their winters. If we are seeing, as we are, a climate that is becoming hotter—the frequency of days out my way in the Scenic Rim or the Lockyer of over 40 degrees when it is literally impossible to grow horticulture in those climates—and if we start seeing that period of increasingly hot days extend beyond current parameters then that will ultimately impact on the production coming out of those areas as your growing season is shortened as a result of increasingly challenging conditions. Of course, that feeds into water use which, of course, feeds into sustainability of water supplies, particularly groundwater supplies et cetera. When we talk about more research being needed—and our friends from Queensland Fruit & Vegetable Growers will no doubt speak about this as well—there really needs to be a concentration on what does the future look like and how you adapt whilst, at the same time, doing whatever you can to ameliorate the impact of climate change.

Mr HART: I do not know how much you heard of Russell's presentation. I am interested in your input into convincing landholders to move towards best practice by using alternative things. There is a suggestion that we use insurance to reduce nitrogen and whether that is something that we should look to expand somewhere else. I am not necessarily talking about insurance but alternative methods of doing things. Is that something that you look at regularly?

Ms McLellan: Certainly. Bruce can talk to you a little more around the best management practice program that we have been running for quite some time. I think there are opportunities around that to introduce landholders to—as the gentleman before mentioned—the opportunity for insurance to offset nitrogen impacts, which are significant, or nitrogen use. Also, it is around the biodiversity outcomes and the carbon. It is actually an alternative revenue stream that meets lots of other production. You may give up some land. The accounting for nature framework is one of them. There are other accounting frameworks. Over time, industry is going to have to move towards actually disclosing their impact on multiple facets around the environment for any productivity that they do.

Having that relationship helps us to expose and, obviously, earlier adopters will pick it up but the more generalists will at least start to build that awareness. Anyone who has gone into carbon farming, as you know, can take years just to figure out what you are supposed to do and that is with all the goodwill and the help of lots of handy forms, but when you are working 100 hours a week you probably do not really want to look for handy forms to fill in. The extension officers bring that information and it is a really good conduit for the government as well when there is a new initiative. Soil carbon, as we talked about, is a big thing now and how we work with farmers. From a practical perspective, Bruce actually runs a BMP program within Healthy Land & Water and is working with those landholders to build that capability. There are lots of quite different initiatives as well.

Mr Lord: We recently ran some cattle, carbon and sustainability workshops. We wanted to have a face-to-face with landholders for the first time. There are plenty of webinars and plenty of snapshot information, but to actually have a carbon farmer who is representative scale, even though he is not from out in the mulga lands or up in Central Queensland managing 20,000 hectares; it is something that is relevant to the size of properties in South-East Queensland. We come to talk to

people about their experiences and how they see it working, and also the risks and opportunities through some of those frameworks. It is just to get people prepared, I guess, for what is coming, like a train with ESG, and helping them understand what they have: take advantage of your baseline, soil testing, whatever you can do to understand your natural assets so you might be in a position to make more informed decisions as these things come through market or government regulation—probably through market first.

Mr HART: Have you guys been keeping an eye on what has been happening with this committee and this inquiry, particularly around the information we have been receiving about carbon sequestration in soil? The feedback we have is that it is not a clearly defined outcome and it may not be what it seems. I am wondering about ground truthing this sort of thing?

Mr Lord: We are tending to believe the science and not the people who are probably the brokers who are in a position to be selling at the moment—

Mr HART: Is this coming from scientists?

Mr Lord:—because there is not an unlimited potential to store carbon in soils. All of the science is saying that in northern Australia you can build in the good years and you will be losing when we come into those times that we know are ahead of us. It is not a panacea and it is not for everyone and you need to do your numbers. It is good for production. We will continue to shout until the cows come home to use best practice to build soil health for production and resilience, but whether carbon farming is for everyone is another story.

Mr SMITH: Bruce, you might be the best person to pitch this question to. I am trying to get a sense of your training and development workshops. I am going online here and it looks like it is in a big local hall with lots of community members who have come along. In trying to engage are you going into communities and saying, 'We're going to put on a workshop so if you're a community member or an organisation come along' or are you taking requests from different organisations and so forth, or a bit of a mix?

Mr Lord: It is a bit of both, Tom. The program has been running for many years through the organisation. For 15 to 20 years we have been delivering, in collaboration with the agencies—the state government and the department particularly—and the relevant industry bodies depending on who we are engaging. The collaboration is critical. We have established contacts that we go to, but we are increasingly working, particularly in South-East Queensland, with the changing demographics. There is a constant need for that extension and capacity building activity because we are seeing properties constantly changing hands and a shifting demographic so the extension work never stops.

Mr SMITH: I am trying to get a sense of the demographic of farmer who may come along to these workshops. Farming is so intergenerational and it is largely based on trust within the region. Your canegrowers stick together and your fruit and vegie groups stick together. Are the farmers you are trying to reach and who come along smaller property farmers and individual farmers or are you getting the larger corporate or long-time family establishments coming in?

Mr Lord: We are getting a slice of all of those, Tom. There is no one typology. We are getting longstanding generational grazing and cropping people and then we are getting medium-sized people who have off-farm income, which is pretty typical of South-East Queensland. Then we have the whole new—I do not call them 'hobby farmers' because some of them are buying quite a bit more than a hobby. They are buying significant areas for a person who is new to agriculture and they want to learn how to manage that land and that asset and look after it. It is all of those.

Mr KATTER: I appreciate your comments regarding those contracts. I know that there is probably a bit of a problem up there with the retention and skills. The main question I had probably comes from a bit of a wide angle but I think is highly relevant. It is difficult to insert this issue somewhere into this inquiry—that is, rural finance. In my view—and from my interrogation of people still in the system—it is a well-established within the big four that their credit departments do not take a long-term view with agriculture. That can drive practices. You may try to hold on to the wieners, this year's culled cows or whatever for the market conditions and flog your paddock because the bank will not carry you through that five-year period or whatever. Whereas the old-style bankers knew they would be right in the long term, the new metrics in the banks do not allow for that. Has there been discussion or consideration of that in any of your dealings?

Mr Lord: When we do our surveys at the end of programs, as you have identified, access to finance comes up as one of the main barriers—time, labour, finance, the usual things. I suppose one thing that seems a bit positive is the new drought initiatives and the new way of looking at the package. I think there are some opportunities in there for people who have a plan to be able to negotiate a bit

better in developing their farm business resilience plans. There are new grants and loans that are available through QRIDA. Some of the people who have been to the workshops are certainly availing themselves of those opportunities that they may not get with the big banks. Further than that, I could not really comment.

CHAIR: Thank you very much. We are running out of time. We have one question on notice. If we could get a copy of the Ernst & Young report on the value of funding those extension officers, that would be great.

Ms McLellan: It is the value of funding for NRMs from the state government in general, but it was focused on NRM funding, which is largely extensions. There are a few other things we do as well. Absolutely, I can send that through.

Mr McDONALD: Chair, one of the things we could perhaps get more expansion on—just to follow on from Robbie's finance question—2.2b where it talks about finance and the impacts of some of the funding available for disasters and what have you.

CHAIR: Yes. Once again, that is talking in general on the financial framework or mental framework—if we could be so broad on that. Obviously you spoke about grants, but we have not touched on that. As we talked about before, instead of the state government whacking a great lump of money after disasters, what can be invested in terms of those new financial models beforehand to lessen the financial impact? Could you provide any more information on that? Have I got that right?

Mr McDONALD: Yes, you have, but also included in that is the issue of when off-farm income is coming into the household those households regularly do not—

Mr Lord: They miss out.

Mr McDONALD: They miss out on some of these funding opportunities and they have invested thousands and thousands of dollars in getting the business to be productive.

CHAIR: We will write to you and specify what we would love you to expand on.

Ms McLellan: We will give it a go.

CHAIR: Could that information be returned by 5 pm on 18 September? Thank you very much.

Mr Lord: Pleasure, thank you for the opportunity.

Ms McLellan: Thank you very much; thanks for the opportunity.

Mr McDONALD: It would be good to have a longer session with you.

BELL, Ms Jacqui, Program Director, Land Sector, Resilience and Adaption, The Next Economy (via teleconference)

CHAIR: I now welcome Jacqui Bell from The Next Economy via teleconference. We have your submission and have read through it. Could you make an opening statement of about three minutes before we move to questions?

Ms Bell: Good morning and thank you for the opportunity to present to the committee on this issue. Apologies that I could not be there in person today. Before I start, I acknowledge that we are meeting on unceded Aboriginal land and, in my case, I am on the land of the Gooreng Gooreng people. I recognise their ongoing sovereignty over their land and waters. I am not sure if many of you have come across us before, but The Next Economy is a not-for-profit economic development agency that works with different communities and regions around Australia that are navigating change brought on through the decarbonisation of Australia's economy. We help them explore how they can act to generate different economic opportunities in a way that is good for people, is climate safe and is regenerative of our natural systems. A lot of our work over the past eight years has been in areas of close ties to fossil fuels—things like mining and electricity generation—but also in areas where a major industry or sector that has previously underpinned a particular region's economy over time is shifting. I refer there to sectors like agriculture and forestry.

Through our work we have come to understand that, whilst adaptation to reduce emissions can lessen the impact of climate change and is really important, some of that change is already locked in and does pose many challenges for Queensland's agricultural sector both now and into the future. Without things to mitigate the impacts of climate change on the agricultural sector, we will work to reduce current and future risks. It has the potential to build social and economic resilience across regional communities and ensure that Queensland is well placed to take advantage of new opportunities as they emerge.

