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**PRODUCTIVITY COMMISSION**

**INQUIRY INTO RURAL RESEARCH AND DEVELOPMENT  
CORPORATIONS**

**MR P. WEICKHARDT, Commissioner  
DR C. SAMSON, Associate Commissioner**

**TRANSCRIPT OF PROCEEDINGS**

**AT SYDNEY ON THURSDAY, 4 NOVEMBER 2011, AT 9.07 AM**

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**MR WEICKHARDT:** I propose we make a start and I will need to go through a few formalities first of all, so make yourselves comfortable and we will come to you in a moment. Good morning, welcome to the public hearings for the Productivity Commission's inquiry into rural research and development corporations. My name is Philip Weickhardt. I'm the presiding commissioner on this inquiry and with me is Cliff Samson, the associate commissioner. Ian Gibbs heads up the staff team and Nick Ford is part of that team with us in the room too.

The purpose of this round of hearings is to facilitate public scrutiny of the commission's work and to get comment and feedback on the draft report which was released in September. Following these hearings in Sydney hearings will also be held in Canberra, Melbourne, Tamworth, Brisbane, Hobart, Adelaide, Perth and Mildura. We will then be working towards completing a final report to government in February 2011, having considered all the available evidence presented at the hearings and in submissions, as well as from other informal discussions. Participants in the inquiry will automatically receive a copy of the final report once released by the government which, under the Productivity Commission Act, may be up to 25 parliamentary sitting days after the report is submitted.

We like to conduct all hearings in a reasonably informal manner but I remind participants that a full transcript is being taken. For this reason comments from the floor cannot be taken but at the end of proceedings for the day I'll provide an opportunity for any persons which to do so to make a brief presentation. Participants are not required to take an oath but should be truthful in their remarks. Participants are welcome to comment on the issues raised in other submissions. The transcript will be made available to participants and will be available from the commission's web site following the hearings. Submissions are also available on the web site.

I would now like to welcome our first participant, the New South Wales Farmers Association. If you could please for the transcript say your name and the role in which you're appearing today and then we'll get into what you'd like to say.

**MR ARMSTRONG (NSWFA):** Thank you. Charles Armstrong, president of the New South Wales Farmers Association and with me are Charlie Thomas, who's manager in the policy area - - -

**MR WEICKHARDT:** Perhaps if you just let them speak and the people doing the transcript have at least got your name and voice - - -

**MR THOMAS (NSWFA):** Charles Thomas, policy officer for the New South Wales Farmers.

**MR CROSBY (NSWFA):** Justin Crosby, general manager policy of the New

South Wales Farmers Association.

**MR BRAND (NSWFA):** Matt Brand, CEO New South Wales Farmers Association.

**MR WEICKHARDT:** Thank you very much indeed. Well, over to you.

**MR ARMSTRONG (NSWFA):** Thank you very much for the opportunity to present to the inquiry and comment on the draft report. We were certainly encouraged by draft report supporting basically most of our beliefs in terms of how research and development should be conducted. We've been very supportive of the model and perhaps in backing that up New South Wales Farmers represents a whole lot of commercial producers across New South Wales. We have about 10,000 members and we cover a huge range from oysters, eggs through to horticulture through to, if you like, the four large industries: cattle, wheat, sheep, wool and a few others, so the organisation represents quite a large range of both the research and development corporations as well as, of course, the industries across New South Wales.

As I say, we support the R and D Corp model or models, as they're somewhat varied, but we believe it has been working quite well and they have been able to provide substantial productivity improvements through research and through new technology to enable us to continue to compete as farmers. We're always fighting declining terms of trade and have been since the beginning essentially and it's only through those productivity gains that we've been able to maintain our competitive advantage, more in terms of competition overseas but also locally, of course, as about 60 per cent of our production does get exported, so we need to be able to compete with some fairly heavily subsidised industries overseas.

I think the challenges currently facing us and facing agriculture are the United Nations telling us that we will need to double our food production between now and 2050 and obviously we will have to do that with less land, less water, less fertiliser, less a whole lot of other resources. So that means a far more efficient, productive chain that we are at the moment. In addition to that, the whole concept of climate change is something that we will have to continue adapting to and maybe at a faster pace than has in the past. I think it's been argued fairly strongly that we see the return on the dollars invested in research and development and particularly the return on government's investment in our research and development as being so substantial that you would think that something like \$11 return for each dollar invested would be enough to put a whole lot more in there and say, "This is going to be a good return for the economy and a good return for Australia as a whole."

I think the RIRDC report talks about the \$11 for every dollar invested and

perhaps also to emphasise that's over a 25-year period, so it's a massive return and lasts over a long period of time. So we think the investment in research and development is very important and needs to continue. The main issue that perhaps we are opposed to or don't accept the recommendation from the commission is the withdrawal of the \$60 million from the current R and D program. We don't believe that that is going to be advantageous for the economy and certainly not advantageous for the current research programs in the various industries. It seems to be based on the assumption that private investment will take over and I think you do have a session with the Australian Farm Institute and Mick Keogh fairly shortly, there's a significant research - and I suppose I should say I'm a director of AFI as well. I think you will find that that draft report argues pretty convincingly that private investment will not take over, if government dollars are withdrawn, for a range of reasons.

We will leave Mick Keogh really to expand on that issue but there are reasons - Australia is a very small market - as to why in other countries' private investment might take over public funding. Multinational corporations are looking for large market and most of their headquarters are associated in overseas countries. The other thing in relation to that is obviously we are amongst the lowest farm-subsidised industry in the OECD and all the other being more subsidised. So there's an argument there that we're receiving less already anyway. We would argue in terms of the pressure on food production, the pressure on fibre production, the pressure on our own industries maintaining their competitive edge that now is not the time to withdraw funding for research.

You might say, "Why treat agriculture differently?" Obviously all those industries are made up by a multitude of small producers with a low capacity to invest, perhaps a low capacity to capture any particular return or advantage that they may gain from private investment but farmers are a peculiar crowd; if we get an advantage we tend to look at the whole industry. Whereas a firm here in Sydney or anywhere else might say they'll keep their advantage to themselves and keep their particular technology to themselves, we strangely enough will hold a field day and try and get everybody else to adopt the new technology. So it's quite a different approach. It's more an industry approach rather than an individual approach and I think that assists in understanding why private investment in research will not take the place of withdrawal of government dollars. It's actually the reverse. You'll get more private research leveraging off the additional portion that government contributes and therefore is likely to actually increase our productivity with increases in the whole research dollar or the whole research basket.

The only suggestion perhaps that we could put forward was whether in fact the commission has looked at and as a result not made any recommendations on is there a way in which the current resources could be used more efficiently. Are there general economies that the current R and Ds could in fact improve in terms of

increased collaboration, shared administration, cohabitation, all of those sorts of options? We haven't researched it to the extent of saying we think a particular model should be developed along those lines, but we do notice that the commission didn't go into that area and we think maybe it's an area that needs looking at and then may or may not develop recommendations. I suppose in one sense that's a question back to you as, did you make no recommendations because you decided there were no recommendations to be made or because you didn't go into that area? I think that's the question. Thank you for the opportunity to present.

**MR WEICKHARDT:** Thank you. You have opportunities to add some more comments as we go through. Perhaps I might just comment on the last question you threw out first and we'll come back to some of the other important things you raised. Could the RDCs be more efficient, you asked. The answer is undoubtedly yes. I think that applies to almost any organisation in the world today. Did we have some ideas of what they might do? Yes, but we specifically resisted the temptation to act in the manner of an all-wise, sort of, central government body suggesting how organisations might be more efficient because quite frankly my general experience in business is that the people who are best able to perceive the things that really will add value and will work best for the organisations are those boards that are charged with that responsibility.

Certainly from a distance it looks quite odd that some of the RDCs are quite small and you would anticipate that there must be some scale effects in terms of administrative efficiency and cost. But there are, of course, advantages of focus and people being close to their industry and being nimble and responsive. It's therefore dangerous for people from afar to pontificate exactly what they should do, but we would very strongly encourage - and I think we've said in the report - the council or the chairs of the RDCs to continue to work together and to cooperate strongly on developing synergies and efficiencies which don't detract from the advantages of having people close to specific industries and focused on those industries.

