



LEGISLATIVE ASSEMBLY OF THE NORTHERN TERRITORY
Sessional Committee on Environment and Sustainable Development

Committee Members:

Mr Peter Chandler, MLA	Member for Brennan
Mr Michael Gunner, MLA	Member for Fannie Bay
Ms Marion Scrymgour, MLA	Member for Arafura
Mr Peter Styles, MLA	Member for Sanderson
Ms Lynne Walker, MLA	Member for Nhulunbuy (Acting Chair)
Mr Gerry Wood, MLA	Member for Nelson

PUBLIC HEARING, FRIDAY 16 OCTOBER 2009

Northern Territory Cattleman's Association

Witness:

Mr Luke Bowen Executive Director

Madam Acting CHAIR: I reconvene this public meeting of the Sessional Committee on Environment and Sustainable Development. Our inquiry arises from a reference to the committee by the Honourable Alison Anderson MLA; former Minister for Natural Resources, Environment and Heritage.

I welcome Mr Luke Bowen of the Northern Territory Cattleman's Association and thank you for appearing before us today. Although the committee does not require you to give evidence under oath, these hearings are formal proceedings of the parliament and consequently they warrant the same respect as proceedings of the House itself. I remind the witness that giving false or misleading evidence is a serious matter and may be regarded as a contempt of parliament. Whilst this meeting is public, witnesses have the right to request to be heard in private session. If you wish to be heard *in camera* please advise the committee prior to commencing your answer.

Today's proceedings are being electronically recorded. To ensure the accurate transcription of the recording, I ask that the witness and members identify themselves prior to speaking and, in the first instance, I invite the witness to state his full name and position before commencing his evidence.

Mr BOWEN: Luke Bowen, Executive Director of the Northern Territory Cattleman's Association.

Madam Acting CHAIR: As soon as practicable following this hearing, a transcript of your evidence will be uploaded to the committee's web site, but not before you have had the opportunity to proof it. So Mr Bowen, if you would like to proceed, please.

Mr BOWEN: Just as far as the format; we have got an hour, I understand?

Madam Acting CHAIR: Yes.

Mr BOWEN: Do you want me to try and squeeze that in to a set period of time in which then you would ask questions after?

Madam Acting CHAIR: Well, basically, we are looking at having an hour in total. Typically, you would start with some sort of presentation or statement that you want to deliver and then we open the floor to members to ask questions.

Mr GUNNER: Or if you want, if you have a long presentation, you can take questions as you go if you prefer.

Mr WOOD: Or we won't ask you any questions.

Mr BOWEN: I am quite happy with that so I will just keep rolling until such time as somebody throws a brick at me.

What I have done is I have compiled a bit of an outline giving a very short background on the association as the peak industry body, some background of the Northern Territory industry and then I have addressed the Terms of Reference of your committee. Not all of it is applicable, however I have addressed those that I deem to be of interest and relevance. So that is the format I will follow through this presentation.

They are the Terms of Reference that I have extracted, which I will follow and I will address each one of those individually as we go through. There are a couple there that are in your Terms of Reference which I did deem not be valid.

Just by introduction, the Northern Territory Cattleman's Association is the peak industry body for the Northern Territory cattle industry of which between 90% and 95% of the cattle herd is represented on our membership books. There are approximately 200 members. We have associate members and full-paying members who are essentially cattle producers with herds in excess of 50 head.

The area of pastoral lease in the Northern Territory is approximately 44% of the Northern Territory land mass and it is difficult to pin down an exact figure; approximately 48% is deemed to be under some form of pastoral production, whether that be on Aboriginal land or other types of land tenure.

If we look at the Primary Industry sector in the Northern Territory, I think these are figures from last year, approximately 4.6% of the Gross State Product is made up of primary production of which about 65% is in the cattle industry or the non-mining sector.

If we look at the Northern Territory herd, currently there is about 2.1 million, the best estimate is about 2.1 million cattle running in the Territory which, on an annual basis, we turn off in the order of 550,000 head. That is managing that herd over about 620,000 km² or 44% of the land mass.

The sector generates - the official figures are slightly less than this - however we have manipulated figures based on the turn-off of cattle that go in to Queensland and South Australia and the value-adding that takes place, but we estimate the value of our production annually to be in the order of \$370m. 365,000 head went through Darwin last year. This represents well in excess of 50% of the Northern Territory turn-off annually. Estimates at this stage put our employment levels at about 1800 people. In addition to that, there is indirect employment well in excess of that, estimated to be well in excess of double that amount.

If we look at the major cattle regions in the Territory, which are categorised by these: the Top End region, the Katherine region, the Barkly region and the Alice Springs region. Currently 300,000 head of actual Northern Territory cattle generally leave the Northern Territory or Darwin's port annually into our South-East Asian markets. And we have in the order of 200-odd thousand head going into Queensland from properties that have linkages and are vertically integrated into Queensland, New South Wales and South Australia.

If we look at live exports alone, last year the total number of cattle out of the port, including interstate cattle, was 365,000 head. 90% of those cattle are going to the Indonesian market. Darwin port is the largest Australian port for live export and I think the second largest in the world. It accounts for more than 50% of Australia's live exports - cattle in this case.

Just very quickly on the Indonesian market, we have a population there of approximately 260 million and a growing middle-class in the order of about 20 million and we anticipate a doubling in that market in the next six to 10 years. We supply the Indonesian market mainly because there is a lack of cold chain storage in the system of refrigeration, so live cattle are highly suited; our tropical cattle are highly suited to that market.

Moving on, this starts to touch on what I will be referring to in the guts of the presentation. Current estimates, based on improved efficiencies and increasing utilisation of existing land and bringing new land into production; estimates which have been put together with assistance from Primary Industries and best estimates that we can from industry players, is that we may expect to see improvements through better animal husbandry practices, nutrition, genetics and other improvements of close to 10% to 15% in the Central Australian region. It may not equate to increased numbers of cattle *per se*, but increased turn-off, which reflects improved calving rates and a range of things like that.

