



HOUSE OF REPRESENTATIVES

STANDING COMMITTEE ON ENVIRONMENT, RECREATION AND THE ARTS

Reference: Trading in greenhouse gas emissions

CANBERRA

Monday, 25 May 1998

OFFICIAL HANSARD REPORT

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HOUSE OF REPRESENTATIVES
STANDING COMMITTEE ON THE ENVIRONMENT,
RECREATION AND THE ARTS

Members

Mr Causley (Chair)

Mr Anthony	Miss Jackie Kelly
Mr Billson	Mr Kerr
Mr Brown	Dr Lawrence
Mr Eoin Cameron	Mr McDougall
Mr Entsch	Mr Mossfield
Mr Hockey	Dr Southcott
Mr Jenkins	

The committee will inquire into the regulatory arrangements that would need to be put in place to support a market in greenhouse gas emissions including:

mechanisms for measuring, verifying and monitoring emissions and the compliance with contracted arrangements;

mechanisms to integrate emissions trading with the development of carbon sinks (such as timber plantations, gas aquifer reinjection, soil rehabilitation etc), including the science, measurement and security of such arrangements;

the allocation of the right to emit greenhouse gases;

regulatory mechanisms to support a national market and potentially an international market in emissions trading;

possible emission traders, administration and transaction costs;

roles and responsibilities of governments and other stakeholders; and

the impact of emission trading on the environment and industry and the economic and social welfare of the Australian community.

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Trading in greenhouse gas emissions

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Present

Mr Causley (Chair)

Mr Anthony

Mr Jenkins

Mr Billson

Mr McDougall

Mr Robert Brown

Mr Mossfield

Mr Eoin Cameron

Committee met at 9.03 a.m.

Mr Causley took the chair.

CHAIR—I declare open this public hearing of the House of Representatives Standing Committee on Environment, Recreation and the Arts for its inquiry into the regulatory arrangements for trading in greenhouse gas emissions. This inquiry was referred to this committee at the end of October last year by the Minister for the Environment, Senator Hill. Sixty-five written submissions have been made to date, and the committee has held public meetings in Sydney, Brisbane and Melbourne. This is the first of several hearings in Canberra.

The inquiry is focusing on the arrangements that should be put in place for a domestic emissions trading scheme. As the committee collects information about the best sort of scheme to recommend, it will be looking for mechanisms that will ensure that emissions trading contributes to emission reduction as equitably, effectively and efficiently as possible. It will be looking for ways to provide maximum certainty at minimum cost for the environment, the emitters and the creators of sinks.

The committee's proceedings are recognised as proceedings of the parliament and warrant the same respect that proceedings in the House of Representatives demand. Witnesses are protected by parliamentary privilege in respect of the evidence they give before the committee. You will not be asked to take an oath or to make an affirmation. However, you are reminded that false evidence given to a parliamentary committee may be regarded as a contempt of the parliament. The committee prefers that all evidence be given in public, but should you at any stage wish to give evidence in private, you may ask to do and the committee will give consideration to your request.

CRAIK, Dr Wendy, Executive Director, National Farmers Federation, 14-16 Brisbane Avenue, Barton, Australian Capital Territory 2600

DOUGLAS, Mr Robert Ashton, Director, Rural Policy, National Farmers Federation, 14-16 Brisbane Avenue, Barton, Australian Capital Territory

LOVETT, Ms Anwen, Assistant Director, Environment, National Farmers Federation, 14-16 Brisbane Avenue, Barton, Australian Capital Territory

CHAIR—Thank you. We have received a submission from you and have authorised its publication. Do you wish to make any changes at this stage?

Dr Craik—No, we do not.

CHAIR—Would you like to make a brief opening statement?

Dr Craik—Yes, I would, thank you. Firstly, the National Farmers Federation welcomes this inquiry into emissions trading. For agriculture, emissions trading is potentially very significant. With the carbon sinks that agriculture can provide we could significantly reduce net emissions. Carbon sinks in agriculture have significant other potential beneficial uses for agriculture.

However the National Farmers Federation needs to understand more clearly how an emissions trading regime would actually operate. We need to ensure that there is a cost effective abatement and sink enhancement regime. It must not detract from the competitiveness of Australian agriculture.

The sorts of concerns that we have are, firstly, the effect of greenhouse on agriculture itself. Secondly, what is the coverage of the emissions that has been included in such a regime? Thirdly, with the sort of information that is available on sequestration, we would want that to be complete and robust. We would certainly want to have scientifically credible information. We would not want any system to provide perverse signals. Here we are talking about taxation considerations. We would not want people not clearing woody weeds for the wrong reasons and we would not want people to be clearing native vegetation to set up a plantation because of the trading arrangements.

Our other concerns are, firstly, that we would not want to see any carbon taxes as well. We do not want to see carbon taxes anyway. We would want to see a full cost benefit study of the regulatory impact of a scheme undertaken before it was introduced and we want industry to be a participant. We would want to see an appropriate lead time before any such regime was put in place and we would like to see a trial. We believe that property rights need to be clearly articulated before a regime is put in place, and that any such scheme must provide for small players, because, of course, we represent farmers and many of them are very small players. Our bottom line is that we have a very positive outlook towards it, but really we need more information to come to certain conclusions. Thank you.

CHAIR—Thank you very much. You rightly say that you represent a more difficult area of this debate. I have a couple of questions to start with. We seem to have embraced the situation worldwide that

there is a need to do something about greenhouse gases and the effect that they are going to have on the atmosphere and the environment. Do you accept the Kyoto Protocol that was put in place, or do you think that we are probably moving too fast in this arena?

Dr Craik—As you are probably aware, some of our constituents are somewhat sceptical about the greenhouse phenomenon, certainly the degree of effect that the greenhouse phenomenon will have on agriculture. There is certainly a fair degree of uncertainty as to what effects those might be. Our view, as a result of the Kyoto Protocol, was that the outcome was a much better outcome than it otherwise might have been, and we welcomed it. Firstly, it was a better outcome than we otherwise might have got out of Kyoto and, secondly, it did pick up the issue of land use change in agriculture. So we saw that as a very positive step, and the fact that it took up the potential of agriculture providing carbon sinks was welcomed.

However we welcomed the fact, too, that the first 12 months or so would be looking at clarifying the methodologies for looking at those carbon sinks. We certainly feel that a lot more work needs to be done in terms of looking at the whole role of vegetation, at different aspects of vegetation, at woody weeds and the role that they play in greenhouse, and there is a need to clarify all those aspects.

CHAIR—One of the major areas in this whole area of emissions trading and the Australian effect, if you could put it that way, is the area of clearing. I have seen figures that have been put forward by different groups about the areas being cleared in Australia. As a former minister in New South Wales I question some of those figures. Do you have any figures, or do you have any discussion on some of those figures that have been put forward about the amount of clearing that is taking place in Australia at the present time?

Dr Craik—You rightly put your finger on the fact that there has been a lot of controversy about the figures that have been produced. The Queensland Department of Primary Industry has done a very detailed satellite evaluation of clearing in Queensland and that has brought the estimated figures down. As I recollect, the figures proposed before were something like 600,000 hectares a year based on permit allocations alone, not actual clearing. As I understand it now, the most recent satellite figure has brought that down to about 260,000 hectares a year of actual clearing. There has been a 20 per cent drop in the last five years or so per year, a 20 per cent drop over a five-year period in the amount of clearing.

My understanding of New South Wales is that some of the figures that were proposed were based on back-of-an-envelope calculations and the odd phone call. They became some of those accepted statements that suddenly get into the lexicon. Again, my understanding is that it is more like 20,000 to 50,000 a year—and more at the 20,000 hectares end. So, again, that is one of the areas that we have real concerns about. We want to see precise figures because there seem to have been some statements made based on pretty rubbery calculations. It is our understanding now that the technology is available through satellite.

CHAIR—So in the interests of Australia, really, we need to encourage the state departments to get those figures accurate?

Dr Craik—Most certainly we do. We are likely to have a lot more beneficial outcome to discussions on this issue of land clearing if at least all of the statistics agree as the starting point of the argument. It seems to me that a lot of the argument today has been based on the fact that none of us can really agree on

what the actual statistics are, and we suggest quite different actions, depending on what those statistics might be, particularly when you look at the highest and lowest estimates.

CHAIR—You quite rightly say that some of the critical areas here are the measurements of sequestration and emissions. On the sequestration side, there is some work apparently available on the sequestration of carbon by plants—trees, in particular—that might be grown on farms. Do you have any knowledge of that work? I ask most people this to try and tease out of them whether they have read anything in particular. Have you got any information on the work that might have been done as to getting the accuracy of some of the sequestration, and over what period, and when it would be likely to start to turn around, and for how long it locks up the carbon?

Dr Craik—No, I could not give you any particularly detailed information. The places where I understand most detailed information has been investigated are through the Queensland Department of Primary Industry—I understand there are a few researchers there who have done quite a bit of work—and the CSIRO. I cannot precisely remember the names. Anwen might be able to remember the names of the people.

Ms Lovett—Dr Graham Farquhar at ANU has also done quite a lot of work in this area. He has been involved in the methodology for the land use change in the forestry sector. That is our understanding of the information today.

CHAIR—So it seems that a lot more work needs to be done worldwide probably.

Ms Lovett—Probably worldwide, but in Australia in particular, because we have a lot to gain and potentially a lot to lose if we do not make sure we get the science right in the land use change in forestry and agriculture sectors, a lot more work needs to be done. There are still a lot of uncertainties attributed to a lot of the numbers coming out.

CHAIR—In the areas of agriculture where would you see your areas of opportunity, I suppose, where you could benefit out of a trading scheme such as this?

Dr Craik—We would clearly see the areas as farmers being involved in emission credits by planting plantations. We would see that as the big area potentially for farmers. Not only would plantations have CO₂ beneficial effects but also, if appropriately sited, in terms of their own production and their own productivity, there would be benefits. So we would see that as a major area but, given the relatively small nature of many of the players, it may be necessary for farmers to form cooperatives or some kind of aggregation so that the transaction cost per individual farmer did not end up being in a way counterproductive.

CHAIR—Let us say we get very enthusiastic about growing trees to sequester carbon. Is there a conflict there with agriculture and the land available?

Dr Craik—I think it is possible. I suspect that a lot is going to depend on the nature of the trading regime that is set up, the taxation arrangements and the benefits that individual farmers see for their own farm.

CHAIR—One issue that fascinates me quite a bit is that farming is often accused of creating emissions. Probably in some small way the machinery used in agriculture causes some of it but the one that comes to the fore is the flatulence of animals. How do we gauge how much is being produced and how, if possible, it can be reduced?

Dr Craik—I do not think individual gauges are the way to go! It seems to me that this is another area that is not beyond the wit of scientists to come up with ways of measuring. I used to work with someone who worked on dung beetles and he needed fresh cow dung for his dung beetles and he found a way to go and collect it quite efficiently.

CHAIR—Use a big broad shovel.

Dr Craik—And a large garbage bin, following cattle. I think it is possible but the question really becomes: how can you efficiently and cost effectively reduce that flatulence? My understanding is that Australian cattle have the highest rate of flatulence in the world. I suspect it is largely due to the fact that a lot of them are free range and not kept in enclosed establishments, and it is a function of diet now. Clearly, we can change diets in feedlots effectively. I do not subscribe to this suggestion that vaccinations for the Australian cattle herd is a practical proposition—or at least I remain to be convinced that it is a practical proposition or a cost effective proposition. For free-range cattle, it is not clear to me how that might be overcome in a cost effective way. But, again, I am sure if the will is there, the scientific inquiry will follow it. It is clearly an area that we need to look at more closely and there needs to be more scientific investigation into it.

Mr ROBERT BROWN—There appears to be a lot of legitimate, informed and genuine attention given to the possibility that Australia might in the future husband native animals more extensively and effectively. Is it possible then that this concern we have just been discussing about exotic animals may encourage farmers to look at these other options as well?

