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PETER COSIER: Thank you everybody for coming to today's event, with the Premier of Queensland, the Honourable Anna Bligh, the Honourable the Minister for Environment and Resource Management the Honourable Kate Jones and, of course, Professor Ross Garnaut. Before we start, a reminder that the fire emergency exits are straight out the back door, and if you need to go to the toilet it's to your left. My name is Peter Cosier. I'm a member of the Queensland Premier's Climate Council. I was involved in the ground-breaking work that that Council did in understanding the opportunities that carbon sequestration presents for rural land holders. As I'm sure Professor Garnaut would outline today, if we price carbon effectively there is potential and there are opportunities.

Professor Garnaut was commissioned last November to update his 2008 Climate Change Review. His report is due to be presented to the federal government by the end of May. In the lead-up Professor Garnaut has been releasing a series of papers so that we become more informed into the details of the climate change discussions. He has released three papers early this year in February weighing the costs and benefits of climate change action, progress towards an effective action on climate change, and global emissions trends.

Today we are honoured to hear Professor Garnaut speak to the release of his fourth paper which is titled Transforming Rural Land Use. There will be time at the end for question and answers, but first of all let me firstly invite the Premier, the Honourable Anna Bligh to give a few words. Thank you.

HONOURABLE ANNA BLIGH: Thank you very much, Peter. Well, good afternoon, ladies and gentlemen. It's a great pleasure for me to join with you in welcoming Professor Ross Garnaut to Queensland for this event. In doing so can I also acknowledge my Minister for the Environment and Natural Resources, Minister Kate Jones, and Parliamentarians Ted Sorensen from Hervey Bay and Vicky Darling from Sandgate. It's great to have people here from our Parliament.

Well, the last time that Ross Garnaut was embarking on a series of public discussions in the lead-up to his very seminal report in 2008, he issued an invitation to people to come along and hear some of the early workings before he submitted it finally to the Federal government. We held it in the Town Hall, and those of you – some of you here today will have been there, will remember that he certainly knew how to draw a crowd then. The Town Hall, unfortunately, Professor, is currently under renovation. So we're here today and you've done well at drawing a crowd again. So welcome. We're always pleased to see you here.

You must, as I do, and no doubt many others in the room, have a real sense of déjà vu about the debate so far on this issue. It's clear we have quite a long way to go before we see broad political support or, indeed, community consensus on a number of the issues, which is why I think it's so important that Professor Garnaut is not releasing these update papers as part of the road to the next major piece of work but is doing so in different states of Australia, and giving people an opportunity to come and hear from him

directly, and I thank him for bringing this event to Queensland.

Queensland has a particular interest in climate change and in tackling climate change. Firstly, we are a very high emitting state. That means we've got particular responsibilities and obligations in our view. Secondly, we are the guardians of some of the most extraordinary natural assets, not only in Australia but on the planet. We have incredible biodiversity and we also are the guardians, for example, of the Great Barrier Reef and substantial World Heritage areas, all of which stand to – all of which will be very vulnerable with rising global temperatures. Thirdly, as we've seen with flood and cyclone events this summer, Queenslanders are – we got a devastating reminder of just how destructive this state's climate can be and what the climate scientists are telling us is that we can expect these sorts of events more frequently, and that they are likely to be more severe.

So when you add up all the cost of flood and cyclone damage in just one summer in our state I think you can start to put some context around the cost of inaction, as well as potential costs of action. I was very – not so heartened to note Professor Garnaut's comment on our disasters where he said, "If we are seeing an intensification of extreme events now you ain't seen nothing yet." That was not very cheerful news, but I think it was very sobering and confronts us with some of the challenges that we really do have to grapple with.

The debate, I think it's fair to say, is more fractured now than it was two years ago which, in many respects, puts the responsibility on our scientists on people like Professor Garnaut to put material into the public arena that can help people to understand more this very, very difficult policy area. But I don't think we should get disheartened by the fact that the debate is fractured. I think again, Ross Garnaut – to quote Ross Garnaut, he identified this as a diabolical policy issue, and it's useful, I think, to look back at some of the other diabolically difficult policy issues we've dealt with as a nation.

It actually took us a very long time, for us in Australia, to put together a National Health Scheme for example. It was diabolically controversial when it happened, and nearly 25, 30 years on we are still tinkering with it. So there is nothing new or unusual with difficult policy issues, and I think we have to have confidence about our ability, as a nation, to deal with some of those issues when they arise.