If we look at the Barkly region, which is predominately corporate-run operations, some of the largest pastoral companies are based in the Barkly region - it is very high value grazing land. We can probably expect, we believe; to see increases in production and turn-off in the order of 30% once again through genetic improvement and nutrition and management practices, but also increased intensification and use of land with improved fencing and water and management.

We see a similar potential trend in the Katherine region, once again through increased land use and intensification and also there is a certain degree of development potential on inalienable Aboriginal freehold land.

If we look at the Top End of the Territory, predictions are that we could see almost a doubling of the size of the cattle turn-off from that region. Once again, depending very much on the level of development of some currently undeveloped land, which includes Aboriginal land, which includes existing pastoral land that is in an undeveloped state, and further development of flood plains for finishing operations.

Mr CHANDLER: I will just ask one question, Luke. It is more of a statement than anything, but I was amazed recently when visiting Melaleuca Station how many head of cattle they lose per month through crocodiles. It is just amazing; it blew me away that so many cattle are lost to crocodiles in that area.

Mr BOWEN: I think they use a figure of approximately 5% to 7% per annum. Bearing in mind it is probably only about six months of the year that those cattle are on that flood plain, so it is in the order of that sort of amount, which is probably double to triple normal attrition rates or death rates in livestock in the paddock. So you would have normal death rates on top of that again. It is quite significant.

Mr GUNNER: Just a question around those growth projections: has much consideration been given to sharing? I know, talking to people who want to do forests around the Douglas Daly area, do you see the capacity for cattle to be able to share that same land mass?

Mr BOWEN: Probably later on in the cycle. I do not have direct experience with that, but indications from the forestry companies are that they are expecting - certainly one company that had been involved with cattle that have not travelled particularly well - they indicated that they would be grazing under story, but obviously it needs to wait until the trees are mature. The management of fire would probably dictate that that would be fairly necessary.

There are also concerns, which are a peripheral issue, in relation to substitution of food production land with land that goes under tree plantations. That is twofold: it is the loss of food production areas and grazing areas for the cattle industry; but there are also concerns in relation to how something in the early stages of this

development, how that land has been managed and has unfortunately not utilised some of the most basic farming practices which have been developed over the last 100 years or so in relation to contour farming and the like. So there are concerns in the industry in relation to some of the practices that are being used by some of the newer players in the forestry area.

Mr WOOD: Luke, is there an estimate of how many cattle are used domestically? I mean, Palumpa has got an abattoir and I suppose Oenpelli has got one, but there are no other abattoirs, but is some of our beef used locally?

Mr BOWEN: I can give you some broad estimates, and that is going back on historical knowledge that I have. Historically, Oenpelli has killed in the order of four bodies a week, 12 months around. I think Palumpa has killed in the order of 800 head per year. Currently there are only two other abattoirs operating, being the Kalkaringi Abattoir. I do not know what the figures are going through there, but they obviously supply the local market into those local communities, and we now have Bond Springs in Alice Springs. I would be guessing, but they would be killing in the order of 10 or more a week, I would think, both of cattle and camels.

Mr WOOD: Does Palumpa send any cattle out live, or is it still fairly local production?

Mr BOWEN: I would have to take that question on notice. I think they still do sell a percentage of cattle that go out live, but I know the numbers they are killing, as of a few years ago, they were pretty much able to keep up with own production with their annual kill. That is a well run operation. It certainly was up until a couple of years ago when I last viewed it.

Just a point which is probably slightly outside the scope of this committee, however if we look just specifically at the live export market, Ramadan, which is the Muslim Holy month, fell in September this year and it is progressing backwards towards our Wet Season by a matter of a couple of weeks a year. Most of our cattle will go in to that market either 100 or 150 days prior to that festival, and this is effectively the peak supply time, whether it be 150 or 100 days. The fear that we have is that infrastructure that is used to get cattle to market is largely - most of the traffic is probably outside of the Wet Season. We are increasingly going to be calling on our infrastructure to handle Wet Season access to our markets as we get in to the next three or four year period. Infrastructure will be an ongoing issue for environmental, economic, cultural and social issues right across the Northern Territory and in particularly in the Top End.

I will talk later about viewing some of our environmental issues more holistically in terms of the sustainability of communities and of regional economies.

As a bit of an overview to the fact that we have an increasingly complex environment that our producers are managing within, and this is no different from a lot of businesses that are operating more generally, but we do have a number of added variables which relate to the variability of our climate and natural resources particularly and the vagaries of markets, which people are exposed to, so we are managing in an increasingly more complex environment.

I guess I place that in the context that the environment is just part of that and the economic livelihoods or future of a lot of our producers are intrinsically linked into the environmental health on which their production systems are based.

I also place my talk in the context that we are also experiencing a fairly intense or frenetic period of policy revision in the Northern Territory particularly and also nationally. We have just been through a phase and we are still currently in a phase where we have not only our core legislation, which governs probably 95% of the pastoral industry, which is the *Pastoral Lands Act*, which has served the industry very well since its inception, both environmentally and economically. But we also have a review of a range of policy issues about land clearing or land development, cultural significance, environmental significance of certain sites in the Northern Territory and programs attached to them, native vegetation legislation, which is on the table. Policy documents or discussion documents about things such as living rivers and there are a lot of attached implications with those sorts of things. There are environmental impact statements and a review of principles governing those sorts of processes. There are a whole range of federal strategies – biodiversity and the list goes on.

So I guess the complexity in which people are managing is added to by a high degree of review of policy and some of this policy has a direct bearing on people's livelihoods. There is at the moment quite a deal of concern in relation to particularly the *Pastoral Lands Act* and other legislation such as native vegetation, which could have quite a dramatic impact on both the economic and environmental sustainability of the industry going forward.

The last one here is probably the big nut, which I will touch on and it is part of your Terms of Reference, which is the carbon pollution reduction scheme. I will present a little bit of background in relation to our industry position on that and where we think it probably needs to be headed in the longer term.