Dr Craik—I suppose it is. I would not have thought at this stage that this particular issue was driving that to any particular degree. I suppose it is. I think generally there is a greater move to look at native fauna and flora in terms of Australian agriculture. I guess I would be a bit surprised, but Bob might have some more comments on that.

Mr Douglas—I would have thought—at least in part at the present time—one of the restrictions on husbandry of native animals would come from some state government legislation rather than anything to do with the greenhouse or whatever. I used to be a farmer in New South Wales and I remember that suggestions of cultivating kangaroos for meat and skin were not looked on favourably by the bureaucracy at that time. I think there may be those kinds of impediments which would have to be looked at.

Mr ROBERT BROWN—I have another unrelated question. I know that in the process of farmers working out their income and cost, and then determining what might be identified as, say, a net taxable income, there has always been a lot of conjecture about that. When we hear that the average income for farmers, say, in a drought year in a certain area was \$3,500, people say, ‘How can anyone live on that?’ Is it possible that, as a result of the very real and continuing costs that the farming community incurs—which of

course must be offset against any revenue that accrues to them—the bottom line figure may encourage them during bad periods to take advantage of any credits that might be available to them as a result of developing sinks by re-forestation? In the longer term, for that and other reasons, is it possible that this particular approach to the possible sale of credits, and so on, may bring about a significant re-forestation of a lot of those denuded parts of the Australian farming environment?

Dr Craik—I think it is possible, depending on the trading regime that ultimately is established. There is no doubt that many Australian farm businesses are becoming much more diversified to take account of cycles in commodity prices and this could be another aspect of that increasing diversification. I understand though that there is some experience in New Zealand that where there has been a lot more encouragement of forestry activity on farms one of the unintended consequences has been an accelerated reduction in rural communities as larger plantations take over from other kinds of agriculture. It is hard to say whether that would occur in Australia because we are looking at different kinds of geography. If the trading regime was right, I could see the involvement of farmers in the establishment of sinks as another bow, as it were, in their diversification activities, and, again, of course, as a consequence, the contribution to revegetation.

Mr Douglas—I think that if, as a result of such a regime coming in, farmers decided that farm forestry was possible they would definitely take it on, particularly in times when they have depressed prices. Just on a point of clarification, the published figures that you hear about farmers' income being \$2,500 and \$3,500 are seldom anything to do with taxable income. It is their actual cash income less their cash expenses. So it is the amount of cash that they have received and is not taxable income per se.

Mr ROBERT BROWN—Right. I would imagine that, for farmers who are use their acreage or hectares for plantation of forests, the amount of management and supervision would be less. You could then have more absentee type ownership of those traditional farming areas, and a greater evacuation of them and a bigger drift to the urban areas.

Dr Craik—I think that is possible. There is clearly an establishment time and a moderately high labour content. I imagine that is correct over time. I think that is the experience in New Zealand.

Mr Douglas—In New Zealand, I believe that plantation of forests is about the only tax advantage game left in town. As a result, there have been huge plantings of commercial forests to the stage where whole districts, I am informed, are going from agriculture to forestry and, as a result, whole communities are basically having major structural problems. Suddenly, there is no work on the farms, and abattoirs and freezing works are closing down because there is no longer any livestock coming through. So it appears that, as with anything else, if you do not get your balance right, it can have major social effects.

Mr ROBERT BROWN—Are you aware of any particular recent studies that you might be able to advise us of that deal with those particular aspects?

CHAIR—It could be false economics in the long term?

Dr Craik—It could be, yes. We could certainly look at that and provide information to the committee.

Mr Douglas—If I cannot get you a study, because it may be confidential to the New Zealand government, I would certainly be able to give you the name of the person who did it and you may be able to talk to them.

Mr BILLSON—Dr Craik, thank you for a new defence in our lack of exercise. We can say that activity leads to higher greenhouse emissions using your free-range cattle argument! I note that the creation of credits is a key focus. Could you give me a response to an alternative way of looking at plantations as a sequestration measure. It is to do with a deduction off emissions from a large emitter—that is, rather than create something you can trade on the open market, a large emitter would go and develop relationships with people making the plantations. They would then have the task of verification and of factoring that into their accounting for their emissions at the end of the day. Is that an alternative approach that may have some appeal?

Dr Craik—I think so, particularly in terms of our constituents. I think they would not be averse to approaches from large emitters who were keen to engage them in the development of plantations where the credit actually went to the emitter, as long as there was something in it as well for the farmer.

Mr BILLSON—The thinking being that the aggregation exercise would then be a task—

Dr Craik—For the emitter.

Mr BILLSON—For the person who was the large emitter.

Dr Craik—Rather than for the farmer. Yes, I think that is quite possible. I have yet to see a farmer who is not prepared to take advantage of an offer where they could see something in it for them.

Mr BILLSON—The follow-on to that is the ownership structure. In Victoria we put in place the forestry rights framework where someone else can own the crop—the growth—separately from the land. Is that an idea you think investors would need to see in place before they entered into a relationship with a land-holder—that they had title to either the emissions credits or to the trees themselves?

Dr Craik—As I understand it, unless there is a contractual arrangement between the emitter and the land-holder, the trees are actually the land-holder's property. So that would need to be developed in the contractual arrangements, but I do not see why there could not be arrangements developed where the emitter had the contract for both the emission—the credit—and the trees themselves, if that were agreed by the land-holder.

Mr BILLSON—The statute in Victoria creates the trees as a chattel; you can transact the trees in isolation from the land.

CHAIR—The trees only belong to the land-holder on freehold property, don't they? On leasehold property they do not.

Dr Craik—I do not know.

Mr Douglas—I think it would depend on the terms of the individual lease, but I think a lot of leases—

CHAIR—I think you will find that with leasehold in New South Wales the trees belong to the state.

Dr Craik—Is that right? My understanding is that even in Queensland they belong to the land, but we would need to check that up. I guess it would depend on whatever arrangements are in place in each state.

CHAIR—I think what Bruce is getting at is that there could be a need to investigate that.

Dr Craik—Very definitely, yes.

Mr BILLSON—Particularly in Western Australia, for instance, where the wholesale acquisition of real estate was something that was resisted by the local communities where it was offshore ownership, and this is a way of getting around that. The other point is one of public investment. I am interested in your reaction to an argument that goes: if the government were more forthcoming with land care resources—Natural Heritage Trust resources—for improved land management plantation and those sorts of things, the public dividend of that sort of investment made available to land-holders through a range of schemes would be the sequestration values, and the land-holder would benefit from improved land management practices and the productivity benefits that come from that. Is that an idea that you guys have had some thoughts about?

Dr Craik—No, I cannot say that we have had any particular thoughts about it. Yes, if public money were used as opposed to private money, you are looking at a different scenario, and that would be something we would have to look at a bit more closely.

Mr BILLSON—It might be an argument for more investment of that kind.

Dr Craik—That is right.

Mr McDOUGALL—Dr Craik, you have said that permits should not be auctioned and must be available for business expansion. Why do you say that they should not be auctioned?

Dr Craik—I guess it is our view that in the initial handing out of it they should not be auctioned. We believe it would discriminate against the smaller players in the system if they were auctioned initially and we believe that, to do that in the initial round, they should be handed out according to the current level of emissions. After that the market becomes a trading market.

Mr McDOUGALL—So you would hand them out free to the existing emitters first. Then would you auction, or simply price them out for the future?

Dr Craik—I do not know that we have looked at that in particular detail.

Mr Douglas—From there on, basically the market takes over: it is whatever people negotiate between themselves as to whether they decide either to buy or to sell additional quota.

Mr McDOUGALL—I know we have discussed this a fair bit this morning, but something that bothers me—taking the electricity industry, which seems to be the big emitter, the growth one, that we can find at the moment—is how far we can take the idea of constructing sinks purely as a method of resolving the problem of them emitting. I know we have talked this morning briefly about the economic viability of that and how far that can go, but can we really go on planting sinks for ever and a day? Where are we at the end of the day? And what do we plant? Do we plant native trees that have got no commercial value? Is that a valuable sink? What have we got out of that? Or do we start planting exotics that have not normally existed in areas?

Dr Craik—Some of those are questions that we need to look at more closely. I am not sure that the information is there, in many cases, to answer the questions. The creation of sinks should not detract from the pursuit of more efficient energy production. Frankly, both of those activities go hand in hand. One of our concerns has been that, in resolving that 10 per cent gap—between the additional 18 per cent emissions that the Greenhouse Challenge will bring Australia's emissions down to and the eight per cent that was agreed to at Kyoto—agriculture by itself is not going to be expected to pick that up. There is no doubt that all industries and the whole community need to be party to this exercise to reduce emissions, if that is the track that this country is going down.

Mr McDOUGALL—One of the things that is bothering me is that obviously we are looking at how we might set up a structure and a trading regime within Australia, but anything that might be set up in the future is going to have to work hand in hand with an international regime, in order to make it work effectively. Some of the evidence that is coming out is suggesting to me that, when you end up with big international players in the game, their overall objective is going to be either to buy permits to enable them to emit their greenhouse gases or else to do trade-offs between their own organisations around the world—which may in the long term achieve their end target but not gain anything for Australia in the way of benefit in getting our targets down. How do we then structure to account for that?

Dr Craik—I do not have the answers. Again, those are the sorts of questions that need to be looked at before we leap into these things. We are positive about the possibilities in it but we have real concerns about how it is going to operate. From our perspective, we do not want to see farmers left at the end of the line in this—as they are on some other issues.

Mr McDOUGALL—The New South Wales government, I think it was, suggested that we should be waiting to about 2005 before we get ourselves going.

CHAIR—That was Victoria.

Mr McDOUGALL—Sorry, it was Victoria that suggested we should wait. Obviously, the energy industry thinks we should start tomorrow. Where are we going to get this information from to put all this together?

Dr Craik—We do not think it should start tomorrow, because we think the information in relation to agriculture is seriously deficient. However, we do think that more funding for DPIE, CSIRO, ANU and the Bureau of Resource Sciences would help. Those organisations ought to be looking at the sorts of information

that we need. As that information comes to light, we need to be made aware of it. We feel that right now, even though we have a positive view of the thing, we are not really in a position to make a decision such that we can go back to our constituents and say, 'This is how it is going to operate. What do you think?'

Mr McDOUGALL—When would you be in that position, do you think?

Dr Craik—We need some information on some of the issues that we have raised already. What are their property rights going to be? What precisely is involved in terms of crops and sequestration? What is the trading regime? What is the tax regime? What gases are involved? All those things are issues that we would like to have much more information on. The error bars on some of that information are probably much narrower than they are at the moment.

CHAIR—Couldn't this be dynamic, though? Couldn't we set up a process? The generation industry has grown and it is relatively easily monitored at the present time, and that could be the start of an emissions trading scheme. Then, as we get knowledge of the other areas, we could bring them into it. There is not just your industry: there are others as well.

Dr Craik—It is quite possible that it could be a gradual thing and something that evolves. I suspect that is probably both desirable and necessary, frankly. If we wait until we have perfect information on a lot of these issues, we will never start. That is quite likely but, with whatever we have to start with, a trial of it before we actually get going would be very valuable and would bring out a lot of issues that would need to be resolved down the track. We would want to be clear that, with whatever was started, agriculture did not again end up in some way disadvantaged by a scheme that started off as a reciprocal thing.

Mr MOSSFIELD—I have a couple of questions about the role of governments in emission regulations. You say in your submissions that costs could be better contained with less government regulation of the emission trading system.

Dr Craik—Yes.

Mr MOSSFIELD—In a market based emission trading system, what do you see as the role of governments? Do you see the trading system being administered by the state or by national government? Do you see any role for local government?

Dr Craik—Good question. Do you have any thoughts on that, Bob?