We're spending a lot of time in this debate talking about the cost of action on climate change. What I think we need to do is balance that by recognising not so much what we might lose, but rather what we can gain, and here Queensland also stands to do very well. We believe that in Australia there is no country better placed for a low carbon economy. We have intense radiation for solar power. We are close to the world's richest hydro-electric power resources across the shallow stretch to PNG. We are seeing advanced development of algae as a low cost source of biofuels. We are home to the world's richest deep rock geothermal resources, and we have huge resources of coal seam gas as a transition fuel.

So there is potential for massive investment here, and potential for transformative technologies to be developed here. But perhaps the biggest sleeper is the opportunity in the rural sector, and that's the work that we'll be hearing more from Ross today.

Queensland is in a unique position. Because of the size of our state and our historical tenure of Queensland where 63% of our state is government-owned and held in leasehold, makes Queensland and the Queensland government the third largest land holder in the world. There's been plenty of regulation on leasehold over the years to see great public

benefit, and the vegetation management laws are probably the best example of that.

To understand more, the potential for biosequestration and carbon sequestration the Climate Change Council, the Premier's Climate Change Council that I appointed, worked with the CSIRO to try and better understand what the opportunities are for biosequestration of carbon. The report is ground breaking. It is the first in the international environment to look at it in this level of detail, and it identified that the total potential for emissions savings in Queensland using this method from rural land was approximately 225 megatonnes of CO2 per year.

Now, that's only realised if every single possible ounce of land that we own was used. But even if we used half of it, or less than half of it, for this purpose what you would see if you put in context, our current annual emissions in 2006 were 171 megatonnes. So it would make a very big dent in what is a very difficult problem.

We also believe that the best way to achieve this is through an incentive-based project, sorry, program and that is why we are very keen to see what the Federal process will deliver by way of a carbon price. If there is a market demand for those credits, then that's where the carbon price can come in. It has to be set at a price that will provide an incentive to rural landholders to go down this path. Bio-carbon capture may provide graziers in some of our regions with the opportunity to generate new revenue streams from otherwise unproductive land. When I talk about our landholdings many, many, many hectares of it are largely unproductive in their current form.

So there is a big opportunity here. We want to see that opportunity realised and I'm absolutely delighted to welcome Ross Garnaut here to outline the next stage of work in this very important area, and to say, Ross, in Queensland we like to see things as opportunities not problems and we welcome you up to come and talk to us about it.

PROFESSOR ROSS GARNAUT: Thanks, Premier, always good to be in Queensland. Minister Kate Jones, members of the Office of Climate Change in the government of Queensland and the Climate Change Council, and friends who are interested in these issues. As the Premier mentioned Queensland has been at the forefront of analysis and discussion of a lot of the opportunities in the rural sector for contributing to Australia's mitigation task – a lot work sponsored by the Climate Change Council as identified more precisely than elsewhere in Australia, the technical opportunity for biosequestration through careful land management and, as the Premier said, if that's properly priced, if it's recognised within a system then that can be not only a very big contribution to the overall mitigation effort that Australia has to make but also a big contribution to farm incomes.

Australia has always been a country of climate extremes and Queensland knows that better than any other state. The health of Australian farming will continue to depend on effective management of weather and climate uncertainty. It is increasingly clear that the world is moving towards more rapid and severe climate change. So what we've always had to do we'll have to do more of and better.

The science is telling us that climate change will be associated with significant warming which will change optimal planting and harvesting times, and the crops cultivars and animal types that do well in each region. It will reduce water runoff even if there is no general effect on rainfall, and so reduce water available from rivers and streams for irrigation. It is likely to increase the intensity of extreme events, heatwaves and associated bushfire, cyclones in tropical regions, episodes of exceptionally high rainfall

and drought. The impacts of accelerating climate change will intensify the climatic challenge to rural Australia. It's not new. It's not a new challenge, just harder and more of it.

Land use planning will need to identify the change of future climate change – the range of future climate change risks and to consider how best to take these into account. Increasingly, farmers will need to understand and actively manage these risks to ensure the success of their activities in a changing climate.

All of these effects are likely to be significant, even if there is strong successful global mitigation from now directed at holding the increase in global average temperature below 2 degrees centigrade above pre-industrial levels, the objective that the International Community set at Copenhagen. Any delay or failure in global mitigation will increase these effects. Mitigation will have a cost to rural Australia as it will for all Australians, including some opportunity costs to conventional rural production, but that's not the whole of the story.