Just as a kick-off point, I think there is a perspective that needs to be presented, I suppose, and we need to put things in perspective for the Northern Territory, and the cattle industry in this case. Currently, we largely graze natural pastures and we use a very low impact clean-and-green production system, which is as close as nature as you are probably going to get given that less than 1% of the Northern Territory has any form of development, whether that be for urban or for agricultural development. So we are largely using very low impact systems of turning rain, carbon dioxide into meat and food. It is a simple process: it rains; the grass grows; the cattle eat the grass; they grow meat; and hey presto it is as simple as that. It is no more complex. We have a natural advantage. With these production systems; people are increasingly calling for these sorts of products so that we do have a competitive advantage in some cases. Having these natural grain-fed systems that we predominantly are using still in the Northern Territory and will increasingly look for in the future, we believe.

It is also, probably importantly, a very low-cost way of managing what is close to 50% of the Northern Territory's land mass having an economic base which is a pastoral industry which keeps people on the land; it keeps a level of control over feral, fire and weeds. For the Northern Territory government, it is a very cheap way of managing half the land mass.

I think the future of the industry will only ever see a mosaic of development in amongst what is still a relatively natural system. Given that we currently have close to 1% of development, it is probably never going to exceed much more than 2% or 3%, I would have thought. It would be a mosaic, a very strategically placed development for value-adding the diversification in order to build resilience in the longer term for the sector which ultimately assists with sustainability environmentally and economically.

What we suffer from at the moment is probably the southern view, which is transferred to the Northern Territory and it is a sort of doomsday view that what we see down south will happen here and it is bound to happen. I think that is fundamentally a flawed assumption that is used for spin in a lot of cases, we believe, but it is fundamentally flawed given that there has been a passage of time in some cases 150 years and we have learnt from those mistakes that have taken place elsewhere.

Addressing your Terms of Reference, and I have just abbreviated this, but environmental issues including opportunities and constraints facing agricultural production in different regions, I was going to just give an overview in broad terms of northern and southern systems, but let me say that we suffer from an ongoing challenge with weeds, fire, feral animals and potentially exotic diseases, which not only threaten our production systems, but also threaten our environmental integrity and in some cases the integrity of our human population as well. These will continue to be challenges and they require investment, research and development and I think extension in education in order to tackle it in the longer term. I think all those issues are very well known to most people and certainly this group.

If we look at Central Australia, it is an area characterised in our pastoral industry largely by family farms or family stations, owner operators, an area of usually extreme climate variability but also an area with extreme resilience. It is an area with low production costs. The production costs per kilogram of cattle coming out of Central Australia are some of the best in the world. They have very low input systems. They have a lack of diseases and pests that often plague us further to the north so they have a very low cost of production. They have developed a resilience to variability which, even with increasing variability, potentially they will find ways of surviving. They have high levels of productivity. The feed is not vast, but it is very powerful when they get it and this gives the area a comparative advantage in certain circumstances when the weather and things are permitting. There is an opportunity for a more organic, far more natural type of turn-off of products.

The opportunities for market diversification down there probably exist similar to how they exist elsewhere; but horticulture and tourism are probably major areas of the potential diversification at this stage of the game, anyway, based on what we understand the system to be.

Labour availability is an ongoing issue across the pastoral industry, which I will touch on, and I will also address it in the context of Indigenous engagement and Indigenous employment. I will address that in more detail further down the track.

If we look at the northern part of the Northern Territory, there is less variability, to a major extent, in the climate: high rainfall, high prospectivity, so we have a high degree of interest in the prospective value of northern Australia, particularly given the issues down south with food production and agriculture.

Largely, in general terms, we are dealing with lower fertility and higher input costs and this in itself also calls on higher levels of management expertise and technical expertise of a different kind from what you may encounter in Central Australia. Various production challenges with higher pest loads, reliance on more chemicals in some cases - it is more difficult to gain that organic focus that Central Australia probably is in a better position to capitalise on - and increased pest and weed and potential for introduction of exotic threats over Central Australia.

I will pause there for a bit in case anybody has any questions.

Madam Acting CHAIR: Member for Nelson.

Mr WOOD: I suppose when we are looking at ecologically sustainable development, the issue of weeds or pastoral plants that can be regarded as weeds by some and beneficial plants by the cattle industry and I suppose the two that come to mind easily – and there are plenty of them – would be Buffel in Central Australia and Gamba in the north. How does one see, for instance, Buffel fitting into, I suppose, an ecologically sustainable development process when it is an invasive species unless controlled?

Mr BOWEN: There are probably a couple ways to answer that. In the first instance, it is highly valued in the pastoral industry across; I would say, the vast majority of the pastoral industry is a highly valued pasture species. It is also endemic so it has got a foot-hold which goes back for probably over 100 years in some cases, which it makes it a challenge to eradicate. If it were to be deemed necessary to eradicate it, there would certainly be resistance. There is resistance in our industry to any push to eradicate Buffel Grass in production systems. So, yes, there would certainly be a lot of resistance to that. Let's leave it at 'resistance'; that will do.

Travelling north, and particularly some of the flood plain species that we see as a major threat, species of no economic value and also of detrimental impact on cultural and economic values in the flood plain, for example weeds such as Mimosa Pigra, we see that as a priority and we can put other weeds such as Bellyache Bush in that same category. On those same flood plains we also see species such as Para Grass and to a lesser extent Olive Hymenachne, which are valued pasture species. That is the subject of ongoing - I guess the best words would be 'discussion' and 'understanding' between those with objectives to limit the spread or the impact of those species and those which see the economic and, in many cases, environmental values of some of those weeds. When it comes to out-competing plants as part of a control measure for Mimosa Pigra, for example, Para Grass plays a very important role in out-competing Mimosa Pigra on the flood plain as part of a control program.