Mr Douglas—To start with, the first role of government is actually to define what the rights are, to set up property rights in those tradeable units—be they water, CO₂ or whatever—and to set out the rights that go with owning one of those units, and the sanctions if you do not do the appropriate thing by what the government has set up. But the actual trading of the units themselves can probably be well left to the market, as long as an efficient market is developed. On the other hand, if it is going to be a fairly thinly traded market, there may be a role for government in providing information or setting up some form of formal exchange.

The other role for government is, of course, continued monitoring. As time goes by there will undoubtedly be a need to adjust any form of trade or quota up or down because not every greenhouse gas emission—in this case—will be caught within the scope of the emission quotas. There will be all kinds of things. For example, the gas fires of Canberra on a cold morning will presumably not be caught up in an individual quota, although the AGL may have a quota. So you would expect that there would be continued monitoring and finetuning of the policy to make sure that it worked.

Mr MOSSFIELD—Do you see local government involved at all in the monitoring or regulation?

Dr Craik—They could be involved in monitoring, I would have thought, quite effectively.

Mr BILLSON—In terms of herds of various species, if under the initial arrangements a permit were allocated to the peak commodity body for a herd of 200,000 head of X, that would be fine, unless the herd significantly increased or decreased in size. Would it be unreasonable to ask the peak commodity body to get the extra emissions credits, or is that something on which you would go back to the main players in that sector? I am interested to see how you would work that sort of idea through.

Dr Craik—Yes. We were discussing this morning the issue of whether the agricultural bodies could take a role in this. I do not think NFF itself would, because we are not set up that way, but the commodity councils might do it. It is something we would need to talk to them about. Or some of the more commercial structures within our federation might do that.

I think it is an interesting issue that we are going to have to sound our members out on. It may be more appropriate at state levels, just because they are closer directly to the action, or the state commodity councils. That might be the way to go. I think that is something we need to look at to see how that might work. It is not out of the question, but I think it is something we would need to look at.

Mr BILLSON—There has been an attempt to explore a similar type of idea with the motor vehicle. Does every car have to have a Kyoto compliant sticker on its windscreen or you get pulled over by the gas police? These sorts of things were in our minds.

The thing I would be interested in your thoughts on is how we equalise the trading environment for annexure 1 countries versus non-annexure 1 countries. Does aluminium that comes in from Malaysia need to have a greenhouse gas credit permit stuck on it when it enters a climate change compliant country or what? Given your interest in this area and other fronts, I would be interested to know what your thoughts are on that.

Dr Craik—We have not actually discussed that particularly in the NFF, I would have to say. It is not something that we have given a lot of thought to at this stage. I do not know. We have not really considered that one at all, I would have to say, not in an NFF sense.

CHAIR—Thank you very much for giving evidence. It is very valuable evidence to this inquiry, and we may well come back to you for clarification from time to time, if you do not mind.

Dr Craik—I would be more than happy to.

[9.43 a.m.]

LANG, Mr Warren, Deputy Executive Director, Government Relations and Environment, National Association of Forest Industries, 24 Napier Close, Deakin, Australian Capital Territory 2600

CHAIR—We have received a submission from you and have authorised its publication. Do you wish to change that in any way?

Mr Lang—No.

CHAIR—Would you like to give a brief opening statement?

Mr Lang—I would like to do that. Thank you. The National Association of Forest Industries made a brief submission to the committee's inquiry mainly because at this stage of the greenhouse debate we are not sure how our industry will be affected. It is not our wish at this time to take a firm position on any particular aspect of the debate other than to say we are more than happy to shoulder our share of the burden in relation to greenhouse abatement. With your permission, I would like to run through what I see as being three of the most salient features of forestry in relation to greenhouse.

CHAIR—Certainly.

Mr Lang—The managed native forests in Australia are a significant but not a huge sink. According to the national greenhouse gas inventory, managed forests—and by that I include all production forests and plantations—sequester on average about 21 million tonnes of atmospheric CO₂ each year.

That has two points of significance. One is that we are growing more wood than we are harvesting and, second, it means that the forests are fulfilling a useful function in relation to greenhouse abatement. Secondly, the industry and the government have already adopted plans for a trebling of our plantation estate by the 2020. That increase in size will be made up of a mixture of species—softwoods and native hardwoods—and will take the total plantation estate from just under one million hectares to about three million hectares by the year 2020.

The third point about forestry in Australia is that carbon cycle management in the forests is already incorporated into the prescriptions for sustainable forest management that the industry is working to. Under the heading of the Montreal process, we have adopted a very comprehensive set of criteria and indicators for sustainable forest management. I think No. 5 or 6 of the criteria is management of the carbon cycle in the forests. So the forest industries are already aware not only of their obligation but also of their opportunity to make a contribution in this area.

The second main point I want to convey to the committee is to reinforce a point that was raised in your discussion with the previous witnesses about the limitations of sinks. There is only so much that can be achieved by the establishment of sinks, mainly because the opportunity to revegetate and to afforest the landscape is limited by the needs of agricultural production and by the growing human population. Most of that plantation establishment and afforestation will take place on what was previously agricultural land, and

there are limits to our ability to take agricultural land out of production.

The third main point I want to convey—and this is perhaps the most important from my perspective—concerns an obstacle to the participation of the forest industries in carbon credits trading. Under the protocols adopted by the intergovernmental panel on climate change, the IPCC, timber harvested is counted as an emission in the year of harvest, and that is how the national greenhouse gas inventory is actually calculated in Australia. What that means is that anyone who accumulates a credit by planting and growing a tree will extinguish it by the act of felling it. As long as that convention applies, I find it a little difficult to see how forestry can take part in an active system of carbon credits trading.

The convention has undoubtedly been adopted to take account of the fact that wood has a limited lifespan—some of it of short duration and some of it of relatively long duration. But it seems to me that the mistake that has been made by the IPCC—and I hope that sensible government attention to it will remedy it—may have arisen when they tried to discount the carbon credit accruing to the grower of the tree for the length of time that the timber was expected to last. I do not think that that was a necessary step to take for the purpose of putting together an inventory of sequestered carbon or developing an auditing process. But it has been done, and until it is changed I think it is something of an obstacle.

CHAIR—I might lead off with a couple of questions. First of all, could you give us some idea as to the breadth of your organisation? Who do you actually represent?

Mr Lang—My organisation represents most of the major timber processors in Australia. We represent North Forest Products Limited, Boral, Bunnings Forest Products and a number of smaller millers and timber processors. We do not represent Amcor or CSR, which have been members of our association in the past but are not at the moment.

CHAIR—I want to explore this area of sequestration and the period of time that it might lock carbon up in the system. You say that, with competition for land, there is a limit to the areas that can grow forestry in Australia, but there would also be a limit as far as climate areas of soil and rainfall where our native trees grow, wouldn't there?

Mr Lang—That is true. The limits might fluctuate according to changes in climate that could be a consequence of the greenhouse phenomenon, but at the moment it is not possible to say whether slightly higher temperatures and slightly increased atmospheric concentrations of CO₂ would be accompanied by greater rainfall or less, and that would be a major limiting factor.

CHAIR—I saw some research some years ago which I was very negligent in not filing. One of the universities was doing some work on the uptake by plants of carbon in a high carbon atmosphere. Have you seen any of that research? I have been trying to dig it out for this inquiry. There was some research I saw three or four years ago on the effect on plants of a high carbon atmosphere.

Mr Lang—I am aware of the research and I could assist the committee by putting you in touch with the researchers at the Australian National University who are most familiar with it and may have contributed to it. The phenomenon is known as the greenhouse effect. It has been found that native vegetation as well as agricultural crops increase their rate of growth as a consequence of increased levels of atmospheric CO₂.

There has been some speculation that Australia might even be a net sink as a consequence of the fact that the response of our vegetation cover to increased concentrations of atmospheric CO₂ is to grow faster. But our techniques for measuring vegetation growth are at the moment not sufficiently sophisticated to put it to the test.

CHAIR—I put to you that some of our present day government policies may be in some way working against the effect of Australia being a net sequester. For instance, many of our native forests are now locked up, and particularly in the next 30, 40 to 50 years we will be net emitters, not sequesters. If we take the scenario that a lot of this will be put into timber and probably put into building and therefore locked up for 30, 40, 50 or maybe 100 years, in fact some of our policies might be working against what we are proposing to do.

Mr Lang—I think that is a proposition that deserves the most serious examination. The science that we have available to us at the moment may not be capable of giving us an unequivocal answer to that proposition, mainly because we do not know enough about what happens to old forests—at least as far as the carbon cycle is concerned. We know, for example, that an area of eucalypt forest in a location where there is sufficient rainfall could eventually revert to rainforest. We know also that the biodiversity of rainforests is considerably less than you would find in, for example, a regrowth eucalypt forest. But we do not know what is happening to the carbon cycle at that stage in the forest evolution.

It seems to me that it is possible for a community or a society to adopt policies that require timber to be used in long-term applications which are certainly capable of serving in. That might be an area of policy that we will have to examine in our efforts to come to grips with the problems of greenhouse abatement.

The other point that I would make is that, under the IPCC conventions that I mentioned a moment ago, national parks and forest reserves are unable to be counted either in the inventory or in any efforts to secure reductions in emissions, because they are not regarded, or what happens there is not regarded, as being anthropogenic. So in one respect your proposition is unarguable. If you take out of production large areas of forest and put them into reserves or declare them to be wilderness or national parks, you are constricting the area of forest that you have available to you to work with, and that will inevitably limit your options.

CHAIR—Thank you. In the areas of credits and tradeable rights, would you see the people you represent being interested in trying to develop those assets—I suppose you would call them—in greenhouse tradeable rights?

Mr Lang—They are certainly interested, but there is a fairly even balance of optimism and pessimism amongst them about the likely consequences of their involvement in the effort to build a trading system. I think some of my members see it as an opportunity to revalue their forestry assets. Others see it as being a risk that they will be swamped or carried away by an avalanche of cheap timber created as a result of greenhouse plantings. I suppose, to summarise those concerns, I could say that any significant or dramatic upward or downward price movements in the cost of timber would have quite disruptive consequences for the industry.

CHAIR—So, in the marketplace, for instance, if we suddenly raced out and we started to grow, say,

250,000 hectares of plantations to take up the opportunity of carbon credits, in about 10 to 15 years you have to thin those forests and therefore that would probably go into the paper market. Do you see that as having a big effect on the market itself?

Mr Lang—It could do, depending on the state of demand, but there is a lot of land around the globe now being put under timber and plantations, including a lot of land that is going under Australian hardwoods, in South America in particular. The biggest problem that those forestry companies have is that if they plant with a view to harvesting, they are going to extinguish whatever carbon credit they might earn by the act of planting. The world price of pulp and chips at the moment is not particularly robust; there is not a shortage. Greenhouse is likely to increase the supply.

Mr BILLSON—Mr Lang, is it conceivable that what you are talking about in terms of harvesting having a permit issue attached to it may see countries that are outside annexure 1 with an advantage against your membership in the timber industry?

Mr Lang—I think that if the present convention remains, namely that timber harvested is an emission in the year of harvest, those countries that are taking part in the preparation of national carbon inventories will be penalised and those that are not, will not.

Mr BILLSON—I am just thinking about the forest stewardship council, the good wood guides and those sorts of ideas of a number of years ago, and whether they are likely to come to the fore again so that consumers can see where the timber has come from—whether it has come from a country or a nation participating in the Kyoto Protocol or whether it has not—and actually trying to factor in a market signal about that sort of imbalance that could occur under the current accounting regime.

Mr Lang—For that to happen, I think certification would have to be a much more important market tool than it is at the moment. The reason that its visibility and usefulness is limited at the moment is that there is, firstly, not a big supply of certified timber and, secondly, no significant demand.