Intuitively the idea of consolidating all the RDCs into one body would probably make administrative costs as a percentage of the total much lower, but would it render them more efficient and effective, probably not. Intuitively would the RDCs, for example, sharing a common contracting system with their external research providers make a lot of sense? I think so. So I'm sure there are efficiencies there and one of the reasons that - and it's only one of the reasons - we recommend that the industry-specific RDCs would receive less money and we would hope more money from the industry, but have fewer requirements from government as to exactly what they did, we would hope that the boards of those RDCs would then take greater control and responsibility for driving efficiency because there was more of their money at stake.

There is a intuition that we developed that perhaps at the moment with a mixed funding model that both the government on the one hand and the industry on the other hand looked to the other to mind the governance of the organisation and its efficiency. If you've got a greater preponderance of industry funding going into an RDC, there's maybe a much greater chance that the industry will say, "This is the way we've got to get a better bang for our buck." So that was the sort of thinking that went into our lack of specific recommendations there but on a generic basis we're very strongly of the view that the RDCs should drive greater efficiency and effectiveness in their organisations and there are opportunities to do that. Do you want to add any more to that?

**DR SAMSON:** Very briefly, exactly as Philip said. We are also aware that there are moves afoot within the RDC community to look at some of these issues. I think, as most people have agreed, the models are basically sound and there's a dangerous opportunity to try and micromanage and in doing so make things worse and we're very conscious of that. As Philip said, we hope that as the levy payers become proportionally more significant stakeholders in the commodity based RDCs, the incentive for any changes in efficiency will best come from the levy payer and have far more impact than somebody trying to be omnipotent and wise and imposing a solution on a system that by and large works quite well.

**MR WEICKHARDT:** Can I come back to the issue that no doubt others will comment on and you've commented on, the issue of money. First of all, you quoted in your original submission to us and you've, I guess, reaffirmed in your presentation this morning the very high benefit cost ratios that are being shown up by the evaluations that have been done on the work of the RDCs and I assume that because you've quoted these and indeed in your original submission you quoted benefit cost ratios of 2.36 after five years and 5.56 after 10 years rising to your 11 after 25 years. I'm assuming if you are quoting these that you believe that these evaluations faithfully do demonstrate what has been delivered by the RDCs in terms of the returns.

**MR THOMAS (NSWFA):** I guess we have relied on those figures and I think that most farmers would agree they're getting a fairly substantial investment and we're not in a position to really go into the economics behind it. Certainly I think figures like that would be representative of what most farmers are feeling on the ground.

**MR WEICKHARDT:** Okay.

**MR CROSBY (NSWFA):** I think if I could add further to that, you'll note there that in the council of RDC chairs that that is where that figure has come from. There was a randomised selection from which those numbers were developed. So there has been rigour that has been placed in that analysis and it's upon that basis that we have

relied upon them.

**MR WEICKHARDT:** You also then go on and make the point in the submission that the - I mean, a positive aspect of the RDC model is that it is being very largely influenced, as was the original intention by John Kerin when he set this up, by the requirements and the needs of the farming or the grower community. You say in Project Oversight on page 23 of your submission, "A vast majority of outcomes from RDC R and D are aimed at adoption by producers, " and, "The end results are more likely to be relevant to the industry's needs and adopted." That is all good news, but in those circumstances where you've got very high benefit cost ratios and you've got RDCs working on things that are of interest to and of benefit to farmers, why is it that you predict if the government reduced the amount of money that they contributed that the farmers wouldn't say, "Gosh, these are fantastic returns, we ought to invest more ourselves."

I accept that nobody will willingly put an extra dollar on the table if they think the government would put it on instead. But if the reality is the government wasn't going to put that extra dollar on the table, surely self-interest, commonsense, economics would suggest with these benefit cost ratios that farmers would eventually decide it would be foolhardy not to invest more.

**MR THOMAS (NSWFA):** I guess a lot of these issues come down to a vote between producers and without having more than 50 per cent of producers having read your report and knowing that these are high-risk investments that aren't going to pay off perhaps in their lifetime, given the age of an average farmer, selling that to a producer is, I suppose, a bit more difficult.

**MR WEICKHARDT:** 2.4 times in five years I would hope most farmers are going to have a perspective of a five-year return. Most of them are very stoic about the cyclicity of their industries and so they look beyond next year and I guess when they buy a new tractor or a new harvester they don't assume they're going to get a return from it in year 1. So if they're going to double their money after five years and they're very confident that this research is of direct benefit to themselves, surely they would invest more.

**MR CROSBY (NSWFA):** If I might say at this point as well, there's a combination of factors that go with that. So the president has noted firstly about the small nature of the majority of the players within our industries and also in that term the reduction of terms for trade that those producers have suffered over a long period of time, basically since the end of the war boom with the Korean War. So there is a real hip-pocket effect in any increase of costs which does not get passed on to the consumer in our industry. So, firstly, you look at the economic situation of the individual producers as a crucial factor that you need to look and the ability - not just



the desire to, but the ability - to invest in further R and D.

The second part that comes with that is that figure looks at whole range of externalities that aren't captured by those individual producers, so in effect there's an amount of public good that's looked in those returns of investment. So on that basis we also look at not just what's captured by the individual but what is captured by whole society and, therefore, from that basis we lead to believe that there should be no reduction in government investment through this program.

**MR WEICKHARDT:** I think you're quoting the evaluations from the RDCs that were coordinated by the chairs and those evaluations specifically do not quantify environmental or social benefits because they haven't developed a methodology for doing that which is understandable, it's difficult to do that. But those sort of externalities are not quantified so the benefit cost ratios you're quoting are not from those public good outcomes. They are generally outcomes that are captured by the industry. Now, I recognise certainly farmers are having a tough time, as are most producers, with the high dollar and the declining terms of trade. I mean, prices are improving obviously in some farming sectors right now, but it's tough. But nonetheless, if you're going to double your money from an investment, most people would think that's a pretty good return in a five-year period of time.

**MR ARMSTRONG (NSWFA):** It certainly is and I know it sounds contradictory but we have a complete range of farmers from those who support the whole research and development effort to those who only read and only believe any reports of failures or technology that doesn't work and the ability for the farmer who wants to contribute more and capture the benefit of his contribution, it's not there because it's open to everybody to capture. So he can't capture it himself as an individual or as a - even if you argued the top 20 per cent of producers across Australia said, "We want to increase our investment in research and development but we want to capture that return," they can't because everybody has access to that unless it's a specific piece of machinery or a specific plant that could be confined into their particular market.

I could turn it around, of course, and say that surely the government is also in the same boat and surely the government would like to put in another dollar and get that sort of return on it as well. I think there are two arguments that suggest that the greater good is served, whether it is an individual industry or the whole community, and significantly by increased efforts in the funding that goes to research and development. This organisation has argued in the most recent one, which was the wool industry levy that that was up by half a per cent, wasn't it, from - - -

**MR THOMAS (NSWFA):** The most recent one was retained but the most recent beef levy increase we supported.

**MR ARMSTRONG (NSWFA):** Yes, so we argue and we recognise that the industry both needs it and there is a good return. It is certainly difficult that we'd get a far better return investing money in the equity market or anywhere else in terms of those sorts of terms, but capturing that benefit to the contributor is where it's difficult to see the return.

**DR SAMSON:** I guess we're trying to in part understand the psychology of the reaction to some of these recommendations. We hear what you say that in your view if the government were to reduce its funding it would be, in your view, unlikely that levy payers would put more money on the table and we do hear from some that they might actually be inclined to put less on the table than they do now. But is the counterargument true? Hypothetically if the government was going to put more on the table and if the capital was raised, would producers then put more of their money into this?