When the government collects revenue through a carbon price, an emissions trading scheme, as the Prime Minister and others announced last week under the government's proposal, a fixed price of the scheme for some years – the money that's collected from sale of permits, emissions permits, doesn't just disappear. It goes back into the community or the government and the Multi-Party Committee on Climate Change have committed, amongst their principles, to all of that going back into the community. And so to judge even the direct immediate effect of a carbon pricing scheme couldn't not only look at the tax but what it's used for.

It's not reasonable to look at the effects of a tax without looking at the effects of the tax cut that it will finance. It's not reasonable to look at the effect of a tax without looking at the effect of the support for research into new technologies in rural Australia that it will support. You've got to look at the package as a whole, and that's going to be very important for rural Australia. Look at the package as a whole. It doesn't exist yet, but look at the package as whole and I'll be talking about this in paper number 6 in a couple of weeks on the carbon pricing arrangements that I would suggest in the new circumstances for Australia.

When you're looking at the effects of carbon pricing on rural Australia it's also important to remember that a lot of the new energy sources that will be encouraged by carbon pricing will have their best locations in rural Australia, almost across the range of renewable energies and low emissions energies, renewable energies like wind and solar and mixtures of solar and wind with gas and, obviously, gas itself and bio-mass geothermal and other sources of low emissions energy.

So in looking at the balance sheet on the effects of mitigation, a strong effort in mitigation on rural Australia, one needs to take that into account. And, possibly, the biggest of all in the balance will be the opportunities for biosequestration that are encouraged by the pricing of carbon. I'll say a bit more about that today, but it's potentially a very large effect, as the Premier said, potentially transformative for rural Australia.

Necessarily uncertain in its extent until you've actually got the incentives in place and farmers start making their decisions on how to use it. This is not an economy that runs through central planning. It runs through firms responding to incentives and we will know how big it is once we watch responses to the incentives. But one thing we can be sure about, there'll be no effort specifically to mitigate carbon through our - to sequester carbon through our opportunities in rural Australia if there's no incentive to do so

and the bigger the incentive the more of it there'll be.

In this complex new world that the Australian rural economy will be working in, a new world affected by climate change with new opportunities for earning income through involvement in biosequestration, in this new world it's likely that food and fibre prices will rise relative to other goods and services after many years of decline. Those prices will rise much more if we're not successful in mitigating climate change. The change could be large. Already we've seen how botched approaches, regulatory approaches to mitigation have led to very big distortions in the rural economy in Europe and the United States where they relied on encouraging use of biofuels, not through a general carbon price, but through mandating large proportions of fuels to be required to come from biological sources.

That led to a huge shift in land from producing food to producing biofuels and it's one of the elements between - behind the big increase in world food prices over the last three years. And in the longer term climate - well, already but much more in the longer term climate change itself will be creating problems for rural production and therefore raising the price of food. Higher prices are not good news for everyone, but they're good news for Australian farmers, so long as you're able to keep producing like you were producing before and the problem with climate change is you'll have higher prices but you won't have as much to sell into them.

The carbon emissions from the land sector in Australia are associated mainly with agriculture and forestry but increasingly will come to focus on other aspects of land management including land management by Indigenous Australians in areas that that - over which they have control. Increasingly opportunities for biodiversity conservation and general woodland conservation will all be part of what we think of when we think about opportunities for biosequestration in Australia.

The land sectors are already a big part of Australia's emissions profile and represent a very high proportion of our opportunities for low cost reduction of emissions, and this is because of our large land area and agricultural and forestry production relative to population. There was a chart in the 2008 review that showed woodlands per capita of all the developed countries and Australia is like that and the others are like that. We are different from other developed countries both in the importance of emissions from the rural sector - in that we're exceeded by New Zealand but we're pretty different from the rest. But above all we're distinctive in our very large opportunities for biosequestration through managing our land in a different way.

New opportunities to increase farm incomes through various carbon sequestration activities will be interacting with other aspects of other changes in the farm scene that I've just mentioned and the farmers who do well in that are the farmers who've always done well in Australia, who are able to adapt to different opportunities for doing things more profitably who stay on top of the latest scientific information . You wouldn't have much farming at all in Australia if, from a very early stage, we hadn't based that farming on scientific knowledge. We had to just discover a lot of new knowledge to make farming profitable in Australia, and in this new world we'll have to do - continue to do that only more so.

Australia is exposed to greater risks of damage from climate change than any other developed country. I went through the reasons for that in the 2008 review. But we've got more opportunities for reducing emissions and for effective participation at global mitigation effort than any other developed countries. These two interests together argue for Australia doing what it can to encourage comprehensive mitigation efforts internationally and the fact that we've got very high emissions in our rural economy, but also very large opportunities for reducing emissions gives us a very strong interest in

seeking, in the international system, more comprehensive accounting for emissions. So that the value of rural abatement is properly recognised which it is not now under the international rules. That's partly because we took ourselves out of the game for a number of years in the early 21st century.