Broadly—and I think that you will have received a lot of points around the consequences of climate change and some of the things that we experience in terms of seasonal changes, weather patterns, increasing risks of sudden events like cyclones, fire and drought—some of the consequences that we see in Queensland's agricultural sector are: declining quality, quantity and value of crops and resources; increasing competition for land and water resources; deteriorating soil in the agricultural landscapes and natural ecosystems; and rising input costs and economic pressures that some farmers are often facing now.

We understand that the climate change risk is dynamic and that it is not just a result of the change in climate but also our human response to it. It means that the impacts of the consequences listed will be felt differently between different industries, geographical regions and stakeholders, and it will have complex and overlapping effects on farming livelihoods, regional communities, First Nations communities, different ecological systems and regional economies. We have seen through our work that, whilst climate change poses many challenges for the agriculture sector, it will also bring opportunities for businesses which are motivated and able to adapt. Addressing these challenges, they will require changes to the way in which agricultural products are consumed and produced. There is a growing acknowledgement across many of the stakeholders that we have engaged with over time that any of those adaptation efforts should be centred around equity, justice, decarbonisation and the regeneration of our natural ecosystems and communities. Effective measures we believe will prioritise these elements and achieve good climate adaptation outcomes across the agriculture sector. Effective measures will of course also address different types of risk.

In our submission we outline several ideas and areas for practical measures at different levels and scales. These are summarised under the broad themes of systemic levers such as policy and regulation changes, knowledge and capacity building for farmers, producers and agribusinesses—I heard today Healthy Land & Water talk about some of the agribusiness that they do in that area—and adaptation and practical adaptation of on-farm practices. We have also identified the opportunity and need for measures to be informed by First Nations knowledge and world views and for measures to address Indigenous biocultural rights. We would like to acknowledge the work done by the Queensland government to date in supporting effective climate adaptation across the agricultural sector. The Next Economy encourages the government to continue engaging with stakeholders across the agricultural value chain to ensure any ongoing policies or programs contribute to a climate safe, socially just and regenerative future for Queensland's agriculture sector into the future.

CHAIR: Thank you very much for that. I have a broad question. We have had evidence from Healthy Land & Water. One of the things they talked about was system change. You have talked about essentially the same thing. You have talked about a holistic approach. Across all points of view in the sector, is there an increasing acceptance that we do need either system change or a holistic approach as we cope with the effects of climate change and climate variability?

Ms Bell: Yes, I believe what we are seeing in the economic development space and in the climate adaptation and disaster resilience spaces is an understanding around complex risk and the need for that systems lens and understanding that risk is not isolated to one sector or industry and in fact it is quite cross-sectorial. We are seeing more and more a big acknowledgement that it is complicated and complex and hard to do, considering the structures that we have set up to manage programs, the flow of resources and that sort of thing. Yes, there is an overwhelming understanding that a different mindset is required to look at these sorts of challenges.

Mr McDONALD: Thank you very much for appearing today. Can you give us some examples of the use of regenerative agricultural practices in Queensland?

Ms Bell: That is a really good question. We have been working across Central Queensland and Far North Queensland with different communities and engaging with stakeholders who have a lot of experience in this area. Different examples of things that we are seeing are practices where livestock farming is combined with different cycles of cropping and tree planting. I apologise that I cannot give you exact details of the locations, but I can follow that up. They are doing companion planting with different livestock practices. We are also seeing in regions the use of alternative crops during different seasons—not necessary cash crops but crops that are there to fix more of the carbon. I am just trying to think of another explicit example in the Queensland sector. I can definitely provide a few great case studies by diving back into our library and resource bank if you would like me to take that on notice.

CHAIR: We will write to you and ask for specific examples. Member for Ipswich West, do you have a question?

Mr MADDEN: I am just reading some information about the genesis of your organisation out of a talk that was done in Mackay. What areas in Queensland are you mainly focused on with your work with supporting communities adapting to climate change?

Ms Bell: That is a great question, thank you. As I said, The Next Economy has been working with communities probably for over eight years, particularly in the Queensland regions. We have done work in the Mackay region and in Gladstone. A lot of our work has started—the conversation has started—in the space of how we are navigating transition, particularly energy transition, as we are moving towards a decarbonised economy. How we are navigating and dealing with the impacts of climate change that is occurring at a point in time is part of that conversation inevitably. We are setting up these conversations to really look at the whole systems approach, so not only looking at how the energy system in a local region like Gladstone is changing, but actually what are the intersections and connections it has with other sectors that potentially rely on the supply chains and then looking at the shared risks that all of these different industries and sectors have that the change in climate is posing.

We have recently released and supported Gladstone Regional Council with a 10-year road map on the future of industries in the region. I understand that the changing climate and having a high-level understanding of what impacts, sudden impacts and long-term impacts the region might be experiencing, was taken into consideration in the conversations. One of the things that we are finding though is that it is either an early conversation or a side conversation. One of the things that we are looking to do for our work, and I know a lot of others are as well, is trying to mainstream that adaptation blends across any work that we are doing so that every decision is informed by the risks that the science is telling us that we may need to navigate in the near and distant future.

CHAIR: You have talked about farm training field days and demonstration sites for regenerative processes. This ties in with what we have been talking about, which is the vital need for more extension services or different extension services or more or different officers who are trusted on the ground and can show people this is what we need to do. That would reflect what your organisation believes as well. I assume you would have been doing some of those things yourself.

Ms Bell: Absolutely. A lot of our work is just making visible what options are available to different sectors and different people. We do look at regenerative agriculture as one of those pathways that can support effective adaptation. We understand at the moment that it can be contentious because it is quite a broad umbrella term, the different methods and approaches. People

are sometimes talking about different things when using that language. One of the things that we understand is that there is a need for more evidence-based research and practical on-the-ground research with communities and with local farming businesses to understand the role of what is an emergent area. What we do know is that it does provide a framework of good things to do and that there are good outcomes that can be achieved. We see more and more when we are travelling in the regions that there are a lot of farmers who are interested in regenerative farming but that there is a real limit to the technical support and offering around what this looks like and how we practically explore this. As well there are some financial barriers to even having time to explore this and to move into this space in terms of finance and the monitoring that is required. I think Healthy Land & Water referred to that briefly in their discussion earlier. That is very much part of a conversation that we would be having with regional communities that are heavily involved with agriculture.

CHAIR: I think we have covered most of it, but I notice you have talked about natural capital accounting and we have been talking about new financial models. It may well be something that we can ask you to expand on as a new financial model in questions on notice for you. We do have a question on notice about case studies that can provide specific examples of regenerative agriculture and more information on natural capital accounting.

Ms Bell: Yes, fantastic, I can do that.

CHAIR: If we could get that by 5 pm on 18 September.

Ms Bell: Yes, no worries.

CHAIR: Thank you for your time.

EMMOTT, Mr Angus, Queensland Representative, Farmers for Climate Action (via teleconference)

WEBSTER, Ms Georgia, Interim Chief Executive Officer and General Manager, Farmers for Climate Action (via teleconference)

CHAIR: Would you like to make a brief opening statement and then we can ask you some questions.

Ms Webster: Many thanks to the committee for having us today to expand a bit on the submission that we made in writing. I am joined by Angus Emmott who is a recently retired grazier. I understand Angus's family have run cattle for more than 100 years—correct me if I am wrong, Angus—

Mr Emmott: That is correct.

Ms Webster:—on a station near Longreach. Angus also sits on the board of Farmers for Climate Action. I am Victorian based. We are a national organisation. Angus joins me today as a Queensland rep of our farmer network. As noted in our submission, Farmers for Climate Action is a national organisation. We are a movement of farmers, agriculture leaders and rural Australians, all working in various ways to work towards Australia adopting strong climate policies with the goal of protecting our farming future across the country. We have around 8,000 farmers in our network across the country. In Queensland we have just over 850 farmers in the network across the state. We also have a lot of folks who work in the agriculture industry. They may not be farmers specifically, but work in agriculture across the supply chain somewhere or in research roles or all of those different roles that are part of our network and participate in various activities that we are up to.

We welcome the chance to make a submission to this inquiry and appreciate the committee's focus on the impact of climate change on agriculture in Queensland. As we noted, Queensland has had its absolute fair share of exposure to the impacts of climate change historically and we know that there is modelling that shows that the increase of extreme weather is a real threat to Australia as a whole and, indeed, to Queensland's landscapes and industries. I am certainly happy to talk a bit more about those threats. I am not a climate scientist, but it is something that we certainly keep our eye on. I also wanted to draw the committee's attention to the opportunities that exist in different policy settings and different approaches for farmers. There are a lot of opportunities on the horizon in the response that we might all take to climate change across productivity, energy costs, the viability of their businesses and ensuring that sustainability into the future. I am happy to expand on any points in the submission as best we can or take things on notice to take back to our policy adviser if it gets into that level of detail.

CHAIR: Thank you very much. I will take up one of the things that you said. Certainly, Angus, I would appreciate your comment on this. We have heard about and have a lot of information on the potential costs of climate change and climate variability, but what you have said about the new opportunities for the farming sector is that there are more opportunities there that we need to emphasise or focus upon as well, would that be correct? Can you give us some examples?

Mr Emmott: There definitely are quite a lot of opportunities, but they are going to be mixed up with deteriorating climate. Where I come from in Western Queensland, a big beef operation in the Channel Country, we have been finding our drought is getting longer and drier. We just had a 10-year drought, so that is why we have retired and moved up to the Atherton Tableland to go somewhere where the climate is a bit more gentle. One of the big things that is happening in Queensland at the moment is the whole issue around the REZs—the renewable energy zones. I think there is a lot of opportunity for agriculture both to use renewable energy to make their operations cheaper, but there is also the opportunity there for renewable energy to be used across the whole of Queensland. Where we are at the moment in Queensland, as you know, is that the REZs are mainly to do with the east coast, but I am sure they will expand to cover the whole area. Would you like, Georgia, to cover the other opportunities there under Farmers for Climate Action that we are looking at?