Mr GUNNER: This might be coming up later in your presentation, but something we have discussed at different times as a committee is the argument around kilometres from a food source to where you eat it or drink it. It is a simply argument in some respects, one that people will often understand when bananas are grown down the road and there are obviously less kilometres involved. I think cattle are an example where that argument does not work. I think there is a very good model about how cattle are grazed here, get put on a shipment just before they are about to have their growth spurt and then obviously grow rapidly the other end, often on the food scraps that are around; I know in Asia they do that. I was wondering if that is an argument that has often been put to you. You mentioned before the southern view of industries in the Territory, and that you get pressure based off kilometres of the live cattle exports and all that sort of stuff; particularly with the CPRS coming up. Is that something you have done a lot of work on in terms of rebutting?

Mr BOWEN: There are a number of ways if you want to call it 'food miles'; which is probably the term that is used for it, you can look at it. Now, it depends what the motive behind food miles is. If the motive behind food miles is about retaining local economies, that is a different criteria from food miles based on a carbon emissions footprint, for example, per unit of production.

Now, we would argue that the mere fact that a cow is produced here and it is transported 3000km to be eaten in a second location versus that cow being eaten one kilometre away right next door - unless you can evaluate how much carbon is used per unit of production, in other words per kilogram of production, it is really a very arbitrary measure. For example, an animal produced in Britain may have a much higher footprint in the production system in the way that animal is produced in shedded environments half of the year with heating, that animal may, per kilogram of beef, have a much higher carbon footprint than an animal that is produced in Australia and shipped to the other side of the world and sold in the European market. So I think we have to be careful that whatever products we are talking about, we understand what is behind the food miles. But if we are arguing on the basis of carbon footprint; clearly if you break it down to the carbon footprint per unit of production, you have then got an argument, but just an arbitrary thing about how many kilometres it travels tells you nothing about the efficiency of the production system or the efficiency of transportation or processing or anything.

But certainly the argument about maintaining regional economies and keeping people in business next door and all that sort of thing, I think that is another issue again, which is what the Europeans, I think, base a lot of their argument about food miles on. It is the fact that it is about retaining communities out of the major cities and it is a structural adjustment issue. You do not want everybody disappearing in to Paris from the country where it involves huge social dislocation if all their industries fell over tomorrow.

Further constraints, which I have touched on earlier, is the underpinning legislation which we work under; which is the *Pastoral Lands Act*, which is a very comprehensive piece of legislation that has served the industry very well and it has served the environment very well, and we certainly resist major change to that legislation because we see it as the essence of what we are and what we do for 90% plus of the pastoral industry.

Some of the constraints which probably grow out of the *Pastoral Lands Act* to some extent and also other legislation are the level of that tenure and the ability to diversify. I think the future dictates that the more resilient businesses and the more resilient pastoral production and primary industry production systems are those that have diversified and have a percentage of their income in off-farm or off-property investments, which allow for risk management with some level of resilience longer term. We would argue that we have to look for increased opportunities for diversification in the future and that in itself implies that land tenure is probably at the core of that so we need to be looking at more efficient mechanisms or systems of land tenure, which allow diversification and, in doing so, build greater resilience in the industry. This flows through to subdivision. There has been a certain degree of subdivision of pastoral leases. Historically, very large pastoral leases, which we know through improvements in breeding practices and management practices, you can reduce the size of operations considerably in land area term, improve the level of efficiency and management and often you can get an improved outcome from less area. So increased intensification will occur and that requires, in some cases, subdivision of pastoral leases. We currently have a system which largely views each subdivision as a separate, stand alone piece of land that has to support a family, for example, and a business. We argue that business today and our primary industry is diversified with on-farm and off-farm income. Those operators are in the best position to make a decision about whether something is viable rather than a government bureaucrat who does not necessarily have those economic principles that they are working to.

There is probably greater scope for some reallocation of boundaries and allowance for people to restructure pastoral lease boundaries to amalgamate with neighbouring properties and do deals to some extent to see greater efficiency in the use of land and resources. An inability to do that, it is thought at some levels, can put greater pressure on land resources. Where operators are forced to continue to conduct business perhaps in a square that is not viable and sometimes pushes them beyond what they might comfortably do otherwise if they were more economically viable.

Just touching on what is on the horizon, I have already alluded to this but increasing diversification and enterprise mix both on-property and off-property is where industry is headed. It is already moving in that direction and I think we will increasingly need to, as we seek to become more self-reliant and the level of support through Federal and in this case Territory programs for extenuating circumstances probably will decline with time. The level of self-reliance is increasingly going to come to bear on producers and diversification will increase people's level of resilience.

Intensification of land-use and production and a requirement for greater resource planning and scoping by government and by industry in order to identify both infrastructure requirements and prospective areas where development and conservations areas where they can take place. I will touch on that a little bit more further down the track. It requires greater levels of harmonisation between the key ministries and departments which have responsibility, and we are not talking simply about the Environment Department, the Primary Industries Department, we are also talking about departments and ministries of infrastructure; health, education and housing, just too sort of start the ball rolling. I think that long-term solutions will require a more holistic approach rather than specifically an industry approach or a sectoral approach. Clearly, the perception in the Territory is that there is a lack of coordination and harmonisation across some of those key agencies when it comes to having a consistent vision for a primary industry sector and a vision of growth or a vision of any kind which relates to those multiple stakeholders and agencies that need to be involved in it.

I guess where that leads us is that ultimately, in order to dispel some of these other myths also, we need to start putting some dots on maps or lines on maps and those are not to be taken literally, but it is for illustrative purposes that we know there are perspective areas. Work still in some cases needs to be done if you look at water conservation, soils and infrastructure in order to decide where we have the potential to develop in the first place and then, if so, how we do it rather than probably the southern view, which is perhaps pushed by more extreme groups, which is: 'They will just start at one side with a couple of D10s and a chain and they will not stop until we get to the other side and what we saw down south will happen here as well'. I think part of the responsibility of government is to assist in dispelling that myth and bringing some context to really what we are talking about and some perspective to what we are talking about.