The international rules were developed with, in my view, excessive influence from Europe because Australia and America took themselves out of the game. So the rules are not as good as they would be if we'd had a big influence and there's certainly not as good for Australian farmers as they would have been if we'd had a big influence during that period. If we'd been a full participant in the international system in the early 21st century. We can correct that. Things are being done now to correct that but it takes time.

Well, maximising the opportunities available to the Australian land sector in a world of climate change depends on the eventual coverage of the sector in a carbon pricing scheme. One can do some things without that but with our - there is increased sequestration in soils building up of soil carbon is going on in parts of Australia as the sciences come to teach Australians that there are productivity benefits from that. But we won't utilise the full opportunity without proper incentives, and you're not going to get incentives that truly reflect the value of the abatement unless it's linked, unless the abatement in the rural sector - the selling of credits for biosequestration is linked to a carbon pricing scheme.

I think it is not - I think it's foolhardy to expect that we will get very, very large quantities of abatement purchased by an Australian government simply off the budget without a carbon pricing system in place. And so providing the incentives for sequestration in the rural sector depends on having the carbon pricing in place and if we don't have it in place we will be short-changing the Australian farmer in trying to get them to participate in biosequestration.

So I'd like to say something about the recent carbon farming initiative papers put out but the federal government that represent a major step forward in recognising abatement in rural Australia. I think this is a very positive initiative. I think it's a big step forward but I've got some suggestions to make on how it can be made better. In 2008 the review argued that interim policies will be required to encourage mitigation in the agricultural sector until it was fully incorporated into a carbon pricing system. The carbon farming initiative which has been announced by the federal government and really sets papers available for discussion at this stage. It's important because it provides - it would, if implemented, provide an incentive for reduction in sequestration of emissions in Australia's land sectors.

It would provide valuable lessons in Australia and internationally on the administration of land sector incentives and it would also lead to learning by doing improvements in technologies applied to emissions reduction and sequestration in the land sector. The government's proposed design provides substantial encouragement of new emission reduction and biosequestration while constraining the risks of giving credit for activities that do not deliver real abatement.

Experience with the associated mitigation options and reporting methods will be useful in testing coverage design options prior to any transition to full incorporation of the rural sector into a carbon pricing regime. The carbon farming initiative, I'm pleased to say, puts the right and very strong emphasis on permanence. You don't want to reward carbon sequestration in trees or grass or soil if it's only temporary. You need to be able to measure the contribution over time so that you're only rewarding permanent sequestration. Naturally there will be fluctuations over time and you have to

have ways of handling that in your measurement of emissions, and the initiative has got proposals that I think handle those things pretty well.

The level of participation in something like the carbon farming initiative is likely to grow gradually as land holders gain an understanding of the scheme requirements and the opportunities and risks.

The two aspects of the scheme that require further consideration and I'm recommending further development, some change in the scheme, are these: first there's a requirement of financial additionally in the carbon farming initiative. The requirement is that farmers would not have done what they are doing purely for financial reasons in the absence of a carbon price. I argue in the paper, the update paper that's being released now, that this is highly subjective test, a bit metaphysical. What would the farmer really have done?

Now there's some sensible rules in the carbon farming initiative that try to give some greater certainty about that and they're all to the good. But I'd go a step further, I think that what matters is that there is genuine abatement above a base level and if you've demonstrated that then I don't think it's necessary for environmental reasons to prove financial additionality, in general, to prove that the farmer wouldn't have done it for other reasons anyway.

And the second change that I'm suggesting is the linking of an emissions trading scheme to the carbon farming initiative and I'm suggesting two types of links. First, for the - for those credits that are currently allowed under the international rules, called the Kyoto rules because they emerged out of the discussion that followed the Kyoto Agreement, I'm suggesting that anyone managing land, owning land, be able to sell credits to liable entities under the general scheme.

I'm also suggesting that for non-Kyoto credits, those that are not currently recognised under the international rules but which, in principle, should be recognised, which might have been there if we'd been a sensible participant in the international discussion all along, then these be recognised by the regulatory authority using part of the carbon revenue to purchase credits of this kind. A lot more detail about that is in the update paper which we're releasing today.