Ms Webster: I think that energy space is a great spot to start. There is a lot of complexity both in the on-farm renewables and storage space right through to that larger scale side of things, and we certainly do not presume that that is an easy energy transition right now. There is a lot of conversation, as we are all aware, about how that is rolled out and we want to make sure that farmers are involved in that conversation fairly and early and that—just putting it up front—around those large scale things that community benefits are fairly shared across that whole farming community if and when that rolls

out. I think that probably takes several days worth of hearings to go through that, but we have had a couple of our farmers, Angus included, participate in that conversation that the Queensland government is holding right now around the REZs and the partnership framework too.

There is real opportunity across a number of practices and this varies a lot, I think, both in industry and production type. Our farmers do tell us—we did a large survey last year—that they are interested in a range of different climate smart farming tools and markets in particular, but one thing we have highlighted in our submission is that there are a few gaps in that extension and information dissemination space. We recommend the committee might consider at the state level what else might be offered to farmers to support them, for example, to access new markets, whether it is carbon or nature-based markets, and see those co-benefits framed up. That is another opportunity that we thought we might highlight. At the practice level, again we talked in our submission about different land management practices around soils, around water management and just boosting their resilience to the changing conditions that they might be producing under.

CHAIR: We have talked a lot about extension services today and it is interesting that you have talked about 93 per cent of farmers, the vast majority, are willing to look at and change their farm practices related to climate change, but very few, 30 per cent, are actually involved in it. You have talked about increasing funding for extension, but is there a new model for extension services that perhaps has started or we need to go down? Is there something so that we can say to the state government this is the best model for extension services? What is your view on how those services can be delivered?

Ms Webster: My short answer, and I will throw to Angus as well, is again I guess I am at pains to say we are not an extension and delivery organisation so certainly not experts on the particular model of extension delivery that might occur. I think my understanding from the farmers we talk to is that enabling any extension to be localised is quite important so that they can see the application to their farming type and to their local environment. That is one take home, again anecdotally, that I would share with the committee. Angus, did you have anything further to add on the extension front?

Mr Emmott: One thing I will say as a grazier farmer is that in our industry we are all very conservative. We like to watch and make sure things are working before we take the leap. I think a big part of extension is picking the early innovators and making champions out of them, showing the greater grazing community and agriculture community that it does work. Once it is seen that it is working, people will then jump in.

CHAIR: That is a very good point, building trust.

Mr McDONALD: Thanks very much for appearing today. Angus, the comment you made before is absolutely correct. We have seen that a number of times around adaptation. There are a lot of farmers out there who are very reluctant to adapt, but when the neighbour next door has a successful crop of potatoes, onions, or whatever it might be, then it regularly gets taken up. It is market driven. Your 93 per cent of farmers who are willing to change farming practice relating to farming variability, was that your farmers or was that a public survey?

Ms Webster: That was our farmers, yes. There is an element of selection to that. This was not a formal research project. This was us surveying our farmer network Australia-wide, which was still a high number of respondents and a whole lot of variability and solid data that we gathered. Yes, that was our farmer network.

Mr McDONALD: I suspected that might be the case. One of our submitters said there needs to be a harmonisation of local, state and federal government regulations to allow farmers to do and put in place some things, because sometimes it just gets so hard and you end up having to do local government development applications or jumping through hoops.

Mr Emmott: Exactly.

Mr McDONALD: Could you talk to us about some of the experiences in that space?

Ms Webster: I can talk briefly to one element of that. If you use the example of these emerging or established markets and market access that might rely on counting carbon and those kinds of measurements, we hear from our farmers that they are worried they are going to have to tick a whole lot of different boxes in order to participate in these markets, depending on whether they are domestic or overseas, and measuring and managing their emissions or their carbon accounting into all different sorts of systems. We have talked to the federal government about this and noted that we think a role they can play is streamlining to reduce red tape, make sure there is consistency, and that a farmer or producer does not have to have all of these different types of measurements and monitoring across their farm carbon. That is one example and I think that might address what you were referring to. Angus, I do not know if you have other examples.

Mr Emmott: I think there is very much a scale dimension in this. The bigger operators with more staff have the wherewithal to get involved in putting in submissions and grants et cetera. When you get smaller operators who are already captured in the cost price squeeze, they are having trouble paying for all of their overheads, they are having trouble getting staff and they are just working 24/7 to try and make ends meet, they struggle to have time to explore these opportunities. There are two very different ends to the equation there.

Mr McDONALD: We have talked a number of times about having a circular economy with energy production. One great example was about pigs being produced and then capturing the methane and using it to produce power for the plant. It is up and running and it is working but they cannot get approval for it. Do you have any other examples like that?

Mr Emmott: I do not off the top of my head. Yes, there are a whole heap of issues around opportunities to move forward, but actually getting approvals to move forward can be very challenging.

Ms Webster: I do not have a specific local example that comes to mind on that front but it does not surprise me to hear about that. I can imagine it is frustrating for that producer, who is trying to do that innovation and invest in that kind of energy usage for their operation and jumping through various hoops. Whether they are local planning ones, state ones or federal ones, it is a real minefield.

Mr MADDEN: Georgia, I do not think I have met you before but I think I might have met Angus when I had a chance to see some of your photographic displays at QUT. Would that be correct?

Mr Emmott: Yes, that is correct.

Mr MADDEN: It was great meeting you, Angus. My question relates to the Land Restoration Fund. I notice in your Farmers for Climate Action submission you talk about the need to simplify the fund. I wonder if you would like to make some comments as to how the fund could be simplified and how effective the Land Restoration Fund has been.

Ms Webster: That is one I have worked extremely closely on. I do apologise, our policy advisers popped that together and that was a particular one I could not pin her down on this morning. I do apologise to the committee for not having much more on that today. I am happy to take that on notice, because I think I can certainly pop a little bit more in writing about the specifics of that framework. I know that, as we said in our submission, we do support it. We do think there is a continual improvement that could be in place to really keep enabling farmers to access that kind of support for protecting the biodiversity and the health of your landscapes. Is it useful to the committee if I pop through something following this hearing?

CHAIR: That would be great.

Mr MADDEN: I am happy for you to take that question on notice. Just to clarify the question, I would appreciate your comments as to how the requirements for the fund could be simplified and how effective the Land Restoration Fund has proven to be.

Mr HART: Georgia, your submission talks about taking a more holistic approach to the consideration of land use. Can you tell us what sort of issues you have identified that need to be fixed?

Ms Webster: As we have said in our submission, an ability or potential to look at the way that different regions might adapt to different changing climatic conditions and having a longer range look at what is going to be happening region by region and then coming up with producers with a response to that, recognising where there may be regions that are harder to sustain, the production that might have been done in decades past versus what opportunities there may be to adapt, and making sure that farmers are not just left on their own in that space in high level terms. As we have said there, the incursion of fossil fuel projects and other developments into agricultural land needs to be carefully considered because it has that local impact. When it comes to fossil fuels, it has a wider impact on climate that then comes back to bite the farmer when the climate effects come back through to them. That is something that we need to keep an eye on as well, we think.

Mr HART: Who should be involved in that whole discussion? Who should have oversight or make suggestions on what should happen in the future?

Ms Webster: All of these decisions are big and multifaceted, so I think there is a role for the government to play to lead those conversations about the types of land use across the state. I know it is an extremely big and diverse state so it is hard to generalise, but making sure that government is taking that lead and looking ahead, recognising that there are certain impacts from climate change coming down the line. There are going to be multiple stakeholders in these conversations. I know that

I am telling you things you already know. I think that farmers having a very active part in that conversation is important. If land use is to be converted across different industries or adapted or partially converted, I think it is useful for farmers to have a clear role to play. Early consultation in anything is crucial, also that they feel like they have different options when it comes to diversification of farm incomes. I know that sometimes they see different energy developments in certain lights. If there is a gas potential or renewables potential adjacent to or on their land, I think they need good support to negotiate and navigate that stuff and make sure they are properly consulted in those processes.

Mr SMITH: I am just seeking a little bit of clarification. In your submission you say that you represent 8,000 farmers, 860 of whom are in Queensland, and have a supporter base of 45,000. I am just wondering how you measure whom you are representing. Are they actual members? Have they signed on, they are members, have they subscribed to an email, or have they just engaged in communication or activity in some way?

Ms Webster: That is a great question. No, we do not have a formal membership. We want to keep the bar low for farmers to engage with us and avoid too much bureaucracy. These are farmers who have signed on in various ways. We do have a general invitation to join us, and the vast majority have done that through that process. It is not a formal membership, no. It does fluctuate a little, but we do our best to track that. The general trend is that it is growing. We have more and more farmers every month who are interested in what we are up to and interested to stay in touch.

Mr SMITH: Where would that figure of 8,000 that you help come from? Is it a bit of a broad-brush statement, 'We represent the vast majority of growers'?

Ms Webster: No, we certainly track it. That is the number of farmers who have actively engaged with us and provided their contact details to us in order to stay in touch with what we are up to.

Mr KATTER: I apologise if you touched on this earlier and I did not pick it up. I know it is always a challenge with developing irrigation in the gulf north-west. A lot of money goes into these areas but there are a lot of people doing it on the ground. It is often said we should be assisting them because they are the pioneers who are doing it. It seems that with this regenerative agriculture, as you were saying before, Angus, people are doing it on the ground off their own back, I should say. Do you think the assistance or the incentives are enough to get any traction for what you are talking about?