**MR ARMSTRONG (NSWFA):** It is a hypothetical question but I would suggest, yes, particularly as we're coming out of a drought, the last 10 years obviously being - any spending looked at very closely. But coming out of a drought and looking at the challenges that are facing us now, particularly, say, in the water debate, the more efficient use of a lesser availability of water, the whole climate change adaptation challenge, I think there is a fair argument that we would be able to convince farmers that they should, if for argument's sake, government went up by quarter of a per cent that we ought to take the producer levy up by quarter of a per cent.

**MR WEICKHARDT:** Why is it, do you think, that some of the industries already participate and contribute significantly above the matching cap? For example, the GRDC, AWI, sugar, fisheries, and others participate below the government matching cap which doesn't suggest that even if the government cap were raised that they would put any more in and some are poised at that level which suggests that it does have some influence. What conclusion should we draw from the fact that there is that mix of people who are over, under or equally contributing?

**MR THOMAS (NSWFA):** Perhaps the only conclusion you can draw is that it really does come down to the culture of each industry and it's hard to generalise across all of them.

**MR WEICKHARDT:** Do you think it has any correlation with their experience of the benefits of the R and D that's done in their industry?

**MR THOMAS (NSWFA):** Perhaps that and also the job that each RDC does at marketing their results.

**MR ARMSTRONG (NSWFA):** Possibly also the potential that the participants in

the industry see for change and improvement. GRDC are particularly strong because money invested in new varieties can produce an ability to see a return very quickly; plant a new variety next year and you've got an immediate increase, say, the year after in terms of significant yield increase or rust resistance. So I think all of those factors relate to both the participants who are contributing seeing a result, seeing it early as distinct from perhaps seeing it over 25 years and saying, "Well, if I had have invested a dollar back then, that would have returned 11." So different industries, different potential for change, different opportunities for technology and different potential threats.

**MR THOMAS (NSWFA):** The visibility as well. If you look - I think MLA is actually one of the ones that's above the cap but I'm familiar with it. The genetic research that they do actually flows through studs to your grassroots producers and so they might not actually see that connection between the work MLA is doing to their improved genetics but it is flowing through, just not directly from MLA.

**MR WEICKHARDT:** I think actually you do show a table in your submission that shows industry levels and government contributions which does show MLA well ahead but I think that's because the number you've included in table 2 for most of the industry-owned corporations includes a marketing levy component as well as the R and D levy component and I think MLA are actually hovering at about parity with the government contribution on the R and D component, whereas some like GRDC, as you say, are significantly ahead. That does bring me, however, to an issue relating to the R and D and a marketing levy for the industry-owned corporations. Some of the industry-owned corporations, as we understand it, when they go out and have a poll of members, look at the totality of the levy, marketing and the R and D component, but the board retains then a flexibility about whether or not on a particular year more or less money should be put into R and D or marketing. Whereas in some of the other organisations the R and D money is quite clearly specified as a component of the levy and I think that's true with MLA and a marketing levy is quite separately quarantined too, so the only way of changing the two is to actually go back to the members.

Now, we, as an information request, did ask for any comments from participants as to whether or not one of those mechanisms was better than the other. Do you have any reaction to that?

**MR ARMSTRONG (NSWFA):** My first point perhaps is that I certainly do feel that the board should be given that flexibility and I don't think there has been a sufficient discontent with that to change it. The boards are closer to it. They are closer to understanding what the returns are and/or the relative costs between the split between research and marketing. Again, industries are very different and I suspect that that flexibility should remain that way and it's still completely open to

the board if they wish to go back to an annual general meeting or an extraordinary general meeting to change the perception that they may have conveyed - even if it wasn't specific - at the previous meeting. Would anyone like to make an additional comment?

**MR THOMAS (NSWFA):** I think maybe it's probably not up to us to tell in each specific RDC's case whether or not levy pay should be included in that process but I think it generally would be comfortable to say that, I think, removing government from that process and giving more flexibility for the company and the levy payers to make that decision without having to go through what's going to be a six-month process thankfully to have it reapportioned.

**DR SAMSON:** Charles, you mentioned a few times in your presentation some broader cross-commodity issues like climate change, water usage, a whole range of things that affect agriculture and indeed the broader community and in addressing those in our draft report I guess we basically formed the view that the existing R and D corporations are particularly good at dealing on a commodity basis with the producers and levy payers and the bottom-up approach for identifying research priorities by and large seems to work very well and it is the strength of the RDC.

What we feel has perhaps been less successful is the government stakeholder has become increasingly more active over the last five, eight years. Looking at those cross-commodity national issues, the model, as it historically stands, the RDCs seem to have been less successful in dealing with that. Now, our proposed solution at the moment is to actually separate out the on-farm productivity-driven agenda of the levy payer, and in the form of creating a new entity, Rural Research Australia, put a greater focus on those bigger national cross-commodity issues in that entity. So current RDCs can focus on what they're good at and this increasing government agenda can be addressed through this new body tasked with focusing exclusively on that. Do you have a view on that proposed modification of the existing responsibilities?

**MR ARMSTRONG (NSWFA):** Well, yes we do. We do have a view. There was a considerable support for Land and Water Australia when it was in place, which was essentially, handily I think, the sort of area you're referring to. But that had its own funding source. Although there is not a lot of detail about the proposed Rural Research Australia it's quite clear that over a period of time the \$60 million is going to come back from or be withdrawn from the government side of the contribution to the R and D corporations into forming that extra body. So we have significant problems with the proposed withdrawal of funding.

On the other side or in addition to it, so acknowledging that Land and Water seem to be a successful research body to cover those bigger national cross-industry

issues, there are also other agencies that don't seem to be mentioned in terms of CSIRO, even National Parks. Some of those should be contributing perhaps to those broader issues as well. But our real concern was the reduction in the funding rather than necessarily the role that a body like Land and Water could do in terms of those cross-industry issues. But I'm pretty sure Justin has got a comment there.

**MR CROSBY (NSWFA):** I guess the only other issue that I would like to raise in that is that the strengths of the RDC model is not just the bottom-up approach to the research but it's also then been the way that that has been adopted on farm. So the industry networking works both ways. You build up your research priorities so that they actually fit your need and then build it up. So we're of the approach that there needs to be that industry-led positioning on these broader schemes that you've discussed with regards to the research topics of RRA. I think that adoption is a key factor in the position that we've been taking.

**MR THOMAS (NSWFA):** Also, to drive the adoption, I think if you have a body like this that's focused only on public benefit things and expecting adoption by people using their productive lands, without any private benefit there's no real incentive for them to do that. I think by involving the industry-specific RDCs in these projects is where you make sure that you get that link.

**DR SAMSON:** I think we acknowledge that the strategies that you would have to develop to encourage adoption of some of these broader national interest projects are somewhat different than the on-farm productivity where there's an immediate, obvious benefit to the producer that if you do this you're going to get an increase in production; whereas some of the other things may in fact not produce immediately or even in the longer term an obvious financial benefit. So we think there's potentially quite different skill sets that you need. In saying that though we absolutely agree that you can't totally divorce the two. If this RRA were to come into existence we would envisage it working very closely with the 15 commodity-based RDCs and indeed, organisations like yourself.

**MR THOMAS (NSWFA):** One other comment we did have on RRA - and I mean again, without all the details it's a bit difficult, but in terms of our earlier suggestion that we be looking at cost-saving efficiencies through collaboration and mergers and those sorts of things, creating a new RDC which is in essence quite similar to RIRDC is now - whether that's beneficial or whether we should be looking to create something within RIRDC or how that could happen.

**MR WEICKHARDT:** Okay, can I change tack a little bit. One of the other information requests we had in the draft report related to the issue of the governance of the RDCs. It is reasonably obvious that at least one of the RDCs has caused a fair degree of frustration among some of the levy payers, some of the other RDCs and

also with government and yet despite lots of advice, recommendations from various directions things don't seem to have changed very rapidly. You would sort of say given there appears to be discontent from a number of stakeholders around that RDC, this seems to point up a sort of a failure in the governance model that the issue hasn't been corrected. If you were looking at a sort of public company where shareholders elect the directors you would expect that if the financial or governance performance of an organisation continued to fail that eventually the directors would be removed and the shareholders would vote in a new board or the company would be liquidated or wound-up or something would happen.