I know that concerns have been expressed at the opportunities for low cost sequestration in the land sector may be so large that the purchase of Kyoto credits at low prices by liable parties would reduce excessively the pressure on liable entities in other sectors to reduce emissions. The concern, and it's a reasonable concern, is that if there's a whole lot of low cost abatement in the farm sector and you let liable entity, a steel maker or a power station, go and buy credits from the farm sector that you'll get a lot of abatement in the farm sector, but it'll take the pressure off change in the energy sector and the industrial sector.

Well, is this a real cause for concern? It maybe that once it's in place these incentives will reveal large opportunities for low cost abatement in the land sector. Only time and experience with incentives will tell how much. However it's unlikely that the price for offsets would be pushed significantly below the fixed price proposed by the Australian government for the early years of carbon pricing in Australia. It is therefore unlikely to reduce pressure for reduction in emissions by liable entities under the carbon pricing scheme. They would face the same prices for emissions as they would in the absence of the carbon farming initiative.

If you do the things the way I propose then the energy company, the electricity generator or the aluminium plant, will have to pay something pretty close to the going carbon price to the farmer and so will be under

pressure to reduce their own emissions. And I set out in the paper some reasons why I think this is the way things will work. That's not to say that there will be no problems with the unlimited linking of Kyoto offsets to the scheme in the way that I've proposed. The sale of offsets to liable activities would reduce the number of permits that the energy company or whoever the buyer is from the farm would have to buy from the regulatory authorities. So there'll be less government revenue.

Now it's an important premise of the work that the Multi-Party Committee on Climate Change and the government have embarked upon, a premise that was reflected as one of the principles that the committee put out a few weeks ago, that this whole exercise should be budget-neutral, and if you've got a completely unlimited and open-ended claim from one sector, in this case the offsets, then you could get the significant effect on government revenue, and if you've already promised tax cuts and support for some trade exposed industries and support for a development of new technologies then it may not add up to the budget neutrality which is a premise of this exercise and which, in Australia's economic circumstances, is an important premise.

That premise is there for good reason and there may need to be in the early stages some limit – I would hope it would be a large limit – and I don' think that limit will be approached in a very early stages. At a later stage, we may find that that leads to pressures from the rural sector for unlimited involvement in the carbon pricing system, and that could be the subject of review a number of years down the track.

Another concern that is sometimes expressed about the possibility of very large numbers of credits being earned by encouraging the sequestration of carbon in land, on Australian land, is that the largest benefits in some locations at least might be available from - simply from plantation forests. There might even be a financial incentive to clear diverse native woodland, and replace it by plantations because you can get more carbon out of a plantation of pure blue gum if you can keep the disease away from it than you would from the diverse native forest or woodland.

I think the way to handle this, and I discuss this at some length in the paper, is to recognise separately the value in Australia of biodiversity And Queensland is one of several State governments that has put quite a lot of effort into recognising and rewarding a return of land to biodiverse uses and, well, when you have such developments which are also contributing to accumulation of carbon and increasing sequestration of carbon, then I'm suggesting that that land should qualify for support from two sources. They should be able to get the carbon credit and the credit for biodiversity. If you've priced both well, then you won't get perverse decisions resulting from the excess incentive to turn diverse woodlands into a monoculture plantation forest because there's an incentive on the carbon sequestration and no recognition of the value of biodiversity. More of that in the paper itself.

The paper discusses, at some length, the key opportunities for biosequestration in rural Australia. I've been using the word "biosequestration"; some people might not be familiar with it. It's the use of biological processes, natural processes, the processes that started life on earth – absorbing carbon dioxide from the atmosphere into plants and algae and then having that carbon stored as organic material, first in living organisms and then, when they die, in the soils or at the bottom of oceans. If you wait long enough and put it under enough pressure and heat, you've got coal and gas and oil from it all.

It's those processes of biosequestration that created the conditions for life on earth – well, for animal life on earth. It was that natural process of biosequestration that led to the emergence of the oxygen-rich atmosphere that made the respiration possible – made animals like us possible on this

earth. But, in addition, the absorption of carbon dioxide from the atmosphere through those natural processes created the cooling effect that made life liveable on Earth. It's why Earth has an equable climate that's different from the climate of Mars or Venus. And we're talking about – it's not a new scientific invention when we talk about biosequestration; it's just using these ancient processes that laid the basis for human civilisation, but using science and all the things we know now to do that better – in some cases speed it up.

Finally, a few words on a couple of other concerns that are sometimes raised, I know there is a concern about how mitigation of climate change could damage food security, and people have in mind the distortions that resulted from the biofuels incentive – the mandatory requirements to use very large proportions of biofuels for transport in the United States and Europe – the effect of that on shifting land from producing food to producing biofuels with very limited environmental effects.