CHAIR: Who is that question for, Robbie?

Mr KATTER: Either Georgina or Angus.

CHAIR: Does anyone want to respond to Robbie?

Mr Emmott: You can start off, Georgia.

Ms Webster: I am happy to let you, Angus. It was a local question, was it, Robbie, about incentives for which particular—

Mr KATTER: I was just trying to provide some context initially. I am sure you could rattle off grants and things that are there, but the question is: is there enough to incentivise? As Angus commented earlier, people can demonstrate they are doing it. That is great if you have some people who may be altruistic and then find there is some benefit. We are here in government. If you are saying it is a good thing, are there enough incentives for people to take it up and say, 'We're pioneering this. We don't all want to be guinea pigs. We want to pioneer this and have a crack'? Often there is a lot of funding that goes to bodies that sit on the side but the person doing it does not get a lot of the benefit.

Mr Emmott: My personal feeling is that there will be opportunities in the north-west and north but there are also a lot of challenges. One is the seasonality of the water flow and the ability to have reliable water. That includes the ability to have reliable water without damaging ecosystems. There are two other big challenges up there. One is that a lot of the soils are very poor and—

Mr KATTER: I might have muddied the water talking about irrigation. I was just talking about grazing practices generally. I was just using that as an example.

Mr Emmott: There are definitely opportunities in the north and north-west and I think, as I was saying earlier, we need to have some examples of people making a success of it for other people to join in because, as I said, we are a very conservative mob. Yes, there are opportunities, but the big problem is trying to grasp which are the opportunities that are going to work and which are the ones that will not make it. That is something we need to have a greater discussion about with AgForce and people who live in those areas et cetera.

Mr KATTER: That is probably more of a statement than a question. I find that government always has a great reluctance to say, 'We don't back winners,' or, 'We don't want to help private entities.' However, if they are the guinea pigs who are doing all these things, I feel there could be some effort to make sure the money hits the ground for those people who trial new things.

Mr Emmott: I think there should be because governments certainly back losers quite often in terms of all the drought funds, because the people who end up claiming most of the drought funding are the people who are not good managers and have not looked forward and have not done what they need to do to make sure they are in a good position to ride out the drought. We are certainly rewarding bad management in a lot of cases and I think there are certainly opportunities to reward good management.

Ms Webster: I think the types of incentives are interesting for governments to consider too, whether it is a tax-based incentive versus direct subsidies versus other supports they can put around farmers. It is really difficult for policymakers because different farm businesses, as Angus said earlier, are more or less in a position to even embark on new tools or new practices. Governments could provide, within reason, a greater range of ways that farmers can engage in new things.

I certainly do not hold up any particular state as having best practice, but I do know that different states are trying different things. I saw this come across my desk last week: the Victorian government has a particular grant program for farmers in Victoria aiming to increase carbon on their properties and engage in carbon markets. Again, at Farmers for Climate Action we are at pains to say—the carbon market space is really tricky and difficult, and we really call for strong integrity in that space. We know that lots of farmers quite rightly are being quite cautious with how they engage. I think there are some different state-by-state programs that are rolling out here and there that might have some lessons that could be shared across states and different sectors.

Mr McDONALD: Angus, I seek clarification of the statement you made about those farmers who are getting drought funding. Is that recovery funding from after a disaster, or are you talking about the drought assistance packages?

Mr Emmott: It is actually both. I have noticed during my many years of living in a part of the world that gets a lot of droughts that there are operators there who are very switched on: they keep fairly light numbers and they keep their finances in really good shape. When it looks like a dry period is coming on, they unload or agist most of their stock elsewhere. There are others who hang on to their stock and then get stuck; they are too poor to send them away. They put a lot of feed into their beef or try to find agistment, but often by that stage they are too weak to move. They seem to have an opportunity to gain quite a bit of funding to do that and to recover afterwards, whereas those who are doing the best job are not even asking for any funding. They are just reading the weather systems, looking after their finances and making sure they put in place a risk system that works quite well for them. I think that clarifies it.

Mr McDONALD: Yes, thank you.

CHAIR: Thank you very much. In relation to the question on notice, Georgia, we are looking to get a response by 5 pm on 18 September. That was expanding on the Land Restoration Fund, specifically about simplifying some of the requirements. We will be in contact with you by email with what we are after. Thank you very much to you both.

Ms Webster: Thanks to the committee for having us.

Mr Emmott: Thanks for the opportunity.

Proceedings suspended from 12.19 pm to 12.31 pm.

FORZISI, Mr Sam, Policy Director, AgForce Queensland

GUERIN, Mr Michael, Chief Executive Officer, AgForce Queensland (via teleconference)

SOMERSET, Ms Georgie, General President—AgForce Board, AgForce Queensland

CHAIR: Thank you for coming along. Would you like to open by making a brief, three-minute statement?

Ms Somerset: Thank you, Chair, and thank you for the opportunity to present today. In our submission we referenced five key policy initiatives that AgForce considers impact farmers and the risks of climate variability on Queensland's broadacre agricultural production. What we recognise at AgForce is that building effective and resilient climate policy is a complex and long-term endeavour. We believe the AgForce agricultural business cycle encapsulates the necessary thinking and approach to progress climate variability management and impact minimisation. The business cycle specifically targets strategic measures and programs at each phase of the drought cycle—pre event, in event and post event—and the triggers essential to success, rather than focus solely on the preparedness phase, which we believe drives better holistic strategies over the long term.

Natural disaster, drought, biosecurity and climate variability range in frequency of extreme, and the ability to fully recover financially, socially and environmentally before the next event arrives is a key concern for our farmers. Natural capital, carbon markets, low-emission pathways, land access, data privacy and the emerging renewable energy market are just some of the non-core business variabilities our farmers are faced with on a daily basis. Our farmers want to be part of the renewable energy solution and assist in the energy source transitions, and we do advocate for government policies that limit or remove opportunity cost of the renewable energy development over agricultural development. We want to grow and protect our prime agricultural land and improve production systems to ensure food security into the future.

AgForce's view to alternative land use, however, takes a precautionary approach that seeks to avoid negative impacts on existing or future sustainable agricultural opportunities and is precautionary around the legacy effects on natural resources including the air, soil, water and biodiversity. As many of you would know, our farmers have a history of continuous adaptation to climate variability and minimising the triple bottom line impacts of the climate. It is constant. For this reason we believe that they are in the best position to manage the land sustainably and protect the environment and we seek to enable and reward them through sustainability programs such as AgCarE, a natural resource measuring tool. AgForce is advocating for investment into AgCarE as a natural capital measuring pricing mechanism from a property-level perspective—so mitigating the cyclic pressures of climate variability with data that tells a story and supports decision-making at both a macro and a micro level. AgForce sees a role for government in assisting farmers to become more self-reliant through programs such as AgCarE and to support innovative approaches that improve agricultural production systems and productivity. We are seeking investment in biosecurity, in extension and in managing the natural capital into the future. I thank the committee for the opportunity to present at today's public hearing and am happy to take any questions on our submission.

CHAIR: Thank you very much. AgCarE is obviously a very important initiative. Can you tell us a bit about its importance and what is going on with it?

Ms Somerset: Essentially, AgCarE is a farm-level valuation of the natural capital—the land, the air and the water that you manage on the property—but also looking at the business and the social perspective. If we think about ESG, it is all three things. While we often focus on the E of ESG, I think the S and the G are just as critical—that we manage the social, we are part of a regional ecosystem in agriculture and we are reliant on each other, and also the governance side of things. AgCarE enables a producer to look at the natural capital they are managing—biodiversity, carbon, all those elements—and actually have a value. Then they can choose whether they keep that on their books or whether they decide to go to a market. There may be a biodiversity market. There may be a carbon market. They may decide to inset with a producer. They might decide to go into some sort of trading mechanism. It is actually giving them that valuation at a farm level in a language that is understood internationally. It is understood by finance and the other sectors, which I think is going to be critical when we look at the discussion paper out at the moment from Treasury around scope reporting. This enables producers to talk in a language that the risk industry will understand.

CHAIR: It is clearly an important service that is operated and it can be one that opens up further opportunities and further discussions on broader change or new services or new products that can be accessed. It plays an important role.

Ms Somerset: We believe, too, that it can be for benchmarking. It is a couple of years since I did our first AgCarE audit and I am the one overdue in our business to put the data in to do the next one. We hope that will incentivise people to track their own change so that they can benchmark their property. They can then choose to engage in programs that enable them to do things differently—to adapt in different ways and then come back and measure it again and see what difference that has made within their business. It is at that farm level and giving them the ability to do that and have control of the data as well.

CHAIR: It is a trusted service and you have local demonstration sites you can point to where it has worked well.

Ms Somerset: We actually have a demonstration on our website, agcare.org.au. That is our research station which we own near Rockhampton, Belmont Research Station, which is currently leased to Central Queensland University. The report for Belmont is available for people to have a look at so they understand what information they will get in a report. It enables you to understand how much you are sequestering and how much you are emitting. I think the focus just on carbon means that often we are just talking about emissions, and what agriculture is doing for a significant amount of the time is actually sequestering. The role that we play in sequestering and managing the landscape is a critical piece. The recent conversations about the role of farm dams and the work they play in the landscape are the sorts of things that can be captured in an AgCarE report.

CHAIR: Thank you. It is a good example of partnerships that we have seen everywhere as part of this inquiry.