Mr BILLSON—Is your industry more confident in that certification process than it was a few years back when the push was on from WWF and others to get involved in the stewardship council process?

Mr Lang—Confident in the sense that, yes, we are able to respond to a demand for certified timber if one develops. The state forest services agencies are now taking a much stronger interest in what they would need to do in order to become certified under whatever scheme they chose—and there is more than one—and some of them are working towards developing environmental management systems which they could have certified under the ISO environmental management standard.

Mr BILLSON—In relation to the state forest management codes both on public and private land, I am very familiar with the Victorian one because of my former life, but in other states is that consistently of a standard that would enable the state jurisdictions to achieve a level of consistent certification across the nation as a whole?

Mr Lang—Certainly in relation to plantations there is a more or less consistent code of practice

which would provide a consistent basis for certification if state forest agencies wanted to use it. Victoria also has a code of practice applying to native forest management. Three or four months ago they published the results of an internal audit of the application of that code of practice in Victoria which looked very like the sort of statement that an auditor preparing a certification would prepare. So the Victorian government and the Victorian forest agency is within striking distance of being able to have its forest management certified if it wishes.

Mr BILLSON—Given the way the accounting regime looks like evolving unless we can put a credible argument forward to change it, would it be your view that the government should look at certification moving in parallel with the Kyoto outcome so that the industry is not left vulnerable to a swamp of timber products from non-annexure 1 countries?

Mr Lang—I think that the approach that the state governments are taking at the moment is a prudent and sensible one, and that is to prepare themselves for the emergence of any significant demand in the marketplace for certified timber. They are now, I believe, in a position where they can respond to it fairly quickly if they need to. As to whether they should do something for greenhouse alone, I am not sure. I would need to think about that.

Mr BILLSON—Finally, on that point, my sense is the marketplace is not well informed about the virtues of certified versus non-certified timbers, certainly at the retail end. Is that your impression? If certification were to be part of a fair trading response to the Kyoto Protocol, would the government need to look at some consumer education activities?

Mr Lang—I think it is fair to say that the market is not well informed about the issue of certification, but I think there is a more general problem, and that is that the market is not well informed about the conditions under which the timber it uses is produced. That is a more general problem. I think certification is one means of addressing it, but it is not the only one.

Mr ROBERT BROWN—When particularly the chief players in the forestry industry undertake plantation plantings, is it always for the ultimate purpose of clear-felling? Is it ever designed for sustainable harvesting?

Mr Lang—When participants in the timber industry in Australia establish plantations they are usually of only one or two species and it will usually be for the purpose of clear-felling at maturity in 25 to 30 years time. The idea of plantations in Australia took hold in the sixties when it was decided that we did not have the softwood resources that we needed to cater to that particular market, so radiata was established to serve a need which our native forests could not.

The rationale for plantation establishment now is to grow more and different timber. The rationale is not to take the pressure off the native forests because, in the submission of the industry and I think also of the state forest services agencies, the forests are not under pressure. So sustainable forest management will mean different things according to whether you are talking about plantations or about the native forests. If you are talking about native forests, you can still use clear-felling to achieve a multispecies regeneration which is very biodiverse. In some forest types it makes more sense to practise selective felling.

Mr ROBERT BROWN—My chief purpose in asking that question was that you correctly said earlier that, in the event of the plantation forest being harvested, any initial credits then are cancelled out by the debits at the harvesting stage. Is it possible that, as a result of the introduction of credits, greater attention would be given to sustainable forest plantations and harvesting because that would mean that the initial credits would not be cancelled out?

Mr Lang—That could be a consequence. I would have to say, on behalf of my industry, that I do not know any other sector of primary production which is giving as much attention to the issue of sustainability as the forest industries are already.

Mr ROBERT BROWN—In connection with this, you also said that there is a limit, and I agree that there is a finite limit to the extent to which inroads can be made into or should be made into Australian agricultural and pastoral industries. But I just wonder whether you have got any comments that you would like to make about the possible impact that could occur on Australia's agricultural and pastoral activities as a result of this. Perhaps not so much with agriculture, although there is a possibility but we can undertake the growth of higher yield and more intensive forms of agriculture, so that the area of land necessary to produce it contracts, so that more land then is available for the establishment of forests.

Certainly in terms of pastoral activities, there is no doubt that much more intensive forms of protein production can significantly contract the amount of land surface area which is necessary for that production in order to enable large areas to be put under forests, perhaps forests of a permanent nature. Have you got any comment to make about this? It could be that, as a result of these changes taking place and the future development of them, it is feasible that there can be a very dramatic change in the distribution and the nature of Australian rural industries generally, including the current approach to forestry.

Mr Lang—That is a feasible scenario. It is supported by what we know of changes in land use that have taken place over the last 20 years. For example, when Australia entered into the closer economic relationship with New Zealand, there was a quite significant contraction in our dairy industry, which now focuses, as I understand it, mainly on fresh milk supplies. A lot of fairly rich dairying country in New South Wales and Victoria is now back under forests not because they were replanted but because they re-grew when the farmers walked off. Changes in patterns of land use can certainly take place and do and could be facilitated under programs of structural adjustment if governments were so to decide.

Mr ROBERT BROWN—It is also possible in the process of that occurring that it is not just a matter of efficient land use and agriculture—animal husbandry and forestry. There are also community concerns about the way in which those agricultural industries and rural production is carried out. For example, there are public concerns about open range production of eggs, protein and milk as opposed to more intensive, caged, small area production. So whatever the impact may be and however that impact may show itself, it could also bring about a significant level of public reaction to the developments that it brings in train.

Mr Lang—I am aware that there are varying opinions about forestry development in rural communities. We had an opportunity to witness this in the industry at first hand when we brought together a number of local government bodies for a conference about plantations under the heading of 'Our plantations—vision 2020' just two weeks ago. It was surprising to us to find that neighbouring local government organisations—

for example, Holbrook and Tumberumba—had diametrically opposed views about the virtues of plantation development. One was wholly in favour and had solved the problems. The other one was still totally hung up about what the impact for their communities might be.

Mr ANTHONY—I totally concur with your earlier comments about dairy farming. Fortunately, on the north coast, camphor laurel is now growing back. It is not in a systematic way at all. I do not know how much impact it has on greenhouse. I was interested in your section on emission trading, about the market based system. The jury is still out there and you are looking at what is happening with sulfur dioxide emissions in the United States and how that is traded. Notwithstanding some of your earlier comments that you are reticent about the actual trading system and that it might impact on your members, could you perhaps just elaborate on the type of carbon trading system that you see? Do you see that happening on a central exchange?

Mr Lang—As I am sure you will appreciate, there are quite significant differences between sulfur dioxide emissions and CO₂ in relation to the trading of emission permits or carbon credits, but I think there will be some similarities with whatever trading system is developed. For example, whilst the involvement of governments in the development of policy, both nationally and internationally, will provide some impetus to governments becoming involved not only in setting the rules but also in trading amongst themselves in relation to carbon dioxide, I think that will prove to be a passing phase—when governments realise that they have done as much as they need to do to establish a trading system and that they can leave it from that point onwards, whenever that point is reached, to people who make a living from trading commodities and understand the rules and are most efficient at making markets work to the benefit of the participants. Eventually, I think, if we are to have carbon credits trading, we will end up with an arrangement whereby they can be traded on any reputable international exchange—like the Chicago Board of Trade, the London Stock Exchange, the Sydney Futures Exchange or wherever.

I think there is a temptation to become too clever in relation to trading systems. For example, I have heard it suggested that it will be possible to trade the timber separately from the atmospheric carbon sequestered in it. I cannot really see how that is possible. The carbon is in the wood. If we get past this initial obstacle that I have identified to you, we may have to prepare ourselves for some system of carbon credits trading where everyone who handles and processes wood recognises and accepts that they are also handling and processing carbon and that they are a participant in a market for carbon. How it will come about, I do not know at this stage. I attended an ABARE conference in Sydney on Thursday and Friday of last week which dealt with this specific issue. I can tell you that I heard quite a few points of view and I did not hear complete conviction on anyone's part.

Mr MOSSFIELD—You have been pointing out the difficulties, I suppose, of your industry taking part in the question of controlling greenhouse emissions and we know there is some difficulty there with forests because of the risk of fire and the failure of the owner to maintain timber as a carbon sink. What measures would your industry introduce to make carbon credits more secure? What other steps would your industry be prepared to accept to reduce the greenhouse emission question?

Mr Lang—I will respond to the last question first. We would be prepared to accept whatever disciplines are thought to be good and sufficient. For example, we would be perfectly happy to accept the

discipline of using whatever fuel we use more efficiently than we do. We would also be prepared to look at whatever other suggestions were made about ways in which the harvesting and processing of timber could be done in ways that yielded a lesser burden of emissions.

In relation to what we are prepared to do in order to participate in the system of carbon credits trading, I think we first have to resolve this question that, manifestly, harvested timber is not an emission in the year in which it is harvested. Once that is done, who knows where the debate might be able to take us. At this stage, I am unable to report to the committee exactly what is being done to examine and remedy the deficiency in international conventions that I pointed to, but I do know that discussions have been taking place. Until I know that we are looking at something less draconian in that convention, it is very hard to say what further contribution the industry can make.

Mr MOSSFELD—What effect does the import of timber and timber products have on your industry operating efficiently in Australia, particularly in relation to greenhouse emissions?

Mr Lang—Tariffs on timber entering Australia are very low. They are either zero or five per cent—there is nothing higher than that. You would also be aware that we have a debit of about \$2 billion per annum on wood products, most of it high quality papers being imported, some lumber but not very much.

I do not think the industry feels the need of any sort of particular government encouragement or incentive to further develop. What the plantations vision 2020 needs more than anything else is land available at a reasonable price and the cooperation of state and local governments. Local governments do have an important part to play in relation to this, both in regard to the issuing of zoning permits and the maintenance of roads, and in the provision of port facilities, where they are involved in that.

Mr McDOUGALL—I am trying to understand what plantations and sinks can do in relation to the whole question—how big a part they can play as opposed to reduction in CO₂ by methods other than sinks. Am I correct that you mentioned 21 million tonnes absorption in currently managed forests in Australia per annum at the moment?

Mr Lang—According to the national greenhouse gas inventory, yes.

Mr McDOUGALL—What is the energy industry putting out in CO₂

Mr Lang—I am afraid I do not know the answer to that.

Mr McDOUGALL—You talked about an increase of growth in plantations from just under one million hectares, was it, to three million hectares by the year 2020?

Mr Lang—That is right.

Mr McDOUGALL—What does that increase your absorption capacity to?

Mr Lang—I cannot give you a terribly precise answer but I think you could certainly treble the 21

million tonnes, which is an aggregate figure for managed forests, made up both of plantations and the native forests sector. It would be in excess of that, I expect, but I do not know how much in excess.

Mr McDOUGALL—Is there any way you could find out and let us know?

Mr Lang—I could enlist some expert help to do those calculations and get back to you.

CHAIR—It would be helpful. Some of your original 21 million would be back into the atmosphere though, wouldn't it, because if it was in the short term, say, paper or something like that, it could—

Mr Lang—No; the 21 million is the amount by which the growth in the forest estate exceeds timber harvested.

Mr McDOUGALL—I see it as an important issue in relation to not only domestically being able to find the right balance between sinks and other methods and how that affects the value of the permit so that you can actually end up with what I would call an affordable trading operation to take place—

Mr Lang—Yes.

Mr McDOUGALL—and how that then would operate. I note your comment that any domestic trading system must be complementary with systems internationally. I accept that point. Maybe we should be the ones trying to set the international systems so that we end up with the best—it does not damage us—because I see a problem eventuating in the fact that when you get trading within international companies the country of origin may not end up with any management control over that.

Mr Lang—I see that problem too.

Mr McDOUGALL—You haven't got any method, in a design of a permit system, of how we could avoid that?