As I've said, the effect of that is to – or the proper response to that is to make sure you are providing incentives in an environmentally and economically efficient way, and economy-wide carbon pricing does that. You won't get those distortions which we have seen in world food markets if we've got an economy-wide carbon price. I can talk about that in more detail later if people would want to. But the big threat to long-term food security in the world is the threat of climate change itself.

I make extensive reference in the paper to a new paper from the International Food Policy Research Institute, some of the world's very good economists drawing on some of the very good scientists working at IFPRI. That's an organisation that I chaired for quite a while based in Washington DC. I retired from the Chair last June, so either they've continued the good work or they've improved their work since I left, because it is a very good paper. And it looks systematically at all of the long-term influences on food security, and it says that world food security is under some threat anyway, largely because of – well, it's the opposite side of the coin to one very good thing – the spread of rapid economic development into the developing world from early this century.

I call this period from early this century when you've had a spread of developing countries participating in modern economic growth in a very strong way – I call this the "platinum age." It's a new historic era. It's taking people in developing countries out of poverty more rapidly than ever before in human history. Well, the other side of that coin is they're spending more money on food, more money on high-quality food when you shift from a rice diet to a pork and chicken diet. There's an awful lot of grain in a densely-populated country that goes down the necks of the chickens and pigs, and you end up using several kilograms of grain for every kilogram of meat.

So that's leading to a reversal of what had been, for 50 years, a decline in global food prices. That's happening anyway. Now, if that was all that was happening, we'd still have a bit of a challenge as a world in food security because, while the developing countries where people are growing rich can afford to buy a lot of food, China has got a great drought in the North China Plain right at the moment which is significantly damaging grain production. It might be their worst season – well, the biggest setback, biggest reduction in grain production for a very long time. But the Chinese won't starve because of that, because China has got plenty of foreign exchange reserves. But, of course, rising food prices is a challenge for poorer people in poorer countries.

The international community needs to be aware of that. It's the other side of the coin to the growth of incomes in many developing countries. But, with

good policies, international and domestic, you can even handle that food security challenge. What will be very difficult to handle is if food prices are pushed up even further than they are going to go anyway by unmitigated climate change and, as the authors of this very good piece of work from IFPRI conclude, especially once we get beyond 2050 in a world of unmitigated or weakly mitigated climate change, these problems of global food security may be unmanageable. Thank you.

PETER COSIER: Thanks very much, Professor Garnaut. I think Professor Garnaut's paper is testament to the growing sophistication of our understanding of the implications and opportunities presented in effective climate change action. His paper, the paper he's just spoken about, is about land management, and he has raised a number of issues that we, over the coming months and years, are going to have to grapple with. Just to let you know that the Professor's update paper is or soon will be on the Garnaut Climate Change website.

Now, I'm sure you have some questions. We have about 10 or 15 minutes available for questions, so if I could invite the Premier and Professor Garnaut to come to the podium – just Professor Garnaut? Could I just invite the Professor to come to the podium?

I'm under strict instructions to be quite ruthless with questions, so what we've done is devised the microphone so it automatically cuts off after 30 seconds. Can you please just restrict your questions to one question so we can get through as many questions as possible? Yes, sir, there's a microphone coming.

QUESTION: Many farmers have small returns that might find the incentive of carbon biosequestration financially attractive. How will the question of permanency of those plantations – could distort a market correction to rebalance food prices against carbon prices when you'll see more of what's happening in places like northern Tasmania and Western Australia where you get good agricultural land put over to tree plantations. How are you going to correct for that?

PROFESSOR ROSS GARNAUT: Yeah. There has been an artificial encouragement of plantations through some of the tax arrangements in that sector but not in others. Economists don't like that sort of distortion in the tax system because it does encourage some activities and not others. One could see that as milder version of the sort of distortions you get if you rely on regulation for mitigation, like the Europeans and Americans did in the encouragement of biofuels. So let's put aside the extreme pressure that have come from distortions in our tax system, which have been partially corrected.

But more – if you have a general carbon price going through the economy, at the margin there will be some land that was otherwise food land going into biosequestration, but the modelling that we did, which I must say was confined to the Kyoto credits, not to the wider opportunities – but that modelling showed that the land that went into biosequestration into plantations was relatively low-quality agricultural land.