Ms Somerset: We appreciate that both DAF and the Land Restoration Fund have provided some pilot funding for AgCarE. We are really appreciative. We believe that we need greater investment to help us digitise and get that out to more producers as well.

Mr McDONALD: Thank you for being here today. One of the challenges that we have been informed about is the lack of harmonisation between local, state and federal government regulations. I see over and over again in your submission that you talk about government assisting. Can you outline any experience or comments around harmonisation of those regulations?

Ms Somerset: I think one of the challenges is that in small business we are impacted by so many different regulations. As I often say, while people who work in a large organisation can be a technical specialist and go to the help desk when they need help, in agriculture you are the CEO and you end up being the help desk on everything from IT to biosecurity and managing the plant in between.

I think one of the challenges is that we are often not thinking about the perverse outcomes for agriculture when we overlay a whole range of regulation and things, so when we look at the things I listed off about climate variability—at the moment the thing that is marching at people is renewables, so renewables are coming out and asking to meet with people and basically land-bank their properties for the next five to seven years. It is another thing that you have to learn how to negotiate. There is limited regulation around what renewables can do in that land-banking space, but if we go to something like human resources, you are the human resources department as well so you need to be across single-touch payroll and all your legislative requirements around workplace health and safety and psychosocial. I guess they are just sort of business ones.

Then if we look at the overlay of the EPBC Act and the Vegetation Management Act, I have multiple examples within AgForce of members who have had approvals at a state level that EPBC have then knocked back or vice versa—EPBC have approved and the state has not. We have often spoken to Minister Furner about the real and meaningful change we could achieve if we collaborated at a state and federal level to harmonise some of that regulation to enable the true production that we could achieve.

When we look at trying to manage climate variability, regulatory non-variability is critical because if the legislation keeps changing it is very difficult to change your investment. Investment pathways for us are often 20 or 30 years—there are multigenerational businesses—but if the regulation keeps changing then it is very difficult to continue to develop your business in the way that you originally planned.

Mr McDONALD: From my experience in the Lockyer, farmers have dealt with the climate variability of drought, flood, storms and cyclones and what have you, so they are already working in this space, but I am really interested in seeing how many of the farmers out there are actually going to work in this space and how we adapt the technologies and opportunities for those farmers who might be a bit reluctant.

Ms Somerset: I think there is probably a good at least 20 per cent who are out there innovating and well ahead of the game. I talk about that in terms of the adoption of solar pumping, alternate telemetry and those types of things. We have just run some ag innovation workshops. There is some really terrific uptake of different things. If we do not invest in DAF and its capacity to provide extension—and I believe it is completely underfunded at the moment. They do well with what they are provided, but they need greater funding for extension—that is, people out on the ground supporting the people you are talking about in places like the Lockyer, where they are trying to manage a whole lot of variability but they are wondering what their options are. It is difficult to work that out in a virtual space and to go online and try to find that out. They will find it out by getting together and talking to other people and having leading people show them what they have been doing. They will do it by going on farm walks—going on farm, hearing from people. That is extension and we need greater investment in that to enable the next 60 per cent to adopt and adapt.

Mr McDONALD: You made a comment at the start about non-core influences on farming—that is my word. It is a complicated area for them, so I really appreciate the systems approach that you are talking about. By example, we have farmers growing broccolini as well as sorghum, all with the same trickle tape, and then going to a cover crop over summer to protect from the rains or the floods and washout to keep the soil on-farm. There is some really great innovation there. You mentioned you have just run a trial with wi-fi and the extension. Could you talk to us about that?

Ms Somerset: We have just been running some workshops. What we are seeing is that particularly stations in the north are adapting. There is the example of Andrew Sevil near St George who did his own wi-fi, but there are companies like Zedify that are now offering that ability to have roving wi-fi—something that travels between Optus and Telstra and provides satellite in-between. We then have stations in the north that are putting in their own wi-fi systems to enable telemetry and then implementing solar pumping, so you get this whole reduction.

When you look at trying to adapt to climate variability, you are reducing the number of vehicles that are on the road doing the water run, you are reducing the labour requirement and you are taking out diesel and pumping by putting solar in, so there is a whole range of things. Personally, we put in a new water system near Millmerran in 2019 during that drought and about 7½ kilometres of polypipe. You do an annual subscription and you are able to remotely control the solar pump and generator that enables the pumping and the direction for all of that. To me, industry is uptaking a lot of these things. It is how we enable and incentivise. We currently do not have any incentivisation around the uptake of renewables on-farm. There have not been programs to incentivise us around vehicle adaptation. Those are very practical things that could happen, but I think we need to think on a more systemic level as well—that is, if we are having climate variability, we will have greater risks that we need to be managing.

Mr MADDEN: Thanks very much for coming in today, Sam and Georgie, and Michael on the line. Could you outline what you see as the greatest impediment for farmers managing and mitigating the impacts of future climate change? What is the No. 1 issue? Do we need to have more agronomists assisting farmers with the adaptation, or do we need to have something like the Land Restoration Fund? Do you have any ideas on that issue?

Ms Somerset: On-the-ground is really important and having people available that they can talk to, but I think one of the greatest risks to managing this, Jim, is long-term policy security. Working with the Queensland government on the low-emissions road map was a really critical piece of work for us—it was two years of sitting around a table—but we are really proud of that work because we did it together and we are trying to enable ways where the policy will not suddenly change. We need to ensure there is a strong, stable policy framework within which you can run your business. It is very difficult to cope with external variabilities if the framework and the laws in which you are operating keep changing. At the moment there is a degree of uncertainty between federal and state and environmental and so forth. We have 16 different bioregions in Queensland and we currently manage them as one bioregion. There is not a recognition of the inherent differences between those bioregions, so providing greater certainty around the long-term policy settings and framework in which you run your business would give people real stability.

Mr MADDEN: So we need those long-term policies where agriculture and industries can predict how the government is going to be in the long term, not the short term?

Ms Somerset: Yes, if we can work collaboratively. My commitment is that industry is happy to sit around the table and develop those long-term policies. As I said at the beginning of our statement, this is complex and it is long term and the worst thing for us is when legislation changes year to year. It creates significant mental stress for people to try and cope with, but it also creates perverse outcomes because people jump the gun on doing things that they may not have needed to do or they do not make investments that would have been wiser for the long term because they are concerned about what that might mean. So long-term, stable policy settings can make a significant difference to the uptake within a variable external environment.

Mr MADDEN: That is great, Georgie. Thanks very much.

Mr HART: Georgie, the AgCarE reports that you are talking about: are they on-ground or are they desktop studies?

Ms Somerset: It is a combination. There is farm data. As I said before, I am responsible for putting in some of the farm data—so the fuel, fertiliser and things that we do on-farm and how we train our staff and invest—but then we also use Queensland Globe and the publicly available spatial data, which we believe has been interrogated significantly and has a high degree of rigour. So it is a combination of publicly available spatial data and GIS mapping combined with on-farm investment of data.

Mr HART: I do not know if you were here earlier to hear Russell—Russell is sitting up the back there—talk about insurance. He gave us an example of insurance for the changing use of nitrogen. If you change the amount of nitrogen you use and if you do not achieve a modelled outcome then you are insured for that. Do you see the use of that sort of incentivisation of changing behaviour assisting the industry?

Ms Somerset: If we had more appropriate insurance products available, industry would take them up. In our submission we again talked about the removal of stamp duty for agriculture. The ability to insure many of our crops in Australia is limited. We have limited crop insurance. We have done work at a national level, and I am pretty sure Russell has been involved in that as well. I believe that these sorts of tools are going to be required into the future, particularly for high-value crops. For people wanting to expand into new areas, they need to be able to mitigate their risk. Where something like AgCarE can support people to mitigate risk is potentially the insetting or developing of other income sources, if they decide to go to market, or providing them with more secure financial backing with their investor, so whether that is with a bank or others AgCarE can provide them with a greater security or perhaps more secure funding.

Mr HART: In your submission you talk about the government limiting or removing opportunity costs for renewable energy development as against agriculture. Give us some examples of what you would like to see changed there.

Ms Somerset: I welcome that renewable energies are now being included in the remit for the GasFields Commission. I heard that news last week. I believe that it is around—and I do not have the figure in front me—450,000 hectares that will be under wind turbines in the foreseeable future, so that is a significant amount of disruption we are going to have to food and fibre production in the next few years. How we support agriculture to cope with the speed of that change and negotiate what is essentially a very commercial negotiation is, I think, the challenge at the moment. These businesses are marching up the drive and have significant support at Coordinator-General level, but often locally you do not know about it until someone has come up and talked to you to see if they can land-bank with what you are doing and vice versa. Some of them are land banking before they even have approvals, so there is a lot of work going on between neighbours to try and work out if this is a proponent they can work with or not and what is the deal when in fact they have not even been and talked to the local government or got approval at Coordinator-General level. We have this quite unusual situation happening where the renewables industry is literally marching across to stake their claims but in a reasonably unregulated fashion.

Mr HART: So how do we solve that?

Ms Somerset: It is a good first step to have the GasFields Commission. I think we are going to need to invest in some negotiation skills for landowners who have them approaching them so they understand. The Queensland Farmers' Federation recently completed a toolkit. I think that is a good first step, but I think that we need to invest in some negotiation.

Mr HART: With regard to restricted zoning type things, is that something we should be looking at?

Ms Somerset: Use of the existing corridors would also be a great first line in that we already have transmission lines, so we have some areas that are zoned as a REZ, a renewable energy zone, that are prime agricultural land. We have some areas that have transmission lines going through them—so legacy poles and wire—but are not zoned within the renewable energy zone. So I think thinking about how we use state infrastructure—so how we use state land—before we march on to prime land would be a really useful starting point with that as well.