We suggested that really one of the problems appears to be, particularly for the IOCs, that if the government withdraws money, which is an ultimate sanction, it damages a whole lot of people and the collateral damage to innocent bystanders is quite significant; researchers get hurt, the levy payers get hurt and perhaps they haven't been responsible for any heinous crime at all. So we were scratching our heads as to what might be an appropriate sanction to an RDC. I'm not wanting to specifically get into one particular RDC, I'm looking in a generic sense going forward. What ideas have you got as to how an RDC that wasn't performing for its industry, wasn't spending public money wisely or wasn't in a good shape in terms of governance - how that RDC could be brought to heel?

**MR ARMSTRONG (NSWFA):** Well, certainly a challenging question because all the models - I think all of them - are different in the way they are structured. But we believe that the skills-based board is something that has our endorsement, and a selection committee process associated with seeking board nominees is a beneficial way to go. That then, I think, points to a couple of R and Ds that you might be referring to, or certainly one that you might be referring to - and as a potential solution to perhaps some of the difficulties they have been through.

I think the other aspect - and we welcome the recommendation where a director representing the government could be invited by the board onto the board. I think that's a significant step. I believe it worked well in my experience in the past in a few of the research and development corporations in the earlier models. I think it's fair to argue, and I would be arguing, that the government contribution itself means that or suggest that there should be someone representing that government contribution. So I think if you put those three points, and there may be others, it should start to address some of the problems that you've quite rightly referred to.

**DR SAMSON:** So that strategy is really to try and avoid the problem occurring in the first place, I guess, if you've got a good skill-based board.

**MR THOMAS (NSWFA):** Yes, I think we're satisfied with the actions AWI have taken in implementing their skills-based board, whether it actually does get off the

ground, and we think that given the quarterly meetings they have with DAFF and things like that there's plenty of opportunities to reprimand them informally before any serious action has to be taken. If they're not performing then - well, we don't think it will be an issue that they won't perform with the new board.

**DR SAMSON:** When the commission started this inquiry we were very conscious of the history of the model and the number of players and different interests et cetera et cetera. So that led us at quite an early stage to try and establish some principles to underpin this whole rationale of why the government put money into the system, hence that concept of additionality that the government money should be there to do research that wouldn't otherwise be done by the private group. Are you comfortable with those basic principles as a way to guide the system forward or do you have any concerns with any of them?

**MR ARMSTRONG (NSWFA):** I think we're comfortable with what has been proposed, of all those guiding principles, but only - and this will be a little repetitive, I don't think it should be seen as - the government funding support should be seen purely as additional. There's a fair amount of leverage and/or interconnection between the government funding and private. But in terms of the principles that you're putting forward I think we are quite comfortable with those, yes.

**DR SAMSON:** Okay, thanks.

**MR WEICKHARDT:** So that's a fairly critical point. I mean the argument that we were trying to get to in those principles was the government, when it spends our money - it's not the government's money, it's our money. When the government spends our money it should do so in a way that generates a return for that money. If it simply substitutes for money that a private individual could have or should have spent themselves then the government is not spending that money wisely.

**MR THOMAS (NSWFA):** I think it is a fairly black and white approach the commission has taken in saying that if there is the slightest private benefit there that even if there is a huge social benefit on top of that, that that should be privately funded; because I think to expect producers to be funding that social benefit is - there could be something morally wrong there.

**MR WEICKHARDT:** Well, we would be the first to acknowledge that there are no bright dividing lines in this whole area. There's a spectrum of benefits and costs that apply to research in this area. At one end you might have very large public benefits and very small private benefits, or no private benefits, in fact, private detriments, and at the other you might have 100 per cent private benefits. But the majority of the work that goes on is a spectrum that lies between those two. But the point we were making is if the private benefits would be sufficient to justify a private

rational investor to invest - not that they be so tiny that they wouldn't justify the cost, but if there are enough to justify a private individual to invest, even if there are lots of public benefits, then you would expect that private individual to invest in those circumstances. That's what happens in other industries.

If the government simply substitutes for that private investment then the government is effectively transferring your money and mine to a private individual, which most of us probably would say we'd rather keep our money in our pockets, thank you very much, because governments don't have their own money, they just raise it from you and me. Determining exactly where these cross-over points occur of course is difficult in practice. But when you look at the fact that elsewhere in the world private investors have contributed increasingly greater amounts, and that applies in countries very close to our own like New Zealand, you start to say to yourself, well, private investors in agriculture are treated significantly more generously than they are in other industries, and private investors in Australia are investing less than they do in other industries, other agricultural industries around the world. You start to say - there's a fair degree of circumstantial evidence that suggests that maybe the government is over-contributing in this area.

Now, that's the point that we were going towards. I know we will be talking in great detail with the next participant about this very subject. But it's that sort of feeling that led us to try to articulate these principles about why is it that government should spend money here. Agriculture is different, there is no doubt about that, but is it as different as the amount of contribution that's going on at the moment. That's the real question.

**MR CROSBY (NSWFA):** I think if I may head further to what has been said. If you look through our submission on items 1.23 to 1.4 there's a combination of issues here. The first is that there's a moral imperative about increasing food production worldwide, as the president noted earlier in his address. Is the market at the point where it is able to take up that challenge without this additional government investment? We are not of the belief that - furthermore so, we talk about the capture of this investment. Essentially what has occurred is there has been an increased production which has actually favoured the producer - sorry, the consumer at the grocery store. So there is the possibility that if you take out this government expenditure at the point of production what you might actually end up is a consumer increase in costs at - in the cost of living. So that's a factor that we think needs to be taken into account in that cost-benefit analysis.

**MR WEICKHARDT:** Just pushing back a bit on that last point, I think you've made the point, and we would accept it, that farmers don't set prices on a cost-plus basis here. Most farm commodities are priced on a global commodity basis. So if the farmer is spending more money on R and D I don't accept that is going to lead to



increased costs in the grocery store.

**MR CROSBY (NSWFA):** It may not at this point in time but as we go through forward with the FAO - so the UN FAO sort of stating by 2050 we'll need to increase food production by 70 per cent globally, there's a moral imperative looking forward and we believe that there's a possibility the market may not be able to capture that or in fact plan for that. So we believe there's a need for central coordination through government investment through RDCs.

**MR WEICKHARDT:** Well, of course if global prices do rise because food becomes increasingly scarce, that will provide a significantly greater private benefit to the farmers to want to increase output even more. So there are a number of different ways you can look at that particular equation. I mean we did note in the draft report that the moral imperative of Australia to contribute to sort of global food production is being discharged to some extent. You can argue to what extent but the Department of Foreign Affairs and Trade make a significant contribution through ACIAR to research in trying to improve food production in other countries. Indeed, a lot of that research does, from their own evaluations, actually provide benefits even in Australia too. So the government is not, I think, completely blind to the sort of moral imperative of helping to contribute to feed the world, but expecting the Australian farmer to feed the whole world, I think, for non-commercial returns is a bit of a stretch.

**MR ARMSTRONG (NSWFA):** Perhaps just two additional points. There's an assumption in your question that if government reduces its contribution then private will take up the difference. It's quite clear that that's not the case. Again, the - - -

**MR WEICKHARDT:** Why do you say it's quite clear that's not the case?

**MR ARMSTRONG (NSWFA):** The Australian Farm Institute report which will be delivered very shortly has surveyed 50 Australian agri-businesses and it clearly shows that currently only 13 per cent of Australian respondents plan to decrease research and development in the next three years, with 56 per cent planning to increase it. However, a 50 per cent cut in the R and D funding would change these productions to 41 per cent planning to decrease and only 10 per cent planning to increase.

**MR WEICKHARDT:** A long time ago in the Profumo affair Mandy Rice-Davies made that wonderful comment, "They would say that, wouldn't they?"