So you had growth in farm incomes without very big sacrifices in farm production. I would let the – this would be mainly the result of farmers' decisions on how they can best make use of their own land, so long as we've got in place economically-sensible levels of pricing of carbon, and where you get big distortions is if you get regulatory incentives that don't take any account of cost or value. And if you've got proper recognition of the value of biodiversity, then these two things in them will – if you've set the incentives right will end up with the right balance.

There will be some at the margin – some increase in food prices resulting from the shift of land, but this will be small and it won't be anything like the distortions we've seen through botched mitigation policies in the Northern Hemisphere.

QUESTION: I'll shout. I'm intrigued at your suggestion that we recognise, if you wish, biodiversity credits as well as carbon credits and that, obviously, will be hugely welcomed by the biodiversity community, but how do you see us processing towards a pricing policy for biodiversity? It's proving sufficient of a problem with carbon, which is a simple (48:50) metric thing. Any ideas there or what (48:53)?

PROFESSOR ROSS GARNAUT: Well, the Prime Minister and Minister for Climate Change gave me quite a big job and told me to finish it by May, getting carbon – making some suggestions for carbon pricing. Until I get that done, I won't have much time for getting the systems right there. But there are some good models developing, and I refer to them in the paper – models, for example, in Victoria and Queensland and New South Wales. So have a look at the paper. I think we've made some progress.

PETER COSIER: Perhaps we could ask Professor Garnaut to answer that question in June. Yes?

QUESTION: Thank you very much Professor Garnaut. What's your view on good quality agricultural land and otherwise productive land that could achieve biosequestration outcomes being lost to mining activities such as coal seam gas?

PETER COSIER: Did everybody hear that question?

PROFESSOR ROSS GARNAUT: Yes, this is a real hard one. If the question is only one of use of land for food or for coal seam gas then, as a community, we will often get very high value from a rather small amount of land in those mining uses, and we always have to establish balances in these things, and when you get very high value from one use, like gas, and only moderate value in another use, then it's reasonable to let the high-value activity proceed, so long as the community is getting full value out of its resource and so long as the people whose interests are affected are properly compensated through proper mechanisms.

So this might seem like a pro-mining response, but I think that there is a case in the national interest where you've got a very high-value use, like land; you just have to make sure that you've taken into account all of the interests that have been damaged by that and make sure that they're properly compensated and, if there are environmental impacts, that they're properly recognised and something is not seen as a benefit if it is having a lot of incidentally large damaging effects on the environment.

PETER COSIER: Yes, up the back. Thank you.

QUESTION: Hi (51:30) Mr Garnaut, you and the Premier talked about the benefits of a price on pollution to landholders to help people better improve their framing practices, to help (51:44) and the Premier also in what it can do for this State in terms of a low carbon economy in generating new industries like solar, geothermal, et cetera, but you also talked about the need for the

incentive, which is what the price does.

PROFESSOR ROSS GARNAUT: Yeah.

QUESTION: Can you please comment on Mr Abbott's statement yesterday that he would repeal the price on pollution and what that would do to your quest for certainty?

PROFESSOR ROSS GARNAUT: Oh, well, we're at an early stage of a very hard – of dealing again with a very hard policy issue in Australia. What I'm hoping is that my work can contribute to some sober discussion based on facts and analysis that will at least provide a basis for policy discussion in the independent centre of the Australian polity. This is a really hard issue. It's complicated. It's easy to take slogans to it. But I think that, if we in the independent centre of the Australian polity insist on facts, analysis, then what we might think of as the noise of Australian politics won't dominate outcomes. That might be – that might be too much of a hope, but Australia has done it before. At our best, we're good enough.

PETER COSIER: Yes, at the back there, thank you.

QUESTION: I believe you touched on the issue of the first outcomes which are of equal concern to both farming and conversation, I suppose – one from the biodiversity respect and the other from the food security respect, and based on the water perspective, and I think you mentioned, well, in your new book about (52:48) of biodiversity projects which is obviously some time off. I wondered if you might comment in the meantime with the opportunities we might have to deal with this, because this is a common concern across all sectors, and that has been mentioned, be it in statutory (53:06) as a means of (53:10) priorities as another mechanism to make sure that we (53:16) those outcomes.

PROFESSOR ROSS GARNAUT: Yeah, if we don't have – we're already starting to put – as a nation, already starting to put incentives for biodiversity in place, so we're not starting from scratch. But, if we're not satisfied we've reached a point where we're adequately reflecting the value of biodiversity and other incentives, then there is a need for regulatory support for biodiversity. I say in the paper that's best done at a local level, because a lot of the externalities, the effects on other people of one person's land use decision, are local but, yes, if we're not getting there with the right system of support for – an efficient system of support for biodiversity, then planning mechanisms for land use have a role.