Mr SMITH: This question might be better for Sam potentially, but, Georgie, I am happy if you want to answer it. It relates to—and there is no page number—the dot point heading which is ‘Land Use Competition Issues Related to the Carbon Driven Move to Renewables’. The last paragraph says—

We advocate for government policies that limit or remove opportunity cost of renewable energy development over agriculture development ...

Is that meant to say ‘remove opportunity at the cost of renewable energy development’?

Ms Somerset: Which page are you on, Tom?

Mr SMITH: It does not have a page number, but the dot point heading is land use competition issues and the final paragraph from that one states—

We advocate for government policies that limit or remove opportunity cost of renewable development over ...

I am just wondering: is that ‘opportunity at the cost of’?

Mr Forzisi: I think we are getting into very detailed communication of language or use of language. I would say that it is very similar to what Georgie has responded to previously around the competition use of land and protecting prime agricultural land as a priority. It is very important from an agricultural perspective. When you are on the ground, most farmers are focused on the production of a product or an outcome to market, not so much on other areas. As Georgie was saying, some farmers do not necessarily have the skills to negotiate high-level contracts and, more so, we want to make sure that prime agricultural land remains in use for the production of agriculture for generations to come as opposed to being utilised for a short-term endeavour which might be, let’s say, gas. It is great to have that as a service and an outcome; however, after that particular service is finished, that agricultural land may not be as effective in producing the product that we are looking to achieve from that agriculture.

Ms Somerset: If I can just add to that too, Tom, it was interesting that last week at the GasFields Commission community forum we were starting to talk about what happens post gas, because some of the wells are close to 25 years old. One of the things with renewable energy is that there is a degree of incentivisation for them at the moment and we are concerned that that will happen at the cost of the land on which it is going and the impact that will have through that development.

Mr SMITH: I completely understand the principle there and was for it; I just wanted to ensure that ‘opportunity cost’ was not a particular turn of phrase within the industry, so I completely get that. On the back of that, does AgForce engage much around renewable energy technology and provide feedback and so forth to the industry that is creating and say, ‘Instead of your general wind turbines, we’d rather that you invest in vertical access wind turbines because then that way you can get greater coverage of turbines on a smaller block of land and therefore growers might be more interested in entering into a deal and conversation there’? Is there much work by AgForce to supply the thoughts and feelings of growers and farmers into the changing technology?

Ms Somerset: No, there has not been. It is interesting with those things that I have done some reading on, but there has not been formal engagement between the renewable sector and AgForce. I am happy to follow up for you. I am not sure that has really happened at a national level either, because I think you are right: there is going to be different technology. Certainly the turbines that first went in compared to what is going in now are different, and it is the same with the solar technology. I think solar technology will continue to evolve, and how we use these opportunities to create circular economies is a really critical part of what we do in our regions. How we engage our regions in how they can be part of that journey is really critical.

Mr SMITH: I think, Chair, a good part for our report is trying to bring industries together. That might be an opportunity.

Mr HART: These guys are farmers; they are not energy—

Mr SMITH: No, but in terms of best use planned.

Ms Somerset: I think it is an interesting point, Tom. The interesting thing is that often we end up being siloed. We absolutely meet with Minister Furner on a regular basis, but he has instituted AgMAC and kept that going regularly because we end up needing to engage with so many departments. I would have to say that this section is galloping ahead of industry, so how it engages with industry I think is really critical. I think the transport needs of the renewable sector are going to have an impact on our supply chains and we need to make sure the legacy is supply chain routes that can serve agriculture and serve agriculture effectively. Simply to go ahead with this build is going to require significant investment and we need to try and partner at both a regional and a state level.

CHAIR: Thank you very much for appearing before us today. We do not have any questions on notice. Thank you.

ANDRAE, Ms Margo, Chief Executive Officer, Australian Pork Ltd (via teleconference)

PITTARD, Ms Tanya, General Manager, Policy and Industry Relations, Australian Pork Ltd (via teleconference)

CHAIR: Margo, I invite you to make an opening statement of about three minutes before we move on to questions. We have your submission.

Ms Andrae: Good afternoon, everybody. Thank you so much for the opportunity. It feels a little bit old-school to be on the teleconference again! I am sorry that I cannot see you on video. APL and Pork Queensland Ltd thank the committee for the opportunity to present to you today. Agriculture is a vital part of Queensland's rural and regional communities, state economy and food supply chain. APL is the peak national representative body for Australian pork producers. It is a producer-owned company combining marketing, export development, research and innovation, and strategic policy development to assist in securing a profitable and sustainable future for the Australian pork industry. Today we are also representing Pork Queensland Ltd.

The Queensland pork industry is worth \$273 million and is supported by approximately 280 commercial pig herds. Queensland has around 22.4 per cent of the national herd. Pig production is located close to grain-growing areas. The Darling Downs accounts for 56 per cent of the state's total pig herd. The next largest region is Wide Bay, which has 30 per cent, and then the Fitzroy region, with 9.5 per cent. The domestic pork industry is a vital part of Australia's food supply chain, with pork the second-most consumed meat in Australia and all fresh pork consumed in Australia domestically sourced. In 2022-23 the Australian pork industry produced 453,426 metric tonnes of pork. The largest volume of production is sourced from Queensland, Victoria and South Australia from an Australian domestic commercial sow herd that currently, as of 1 July 2023, sits at 285,000 sows.

The Australian pork industry contributes around \$5.5 billion in gross domestic product to the economy and supports a diverse range of careers across the food supply chain. The industry is domestically focused, with around 90 per cent of our production supporting food security for Australia. The value of the 10 per cent exported in 2022-23 was around \$182 million.

We employ more than 31,000 jobs across the industry nationally, predominantly in regional Australia, supporting the economic and social prosperity of communities and the wellbeing of individuals. The Australian pork industry's workforce is skilled, specialised and generally engaged on a permanent basis. Like many rural industries, the pork industry is currently being impacted by staff shortages, with industry willing and able to support more than 36,000 jobs nationwide and an opportunity for growth up to 38,000 as Australian pork replaces imported pork in the domestic production of small goods. Australian pork producers and associated supply chain businesses are extremely well placed to maintain a safe, affordable, environmentally sustainable and consistent supply of pork focused on our domestic market.

There are a number of actions which could be considered at the federal, state and local government levels to support building the pork industry's ability to adapt to the impacts of climate change. APL believes consistency of regulation, investment in biosecurity mechanisms, on-farm adaptations, support for labour force initiatives and key strategic infrastructure investments are crucial. There are opportunities for government to mitigate the climate change impacts and support the ability of pork and broader agriculture industries to support food security and the economy. We thank you very much for the opportunity to appear today and we are very happy to answer any questions.

CHAIR: Thank you. We know that you are a bit different from some of the other industries because you have some international exposure in terms of regulations from those larger trading blocs. Are we seeing that, in terms of climate change, internationally there are more directions and/or more actions that are being imposed on us?

Ms Andrae: I think you are exactly right, Chris. We are seeing Australia, from a global perspective, sitting around the table with a lot of the European companies. Their geographic regions, the way they operate and their production scales are all very different from what we do here in Australia. Even when you think about the basics of biosecurity, animal welfare or climate mitigation on farm, it is just a very different environment. We do push pretty hard for Australia's geographic uniqueness to be taken into account when we are thinking about what are those rules, what are we setting, what are those obligations we are signing up to and how do we make those policies, those regulations, fit for purpose for the Australian environment?

We are seeing it more and more, but the Australian pork industry particularly is a closed herd in terms of genetics. We do not import genetics into Australia. We do not allow the import of fresh pork into the country, either. Whilst many of you would be aware that APL ham and bacon is imported, all of the fresh pork is Australian. You are exactly right: the countries that are bringing products into Australia have very different regulations and very different geographies and they are responding in very different ways.

Mr McDONALD: It is good to hear from you again, Margo. When last we met you talked to us about the opportunities of energy production, as well as protein production, that came about from pigs. We also talked about some impediment that regulation might have. Could you talk to us about how local, state and federal governments are sometimes not working together in terms of regulation?

Ms Andrae: Exactly. Some of you in the room may not be aware that a fair percentage—15 per cent—of our industry is actually off the grid and creates its own energy. Dare I say it, we are part of the renewable energy industry, utilising pig manure through the capture of the methane gas and using that to power generators which power some of our farms. This is not new technology; this is older technology. There are probably two answers to that, Jim. First and foremost, the planning permissions at the local level particularly are getting harder. If we go to the state and up to the federal, we are seeing not even a lack of consistency but almost opposition when you are thinking about an agriculture response versus an environment response versus just basic land laws and things like that that are making it harder for us to be progressive and continue that push to be a low-emissions protein and to make sure we are giving back more than we take from the land.

We have also seen that with some of the initiatives that have been happening around incentivising producers. Our technology is not new but is capital intensive. We are still rolling out extension activities now based on the biogas capture, based on the utilisation of that renewable energy. A lot of these initiatives are looking for new or, worse, are pushing for existing technology to be adopted but some of the state rules, regulations and planning are in opposition to it. I guess it is around how we get all of our state departments and federal departments talking to each other and having a common goal that works together, rather than that lack of harmonisation or consistency.

Mr McDONALD: It is a really good point you make. As soon as you start talking about methane-producing power—it is old technology—the councils and state, from my experience, just do not want to know about it. It is a really good point about the harmonisation. I really liked the point in your submission about eating unsold food. That adds a different step to this whole circular economy. I just think of the success of some of the food banks and other urban-setting food distribution services. Do you have any examples where your pork industry has successfully been engaging with some of the chains and been able to get that unsold food to feed pigs that could be adapted in other places?