**MR ARMSTRONG (NSWFA):** I think you need to ask the Australian Farm Institute and Mick Keogh in particular the background behind these but I think it does back up the sort of argument we were talking about that there is a certain

leverage involved in getting additional private funding on the back of the investment from government and I suspect that that helps to generate that sort of return on that invested dollar. Sorry, I did get sidetracked, the other assumption I think that should be clearly and very seriously looked at is, will a reduction in the total pool for investment and research cause - and not be taken up by private - a less efficient industry, less production, less supply and therefore ultimately an increase in price through scarcity. I think that is a significant possibility.

The other one which shouldn't be forgotten but is not perhaps as significant as we might like to think, but government does gain from profitable industries. If agriculture, and any industry, can be efficient as possible, as productive as possible and therefore gaining in terms of export income for Australia, export income for the individual operations, the taxation system benefits as well. So there is an additional aspect in terms of having efficient, productive and worldwide competitive industries.

**MR WEICKHARDT:** Of course, if you follow that argument to the extreme, the government would subsidise every industry to the largest possible extent to become more profitable and then to do that it would have to tax them more and you'd go round in great circles.

**MR ARMSTRONG (NSWFA):** Of course, a large proportion of our competitors overseas are heavily subsidised and a lot more than Australian farmers.

**MR WEICKHARDT:** You're talking a lot about the Australian government funding, you haven't talked too much about New South Wales government funding and whilst the data is not good in any of this whole area, there seems to be pretty compelling evidence that some state governments have been progressively withdrawing the amount to which they've been funding RD and particularly E and it is certainly our impression - we don't have the good data that you'd really want to rely on - that as some state governments have pulled back from some of these areas that private individuals and private providers have stepped into some of these roles. For example, in the extension area, it's now very common in some industries to find private agronomists doing jobs that some time ago state governments would have done.

Why is it that you have been silent about New South Wales government funding in this area and why is it, if private sector has been willing to step into some of the void that they've left, that you think this wouldn't occur if some more government funding were progressively and gradually withdrawn?

**MR ARMSTRONG (NSWFA):** The first comment - and others might add - is we haven't been silent about New South Wales' contribution into research. Every year it's a challenge that we take to the department in terms of particular research projects

and one that we've been very supportive of is one that's been conducted in conjunction with New South Wales and in conjunction with Victoria in terms of voluntary market mechanisms in the case of carbon tax and carbon farming and what have been a carbon pollution reduction scheme. So there is very significant research dollars there. We have been very vocal in trying to maintain the state expenditure on research stations and having those facilities reasonably well manned or able to carry out the research, but maintaining those facilities in those geographical areas particular to their specialised form of research.

So I think it's fair to say that we've been pretty solid on trying to maintain - it's been more a case of maintaining the expenditure and preventing cuts rather than trying to get them to put more in there. Justin, would you like to add anything?

**MR CROSBY (NSWFA):** Only to reinforce what's been said by Charles, that is, that we have a great deal of policy that's with regards to frontline services. It was the major issue that we placed in our state budget submission earlier this year to the state government and it's been about frontline services as you particularly know with extension, as well as the pure science services that they undertake. So I would backup that we haven't been silent. The other part that we'd need to take on board and perhaps come back to the commission in our submission reply would be the very limited nature of that on the ground extension, agronomy services.

I'm not quite sure we're talking apples with apples here because there is some very small capturable services in my experience in the agriculture industry where that's undertaken and it's not broad scale and it's not always applied in a way that brings best benefit to the industry overall.

**MR WEICKHARDT:** Thank you very much indeed for appearing here today and we look forward to your submission, if you are proposing to make it. Certainly if you can address some of those issues we've been talking about today and particularly the information requests that we made in the draft report, we'd be most grateful.

**MR ARMSTRONG (NSWFA):** Thank you very much for the opportunity and we look forward to a good outcome.

**MR WEICKHARDT:** We will adjourn now briefly.

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**MR WEICKHARDT:** We will restart the hearings now and the participant we are now hearing from are Across Agriculture. If you could please just give your names and the capacity in which you're appearing here today.

**MR KAY (CA):** Adam Kay, I'm the chief executive officer of Cotton Australia and Cotton Australia is one member of that Across Agriculture coalition.

**MR KEOGH (AFI):** I'm Mick Keogh, executive director of the Australian Farm Institute. We worked with the group to put together a submission that's referred to as Across Agriculture and we've also just completed a survey of private sector investment in agricultural R and D which I believe the commission has available.

**MR WEICKHARDT:** My copy had "draft" heavily tattooed across it but we've certainly received a copy of that. I understand you're going to change hats midway through this, Mick, and then appear as the Australian Farm Institute or do you want this to be a continuum?

**MR KEOGH (AFI):** I'm in your hands. I can go either way. I suspect the issues will intertwine a bit anyway.

**MR WEICKHARDT:** Okay. Perhaps you ought to introduce your capacity then as Australian Farm Institute too and we'll just deal with this as a continuum.

**MR KEOGH (AFI):** All right. I'm also appearing on behalf of the Australian Farm Institute in discussing the results of a survey we carried out of private sector investment in agricultural R and D, looking at both qualitative and quantitative issues around that, particularly as it relates to Australia.

**MR WEICKHARDT:** Thank you for that. Over to you, to make some introductory remarks.

**MR KAY (CA):** That was what I was going to do, just make the introduction on behalf of the Across Agriculture group just to make it very clear where that group is coming from. It is a submission from a coalition of primary producer groups and each of these groups are either the prescribed industry body or the recognised organisation under the PIERD Act and so in a way they're the organisations that represent the primary producers that pay the levies and so effectively it's these groups that partner with government to form the RDCs and so these groups came together because they felt they really wanted to have their voice - I'm sure a number of them will be making submissions but they wanted to make it very clear to the commissioners that there are a number of issues that they are rock solid on and agree on and to that end they used the Australian Farm Institute and thanks to Mick, to run

a process to work through the issues and to come to agreement on the things that they felt needed to be addressed and so Mick has then incorporated that into the submission.

All those groups have RDCs and I'm sure the RDCs will be making submissions but we really wanted to separate away from the RDCs so you could clearly hear from the farmers that pay the levy and not the RDCs who may have some views - they obviously would support themselves and we wanted to give you a chance to know exactly what the primary producers that are paying those levies felt. I think that's really the key to it, these groups, it's a diverse range. I won't go through all the 25 groups that contributed some dollars to pay for the Farm Institute to do this but you can see that there are groups like the Australian Mushroom Growers, the WoolProducers, the Cattle Council and the like. So it's very much a cross-sectoral and very diverse group but at the end of the day enormous amounts that they could agree on. So bringing them together and running those discussions it was just a huge amount of commonality and we've tried to pull that together into the paper that Mick produced and then we've teleconferenced recently and go together our views and again asked Mick to present those to you today on behalf of that Across Agriculture group.

So that is really just an introduction from myself about how the group was formed just to make it clear that you understood that and unless you've got any questions, I'm happy to hand over to Mick to go through the key discussions that that group has had.

**MR WEICKHARDT:** Okay. Over to you, but can I say thank you for your original Across Agriculture submission and your second submission under that heading. I have to say I regret sort of telling you that all 81 pages, which is thicker than we would normally like to receive, were in my case vigorously read because I thought it was an excellent submission. Thank you for that.

**MR KEOGH (AFI):** Thanks for that. Thanks, Adam. I guess there are a couple of ways to approach this. There were some issues we felt needed to be raised in relation to the draft report and I can either go through those or go through some of the recommendations. I think I probably need to go through the issues first because that perhaps then colours to some degree response to the recommendations. I sent Ian an email with the list of issues included in that and I don't know whether that has been circulated or not but I'll go through them briefly.

Firstly, it seemed to us that the information about funding sources, table 1 and table 2.1, don't appear to be correct or at least don't appear to be compiled in accordance with the broader recognised definitions of what should be considered to be R and D expenditure and there we reference, for example, the US Current

Research Information Service Standards or the Frascati Manual that's used by the OECD. So there seems to be elements of expenditure included in that compilation that don't necessarily follow what those other standard manuals would suggest should be incorporated R and D. That then leads on to the following issue which is, of course, that that creates problems in two respects, the first is the comparison is between Australia and international agricultural R and D funding levels and arrangements. We're not in a sense then comparing apples with apples in making those comparisons.