Mr Lang—Not at this stage, no. It is a problem akin to the problem of transfer pricing, as identified by the tax office and well known to all of us. I do not have a solution to that problem.

Mr McDOUGALL—If you could help us with those figures, I would appreciate that.

Mr Lang—I will do my best to do that.

Mr ROBERT BROWN—Mr Lang, these permits are going to be of economic value, and the forest industry and your sister types of industries will presumably need, or it would be in your collective interests, to make submissions in the process of formulas being developed to determine just how this system is going to operate—when the permits, for example, are initially issued, whether they are made available freely or auctioned or sold—and then the process of trading credits, incurring credits, incurring debits. Would you have any idea at this stage about what type of overall net outcome the forest industries would be pursuing?

I put that question in this context: if, for example, you plant an extensive forest over an area which has previously been denuded and is probably poor agricultural grazing land, you should presumably be granted a credit for having done that. If the forest then grows for 15 years, there could be, or may not be, an accumulating credit which would be something less than if the forest continued for 20 years; then you clear-fell that forest, and there is the question of whether that should automatically extinguish the total credits which went before.

The forest then perhaps is cleared and prepared for another planting over a six-month period, then you plant another one, and the same thing continues. Apart from, say, six months in 40 years, the forest industry would have provided forest cover in an area which had previously not contributed in any way to this whole question of cancelling out greenhouse gas emissions. Should there be a net benefit as a result of that type of activity by the forest industry or would the forest industry say, 'Look, if we come out with a neutral net benefit, neither plus nor minus, we will be happy'?

Mr Lang—I think the forest industries at this stage would be happy with either a neutral or a small positive effect. I would take a fairly simple view to determining what expectation it is reasonable or realistic to have in relation to this matter. If the forest industries were to be penalised as a result of their involvement in producing a form of sequestered atmospheric carbon that depends only on sunlight and water, I would think that was an anomalous outcome. But within the parameters that you identify I can see that there could be a very wide range of possibilities.

Mr BILLSON—My understanding is that in November in Buenos Aires two key issues are on the agenda. One is forestation, re-afforestation and de-afforestation and how to handle it, so it seems very useful us having this discussion. The second is the trading framework. With regard particularly to the first issue on the agenda, have you had any dialogue with the government about the particular concerns that you have and about playing an active role in shaping our advocacy at that occasion?

Mr Lang—I have to admit that I have not had any discussion with them about the approach that Australia might take to the next conference of the parties but as a result of my participation in the ABARE conference last week and what I have identified as being fairly advanced thinking in some sectors about carbon credits trading—and by that I mean particularly the petrochemical and the coal industries—then, yes, we will be seeking that opportunity. Bear in mind that the government has only recently set up its greenhouse office and I suppose I would not be offending anyone if I said it is not yet fully up to speed but time is pressing so we will be seeking to have those discussions fairly soon.

Mr BILLSON—But you are fairly confident from the ABARE discussions that the concerns you have raised with the committee this morning are certainly out there in the minds of at least ABARE and other parties?

Mr Lang—Yes.

CHAIR—Just on that point, it has been put to us by others giving evidence that they see an urgent need for a high-level committee of state government officials, federal government officials and industry to get together fairly quickly. We have two, I think, ad hoc meetings before Buenos Aires and then Buenos Aires so

we will need to get some clear thinking on this issue as far as Australia is concerned.

Mr Lang—I am glad to hear you have had it put to you, Chairman, that there is that need and I would hope that my industry would be involved.

Mr BILLSON—On the trading issue itself, we have had differing submissions in terms of how free that market should be. You would know from the sulfur dioxide experience that you have third party interests, some environment groups and some investors going along on these permits being involved in the trading framework. It has been put to us that it should be a constrained market in which we would have to register your interest before you are involved and others have said, 'No, that is just putting another barrier in the road.' Do you have a view? I noted that you identified some of the risks in your paper and at the same time talked about it being a fairly free market. Do you have a view on where you would sit in those sorts of options?

Mr Lang—I cannot see there being any risk in it being a fairly free market. In relation to the participation of groups who are not themselves owners or managers of forests, processors of timber or large investors in the market, at this stage I cannot see any particular impediment to that. The conservation groups in the United States, as I understand it, have bought sulfur dioxide emission permits for the purpose of extinguishing those permits—

Mr BILLSON—Accelerating change.

Mr Lang—Yes, lowering the ceiling and accelerating change. That is an interesting development and I cannot see anything wrong with it.

CHAIR—I have two or three questions. We are getting close to time but we will have to take it over time I suppose. In your answer to a question earlier about the high carbon atmosphere, you indicated that you believed that there were still a lot of unclear situations as far as measurements were concerned. Did I detect that in fact you are still unclear as to whether the so-called science in greenhouse is accurate?

Mr Lang—I have, as must everybody, some personal uncertainties about the way in which the debate about greenhouse has evolved since the problem was first identified and the way in which forecasts have been progressively revised and for the most part revised downwards. In relation to the measurement of sequestration by the biosphere, I was thinking more of uncertainties about the extent to which roots take up and sequester carbon, about the extent to which land clearing in some parts of Australia is followed by regrowth and revegetation and what the effect of that is on the net outcome of carbon sequestration and emissions.

The best data that we have at the moment is satellite data of vegetation type, followed by on the ground verification. But it is a very big country and it takes a long time to make the necessary measurements in relation to all the different vegetation types that we are blessed with.

Those are more the uncertainties that I was thinking of and would not hesitate to talk about, whereas the science of greenhouse is a much broader issue on which I am far from expert.

CHAIR—Do you think the Kyoto agreement may be a bit ahead of the game? Do you think we are overreacting in some instances?

Mr Lang—If greenhouse is a problem, it is prudent to take whatever steps it is possible to take at an early time, because the amelioration of the greenhouse problem is a long-term problem, a long-term issue and a long haul. No, I would not state that attitude.

CHAIR—We have had evidence to suggest that some of the countries around the world are in fact assuming there is going to be a tradeable scheme available in the future. We have had evidence to suggest that the United States and Japan are probably already moving into developing countries to establish forests, et cetera. I am still trying to come to terms with this, I suppose, as to how much will be locked up and what the effects are on different trading areas. If, for instance, they did rush in to either buy or develop forests in developing countries and that product became available some time down the track that would have a big effect in the marketplace, would it not?

Mr Lang—It may do, Chairman. It is often said that the first people into the market with any commodity are those who make the biggest profits. I am sure that that is the rule of thumb that is guiding the behaviour of some of these companies. What the impacts on the broader markets would be of large profits being made by a small number of players it is very hard to say. They still face this fundamental problem of sorting out the inconsistencies or the apparent anomalies in carbon accounting.

I think that our industry would be keen to be a player in a market if there is to be one and I think that Australia has taken an enlightened approach to this issue. Witness the establishment of your inquiry. I heard one of the participants in the ABARE conference last week say that he had had an opportunity to assess the progress that Australia is making in regard to these issues and he did not think that we were at all behind the level of debate and consideration and examination that was taking place elsewhere.

CHAIR—It will not be for this committee but for the minister and cabinet to decide but if we do decide to set up a system in Australia of tradeable rights, we would have the situation, I suppose, in this country where the management of the resource is really in the hands of the states. In a tradeable system, do you have an opinion as to whether it should be a national system, probably worked out through COAG, that would be put in place?

Mr Lang—I think it would be a national system and I do not expect that state forest service agencies would see it any other way. State governments may see it differently when they start to assess the magnitude of the greenhouse abatement burden that they will have to take responsibility for because I think it will vary from state to state. That might have implications for the approach they take to carbon credits trading.

CHAIR—Coming back to the final question of trying to assess the sequestration of carbon, I notice on your submission on page 4, under carbon credits, you talk about:

... several transactions and joint implementation projects involving trading in carbon credits between industrial companies, government authorities and forest owners in North America, Central America, South-East Asia and Europe.

Do you have any knowledge of those schemes? Can you get us any evidence of those schemes and how they

are working at the present time?

Mr Lang—I can get you some evidence about the South American ones in particular. Costa Rica has been in the forefront of that push, if I could so describe it. I think that there are several dimensions to that. There are some market players hedging their exposure to greenhouse and there is an element of foreign aid in it.

There is an element of American and European generosity towards the Third World and a desire to be in the forefront of change. What I am saying is that those projects are not strictly speaking all about greenhouse. I can certainly get you that information and would be happy to provide it.

CHAIR—Was that the instance where an American company bought an existing forest in Costa Rica?

Mr Lang—That is one of them that would fit that description, yes.

Mr ROBERT BROWN—Is there any evidence of any speculation within the industry at the present time about the possible development of these issues, to the extent that that speculation would be affecting the rate of planting, the nature of the planting or the rate of harvesting in our forests?

Mr Lang—I do not believe there is. I may be unaware of it, but I would be a little surprised to hear that companies were allowing greenhouse to become an element in normal investment or silvicultural planning activities. This is mainly because I do not think the science is yet sufficiently precise to enable them to know what they should factor in.

I mentioned before that there is some uncertainty about whether slightly higher temperatures and increased atmospheric CO₂ concentrations would be accompanied by more rainfall or less. In fact ABARE has carried out a study on the consequences for greenhouse for the midwest wheat belt of New South Wales and the area suitable for growing wheat could expand or contract. Areas available or suitable for plantation development could expand or they might contract.

CHAIR—So there are instances where governments are going ahead and planting plantations, some would say on a fairly uneconomic basis. Would that have some effect in the marketplace?

Mr Lang—I would not say they are taking any significant risk. Most of the plantation development at the moment is concentrated in areas where there are already plantations and where there is a fairly large margin for error in relation to climate.

CHAIR—Even with some of the species that are being planted? A lot of them on the north coast are white gum which are just about exclusive to chip.

Mr Lang—Despite the sometimes fairly clear demarcations in the natural distribution of Australian native species, what is emerging is a fairly high degree of tolerance on the part of many of them of being planted in different soil types and different rainfall areas. I suppose the first clue to the fact that that is how things would turn out is the very wide range of environments in which they have been planted overseas.

Mr JENKINS—In the submission where you briefly discuss abatement versus capture, you raise the need for greater research into avenues that could be forest based abatement measures, and in talking about measurement, you have talked about the need for greater research effort. How far is that research effort under-resourced at the moment? How much should that come from government and how much should that be a shared responsibility of industry and government?

Mr Lang—To some extent it is a shared responsibility between industry and government already. The need for that research was identified, firstly, in the work done in the preparation of the national greenhouse gas inventory. Then it was further underlined by the development of a sinks workbook by the greenhouse challenge office. That work has been carried forward in a fairly purposeful and well resourced way.

We will not know how much further is needed until we see the fruits of what has recently been completed. Some of that work has involved the participation of industry. For example, I know that work on studying growth rates has involved the plantations of North Forest Products in Tasmania.

Mr JENKINS—And the abatement opportunities for the forest industries?

Mr Lang—Do you mean what further research is needed on abatement opportunities?

Mr JENKINS—Yes.

Mr Lang—Since we are not a large user of energy—I would think most of the energy is used in the processing sector—that can be certainly stimulated and carried forward under the banner of the greenhouse challenge. There is sufficient research information and understanding available for useful progress to be made there. I doubt at this stage whether we need specifically to commission further research.

CHAIR—There are no other questions? Thank you, Mr Lang, it has been very valuable evidence. As I said earlier, we may get back to some of the witnesses with further questions at a later date.

Mr Lang—Thank you, Chairman.

[10.41 a.m.]

CRIBB, Mr Bridson, Executive Director, Pulp and Paper Manufacturers Federation of Australia Ltd, PO Box 3120, Manuka, Australian Capital Territory 2603

CHAIR—I call the representative of the Pulp and Paper Manufacturers Federation of Australia. We have received a submission from you and authorised its publication. Do you wish to amend that in any way?