The second point in your Terms of Reference relates to best practice through policy regulation and education. It is hard to put an exact figure on this, but estimates place in excess of 25% of producers being involved in leading edge benchmarking and best practice activities in our industry. And I say that in terms of, I guess, some of the leading edge activities. Probably a very high percentage, approaching 80%, of producers are involved in a range of different activities which are probably leading in this direction ultimately and there are a number of benchmarking groups now set up in the Northern Territory which are leading the field

in identifying where people are at environmentally, economically and, in some cases, socially in relation to succession planning and a whole range of things.

These benchmarking groups are a major driver for change and I personally witnessed two separate benchmarking groups who commenced activities probably eight years ago. One particular group has been in a drought ever since that benchmarking commenced, yet that group has managed to not only survive, but appear to prosper in relation to a number of those enterprises that have been part of that group. And it is about people having a higher degree of awareness about where they actually are both economically and environmentally, dealing with risk more effectively, dealing with their production system more effectively, dealing with their human resource management issues more successfully, dealing with succession more successfully and having some perspective on where they need to go in the future which includes, in some cases; investment in off-property ventures and enterprises, which in itself is breeding a high level of resilience.

This is quite a powerful force which I think has a long way to go, but has huge potential to change the nature of the industry in the Northern Territory further. However, it requires a certain level of investment and seed funding to get people interested in the first place, get people to the point where they see the potential and benefit in it. I guess this is where the policy makers and funders at both the Territory and the Federal level have a part to play in trying to seed the interest in getting involved in these quite powerful groups.

A report conducted by the Rural Research Development Corporation, I think it was released in 2008, looked at a range of different projects - sort of extension R&D projects of this nature - and identified that in a lot of cases, the payback was close to 11-1, so for each dollar invested, the payback was \$11. From my own personal experience in viewing the power of some of these benchmarking activities and best practice activities, I would certainly see that it is a great investment of, in some cases, public money, which, once those producers understand the power of it, is very quickly replaced; the business effectively pays for those activities in some cases within the first 12 months, and they become mainstream costs of those businesses because people value the power of those exercises.

I apologise; that figure of \$100,000 - you might want to type this in to the *Hansard*, but if that figure was approximately \$6000 per year in a particular case over seven years, if someone's maths are good, that is close to \$50,000, so that figure of \$100,000 should be changed. But that is the investment that properties are making off their own operations.

In the Terms of Reference, the third point I was going to pick up on which was inquiring into long-term intergenerational impacts on the environment in the Northern Territory, and I place this in the context of also the demographics and I am not sure how well I am going to address these Terms of Reference. However; I think when we look at the long term outlook for the Northern Territory and for the primary industry sector, we have to consider that we have an increasing Indigenous population. The Indigenous population is double the mainstream population of people under the age of 14 based on Bureau of Stats data. The Indigenous population is increasing much faster than the non-Indigenous population. The issues that we have in relation to employment and economic development and addressing social disadvantage are likely to be exonerated with time. There is no doubt about the consensus in our industry that we are in this together and in order to progress, we need to lift collectively.

I will touch on this in another subject further down the track, but as an industry, we are endeavouring to address this issue with some formal programs but it is probably one of the big challenges that we have.

The intergenerational transfer and succession planning that is required in our industry is an ongoing issue that has an impact on the environmental integrity of properties and operations, and that succession also is an issue with change of ownership rather than transfer of ownership from mother to daughter, father to son. I think industry well and truly realises that we have a responsibility to leave country in better shape than it was when we took it on and that the research and development required and effective extension and education that goes with that and positive government regulation and policy that goes with that is critical to us effectively being able to achieve those environmental outcomes as we go forward with our economic activity.

Failure to address these things more holistically and look at the health of our regional and rural communities, failure to look at those holistically in terms of health and education, keeping people in the bush who are well educated, who are smart, who are able to take on leading edge technology, leading edge practices is important. If we do not do that properly, we are not going to keep the right people in our industries, in our regional communities, in our regional economies and in the Northern Territory economy as a whole. So we would certainly advocate a broader view of the environmental health of the Northern Territory than simply the technical application of best practice environmental management; it goes well beyond that, and part of that is keeping people in the bush and on-country.

I will hesitate there; if anybody has any questions.

Mr WOOD: In relation to extension, I asked the Horticultural Association - in the old days, there were plenty of Extension Officers and I suppose there were also Stock Inspectors. Has that all dropped away and if it has, is that to the detriment or has there been no real change since they've disappeared?

Mr BOWEN: I guess that the effectiveness of that extension is always an issue as you well know. Traditionally, the model of extension that was probably used 20 or 30 years ago was that sort of information transfer where you had a scientist who would be out in a paddock doing some experiments. They would decide that a better way to do something was using a certain technique. They would be passionate about that. They would do a fact sheet, print it up and then they would go out and jam it under someone's nose and say: 'If you are not doing this, you are mad'. That was sort of a 'We know best' and 'If you are not doing it, there is something wrong with you' approach. Some of those models of extension have been revised somewhat and I think it has been convenient for government to take on some of these new models because what it has been about is self-help, self-direction for primary producers whereby you encourage them to identify their reason for being there, their strategic vision for their business and for their family and then they decide from that what information they need in order to keep them on track.

It has been quite convenient for government I think, because there has been a level of self-direction and they have been able to withdraw that technical staff. So I would advocate the right type of extension, which is a new type of extension which needs to take a different approach. It is still about people identifying what their training or information needs are, but it is then following it up with the right sort of people that are trained the right way to support that rather than the old style of jamming it down your throat which did not have a very high adoption rate.

I will say that the level of extension has certainly dropped off and it is a concern and I think we have seen the result of that with some environmental issues related to forestry where we have seen probably some basic practices that have not been followed and some of those could have been picked up if we had a more active extension operator. We certainly support increased extension and the right sort of extension. It is going to become increasingly important as we now enter a phase where we have an increased complexity with environmental constraints and policy constraints of the kind such as the CPRS, for example.