Ms Andrae: Yes, we do. You are exactly right: because of the nature of our animals, they have the ability to take food waste. First and foremost, we are currently engaged with industries like dairy, which is a very easy industry in the fact that the by-product can be turned into liquid feed and fed to the farm. In particular, if set up for intensive, it is a great way to tackle waste product. When you think of milk that is about to go off or that has only a few days left of shelf life and the retailers are pulling it off, we actually take that product for them and convert that into a liquid feed. We have also now adapted wheat, pastas, breads, fish fingers—some of our farms are doing fish fingers. Products that are about to go out of date we can take and convert into liquid feed.

We are also doing a heap of research to see if we can put it into a pelletised form of food, which will be fantastic. More recently, in a fantastic win for the industry, SunPork, a major contributor in Queensland, has just completed a research trial which demonstrates that they can take a kilo of protein and, through our production process, convert that to 3.6 times output. Not only are we taking food waste; we are converting it into almost 3.5 times edible protein in return and giving that back to consumers. It is a win-win process that we utilise in the intensive farm and we will continue to push, from a research perspective, how we do that and get it into a pelletised form that then can become alternative feed for our animals.

Mr McDONALD: That example sounds very promising. Are you talking about converting the protein to another food source for pigs, or are you converting that one kilo of protein into pork meat?

Ms Andrae: Into edible protein for people. It is a win-win. Not only do we take waste; we are converting it into an edible protein, which is beneficial for the community.

Mr MADDEN: Thanks very much for joining us today. My question relates to anaerobic digesters. Do you know of any funding from state or federal governments that is available for pork producers to introduce anaerobic digesters onto their properties?

Ms Andrae: I might start with a quick answer of what we are doing first and then I might get Tanya to speak about what she is aware of. From an industry perspective, we have put on additional extension officers who are going out and working one-on-one with farmers who are interested in the technology and working with them to do feasibility studies on what would be the best fit-for-purpose system for their farm—whether it is a covered pond or tanks or whether it is going to generator—and what that looks like. From an industry perspective, we are investing at that ground level with the producers. Tanya, do you want to go a little bit more into some of the initiatives?

Ms Pittard: There is an initiative in Victoria. That state government is really looking at the ways it can support producers. One of the things we have found is that often the pork producers are not eligible for some of the different grants that are in place for some of these systems because the technology is not considered innovative because it is older technology. We are also finding that where states have not got their regulatory settings quite right—or even if they do or are eligible for a grant—some of the restrictions and conditions around the grant mean that the capital investment is not going to be viable for those producers.

We had an interesting example provided on Friday at a producer workshop. One of our larger producers who invested quite heavily in biogas digesters and was really part of the methane capturing to electricity perspective has now found that, because of the regulatory settings around the energy going into the grid, it is more cost-effective for him to release the gas or vent the gas than it is for him to continue producing electricity and then feeding the electricity in through the grid. There is a really big opportunity for governments to work closely with the pork industry and have funding or grant systems that actively encourage and support producers to continue to invest in on-farm anaerobic digestion.

Mr MADDEN: Thanks for clarifying that. That is something we can look into as a committee.

CHAIR: I think we have covered everything for the moment. Thank you for your time. We do not have any questions on notice. Thank you very much for phoning in.

Ms Andrae: Brilliant. Thank you all and good luck with the outcome. We look forward to it.

CHAMBERS, Ms Rachel, Chief Executive Officer, Queensland Fruit & Vegetable Growers

CHAIR: It is good to see you again. Thanks for coming along and contributing today. Would you like to make an opening statement of about three minutes? Then we will come to some questions.

Ms Chambers: Thank you for the opportunity to address you today on behalf of Queensland's fruit, vegetable and nut growers. The horticulture industry, as many of you know, is one that dances a fine line between nature's bounty and fury. It is a classic love-hate relationship. Although rainfall and temperature data spans generations and currently is used to inform growers' business decisions, we have seen firsthand how these predictions are thrown out the window in the face of extreme weather events. By way of example, last year the Lockyer region experienced devastating floods that brought more rainfall in a week than was predicted in the entire year. Crops were lost on a massive scale. However, this year the same region has seen a remarkable growing season thanks to near perfect weather conditions. The irony in this lies in the fact that, even in a year of abundant produce, prices dropped due to market dynamics, causing growers to still struggle financially. It is an unspoken truth that for growers to prosper, someone somewhere else has to suffer. They are the ones who have to bear the brunt of unpredictable weather seasons. The financial toll and the resources required to respond to these events then divert attention and resources away from any proactive climate adaptation and mitigation strategies.

Growers are reporting to us that they used to rely on having a good year in every three. However, now this is pushing out to one in every seven to 10. To put this into perspective, ABARE's modelling estimated that broadacre farm profits were down by 23 per cent between 2001 and 2020 due to changing seasonal conditions. I shudder to think what the figures would be if a similar study were to be conducted in Queensland specifically for horticulture.

It is one thing to look at historical data but another to proactively use the available information for the future. We must prioritise the refinement and widespread utilisation of climate projection platforms and medium-term weather forecasts. Our own best management practice platform, Hort360, is currently undergoing a significant review to ensure we incorporate climate data, emissions and more.

As you would appreciate, a lack of financial resources is one of the most critical roadblocks to implementing climate adaptation on-farm. The business resilience planning program is making great strides in building drought resilience. That currently does not get to encompass broader climate adaptation, and this needs to change. Additionally, the unavailability or high cost of insurance coverage for risks beyond climate adaptation is a major concern, as is the lack of accessibility to farm management deposits due to low profitability, consistent cash flow requirements as well as the changing eligibility of disaster programs that are not designed for horticulture. With a surge in corporate interest in climate adaptation within the agricultural supply chain, we are hugely concerned that costs associated with this mitigation and adaptation have already been, and are planned to be, passed down to growers in the future. This calls for initiatives and research that engages all supply chain members to collectively address emerging climate risks.

In conclusion, climate change and its impact on our industries are undeniable realities. It is our collective responsibility to work through these challenges head-on with a spirit of innovation, collaboration and resilience to ensure profitability for Queensland's fruit, vegetables and nuts.

CHAIR: It is good you have highlighted in Hort360 the best practice tool or risk management tool for your sector. Do I have that right?

Ms Chambers: Yes. Just to further back up that claim, we put it through a national sustainability model through NFF last year with six different best management practices and it did come out to be the best for now.

CHAIR: We will see that improving and the addition of different aspects to deal with the effects of climate change. As a general point, we have learned in this inquiry that there are a number of great tools and great resources that every sector can use, but not everyone is aware of them or they are not promoted in a coordinated way across all sectors. Would that be a fair statement?

Ms Chambers: One hundred per cent.

CHAIR: What are some of the different climate projection tools that your members most frequently use?

Ms Chambers: I would love to give you a list of those after this, but to get to the more strategic side of it, industry and research agencies have been doing this for the last 20 years. Of course, there is this overwhelming sense of urgency that we have not achieved what we thought we would have

achieved by now, so there are all of these overlaps. People who have been working on it suddenly come out with something and then something else again. At the moment, Melbourne University has come out with a tool, as has the Queensland government. We are trying to map all of the tools. As you can imagine, a grower now is faced with being told, 'You should use this tool or that one.' That is why we are trying to get it into Hort360 tools and say, 'Here is how you can run your business through a risk management program and here are the tools that you can use.'

I could not agree more with you: at the moment there is a bit of a jumble of all of the tools available. We know it is there, but, even as leading horticulture, we sit down and go, 'Wow, which tool are we going to recommend above the other and why?' Sometimes it is just the fact that there are really great tools out there but they do not allow a grower to keep information on a year-to-year basis so they can see improvements. There are calculators, but they do not allow the content to be saved. There are those kinds of intricacies.

CHAIR: I have more questions. You have talked about parametric insurance, but I will allow other people to ask questions on that. I will go to the deputy chair.

Mr McDONALD: Thanks, Rachel. It is good to see you again. I really appreciate your approach around the whole of the system of production and investment across each of those. The big challenge I see, apart from that investment across that system, is getting people to take it up. We have 10 per cent, 15 per cent or 20 per cent of the farmers who are innovators, but many are not. What do you think might be the best way to engage with those farmers?

Ms Chambers: Let's take emissions as one example. If you talk about emissions, 13.25 per cent is agricultural emissions and out of that horticulture is one per cent. So there is a feeling of, 'Why are you knocking on my door? What does this mean to me?' We have a really good case study with the Department of Environment and Science in the pineapple industry and it is currently being undertaken in strawberries as well. Part of the issue in horticulture is that it has never been accurately mapped to the grower or the commodity. Hort360 has been taking 20 years of research and data and we can see the shaping of each commodity and what is happening; however, as a grower you may not have ever mapped your emissions or tracked them. For a grower of maybe 10 different commodities across three different growing regions, that is going to have a different outcome for each commodity in each growing region. It is such a complex environment that we talk about. Unless you deliver a facilitated program with that grower or with that one commodity in that region, it does not provide the dividends that we are looking for.

Mr McDONALD: Yes, I understand. The last submitter was from the pork industry and I think there are a lot of similarities with veggie growing in terms of being able to use the whole product and using waste product in producing energy. It is not just a food source but an energy source as well. Are you doing any work in that space as well?

Ms Chambers: It is funny in that we did work on dam covers, evaporation and those kinds of things. We have done work on agricultural waste in trickle tape and what we can do with that. It keeps boiling down to logistics, which kill it each time. You need a big body of something and the desire to conduct further research into those things. Yes, we are absolutely looking at it. We are also on lots of food waste committees, as you can imagine. It is about when you deem it to be food waste.