Mr Cribb—No. As I mentioned in the submission, we are also a signatory to the submissions put in by the Australian Industry Greenhouse Network, so that also represents our views. In relation to the other submission, there are no changes to that.

CHAIR—Would you like to make an opening statement?

Mr Cribb—I would like to make a brief opening statement and then get onto questions if I may. The preferred position of the pulp and paper industry is for Australia's greenhouse response to be met through voluntary so-called no-regrets measures. The industry has already been a major contributor to the greenhouse challenge program and has made significant reductions in its emissions through that program. At this stage it is unclear to what extent Australia's Kyoto commitments will require the introduction of measures that go beyond no regrets. We think, however, that it is prudent at this stage to look at the most efficient means of meeting those international commitments and we therefore welcome the work of this committee.

Our primary concern is the potential effect of more stringent domestic response measures on the internationally competitive position of the industry. This concern is reinforced by the fact that many of Australia's competitors in pulp and paper are developing countries such as Indonesia, Korea and Brazil. None of these countries are currently required to take any action to reduce their emissions. Anything that adds to the cost structure of the Australian pulp and paper industry will of course adversely affect its international competitive position.

In considering the possibility of more stringent domestic greenhouse response measures, the pulp and paper industry has a strong preference for market based solutions rather than government imposed regulation or mandatory measures. Of the market based measures that are available, the pulp and paper industry remains strongly opposed to carbon taxes or similar measures like that and, therefore, we see emissions trading as a potentially preferable alternative.

We consider that now is the right time to examine how an emissions trading system could work. It is also the right time to do the necessary preliminary work that will be required to allow a domestic emissions trading scheme to be introduced quickly. These are things such as: an agreed carbon accounting methodology, the way in which permits will be allocated, et cetera. However, we do not see any need for the early introduction of a domestic emissions trading scheme and we doubt that there would be any requirement for one to be introduced any earlier than around 2003.

I think it is important to bear in mind that emissions trading is not an end in itself. It is also not a no-cost option. It will impose additional costs on industries such as pulp and paper. Its only advantage is that it

will be a lower cost option than other alternatives. We should therefore be in no rush to impose additional costs on the industry.

It is also important to bear in mind that the only reason we are contemplating a domestic emissions trading scheme is the need for us to meet our international obligations. By around 2003 it will be clear whether or not the Kyoto Protocol has actually entered into force or whether it will enter into force. By that time we will also have a much better idea concerning the extent to which existing domestic measures will allow Australia to meet its international obligations under the Kyoto Protocol.

Having done the necessary preliminary work in the intervening five-year period, that will be the appropriate time at which we can make a well-informed judgment as to whether it is necessary to go down the route of a domestic emissions trading scheme. In terms of the way in which such a scheme could operate, I just want to make a few brief comments. We strongly believe that any scheme should reflect a comprehensive approach. Therefore, it should include all gases covered by the Kyoto Protocol and should include sources as well as sinks. In terms of allocation, we think that permits should be allocated on a free—in other words, no-cost—basis using some kind of grandfathered system and that the baseline should be a baseline that existed before the Rio agreement came into force. This is so that companies such as the pulp and paper companies that have already taken significant steps to reduce their emissions are not penalised by the allocation of permits. Some percentage of permits should be set aside for growth in the economy and for new entrants into the market.

We consider that there should be a minimal role for government in the system after the initial allocation of permits and the framing of the market. There is no reason why the emissions trading market should operate in a manner significantly different from any other market.

That is just a very brief overview of our position. I would be very pleased to answer any questions the committee might have.

CHAIR—Thank you, Mr Cribb. Can I assume from your statements that you are rather sceptical about the Kyoto agreement and whether in fact countries will adhere to the agreements that have been reached there?

Mr Cribb—I would not describe our position as sceptical. Australia has a potential international commitment under that protocol, but at this stage it is only a potential commitment. Our position is that Australia should not seek to ratify this agreement until the major emitters such as the United States, Europe, Japan and Russia have ratified the agreement. At this point it is unclear, for example, as to whether the United States is in a position to ratify it. In fact, it is quite clear that the United States will not be in a position to ratify until sometime in the next century.

We support the agreement that Australia has reached at Kyoto, but we see no benefit in Australia ratifying that agreement until major emitters have. It is not a question of scepticism; it is really just a case of what the international realities are as to whether that agreement will enter into force.

CHAIR—Given that we have had evidence before this committee that there would seem to be a move

by the major emitters—the US and Japan in particular and possibly the EC—to get into this trading area early, don't you see some dangers that if Australia just stands back and says, 'We'll wait and see what happens,' we could be left right out of this and that we are only a small player anyway?

Mr Cribb—I think you have to look at the international system, which is seen in a somewhat separate way from a potential domestic system. In terms of the domestic system, as I said, I think we should certainly be doing all the preliminary work so that if we want to introduce a system we can do so very quickly having done all that essential work. In terms of a domestic system, however, we do not see any pressing need for the introduction of one. Indeed, from a practical point of view, it would be impossible to introduce one within a couple of years anyway because that practical work has not been carried out.

There are some theoretical advantages that can occur to those who get into a market at an early stage. As I said before, going into emissions trading at a domestic level is not a no-cost option—it will impose costs on industry. Therefore, the theoretical advantages of getting involved in a market early are, in our view, offset by the fact that it will also impose costs on industry. We do not believe you should be looking to impose those costs on industry until it is absolutely clear that there is a need to do that.

I guess my point is that at this point that imperative has yet to be established. In terms of the international system, which is going to be potentially even more complex, Australia should clearly be in the forefront of arguing and framing the system that will be developed internationally. As I said, there was a lot of preliminary work to be done in either case and we should certainly be actively engaged in doing that preliminary work. For example, those countries or companies that are engaged in activities at an international level at the moment are basically engaged in speculation and whether they will accrue benefits from that really depends on the final form in which the system takes place. So we can be involved in helping frame the system; I do not think we actually have to have a system of our own to do that.

CHAIR—In your particular industry, paper and pulp, any trading system with carbon credits would have limited value to you, wouldn't it, given that your product is probably seen as short term?

Mr Cribb—I heard the comments that Mr Lang made on behalf of NAFI concerning current international methodologies as to how long carbon remains in a product. His comments in relation to solid wood also apply to some extent to paper. The situation is not as clear-cut as it is with wood but to suggest that all the carbon that exists in paper evaporates into the atmosphere immediately it is made or within one year of production is also patently ridiculous. For example, paper that is locked up in books or government files lasts for a very long period of time; obviously things like toilet paper or tissue paper have a much shorter life.

The other thing to bear in mind is that recycling is a predominant feature of the industry in Australia. In fact 61 per cent of the fibre that is used to make paper in Australia is from recycled sources. Fibre can be recycled up to five times and a very large percentage of paper that is discarded is recollected and reused, so the carbon that is in the fibre is still there. These are very complicated questions and take you down the route of life cycle analysis of products. I guess it reinforces my point on the need for a lot more preliminary work to be done to establish exactly what happens to carbon and where it goes throughout its life, before we can come up with a satisfactory trading system.

CHAIR—You are putting forward a very complicated accounting system there.

Mr Cribb—I think these issues certainly need to be looked at. It may be that one would decide not to go to the full extent of doing that, but certainly the current system that is being proposed at the international level, where carbon is taken to be very short lived, would not be acceptable from my industry's perspective.

CHAIR—I am interested in your statement about the effect on the Australian industry of the so-called developing countries outside annexure 1. What is your opinion of the psychology involved in saying that we will deal with the big emitters and, if those big emitters want to go to developing countries and put in better technology that will reduce the greenhouse gases, they should get credits for that?

Mr Cribb—I do not have any problem with that approach, but I have a problem with the fundamental way in which the Kyoto Protocol and the framework convention on climate change before that are framed. That is, if you are dealing with a global problem it makes absolutely no sense from an environmental point of view to divide the world up into developed and developing countries. It does not matter where the emissions come from; they are still emissions to the atmosphere. By that I am not suggesting that all countries should have equal obligations; quite clearly that should not be the case and that in fact is what Australia has argued in terms of its own position, that each country needs to be treated differently and individually and we need to take account of each country's circumstances.

That position, which the pulp and paper industry supports, which the Australian government has advocated, we think in fact supplies the answer as to how to get developing countries on board. Their emission reduction obligations may not in fact be reduction obligations but they would be reductions over business as usual. But the situation at the moment where you have industries that could be based in Indonesia and which do not have any costs to bear in terms of reducing greenhouse gases, and you have a similar industry in Australia that is required to incur additional costs, clearly puts the Australian industry at a competitive disadvantage—and that is what we are concerned about.

CHAIR—I am well aware of the deficit, which was mentioned earlier. I thought it was somewhere around \$2.4 billion, but say that it is between \$2 billion and \$2.4 billion, as far as imports into Australia of wood and paper products go. Australia is probably seen by some of these emitters as being a sink, or a potential sink. How do we take advantage of that to improve our manufacture of paper and pulp in this country and become less dependent on imports?

Mr Cribb—I am not sure whether there is actually a direct relationship between those two things. In terms of pulp and paper, the current figure for the deficit is about \$A1.5 billion per year. We make about two-thirds of the paper that is consumed in Australia. In some grades of paper, such as fine paper, the percentage is much less than that.

It is potentially a two-edged sword as to how you could make Australia more attractive in terms of its sink capacity. For example, at the moment, one of the problems the pulp and paper industry has is that the domestic price of wood, which is obviously the main primary resource for the industry, is relatively high in comparison with that in other countries. If you then attached an extra value to that resource because of its greenhouse benefit, then because industry does need to use the wood as an input, effectively, if you were not

careful, you could end up increasing the input cost on the industry, which would make its position worse in terms of being able to compete internationally.

In terms of growing trees, there is a lot of talk about the idea that we can grow a lot more forests and that that will be helpful from a greenhouse point of view. That is certainly correct, but whether that wood would be economically viable for the pulp and paper industry is a different question. Basically, the further away the wood is located from the mill, the less economic it becomes.

If you are looking at trying to help the pulp and paper industry, it really depends on having high concentrations of the right kind of wood in the right location. Obviously, you could build a new mill somewhere else, if there were enough of a wood resource to warrant that. But it is really not the case that you can assume that you can plant trees willy-nilly across the country and that that is somehow going to provide a benefit to the pulp and paper industry.

Mr McDOUGALL—Mr Cribb, you said in your submission that companies should be allowed to offset their emissions through sinks. You probably heard some of the evidence that we might end up with more forests than we know what to do with, and we would be in a terrible position. Further, you say that a domestic trading scheme should operate as a genuine market mechanism within government regulation. A moment ago, you were making reference to different regimes being set up between annexure 1 countries and non-annexure 1 countries. Where does a company's responsibility lie, and a government's responsibility lie, where companies through international ownership have an ability to cross-trade because they operate in an annexure 1 country and a non-annexure 1 country? Who should be setting the regulations in relation to that? Should they be set?

Mr Cribb—That is a particularly complicated question. The government clearly has a role in framing the market initially and in resolving those issues so that companies and countries have a clear position on where they stand. For example, at the moment, a lot of the new plantation activity that is taking place in Australia is being done by non-Australian owned companies.

I would assume that those companies would be looking to repatriate the benefits of the carbon sequestered, to offset against their emissions in their home country. Potentially, even that country may wish to claim credit for the carbon that is being sequestered in Australia. In these circumstances, you are likely to have a significant difference of opinion between the companies—in terms of what they want to do in their interests—and between individual nation states, as to what they want to do to maximise the benefits in terms of their international commitments.

It is a very complicated question. It is one of those things that will need to be resolved at the outset so that those who are taking part in the market know exactly where they stand and know what they can and cannot do in moving credits around.

Mr McDOUGALL—So what you are saying is that any national regulation scheme put in place has got to be quickly followed with an international regulation at the same time—or do you think one can operate without the other?