Carbon reduction schemes and their likely impact on Northern Territory agricultural enterprises: the best way to probably characterise the current proposals that are on the table is that it is completely out of balance. We have signed up to Kyoto, which is largely designed around industrialised countries and carbon reduction schemes for industrialised countries, but does not carry an eye for agriculture. So the current bill does not allow for offsets because we have signed up to Kyoto and Kyoto rules do not allow it, it does not allow for any offsets other than the planting of carbon forests or trees. Now, this may suit producers in some parts of the world, primary producers in some parts of the world, but it certainly is not conducive to, in the worst case, the Northern Territory where, as I mentioned before; less than 1% of the land area is developed. Those areas that are developed are already under a little bit of pressure from alternative land use, non-food production land use. As a producer, you do not actually have the capacity in the Territory to offset your emissions if agriculture were to be included under an emissions trading scheme.

So it really only presents half of the equation because we do know that our soils, our pastures capture huge amounts of carbon. It is a matter of measuring and accounting for that carbon and a lot of that science is still yet to be done. Only part of the story is currently being told so for Australia to put agriculture under a carbon emissions trading scheme at this point in time would see the traffic going one way only and that is fall out the door or down the gurgler. I will explain that a bit more later.

The other thing is that it is not being considered in the context of other countries around the world and what their carbon pollution reduction schemes are going to be based on. We see America with their draft legislation which excludes agriculture but provides incentives for agriculture to contribute to reducing emissions through improved land management practices and agricultural practices. So it is providing agriculture with the up side and the opportunity to contribute, but it is not penalising agriculture for its natural emissions. We see Europe, which already has a scheme, does not include agriculture. So for Australia to include agriculture in the scheme at this point in time would put us out on our own, perhaps with the exception of New Zealand. Our food production sector is probably one of the most efficient in the world and we are a gross exporter of food and of agricultural produce so it would seriously disadvantage Australian industry and specifically the Northern Territory primary production sector because of the level of isolation and the predominance of beef cattle which are methane producing livestock.

So if we look at it in simple terms, with the inclusion of agriculture under a Federal scheme, under the Kyoto rules and under the current draft legislation, there will be no opportunity for offsets so the nett cost to the industry would increase. Even if agriculture was not included, and the current proposal is that it will not be considered for inclusion until 2015, there is a direct cost immediately from the commencement of the program in 2011 because of the flow-on effect of increased energy costs and the energy component and the high percentage of the products that

are used as inputs for the primary industry and pastoral sector: polythene pipe, steel, fertiliser and the list goes on, not to mention freight, which is a large component and power generation, on-station power generation which is a large component of costs.

So add to that the natural emissions from live stock and transport costs, the resulting impact, the flow on effect through production processing, transport and distribution would be drastically increased food costs and it would have a direct impact on the viability and survival of those primary industry sectors. The Northern Territory would probably be the hardest hit along with northern parts of Western Australia and Queensland because of issues of remoteness and of the fact that the livestock in this case would potentially be counted in the system. So it is a see-saw. At the moment, that is how it looks. We need to get some balance in to it. Now, if the international rules were changed so that there were opportunities for offsets; it may help balance that equation to some extent. The position of industry at this point in time is that until we know that we are not going to be seriously disadvantaged by a carbon pollution reduction scheme, we should not be putting agriculture under it, as every other country in the world has done.

I guess that represents Australia's view at the moment. Everybody is still on the bank and there is a bit of a march across, a sort of fearless march out into the wilderness there to some extent. It is not making any statement about males versus females or who leads or anything like that, but I just thought it was a bit of a demonstration of where we are at the moment.

Putting it in context, Australia's emissions are 1.5% of world emissions; 16% of Australia's emissions are said to be agricultural emissions and a large percentage of those emissions are related to non-agricultural activities such as savanna burning. In the world scheme of things, Australia's emissions and, by consequence, agricultural emissions are very, very small. So we run the risk of shooting out food production sector in the foot by going out and pioneering and setting an example to the rest of the world how good we are. We do run the risk of shooting ourselves in the foot.

There is a whole heap of dislocation which potentially that can create and I guess I refer back to some earlier points in relation to management of the landscape and the Terms of Reference of this group, which is about looking at sustainable development longer term. Now if we see our primary industries become unviable in the Northern Territory, and particularly our extensive industries such as the pastoral industry, which manages huge areas of country, we actually run the risk of having an inverse impact, I guess. We take people out of the system, we take people off the land because it is too expensive to operate and the business becomes unviable. It becomes counter productive because all these issues related to fire and feral and weeds then become a problem and we potentially produce more emissions just by nature of the fact that we are not managing the landscape.

The next one I was going to focus on is the future contribution of agriculture and ag-based products and the industries to the Northern Territory economy including employment and opportunities for regional and remote Indigenous people. I will just focus on the direct employment. Currently, direct employment is the area of 1800 people. A percentage of that is seasonal. We experience periodic shortages in the labour supply, but most of those shortages are in the more experienced areas which are often poached by mining industry. Probably in some cases, there is a good supply of entry-level staff and it has been referred to as the 'McClouds Daughters phenomenon', which is the young people that come out of the city, and a large percentage of those are young women, who have their experience on stations in the Northern Territory and in a lot of cases make a very, very valuable contribution

but leave the industry within one or two years. A very small percentage of them are staying on. What this creates is a shortage of people with more experience, and this is the opportunity that Aboriginal people have in the Northern Territory to fill some of those ongoing places in the industry if we can overcome many of the challenges that currently exist. We have seen, in the last 30 years, capital largely has replaced labour so that properties that may have historically used 30 or 40 staff may only be run with a very small handful of staff or a nuclear family. The use of technology will increasingly force change in that area.

The up side is that there are a range of practices which are probably becoming more common place which do require labour particularly in relation to livestock handling systems and that sort of thing. So there is still some traditional practices; the use of horses and hands-on management of cattle which still exist and are being increasingly valued in the industry as the consumer is demanding a product with higher welfare integrity and, in a lot of cases, physical qualities for eating and other such things.