Then related to that is this issue that governments are shouldering too much of the total funding of agricultural R and D in Australia and I think that's contestable because again, going back to the information included in that compilation of data creates that impression and I'm not sure that's necessarily correct, so that's a key issue that needs to be resolved in relation to the draft report. The Across Agriculture group generally found a lot of the recommendations in the draft report to be supportable. The overarching set of public funding principles, that seemed to have some merit. I guess the main qualifier in relation to that was the sense that comes through the draft report that the segmentation of the benefits from successful research and innovation can be identified in advance. There seemed to be almost an economist's view that if you can look at a particular project you can slice up the pie and say how much the community is going to get out of it; how much the environment is going to get out of it; how much the industry is going to get out of it.

I think that experience and a lot of prior analysis would suggest that that's not necessarily the case at all and that it is sometimes quite difficult to foreshadow what changes will come about if the R and D is successful and, therefore, where the benefits will fall from that. So that was the only concern, I suppose, in terms of trying to identify an overarching set of public funding which, of course, spoke about socially desirable research and just how you identify what that is in advance; seemed to be a bit of a challenge.

In terms of the process to collect and maintain robust data on funding and spending flows, that would certainly be strongly endorsed. I think we pointed out in the original submission and in the survey we did of private sector R and D investment the lack of good, robust information about that as it pertains to Australia and the difficulty that creates then in trying to make sensible decisions about whether it's enough or too much or in the wrong spot, all those sorts of things. So that's certainly something that would be strongly supported.

Establishing mechanisms to coordinate the Australian government's various funding for rural R and D: again, that seemed to be quite sensible. I guess to some extent it happens in an informal fashion. The extent to which you want to formalise that and then from there become prescriptive about it is probably the challenge,

because one of the strengths of the RDCs has been, I think, their ability to respond as they perceive the need rather than to be necessarily too bound up in broader agendas. So to some extent that's something that needs to be treated carefully. CCRSPI, the Climate Change Research Strategy for Primary Industries, I guess, is an example of those sort of mechanisms that seem to be established.

The creation of a new RDC Rural Research Australia: the Across Agriculture group was quite clear that they questioned the merit of that, creating a new structure with overheads and all that sort of stuff seemed to be a bit questionable. I think there was broad agreement - not unanimous - that utilising the existing RIRDC structure to encompass some of those former research activities of Land and Water Australia and the ones suggested might be a better approach than trying to create something new that's completely stand-alone. In terms of the funding proposal for that, there was no support for the proposed reduction in the matching funding. That was felt to be a retrograde step, probably not surprising, and certainly that was not an item that was able to be supported by anyone involved in that proposal.

Most of the other recommendations, I think, that we went through were pretty much supported. There were some questions around the issue of industry representation and whether that should be part of an RDC function. It obviously works for smaller organisations that perhaps can't afford a stand-alone representative group but it also creates tensions if it went too far, so that there was some caution around that.

Government Directors: the general experience of all those involved was that the government director position was supported. It was felt that the government directors provided a very good information conduit back to the department and through to broader government consideration and that that worked very well. There were some comments about on occasions government directorships having changed within very short periods of time and that creates discontinuity and limitations in terms of the value that that position brings but generally the view was that having that mechanism of communication between, particularly the department and the RDC was pretty strongly supported.

Evaluation processes and regular and independent reviews were certainly recommended. I guess the main comment there was they should, to the extent that it's possible, coincide with the normal strategic planning processes and time frames, so I think in that case a lot of them are on five-yearly strategic plans and that seemed to be a more sensible periodic review process than perhaps any more frequently. But broadly I think the rest were pretty much supported in that regard, so that was where that got to.

The other issue I wanted to raise was this issue of the comparable benefits of

the R and D tax concessions and the RDC funding arrangements, matching funding arrangements. We had some communication with the commission over that. We're not sure that the reflection in the report is exactly a reflection of the comments we made and the calculations we made. There seems to be some confusion there. That is obviously something that others have raised as well.

**MR WEICKHARDT:** All right. Let's start picking down that list because it's a rich one. In terms of the data issue, I suspect we're in heated agreement on a number of issues here. I mean, the data comparison and collection is complicated. It's complicated because of definitional issues. Some of the figures include extension and trying to disentangle them would be very, very difficult. The RDC money includes extension and stuff that certainly wouldn't qualify for R and D under an R and D tax benefit definition. The money-go-round and leveraging in Australia makes it extraordinarily difficult. You will have seen in the report in the sugar industry we gave one example of one industry that was able to make a reasonable fist, together with some prodding and pushing by us to disentangle where all the money comes from and goes to. It staggered me that most other RDCs were unable to make a go of that, but it just shows how complicated it really is and therefore expecting any statistics that are kept by research providers about whether or not the money is being double-counted or triple-counted is problematic.

**MR KEOGH (AFI):** I'd agree with that. You'll note that we provided some different estimates and I go through the main points of those. One is we felt that in terms of the Australian government's contribution the science and innovation budget tables and particularly the allocation of funding by socioeconomic objectives which the Department of Innovation publishes each year, we felt, after looking around at particularly the ABS and others that that provided perhaps the strongest understanding we could obtain of exactly what the Commonwealth government's contribution was. There is also annual compilation by DAF as part of the process of informing the OECD comparisons of farm support measures where they go around each of the state agencies and extract estimates from budgets and other sources of the actual R and D spending of that. So that is available and we certainly relied on that for the state government contributions.

We note it doesn't include extension. We note it doesn't include capital expenditure on research facilities which are excluded in the OECD definitions anyway. But that information has been compiled since 1985, I think, and it largely lines up with the work that John Mullen has done and the database he's maintained within about \$20 million, I think, annually. So we felt that was probably a better way or a better source of information about the state government and the Commonwealth government contributions to that and I think that's where the main differences were in terms of the numbers we put in our more recent report and the numbers that were included in the Productivity Commission table.



**MR WEICKHARDT:** A central plea I'd make is that you might devote some time to spend with the person in our team that's done the work on this because we'd love to get to the bottom of this. The state government numbers in the main we've got by asking the state governments directly how much money are they spending on their revenue account and how much money they're spending on their capital account and if they're wrong, well the state government Treasuries or departments don't know what they're spending.

**MR KEOGH (AFI):** It may not be that they're wrong, I suspect the numbers on the face of it look like they include the total budget allocations for those relevant documents.

**MR WEICKHARDT:** That wasn't the question they were after, but we'd love to get to the bottom of it, as I said before. The federal government funding, our belief is the numbers you're quoting are underestimates because they don't include money that's being spent from other portfolios on work that we would think fairly and squarely likes in the area of rural R and D. But we'd love to get to the bottom of it but we're sufficiently concerned by the data and the private data - and we've got real concerns about some of the extrapolations that have been made in your recent work - that it really does suggest that trying to draw conclusions from the current dataset is inherently very risky.

So if you're prepared to spend some time with us to work through what you know and what we know, may be we can shine a bit more light on this but I think the central theme is treat any dataset that you receive at the moment with great caution and therefore treat any conclusion you draw from it with great caution.

**MR KEOGH (AFI):** Look, I'd agree with that but I think that the other point that needs to be made is, particularly in relation to international comparisons, virtually all the international datasets contain R and D expenditure in the food and beverage industries as well and when you look at those numbers internationally, they're almost 100 per cent private. For example, if you look at the US data that says 50 per cent of the R and D investment is private, if you take the food and beverage section out of that you get a dramatically different number because all that expenditure is private. Now, the food and beverage numbers aren't included in the table that you've got, for example, so that's where I think there's a deal of care needed in saying that, "It looks like the Australian government shoulders too much." Also the US stuff doesn't include extension. I think if you look internationally I think you'd find that the comparison isn't that different really.