Mr Cribb—There would certainly need to be a relationship between the two. You could not have one that was incompatible with the other. That is why it is very important that the Australian government, when it is looking the parameters for a domestic scheme, should also play an active role in the international negotiations to make sure that our interests are being protected there.

From a national perspective, clearly Australia would want to be able to claim the credit for carbon that is sequestered by plantations that are grown in Australia. Therefore, you would need to keep a close eye on how regulations would develop in terms of international trading between company entities that are located in different countries around the world.

Mr McDOUGALL—In your industry, what does your emission come from? Is it simply the energy used to drive your process?

Mr Cribb—Essentially, it is the energy that is used in the production process, but that varies a lot depending on the kind of production process that is being employed. For example, chemical pulping where the fibre in the wood is broken down by chemical process in fact liberates a large amount of energy that has effectively been stored in the wood from solar energy. So those production processes are less energy intensive than mechanical pulping. Examples of mechanical pulping are newsprint grades of paper where the wood is broken down just through sheer mechanical energy. Those processes use significantly larger amounts of energy than chemical pulping processes. After the pulping process, the paper machines themselves that actually produce the paper obviously require energy to run.

Mr McDOUGALL—So what you are saying is that the mechanical operation and then the operation of the machinery emits more than the chemical process, plus the CO₂ emitted from the raw material?

Mr Cribb—The chemical pulping process normally generates enough energy to run the chemical pulping process and there is normally surplus energy which would go a long way towards actually running the paper machines if you are talking about a vertically integrated mill. With a mechanical pulping process, that requires large amounts of energy in itself, plus you then need energy to run the paper machines afterwards. It is an energy intensive industry. Energy is the second highest input cost after the cost of fibre.

Mr McDOUGALL—In CO₂ terms, what is the output? Are any of the pulp and paper manufacturers measuring their output of CO₂? Do they know what they are putting out?

Mr Cribb—Yes, they certainly do.

Mr McDOUGALL—How much CO₂ per tonne is produced?

Mr Cribb—That varies depending on the company. I would be happy to get that information for the committee. There are five companies that are my membership and they make 97 per cent of the pulp and paper in Australia. Three of those companies have already entered into greenhouse challenge agreements, and all those factors that you are inquiring about are well documented in each of those agreements. I would be happy to provide that information to the committee.

CHAIR—That would be very helpful.

Mr McDOUGALL—What if you were to change the process and build a new plant to improve your energy efficiency and reduce your outgoings of CO₂? What if you build a new plant rather than try to upgrade an existing one? Should there be a credit given for decommissioning of an old plant?

Mr Cribb—If you are replacing an old plant with a new plant?

Mr McDOUGALL—Yes.

Mr Cribb—I am sure the industry would be very enthusiastic if the government is going to offer a credit in that area. I guess the thing to bear in mind is that the industry is extremely capital intensive. In fact, on a world scale it is the most capital intensive industry in the world. One hesitates to use that term in Australia because I suspect things like the North West Shelf gas project could be more capital intensive, but it is certainly true to say that in the Australian context it is the most capital intensive manufacturing industry.

Obviously, if you put in a new plant, the new plant, by definition, will be a lot more energy efficient than the old plant. There are technological limitations to what you can do by upgrading old equipment. You are talking about very large amounts of money here.

For example, one of my members is building a new paper machine at the moment. They already have four paper machines and they are building a fifth paper machine. The capital cost of the fifth paper machine is around \$400 million. If you were building a completely new world-scale pulp mill plus integrated paper plant, you are talking of investments of \$1.5 billion, or something of that order. Clearly, if there was a strong desire for the industry to reduce its emissions and the government was prepared to offer a credit for decommissioning old plant in return for commissioning of new plant, the industry would be very keen to discuss that further with the government.

Mr McDOUGALL—It was put to us in other evidence that as you convert a powerhouse from fossil fuel to natural gas, or build a natural gas one and take out a fossil fuel one, then you should get a decommissioning credit for the fossil fuel one you are taking out. I was wondering where you stood on that issue, because that also raises the question of the transfer of the credit. If you are running a company that is international based, you could actually be decommissioning a plant in another country and transferring that credit. Therefore, the country that is having the plant decommissioned does not necessarily end up getting the benefit of reductions to their output of CO₂. What is bothering me is: how do you set up a trading structure that takes those things into account? Have you any models you would like to offer?

Mr Cribb—Not at this stage. I cannot give you a more comprehensive response, but I would be happy to talk about it with my member companies and get back to you.

Mr ROBERT BROWN—I have a few small related questions. Firstly, in the process of fibre being recycled, at what stage, and how, is the decision made that the substance is of no further use in the paper industry? Secondly, what do you do with that substance when it can no longer be recycled?

Mr Cribb—Basically, fibre can be recycled a number of times and eventually it just breaks down in the production process. It comes out of the production process as fibre loss. The fibre becomes too weak and basically it gets destroyed in the process.

Mr ROBERT BROWN—The fibre does not just disappear though. Doesn't the fibre become some sort of paste or powder?

Mr Cribb—Yes, you end up getting a solid sludge out of the process at the end. Basically, recovered fibre or recycled fibre is a very important resource and so companies are very careful in selecting what recycled fibre they are putting through their production process. They know that some grades of paper will give them the right fibre that they are looking for, or the right quality of fibre that they are looking for. So they will tend to choose that paper or that recycled paper to put through the process. Inevitably, every time the paper is recycled there is some loss of fibre. The weaker fibres just get broken down and they come out as a by-product of solid sludge.

Mr ROBERT BROWN—Where does the solid sludge go? Does it go into landfill?

Mr Cribb—It depends on the plant and the process that is being used. In some places it does go into landfill. In other places you can find other uses for it. But there is not a huge market for it.

CHAIR—Just on that point, if it was used as a mulch in, say, forestry or agriculture, do we know how much of that could be held in the soil as soil carbon?

Mr Cribb—I am not aware of the research that has been done in that area. Another use to which fibre that is no longer useful for the paper process could be put is high temperature incineration to generate energy. From an environmental point of view, there are very strong arguments in favour of that as a means of—

CHAIR—For running your own plant?

Mr Cribb—Yes.

CHAIR—For cogeneration, in other words?

Mr Cribb—Yes. In Scandinavia they use it to generate heat for heating apartment blocks and that kind of thing. So when you are looking at the best environmental use for paper or for recycled fibre, putting it through a paper machine is not necessarily always the best solution. At the moment it is the only solution we have in Australia, apart from landfill. But high temperature incineration is something that should be investigated.

Mr ROBERT BROWN—That whole question opens up a complex array of possible calculations to determine credits, debits and offsets and what really is available for sale. Earlier, you mentioned some paper products which are single use and disposed of and others—a book for example, which locks up the carbon for a long period of time in a library or whatever. To work out what the application of the debit should be and to

whom would appear to be a very big problem. On the question of the application of the liability of the debit—whatever form that takes—in the pulp and paper industry, who should incur whatever liability there is: those who cut the timber, assuming, for example, it is native timber—natural growth; those who mill the timber; those who make the paper or pulp; or the end user—for example, with a newspaper, the reader?

Mr Cribb—As just one point of clarification in terms of the fibre input to the industry, the amount of fibre that comes from native forests is around 15 per cent or less of the fibre input. About 20 to 25 per cent comes from plantations and the majority in fact is recycled fibre. In terms of who should get the debit when the carbon is released, that is also a complicated question. When you are looking at these issues in something like the greenhouse challenge program, which is obviously an agreement between an individual company and the government, the view that we have taken is that the responsibility stops at the factory gate once the paper has been sold.

Once the company has sold the paper, it is hard for the company to have control over that paper and, therefore, it is hard for that company to have responsibility. Our view is that, once the product has been made, all the carbon that is locked up in that product should be to the benefit of the company and that after the product has left the factory or has been sold or whatever, the responsibility for the product and the subsequent release of the carbon from that product—if there is a release—should be the responsibility of the purchaser.

Mr ROBERT BROWN—You mentioned earlier the industry's preferred option for the provision of initial permits—that they be provided on a no-cost basis. Did you suggest what the industry's attitude was towards the provision of permits for subsequent new entrants?

Mr Cribb—I was suggesting that, of the initial allocation of permits, there should be some percentage—I do not know what the percentage should be—set aside to allow new entrants into the market.

Mr ROBERT BROWN—On a no-cost basis?

Mr Cribb—Until whatever proportion of permits is set aside is used up, yes, it should be on a no-cost basis.

Mr ROBERT BROWN—And when they are used up?

Mr Cribb—Then a new entrant would have to buy on the open market whatever permits they would need.

Mr MOSSFIELD—I have a quick question which probably touches on something that has already been spoken about. Mr Cribb, what are the features of your industry's commitment to improving greenhouse performances, and can they be measured? I think that follows on from the question that Graham was asking.

Mr Cribb—The industry takes greenhouse very seriously. My association was one of the original seven signatories to the greenhouse challenge program. Three of the five companies already have greenhouse

challenge agreements, and in some cases they have resulted in significant reductions in emissions. A fourth company is in the process of negotiating its agreement at the moment. So there is one company at the moment which is outside that process. The industry has taken the view that greenhouse is an issue that it needs to respond to and that it needs to be active on.

As I mentioned earlier, we certainly prefer those kinds of voluntary actions that industry can take rather than having mandated action demanded by government. The industry has been very much on the front foot in terms of those activities, and there have been reductions in emissions. Again, it depends on each company. Companies have found improvements in energy efficiency. A number of companies have been active in expanding their plantation base. That has also been part of the equation in the agreements of some companies. The reductions in emissions they have achieved are very well documented through the greenhouse challenge process, and I would be happy to provide that information to the committee.

Mr JENKINS—There is part of Mr McDougall's questioning that I did not quite follow about the emissions. In your processes there are carbon emissions through the energy used, but are there carbon emissions in the actual process?

Mr Cribb—No, it is the emissions that come from the use of energy in the process.

Mr JENKINS—I just wanted to clarify that.

Mr Cribb—In any process, even with virgin fibre, you get some small amount of fibre loss. I guess there is some loss of carbon in the process, but I would not technically describe that as an emission as such. There is some loss of fibre through the process and, therefore, you are losing some carbon out of the system just through the production process every time you put it through.

Mr JENKINS—This might be described as badgering the witness. You have tried to—and, in fairness to you, I think you have done it well—describe your concerns about your industry taking responsibility for the full carbon load that left the factory gate.

One of the things that the committee is coming to grips with is this. If there was a trade or permit system put in place, what stage of processing of a number of products do we have to monitor? I think that the classic is transport, and we surely could not require permits for every car owner or things like that. But how far back in the stage should it go and whose responsibility is it? Is it the car manufacturer or the producer of petroleum products?

With NAFI and yourselves it is really coming to grips with at what stage would we put this monitoring procedure. I would put to you that there would not be a problem if the members of your organisation had the responsibility at the factory gate, if it was properly assessed about what loss there was by end use. As you say, a lot of the end use is actually locking up carbon in books, et cetera. Some of the end use through the type of levels of recycling that you have given to us, are coming back into the process.

If we develop the science to a stage where we could have some comfort about the way in which that use had been assessed, do you think there would be less reluctance from your members not to have the

imposition of those levels?

Mr Cribb—That could provide a possible solution. One solution might be to survey paper usage or something, so that for any grade of paper that is produced in Australia you could develop an average percentage as to where all that paper ends up: X per cent might be destroyed very quickly; another percentage might last for say five years; and another percentage might last for ten years or more. It may be possible to derive an average figure based on some kind of survey and then offset that against the credit that the company would have in the first place for having locked up the carbon in the paper.