Directly, the Northern Territory Cattleman's Association employs two full-time staff who work completely on Indigenous employment programs, one based in Katherine and one in Alice Springs. So we see it as a very high priority and it is a focus currently and is part of our strategy to assist in moving the ball forward in these regions and in these communities. It is not a particularly difficult concept to get your head around, but the application of making it work is quite challenging. There are currently about 75 people on the structured employment programs that are a direct result of our industry's involvement. It is very hard to put numbers up, but historically and currently there would be probably in excess of 200 people that have, through various arrangements on stations, historical and current arrangements on stations, are part of the workforce, and a very important part of the workforce.

Aboriginal people have some advantages - if the formula can be got right - over people from out of town because they are a source of labour and a succession in the industry that will be there for a long time to come. But we have some issues; obviously, ongoing challenges to overcome which are in some cases quite extensive.

Mr WOOD: I have got to go in a minute, I have got another meeting. You mentioned literacy and numeracy and I think I have raised this before. The complaint I had from going out to Mistake Creek was that when it came to education, Charles Darwin University has basically an 8:00am to 4:21pm training program for Indigenous ringers, yet the actual time should probably be 4:30am to 12:00pm and 4:00pm until about 7:30pm. Do you see your association having a role in perhaps trying to turn that around so the education requirements and more in keeping with what actually happens on the ground?

Mr BOWEN: Yes. That has been a major issue which has been identified. In actual fact, we see a lot of training courses that we directly run - are not necessarily accredited mapped; some of them are mapped, they are not always mapped against some of these Certificate I and II - but it is what industry is looking for and some of those are specific stock handling related courses, horse handling related courses and we basically have to source those training providers and do everything: bring them on site and do the whole thing, but it is what industry is looking for. I think the university probably still has some way to go in targeting their approach to meet the needs of industry and I notice some of the larger corporates may use the facilities, but they bring their own trainers and bring their own staff to undertake the training.

It definitely needs to be industry focused and in industry real time, otherwise people get one hell of a shock when they are all of a sudden thrown out and someone drags them out of the swag at 4:00am and normally they do not get up until 8:00am or 9:00am.

Mr WOOD: I have to leave. I am sorry about that.

Mr BOWEN: I am just about finished. The opportunities for expansion or further development in the Northern Territory go beyond, obviously, employment outcomes. The current industry's in the order of \$370m contribution to the Northern Territory economy; when we place some of the projections that I put before you in turn-off of cattle from the Northern Territory, we can see the potential for a doubling in the economic value of the industry and the flow-on effects of that over the same period of time to service industries and service the industry with technology, transport will obviously have a flow-on effect.

The added intensification and diversification of the industry with agriculture, horticulture and, in some cases, value-adding and local marketing of products, niche marketing of products in some cases, will see an increase on top of that again.

The live export market is still seen as a growth area and, as I pointed to earlier on, it is estimated to double in the next six to 10 years. There is no view why that will not happen at this point in time, barring extraneous circumstances. The market exists and we believe there is going to be an increase in demand in other countries in addition to Indonesia, which currently takes 90% of our trade.

The final point I was going to make was in relation to the implications of the agricultural sector on other land users or users of natural resources. I think, to some extent, I have addressed this to date in calling for a level of research and development extension that allows us to ensure that we are using adaptive type management so we are not getting ahead of ourselves, but we are planning at a regional and at an industry and commodity level. I think if we do it in the right way and involve all the key stakeholders in that process, we probably are not going to get a situation in the Northern Territory where we are going to be cutting off someone else's opportunity for the sake of one industry alone. So that is the extent, I guess, to which I've addressed that last Term of Reference.

That was about it!

Mr GUNNER: It was comprehensive.

Mr STYLES: Luke, Vietnam; what is our potential for live exports to Vietnam?

Mr BOWEN: The Vietnamese population is in the order of 70 million and I cannot quote you the size of that middle class, but it is obviously a significantly smaller mark than Indonesia which has some 20 million in its middle class and 260 million in the population. But I have been to Vietnam and I have been involved in a program to set up some infrastructure and take cattle in to Vietnam. I think it has got both potential. I think it is probably fair to say you need to keep that in the context that it is a nursery-type market.

Mr STYLES: So do we classify it as an emerging market?

Mr BOWEN: Yes.

Mr GUNNER: I understand one of the challenges with the Asian markets is often they will sell at wet markets. It's just a slab of meat and it could be a 14-year old dairy cow or the best cow you can get and part of the challenge is actually educating the market in the sense that you want to eat an eye-fillet that is pretty good. Where is Vietnam in that sort of scheme of things?

Mr BOWEN: It has probably got both; so it has got the meat's meat part, which is largely the wet market and people view a piece of warm meat sitting on a bench that is warm because you have only just killed it a little while ago as fresh; warm is fresh whereas we consider that warm is - well, it might be dodgy. And a piece of meat could be off any part of that animal. It could be the best eye fillet or it could be something off the shoulder. Then in that Vietnamese market, in actual fact in that same location, you have got meat that will actually be going in to some of the restaurants and some hotels there; so you will see both of those.

As far as educating the market in Indonesia and some of these other countries in their wet markets, I think that is an ongoing thing and I am probably not the best person to talk about that; but there is certainly a lot of research going in to it. Markets are certainly becoming very differentiated and very discerning now. I think probably one of the interesting things is contrary to what probably the perceptions I also had is that some of these emerging markets are actually looking at welfare and environmental brownie points that go with their products, perhaps more than we may have thought. Given the sizes of these markets, I guess it just indicates that it is not just the Europeans that are asking for a lot of these feel-good factors with their food. We are seeing it in China and a number of other countries.