PETER COSIER: We have time for one more question. Yes, sir.

QUESTION: Thanks. The Committee for Climate Change in the UK at least had a similar role as you do here, and included in their recommendation to the UK government reference to the current climate science view that, to achieve the UN target of two degrees C temperatures, it will be necessary to reduce the parts per million CO2 to around 330 ppm. I noticed that in the first three update papers it was still talking about 450 and, indeed, 550 ppm, so I wondered if you could say what you will be recommending to the Australian

government.

PROFESSOR ROSS GARNAUT: Yeah. I need – I'm bringing out my science update next week, and the latest documentation from the British Climate Change Commission is something that I haven't actually caught up with in detail yet. But, more generally, on my – the increasingly strong statement from some parts of the climate science community, that to avoid big risks of climate change, we need to get to 350, I'd say a few things. Unfortunately, the science does seem to be telling us harder things. Increased information is on the bad end of the range of possibilities, so that seems to be the trend. I'll be talking about that next week. The second important point is that it's not actually practical to hold things at 350. To get there we will – it's almost certainly the case that, whatever the risks, we will be overshooting 450 parts per million of carbon dioxide equivalent. Presumably that 330 was carbon dioxide, not carbon dioxide equivalent?

QUESTION: The 330 was CO2 equivalent.

ROSS GARNAUT: Equivalent, okay. Well - - -

QUESTION: Sorry, wrong, no, CO2.

ROSS GARNAUT: Yeah, CO2. But, even so, it's probably, say, 400 CO2 equivalent. We're well past that now. It will be one heck of a job stabilising anywhere near 450. That will require some overshooting and pulling back. The path to some more ambitious goal goes through – goes back through 450. If we're ever going to get to more ambitious objectives, we first have to get to the very hard objective that the international community set itself to in Copenhagen.

So that doesn't make me want to give up because, by the time we were making progress towards 450, we would have shown, as an international community and as a national community making its proportionate part, that we could do it, that we could reverse these big strong trends that have been going in the other direction. We would have interests created in biosequestration, in renewable energy, that would be helping us push that further.

We would – to get anywhere near the sorts of numbers that you just mentioned, we would have to be pulling a lot of carbon dioxide from the atmosphere. Well, it's been done before. Algae did it a billion years ago and we're cleverer than that algae. We can use that algae. But – so science and technology were – once we've got the incentives in place, including incentives for research, development and commercialisation of the new technologies, we'll be developing the mechanisms that we don't yet have but which we would need to reach that objective. So I think that, if we're making progress towards 450, we're on the only path through which we would ever get to more ambitious objectives. And I think to aim straight for those very ambitious objectives would be to make the best the enemy of the good.

PETER COSIER: I think that's a very good place to conclude the question and answers. And Professor spoke a lot about opportunity, and I think if we look at opportunity rather than negative, I think we'll make great progress. Could I please invite the Minister for Environment and Resource Management to close this meeting? Thank you very much for coming, everybody. Thank you very much.

KATE JONES: Thank you very much, and it's my great pleasure to thank Professor Garnaut for choosing to launch his fourth paper here in Queensland, Transforming Rural Landscapes – and I think that – Rural Use – and I think, as you heard from the Premier's contribution and both – and Peter Cosier as well I'd like to acknowledge and thank for his role today in MC-ing but, more importantly, for his leadership in his role on the Premier's Council of Climate Change.

This is an area in Queensland that we have, for some time, seen that there are great opportunities here for us, not only in delivering better environmental outcomes and also into biodiversity, which I think your report really does put centrally on the stage about how important that is and how we can work towards that. But this is something that we recognise and commissioned the CSIRO to do significant reporting into, and we released that report in 2009, and I think that, in your paper, this actually builds on the work that we've done here in Queensland.

There are huge opportunities here, particularly for our rural land users, and that is exactly what we want to see here in Queensland. So we look forward to working with you and, with the release of this paper, I'm hoping to see that we do get sober discussion in regard to this policy. This is something that we will continue to work on at a Queensland level with our key stakeholders to make sure that farmers aren't getting short-changed and that they are getting the full price of what can be delivered in our landscape through biosequestration.

So, with those few words, I'd like to thank you, Professor Garnaut, the Premier, and Peter for their time here today, and all of you for taking an active interest in what is a key challenge for Queensland – and no-one is denying that – but also a major opportunity that, if we get those mechanisms right, we get those incentives rights, then we can actually see huge changes and huge biosequestration in our landscape. So thank you, Professor.

- ENDS -

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