We have an open mind on these things. Obviously, you have to be practical and we would be happy to investigate what would be a method of determining these things. My association will be represented on this steering committee that has been established for the national carbon accounting system. We are interested in being represented on that steering committee because of our interest in how these things can be developed. Obviously, we are looking for solutions that do not disadvantage the industry, but we are also looking for solutions that will be practical and will work. Our main concern is not to unfairly advantage the industry. It is to make sure that the industry is not disadvantaged.

Mr JENKINS—As part of your commitment to greenhouse challenges, there has also been monitoring of the direct economic benefit of reaching some of the greenhouse challenge targets that have been set. Can you comment on that?

Mr Cribb—I am not sure if there is an exact figure that would have been produced. By definition, the kinds of measures that companies take under greenhouse challenge measures also have economic benefits as well as environmental benefits. Quite clearly, companies are aiming to achieve both benefits out of the program. I am afraid I cannot give you an exact figure on what the economic benefits would have been but I am sure there have been economic benefits as well as environmental benefits from the program.

Mr JENKINS—Earlier on when we were going around Australia, some witnesses, especially some in Sydney who had an interest in the already developing market in tradeable permits in emissions, suggested that some of the multinational companies that were getting involved were doing so because they wanted to give the impression that they were actually doing the right thing by the environment and that there was some marketing advantage for them. To what extent do you think that members of your association, through increasing the levels of recycled fibre and other green practices, have seen a benefit in a marketing sense?

Mr Cribb—The industry is a sustainable industry from an environmental point of view. The industry has been very conscious of the concerns that exist in the community about the environmental performance of the industry. Therefore, the industry has been very keen to take real action to address those concerns, and it has done that comprehensively across the board.

Having taken the action, the industry believes there is no reason why it should not get some public relations benefit from having done the right thing. The industry certainly would like to obtain that benefit but the reason it wants to do the environmental work in the first place is because it wants to take the action that is needed in terms of its own processes. It has taken the action first and is seeking to get the public relations benefit from it as a by-product, rather than the other way around.

Mr JENKINS—In our concern about a manufacturer coming out of a non-annexure-1 country, to what degree as a marketing tool is ‘Australian made’ an advantage to members of the association?

Mr Cribb—For us that is a very important thing to have on our product because we think people will respond favourably to that. When people buy an Australian made paper product they can be certain that the industry has acted in an environmentally responsible manner in terms of producing that product. When they buy a product that is produced overseas, particularly in some developing countries, they cannot be as sure of what they are getting in terms of environmental performance. We think the ‘Made in Australia’ label is very important for that reason.

CHAIR—You mentioned earlier that in your industry you saw limited use for plantations being grown outside an economic haulage area to a mill. I understand that the paper industry is a very competitive industry and there are economies of scale. However, aren’t there opportunities for a boutique type mill to develop in some of those areas where there is not such an amount of product available?

Mr Cribb—There has been quite a lot of speculation about these kinds of things in the industry. People look at the experience in the steel industry where changes in technology mean that you can have smaller electric arc furnaces, for example, running on scrap metal and that kind of thing that could be economic and could compete against the full-scale, normal blast furnaces.

I hasten to add that I am not a technical expert on the paper industry, but my understanding is that those technological changes have not enabled people to do that in the paper industry. There are some niche markets. For example, there are some small tissue makers in Australia that are able to make use of recycled fibre and run tissue mills based on recycled fibre. They have found a particular niche market for lower grade tissue product. But in terms of general paper production, machines are getting bigger and faster all the time. If you want to compete against that kind of plant overseas, you are really looking at having to have world scale machines. They are so productive that it is very hard to compete with smaller equipment.

CHAIR—So it is not possible to have, say, one module and not five modules in a factory?

Mr Cribb—Yes, but the point is that the size of each module is now so large and they produce so much paper per year that you are still looking at a very large scale of production. Part of the problem in terms of the pulp and paper industry in Australia is that two-thirds of the pulpwood that you could use to make paper in Australia is exported to Japan. Therefore, the amount of wood that the industry has left to utilise in Australia is limited by that fact alone. It is not so much that we have a shortage of wood in Australia as a reason for why we do not produce more paper, it is the fact that a lot of the wood that is available, for various reasons, is exported to Japan where it is made into paper.

CHAIR—You mentioned earlier that the raw material in Australia was dearer than in other countries. Why is that? Is it to do with costs in Australia, or is it that we have too many add-on costs such as inquiries and government regulation which have to be passed on to the price of the raw material?

Mr Cribb—There is a wide range of views on that issue. One view which is commonly put is that because the Japanese paper industry is heavily protected—they pay a very good price for wood and so some

would argue that it is above what they could pay for wood if their industry was unprotected, for example—that effectively the price of wood in Australia is set by the export market price to Japan, and that is a relatively high price in world terms.

There are other things that affect the cost of wood but that is one that is often quoted. However, other people disagree with that view. That is by no means the perceived wisdom, but it is certainly one view that is put.

CHAIR—The real price of the product though has a big bearing on plantations, whether it would be economic or not.

Mr Cribb—Sure, but there are lots of other costs. The industry, especially at the moment, is working very hard to reduce its costs. Things like port costs are a big issue, so the industry has watched that issue very closely. The industry has been working systematically across the board to reduce its cost structure, which is why we are concerned about greenhouse measures that would add to the industry's cost structure.

CHAIR—Could I have another go at this world competitiveness, if you like, which we were talking about earlier and take, for example, a company like Daishowa? Surely it would have limited opportunity of offsetting its emissions in Japan? Would that not put you at an economic advantage in Australia where it is relatively easy to offset emissions?

Mr Cribb—You mean offsetting emissions through the growth of plantations?

CHAIR—Yes, making you more competitive as an Australian industry.

Mr Cribb—That is one of the advantages of a trading system over some other kind of system. If those advantages are real in an economic sense then the trading system will reveal that and companies will make the necessary adjustments.

CHAIR—On page 4 of your submission, in the final paragraph, you talk about carbon accounting and you say:

The Government's November 1997 package of greenhouse measures allocated \$12.5 million to establish a national carbon accounting system.

Given that we have just talked about some fairly complicated accounting, would you see it as pretty important that that be followed up? Would industry be prepared to also make some contribution towards that?

Mr Cribb—As I mentioned before, my association will be represented on the high level steering committee for that national carbon accounting system. We are keen to be involved in the work and to provide technical input or expertise where necessary to help the development of this system. At this stage, that is the extent of our involvement and we do not envisage making a greater involvement than that. But the government has allocated a substantial amount of money to this task, and it has some very good technical agencies such as the Bureau of Resource Sciences working on this under the auspices of the Australian

greenhouse office. So I am confident that the government has allocated the resources to enable the job to be done, and we are happy to provide technical information and input to assist that work to be completed.

CHAIR—Finally, it has been put to us fairly strongly, I suppose, by the larger emitters—the energy generation companies—that they would prefer to see a tradeable system in place sooner rather than later. It has been suggested that this could be a dynamic process—that, because they are in the area that is easily measured, they should be at the forefront of this and that the scheme should be a dynamic ongoing process where the more difficult areas are brought in at a later date. Do you have any strong objection to that proposal?

Mr Cribb—In theory we would not have a strong objection to that proposal, but I would come back to one of the points I made in the submission and in my opening statement—that is, emissions trading is not an end in itself. The reason we are doing this is that we may need to meet an international commitment. We would not have any objection, of course, to electricity supply companies getting involved in some earlier version of a system provided it was not going to take away the gains that the industry has received through the deregulation of the energy market. As I mentioned before, the industry has been trying very hard to reduce its cost structure. One area in which we have had some success has been in terms of energy cost, because of the benefits of the deregulated market. We still hope to see more benefits from that process, but there have been some benefits that the industry has received. So our only concern about some early domestic trading system involving energy generators would be that if the net effect of that market was to start increasing the cost of energy again, we would obviously have concerns about that.

CHAIR—I am interested that you say you do not see a tradeable system as being the panacea. Wouldn't a tradeable system—especially if the emissions were reduced at a percentage rate per year; it might be only a small percentage rate, but to aim for a target—encourage non-greenhouse emitting energy, and wouldn't that in itself get the result that everyone is aiming for, that in fact those who produced the lower emissions would be getting benefits out of the tradeable scheme? It might take two or three decades, but wouldn't it drive in that direction?

Mr Cribb—I think, potentially, over the longer term, emissions for any scheme could in fact do that. I think it really comes back to a question of timing. At the moment we expect that our Kyoto commitments can be met largely through these no-regrets voluntary kind of measurements which do not impose any costs, and for as long as we can continue to be able to meet our commitments through voluntary no-regrets measures, that is the course of action we would prefer. At some point—and we may get to that point quickly; who knows how long it will take—to meet our international obligations, the Australian economy as a whole will start to bear real costs. It is at that point that we think a trading system has benefits, and that is why we think the work should be done now to enable us to implement that system very quickly once we cross that line into measures that are going to have real cost for industry. We think domestic emissions trading can provide the vehicle for keeping those costs to the lowest possible level.

My point is: we do not see any urgent need for an emissions trading system right now because we are already meeting a large part of our international obligations—perhaps our entire international obligations as we know them at the moment—through existing voluntary no-regrets measures, and we would prefer to stay on that path for as long as possible. If we have to cross over to the path where real costs will be incurred,

then we are very keen to look at the benefits of an emissions trading system.

CHAIR—Surely history teaches us, though, that human nature is such that voluntary no-regrets programs do not usually work; it is either the carrot or the stick.

Mr Cribb—I think Senator Parer would disagree with that. The greenhouse challenge program has been recognised as being the most successful program of its type in the world. There are 100 major companies that have signed up to it, and the program is being extended and is having additional funding to sign up more companies. I can only speak for my companies but certainly they have made genuine reductions in their emissions on the basis of that program. I would be surprised if the other 100 large companies that have signed up have not also made genuine reductions in their emissions. It has been our preferred approach to go down that route, where industry can choose to make reductions on terms that are most suitable to what it is trying to achieve in a commercial sense. Real reductions have been made and the program has been a great success.

CHAIR—I do not disagree with that. Maybe you are suggesting that two arms of government do not agree here.

Mr Cribb—You are suggesting that things do not work without a stick. There has always been an implied stick in the greenhouse challenge program—that is, if companies were not prepared to get in there and start to reduce their emissions voluntarily, there was always the implied threat that government would do it for them. My point is that industry has in fact grasped the nettle very vigorously and certainly in the case of my industry has made significant reductions in its emissions on the basis of that program. That should be recognised and they should not be penalised for the fact that they have done that—in fact, the opposite. The question is: how far will those kinds of measures and programs deliver on Australia's international obligations?

CHAIR—It raises another very interesting point, too, as to where you start as far as gauging the efforts of companies and others in reducing greenhouse gases.

Mr Cribb—That is why in any system that is introduced you can argue as to how far back you need to go but certainly it should pre-date the greenhouse challenge program. Arguably you could date it from the Rio treaty, which was the first international commitment that Australia incurred in terms of greenhouse. Or you could use 1990, which is the common baseline in a lot of international greenhouse things.

When you are calculating the allocation of permits for any trading system, we think it needs to go back perhaps as far as 1990, certainly before the introduction of the greenhouse challenge program, precisely so that companies such as mine that have done the right thing and made reductions in their emissions are not penalised for the fact that they have done that. If you started the allocation of quotas or whatever from 2000, or even from this year, those companies which have done nothing in terms of reducing their emissions would end up getting a benefit and those companies such as mine that have in fact reduced their emissions would be penalised. We do not think that is either fair or appropriate.

CHAIR—As there are no other questions, thank you, Mr Cribb, for your evidence. It has been very

valuable.

Mr Cribb—Thank you very much, Chairman.

Resolved (on motion by **Mr McDougall**):

That, pursuant to the power conferred by paragraph (o) of standing order 28B, this committee authorises publication of the evidence given before it at public hearings this day.

Committee adjourned at 11.39 p.m.