Mr CHANDLER: Luke, you mentioned earlier the issues with infrastructure, particularly given that our biggest market, Indonesia, Ramadan, moving back towards the Wet Season. I suppose looking forward to when that is getting closer, would you be looking at ways to either move cattle out of traditional areas earlier or when you can and put them in to feed lots to hold them until they go over or can you see in the future the need for a stand alone port perhaps at East Arm or another area, infrastructure like that? Could you see a day where we do have a stand alone port?

Mr BOWEN: The issue of a stand alone port is something that I have not considered. However, there has been some talk in relation to a creek which comes up in an existing port, which there have been plans - - -

Mr STYLES: Hudson Creek?

Mr BOWEN: Yes; to have a walk-on facility for cattle, so it would be a large depot and cattle would physically walk on to the ship rather than being put it a truck and taken five minutes down the road and put on a ship.

I think the role of areas like the Douglas Daly, for example, and Katherine and some of those areas where there is prospective agricultural land that can be strategically developed for grazing offers probably the greatest potential during the Wet Season for turning cattle off, particularly where they are close to roads and close to good infrastructure and infrastructure needs to be improved in some of those areas already. A lot of the cattle remain inaccessible through the Wet Season in some cases in other parts of the Territory still, and in the shorter term, I think the Douglas Daly and some of those areas provide the greatest opportunity to turn cattle off in the Wet Season. That is naturally when their major feed growth is, major grass growth takes place, and livestock are putting on the weight during that Wet Season in that region.

Mr CHANDLER: Just a supplementary: in addition to growing those areas, could you see cattle in more of the areas that you couldn't get access to? I mean bringing them up in to those areas.

Mr BOWEN: Yes. That is in fact how that region generally works. So you have cattle brought from further south or east or west and they have weight put on them over the Wet Season where normally, if they stayed where they might have been bred, the Wet Season is not always the time when they put on a huge amount of weight on natural pastures. So the Douglas Daly has been quite effective in bringing cattle in. Often people in that region are simply traders so they are not breeding their own young stock to grow out; they are actually buying young cattle from other breeders and trade them, effectively.

Mr STYLES: When you put the map up and you had your areas of the Top End, Barkly, Central and then you used some percentages of increase and in the Top End, it was a 100% increase. Is that through agistment? The Douglas Day, that is in the Katherine region, isn't it?

Mr BOWEN: I probably put the Douglas Daly in that Top End region for the purposes of that exercise, I am pretty sure. I will have to go back to the original data, but I think for the purpose of that, it was probably in that region.

A lot of that also includes Aboriginal land because there is quite a bit of Aboriginal land. Also, the numbers of cattle in that region are not as high as some of those other regions, so probably if I equated that back to actual physical numbers, it might not be quite as impressive insofar as we are working off a lower base in the Top End to some extent.

Mr STYLES: So does that mean that when you say you have got Aboriginal land, is that not being utilised for agistment at the moment?

Mr BOWEN: For both breeding and agistment, that is right.

Mr STYLES: So there is an economic opportunity there for those groups of people who occupy that land to actually get in to the agistment business; not necessarily breeding but also breeding and agistment?

Mr BOWEN: Yes.

Mr STYLES: That is where we get 100% increase?

Mr BOWEN: Yes, I think that is where some of that would come from and improvement of the existing operations that are already out there. There is already one particularly very well known Aboriginal agistment facility at Twin Hills. Industry fall over themselves to get space on that agistment facility; they get very good weight gains.

Mr CHANDLER: Mind you; as you were saying, 30% in the Barkly could be far more cattle than 100% in the north here.

Mr BOWEN: Yes. And I could strip those numbers back if you wanted those figures, I would strip those numbers back and give you the raw numbers rather than simply percentages. But probably the Katherine and Barkly region, numbers wise, are potentially quite significant.

Mr STYLES: So does that mean to cater for Ramadan, some of those people who are out perhaps in the Katherine region where you are getting a lot of water issues, flood plains and stuff, to get those cattle out of some of those beef roads that are not sealed, that is going to be a major problem for you guys, isn't it?

Mr BOWEN: Yes. We think we have got problems now with infrastructure; it will be accentuated with that. Ramadan is just part of that equation. Not every cow has to be in Indonesia for Ramadan, but it is a contributing factor as well as these potential growth issues. You add on top of that mining activity, community activity; we have just seen the impact of the intervention in relation to traffic on roads has been quite amazing. Sure, it has probably generated a lot of economic activity in the Territory as well, but it has produced a huge amount of wear and tear on roads.

So it is all going one way in relation to road use and infrastructure use and demand and it is getting messy. I know the Territory government is certainly increasing the spend to some extent, but we need in the order of \$2bn and I know the Treasurer and the Roads Minister are very much aware of that and pushing strongly with colleagues in Canberra and certainly this association is doing the same thing, but we need a couple of billion of dollars to give it that help to get things up to scratch.

There is also in that transition potentially Local Government taking responsibility for some of the major roads. They are already starting to make ambit claims to increase rating of land to pay for roads and they do not actually have any responsibility for them yet, but it is a bit of an ambit try-on; which we would resist, obviously. But as Local Governments and Shires, they need to be turning their attention not to the pastoralists trying to get a bit of money out of pasturage, which might give them 10km of bitumen, but turning their attention to Canberra where we need \$2bn so they potentially may inherit a road network or part of a road network which is up to some level of respectability. Certainly inheriting what we have now, I would not want to be doing it if I was the local shire clerk and certainly you are not going to get much out of the pastoral or mining industry if to put too much bitumen on the 30 000km or 40 000km of road we need to bitumise. You might get 10km or 20 km.

Madam Acting CHAIR: Members I am going to have to draw this to a close; I have got another meeting to go to and I think others have as well.

Luke, thank you very much for appearing before the committee today to give evidence.

Mr BOWEN: It's a pleasure.

Madam Acting CHAIR: On behalf of the committee, I thank all witnesses for appearing today; NT Horticultural Association, the Environment Protection Authority and NT Cattleman's Association.

So I declare closed this meeting of the Sessional Committee on Environment and Sustainable Development. Thank you very much.