**MR WEICKHARDT:** The other thing is the private and, again, congratulations for having a go. We've also tried to have a go, not perhaps in such a comprehensive

way, but because of my background in the chemical and fertiliser industry I've spoken to as many of people and former colleagues as I could and said, "Point to the numbers of people who area working in these areas," because you can triangulate the reasonableness of a number and when I look at the numbers, for example, that you've got in the seed and the forestry area, I'd say, "Point to the hundred people who are supposed to be working in that area to spend the sort of dollars that you've estimated they're spending," because I don't know where they exist.

**MR KEOGH (AFI):** I think in particular in relation to the forestry, it would be interesting to understand further but certainly the information we obtained was from fairly large organisations and I suspect, in a sense, it as driven by, I would guess, the requirements of the R and D tax concession arrangements.

**MR WEICKHARDT:** Yes, we again went to the R and D tax data and got as much as we could and it's difficult but I think in seed - - -

**MR KEOGH (AFI):** But I think the R and D tax data only tells you the classification of the organisation doing the research, not the purpose of the research.

**MR WEICKHARDT:** Maybe. But extrapolating, particularly with high R and D intensities and in seeds you've got one participant out of 16 and at 10 per cent R and D intensity your extrapolation error is pretty large.

**MR KEOGH (AFI):** I think we made that comment. But the comment I would make is that organisation was a very large organisation in terms of the total market and the understanding we have from others involved that didn't necessarily respond to the survey but that we discussed the issues with were that that's not a surprising number from their perspective for the seed industry.

**MR WEICKHARDT:** Let's see if we can get any closer but I think the central message is proceed with caution in terms of comparisons here but there are some lights that blink to us that look still as if the private sector in Australia is not contributing as much as the public sector. You question that and we'll see if we can get any closer to our suspicion or to resolve our suspicion.

**MR KEOGH (AFI):** I think, to be fair, in the discussions with the private sector organisations, particularly in the agrochemical industry - and that was part of the discussion in our report - they would agree with that and when you discuss with them why that's the case, they explain that to develop a basic new core chemical internationally it's probably a minimum of \$US250 million just to get it to the point of being ready for commercialisation and they have to have almost worldwide registration. They can't risk a unique product in Australia. If you look at the Phillips McDougall survey, those larger organisations internationally had an average R and D

intensity of about 6.7. If you looked at similar organisations responding from Australia that gave us good solid data, their number were closer to 2 per cent.

**MR WEICKHARDT:** That's great news for Australia. This is R and D we can free ride on and get benefits from without spending it in most cases in chemicals with local trialling and proof. I take your point about that whole area. The next area you raised was the public funding principles. You agreed with the principles we articulated but you question whether or not you can be certain in advance what are the benefits you receive from R and D. You certainly won't get an argument from me on that score and, of course, you can be remarkably surprised in a positive sense and be incredibly disappointed in a negative sense and stuff that you thought was going to produce a private benefit ends up producing a public benefit and vice versa.

But any self-respecting organisation that's going to commit a reasonable amount of money has to have a go ex ante in terms of trying to assess what return they might get and I guess their estimation of what return they might get ex ante colours their behaviour. That's conditioned by past experience and intuition and judgment, but nonetheless if you think as a private individual you're going to get a return because the benefits look great, then you're going to be motivated to spend money with appropriate risk factors built into it. If you don't think you're going to get a return, then you won't spend the money. All we're saying is government need to be mindful of that just as private individuals do and governments shouldn't spend money where the benefits look as if private individuals have a lot of motivation to spend that money directly themselves.

**MR KEOGH (AFI):** I suppose my qualification was around the term "socially desirable" and whether that implied that you had to be able to demonstrate predominant public community benefit before you'd even start something. So it would be around how you define that term and how you apply that term to deciding what you want to research.

**MR WEICKHARDT:** As I said, the last participant - there is clearly a continuum here of stuff that ranges from 100 per cent private benefit to 100 per cent public benefit. There's probably stuff off the other end that has 100 per cent no benefit. But there is a mixture of stuff that lies in between and no bright dividing line is between them. All we were trying to articulate in those principles were some ways that government might think about where they should spend money and where they might not.

**DR SAMSON:** Just going on, Mick, you then talk about the data collection and the discussion so far has indicated what we have at the moment is pretty woeful in many respects, so hopefully it's a bit of a no-brainer that that is what we want to achieve. How we actually do it is perhaps a slightly different issue.

**MR KEOGH (AFI):** I have heard that discussion and I just wonder whether it's all that complicated. If you look at the current research in information service that USDA has, it has a manual associated with it to guide the definition and my interpretation of the way that operates is that anyone who is managing a project simply ticks the boxes on the way through and allocates the funding against the particular categories that are there. It just looks like a routine bit of paperwork. I suppose where does that paper go and who compiles it is the question and presumably the argument would be DAFF, you'd think, would have that role and I that's a question we don't have the answer to.

**DR SAMSON:** I guess we thought there is a bit of a broader issue here that outside of the rural R and D system we've got all these - just to take the Australian government, let alone the state and territory governments - other departments and agencies that have got money that have been spent on things that you could, depending on your definition, say, "Well, that's actually going straight into the rural R and D system." I know from personal experience how difficult it is to track those things down within the Australian government and I suspect the states and territories are no different. So deciding what it is you actually want to collect and why you want to collect it, I think nobody wants to go into data collection just for the sake of data collection, it seems to me a bit of a broader issue than just the RDCs and their research providers as the rest of the government system.

There is also the whole issue of - one of the things we found, there are lots of players in this game at all sorts of levels and if you asked the question, "Well, who is setting the strategic agenda for agricultural R and D?" the answer is not immediately clear. Through this inquiry we've heard a lot about the Primary Industries Ministerial Council process and I'm sure you're very familiar with where, perhaps for the first time, there's a bit of an attempt at a government level to look across the whole country and decide where are our resources currently despatched, what does the strategic forward agenda look like and how do we match the resources to that agenda. Do you see that as being a useful exercise that could lead to perhaps more coordinated, strategic direction for rural R and D?

**MR KEOGH (AFI):** Look, certainly. Having had my ear bashed on numerous occasions by Bruce Kefford, I don't have any question about the merits and he wouldn't allow to question it anyway. Unless you're pretty flush with resources, to have specific dairy activities happening in three or four different states when you've got a country the scale of Australia you'd find it difficult to argue that that should be the case. That's not to say that everything should happen in the one spot, I guess, but you would think that in the broader commodity groupings it would be better, if it's coordinated and not duplicated, than just allowed to proceed on its merry way.

I think one of the difficulties is that the states have all got different agendas and while Victoria does seem to be at least trying to maintain and improve some of the stuff they do, I think the notion or the sense is that in New South Wales there's a bit of a hollowing out, there's facilities available but not much resources to go into them and South Australia we've just see a big change there. They had outsourced their extension, I don't know where that's gone now because they've just gut the budget to rural solutions quite substantially. I guess the challenge in terms of coordinating it nationally would be getting commitment as well from the states in particular and I think that was a point we made, that it's all very well to say we're going to make it all make sense but if the states chop and change will-nilly that makes it fairly difficult to achieve.

**DR SAMSON:** We have suggested that the states might want to adopt some of principles we talk about. Then following on probably at all government levels where the models that are employed have worked best is where there is a single or a limited commodity focus. I mean, the RDCs themselves, the 15 RDCs we've very strongly formed a view that their strength is really when they're dealing with a focused industry, commodity-specific, great interaction with their industry, their levy payers and good at producing a research agenda which is very relevant to the levy payer and on-farm production et cetera being a component of it.

Where we've seen that again with the 15 RDC model, but the Australian government more broadly and indeed state and territory governments where everybody seems to struggle is on this cross-sectoral, national interest, socially valuable work, climate change, water usage, a whole raft of things. Hence our suggestion that perhaps the time has come that the tension between the on-farm productivity that one stakeholder wants and this more crosscutting national interest stuff that the other stakeholders become increasingly interested in, perhaps not in a particularly informed way but nevertheless - hence our Rural Research Australia model which, if I understand what you said, Mick, not necessarily opposed to the concept of that separation, but the way we are currently operationalising it possibly are the ways to do it. Would that be right?