At the moment, domestically, I would rather call it an underconsumption than an overproduction. If you go back to *Hansard* in 1923, we called it an underconsumption because people were not eating their quota of fruit, vegetables and nuts. That has not changed, but now we are calling it an oversupply. If we were to grow the same quantities right now and all Australians decided to eat what was recommended, we would not have an oversupply so there would not be waste. It is whether you deem waste at the beginning or not.

Of course, you have the issues with retailers. Retailers need to shore up supply. The No. 1 rule of retail is to make sure you have continual supply. A banana grower recently told me exactly why there is a surplus of bananas at certain times of the year. That is because the retailers demand supply for 12 months of the year. However, a banana only grows at its very best for nine months of the year. For three months they actually have to grow 1½ times as many banana trees to shore up that end of the season which then has a surplus at the other end. It is a highly complicated sector to work in. I absolutely envy one-commodity sectors like pork that can focus on one thing, because I think that is partly the issue with horticulture.

Mr McDONALD: That is a great example with bananas and the market driving that need, which is a huge challenge. My question about the waste was not just at the retail end but also on the farm end. I understand that farmers are now growing additional things or taking the husks of corn and

turning that into an anaerobic digester and using energy from that. It is something that is very popular in Europe. I am aware of tens of thousands of these sorts of things whereas they are a very small number here in Australia. Have any of your growers dabbled in that space?

Ms Chambers: When I was in my previous role, biogas was definitely something that councils looked into, particularly councils in growing regions. Once again, you need a massive waste product in order to make that work. I think, Tom, you were a beneficiary in Bundaberg of one of those. Yes, they are. Interestingly, on-farm waste is the majority of waste deemed in the waste stream. I think more work needs to be done because it is fine to see that waste can be utilised; however, where is the money in that waste?

I know that currently mango growers in North Queensland—because of picking, packing, grading logistics et cetera—may be choosing to juice their mangoes because, at \$6 a kilogram, that is the same cost as not paying all the staff to do different things. With juicing, the money has to be in there; otherwise why are we growing it? I understand it is a waste, but what value is that waste product going to have and is that value then going to pay the grower for all the inputs the grower has?

Mr MADDEN: Thank you very much for coming in today. This discussion is fascinating. I would like to give you the opportunity to expand on something mentioned in your submission, and that is to do with the disparity between the agricultural relief provided by governments to the horticulture industry as opposed to the grazing industry. Just one final thing: I am glad to see that you include nuts in the growers.

Ms Chambers: They would hate me not to.

Mr MADDEN: You will have to change your name.

Ms Chambers: I know. It is very long.

Mr MADDEN: Could you just enlarge on that? I was not aware of a disparity between the relief provided by government in times of disaster to the horticulture industry as opposed to the grazing industry.

Ms Chambers: And I would love to provide it. At the moment I have some questions on notice, a list of the tools available that we know about, and also I would love to give you a list of the disparities because we could probably itemise a list for you. One of the things that I know we tried to ask for is some drought funding. I actually have an email back that says something like, 'Horticulture does not utilise water like grazing does and so we are not able to do that.' I actually rang Sunwater and said, 'Do you have data from my growers that you could potentially share with me so I could demonstrate that we actually do use water, because that is phenomenal in intensive agriculture? I just do not understand how that goes.'

The other thing, I suppose, is: if you think of a flood situation and you think of dying or cold cattle and those kinds of things versus a flood situation in vegetables, there is an element that government has said, 'You need to be prepared and you need to understand your risk and you need to have an element of resilience so therefore they will not support growers.' We have spoken to growers and that is fine, except for the fact: how many times are they expected to be resilient? If you get flooded three times in two years, were you supposed to understand and build that into your business case and your business plan? There are those kinds of things.

Even in tree crops that were wiped out, you can get funding to start small business and you can get funding to start grazing again, whereas tree crops are not under that same funding. What we are saying is: there is a lack of understanding of where the money goes in horticulture in that all the inputs go into 10 years of a tree and that crop is lost. What we are saying is: it is not actually the crop that is the problem; it is the tree that is the problem, so how do we start working together on that? We have quite a line of information that has gone back and forward to government.

Mr MADDEN: It seems that we are trying to apply a stock production model to a fruit and vegetable production model and they are not meshing.

Ms Chambers: No, and to be perfectly frank I do not know of a grower—I probably know of a couple of humans, to be fair—who waits to have a government handout. Between the paperwork and the stress and all the rest, they want to be self-sufficient. They want to be able to do it. It is just the lack of planning and the inconsistency when they can see their neighbour getting support and they do not qualify.

Mr HART: On the insurance side, is it the cost that is prohibitive or is it the policies? If it is the policies, what sorts of policies would you like to see?

Ms Chambers: There are insurance companies that will not insure anyone in Far North Queensland.

Mr HART: Is it the risk?

Ms Chambers: Yes. We understand the risk. Now there is parametric insurance that comes out. QFF have been doing a research paper about parametric insurance with some of our staff. Parametric insurance, for those who do not know, is when you can insure the risk based on a set of climate assumptions. I can say I want to insure my farm for \$1 million if a category 4 cyclone comes within 50 kilometres of this point. You do not have to do an assessment of damage; it is just if those parameters come out you are paid. We are looking at different ways of working with that.

Mr HART: Are your members across the availability of those policies yet?

Ms Chambers: Given the research started last year and we started becoming familiar ourselves with it, no, there would be very low understanding of that at the moment.

Mr SMITH: I am sorry I was not able to see you at the beginning. There is a major fire warning for parts of Bundaberg so I have been dealing with that. How much is Queensland Fruit & Vegetable Growers talking with its clients around the value-add products and potential of creating value-add hubs? Obviously if you have a raw product it is susceptible to the market, whereas if you can turn that into something that goes into a nice little plastic bag suddenly that price becomes more fixed. Is there much discussion in different regions around creating hubs that groups of growers can feed into and then create a new product from there?

Ms Chambers: FNQ Food Incubators is an amazing example of this up north. I would say that most regions have a value-add hub, per se. I think that should be well supported. I think, once again, the value might be in the end product, but there will be no end product unless there is profit in the primary production.

Mr SMITH: Do you know if FNQ Food Incubators have connected up with Greensills? Is that where Greensills have created their new product?

Ms Chambers: I do not know. Do you want me to take that on notice?

Mr SMITH: That is alright. I will give them a call.

Mr McDONALD: Thank you for your opening where you talked about the love-hate relationship of farmers and used the example of Lockyer. Thank you very much for that. In terms of the planning for South-East Queensland, do you play in that space at all?

Ms Chambers: We do.

Mr McDONALD: Can you talk to us about your proposals in that space and fragmentation?

Ms Chambers: At the moment we have a land use project through QFF. We have come together with all of the entities in QFF to speak about land use planning. Of course, I understand very firsthand the state government and the local government planning acts and how they come together, so the idea of coming together as QFF is to put an agricultural lens over land use planning into the future so that we can advise our growers as to the process and what is happening and also give them some support materials.

CHAIR: Thank you very much for your time today.

Mr HART: Rachel wanted to say something.

Ms Chambers: I think it was you, Chris, who said that horticulture had international exposure, and I just wanted to make sure that everyone understood that horticulture is very exposed internationally, with global markets. Hort360 in this redesign process is focused on ESG. Whether we call it ESG or sustainability, we have put them together and we have called it the onion and we have mapped all the global forces down to the grower. I listened to a fantastic podcast, which was one of those 'aha' moments in life, that said that ESG is the world's biggest team sport that we are playing at the moment. It is about the links in the supply chain. Our biggest fear is that the grower is always at the bottom. As a primary producer, being primary means one, so we are always at the bottom. Our biggest concern is that, in all of these climate change and emissions, it is really easy to pass it down and not so easy to pass it back up. We have mapped so many forces coming down in the onion and the layers, but we have mapped it in Hort360 so that the grower on the ground can understand—and this probably goes to your point, Jim—their everyday activities and why they are doing it and what it is mapped to internationally so that they know they are achieving it.

Mr MADDEN: Are you saying ESG could be used against us with global trading?

Ms Chambers: If I am a grower currently and I have a contract with Coles, I have to ensure I am abiding by their modern slavery act because Coles is over 100 million, as it is at the moment, and all of their trading partners—so the UK has a UK farm SAI sustainability measure silver. As of December last year, I have two commodities in Queensland that are under that UK sustainability model. Their emissions target in the UK is actually impacting Queensland growers on the ground. They are going to have to achieve that in order to have their contract with retailers. This is how it all fits together. I had a meeting about two months ago with members of the Queensland government to bring them up to speed on what is happening, but absolutely we are 100 per cent impacted by global emissions—not just Queensland.

Mr McDONALD: Some more information on that in terms of a question on notice might be useful.

CHAIR: In terms of ESG?

Mr McDONALD: Some of those international influences.

Ms Chambers: I am happy to provide the onion and some explanatory notes.

Mr HART: As long as it does not make us cry!

Mr McDONALD: It will.

CHAIR: We will add that to the questions on notice. Could we have the responses back by 5 pm on 18 September? The first was about the list of the climate projection tools that you use; then the list of disparities between government funding for horticulture and grazing industries; and tell us more about ESG and the onion.

Mr MADDEN: We want to know about the onion.

CHAIR: Thank you for your time. That concludes the hearing. Thank you to everyone who has participated today. Thank you, Hansard and our secretariat staff. A transcript of these proceedings will be available on the committee's webpage in due course. I declare the public hearing closed.

The committee adjourned at 1.41 pm.