**MR KEOGH (AFI):** I think yes, that's correct.

**DR SAMSON:** Is it purely at the level of a concern over the duplication of overheads at setting up an RRA or do you see anything more of fundamental concern of setting up that separate body?

**MR KEOGH (AFI):** No, I think that would be the main issue, do you really need a separate structure, and I guess related to that, if you look at some of those cross-sectoral efforts up until now the engagement issue has been the challenge. Everyone agrees that it's a good idea in principle, then it comes down to, "All right,

now, put your dollars on the table," and it's a bit like, for want of a better word, the way the EU has to work. If you've got 27 member states, you've got to get them all to agree before anyone does anything and I suppose that has been the challenge in terms of the RDCs.

**DR SAMSON:** And Germany pays the bill or some RDC beginning with G pays the bill.

**MR KEOGH (AFI):** But certainly the challenge has been getting all the RDCs on board and committed to them. I guess something like LWA had a chance at achieving that or achieving that with a number of partners, even if they all didn't want to be involved, so land, water and wool and a few of those sorts of things seemed to work quite reasonably well. I guess the main issue would be setting up a separate body, having it become part of the culture, if you like, of the RDCs and gain the corporation might be a long path, whereas you would think the RIRDC had both the administrative structure and the interaction and understanding of the other organisations to perhaps achieve that more quickly and get some cooperation going in a quicker time frame.

**MR WEICKHARDT:** Do you have a concern - because we did, so I suppose the question is, would you share our concern that if the other industry-specific functions of RIRDC remained that you would be left with the same sort of potential conflict that exists at the moment with the RDC, the industry-specific RDCs and that is when push comes to shove the industry-specific productivity-enhancing research takes precedent over work that may be cross-sectoral and have much more diffuse and dilute benefits to one particular sector?

**MR KEOGH (AFI):** I guess - and I'm not sure if I'm speaking on behalf of Adam or not, he might jump in - we had thought that there would be a specific funding allocation for the cross-industry type activities and, therefore, that tension wouldn't necessarily arise, if you like there'd be a pigeonholing of specific budgets for those different functions.

**MR WEICKHARDT:** You can pigeonhole the allocation of the money, but most people's brains don't get pigeonholed all that effectively, even though we try sometimes.

**MR KEOGH (AFI):** If the looked at the RIRDC structure, it does a whole range of different ones and effectively has to stream the revenues where they belong and do the projects relevant to those particular groups, so I don't think it's impossible.

**MR WEICKHARDT:** No. I accept the fact they certainly appear to do quite a commendable job, given the spread of industries they work within but it would

appear, certainly in terms of the industry specific stuff, that they allow the industry specific components they look after, whether it's rice or something like that, to really manage their own affairs and apply a pretty light touch to that.

But what we were concerned about is having a mindset in a cross-sectoral research organisation that both sensibly prioritised the work that went on - I mean it would be easy to spend a lot of money in that area with absolutely no benefits to anyone. So that's not what we want to commend. It would also be easy to spend quite a lot of money on work that had potentially large social benefits but was never adopted. So we were trying to find a model that seemed to have worked that had produced beneficial results which had led to changes in behaviour. LWA was about as close as one could get to that example of things that seemed to have worked. So it was really building on that and making it a broader entity and a more sizeable entity with a quadrennial funding stream that made it less susceptible to being sort of part of some budgetary expediency and chopped off at the knees.

**MR KEOGH (AFI):** I suppose in that sense in many respects with hindsight that's the weakness of LWA. When Department of Finance came knocking it didn't have a large constituency, it didn't have political implications, so off it goes. I don't think we disagree on that.

**MR WEICKHARDT:** Can I change tack a moment?

**DR SAMSON:** No, go for it.

**MR WEICKHARDT:** It sort of goes back to and relates a little bit to the discussion we were having on data before but one of the uses that data has been put to in this area is to look at the linkage between productivity and R and D intensity. Given all the health warnings we've made about the data beforehand, we have significant concerns about some of the conclusions that have drawn from - albeit, you know, sort of significant attempts to look at that area. I was pleased to note on page 63 of your original submission you make a point in the first paragraph about the fact that there are lots of sort of things that affect productivity in agriculture and therefore there are no firm rules of thumb. I mean the difficulty of disentangling how much productivity improvement occurred because of the benefits of improved Internet access, GPS systems, improved tractors or harvesters - you can go on and on and on. How much do we credit Steve Jobs or Bill Gates and how much do we credit Monsanto or Bayer? Disentangling that is incredibly difficult.

So whilst we would be the first to agree that good R and D has clear benefits in enhancing productivity, suggesting that you spend a quantum of money on R and D without being able to defined exactly how it's spent, where it's spent, what it's spent on and expecting to be absolutely certain that you are going to get a productivity

improvement 24 years out or 25 years out is, we think, a highly risky proposition. It's a bit like a prospectus for an investment that says, "Past improvement returns are no guarantee of future investment performance." So what we were trying to stress is that the R and D outcome should be built from the bottom up in terms of is this meritorious research? If it is, keep spending it. If there's even more, keep spending more. But don't just assume by setting some global target that you will be guaranteed some sort of beneficial output down the track.

**MR KEOGH (AFI):** Yes. No, I wouldn't disagree with that notion. I think in practice you run into difficulties of course because does that mean you have to always front up to government and insist on project by project almost, that this is something that's worth of funding? I mean that creates difficulties in itself in terms of how that would all work. I guess internationally we see that in some industries at least the intensity of R and D investment does seem related to measures of innovation and productivity growth. It's a very inexact measure. I guess the issue of most concern is that it does seem - and I know you questioned this conclusion but it does seem that productivity growth in agriculture is slowing. It's a phenomenon that's observed in Europe, it's a phenomenon that's observed in the US in the relevant research that's available.

So I guess at that very basic level that seems to be suggesting that whatever else might be involved that seems to suggest that we shouldn't be backing off on R and D. I admit there's a whole range of other factors involved but I still think that at the very basic level if that's what you're observing in terms of productivity, and I know there's questions about that, but when you see that globally it seems to suggest that the new innovations aren't coming through in the way that they used to and therefore the productivity growth isn't occurring. I don't think you can ignore the need - - -

**MR WEICKHARDT:** I think we've had three reactions to that. First of all, the data on the R and D spend was questionable, and certainly the trends in it are highly questionable, in our mind.

**MR KEOGH (AFI):** In Australia or internationally?

**MR WEICKHARDT:** In Australia.

**MR KEOGH (AFI):** Yes.

**MR WEICKHARDT:** Secondly, that the productivity measures critically depend on what period you're looking at and how broadly across the whole rural industry spectrum you're looking at. It's not linear.



**MR KEOGH (AFI):** No.

**MR WEICKHARDT:** Some industries jump ahead at certain periods and they have huge benefits and then you have long plateaus or even declines.

**MR KEOGH (AFI):** But I think you do know if you don't do it those jumps aren't going to occur.

**MR WEICKHARDT:** No spending would be a bad thing, but it's, you know, that old line of how do you make a small fortune out of biotechnology? You start with a large one. R and D is uncertain and it's not guaranteed to produce results.

**MR KEOGH (AFI):** No.

**MR WEICKHARDT:** So I accept you can't have government micro-managing this by every project individually being justified but nor does pouring a given amount of money down the tube guarantee subsequent success.

**MR KEOGH (AFI):** But then I guess the other measure that you look at is the ex-post assessment of where the benefits have fallen out. There's not a strong indication, as I understand the data at the moment, that those sort of return levels are declining.

**MR WEICKHARDT:** Right. Well, that's a good point, so let's sort of beam in on that. Given the fact that those ex-post assessments have in the main excluded social and environmental benefits, because as the people who did that work said it's very hard to put a value on those, those ex-post assessments suggest very large private benefits and in pretty quick order, you know, sort of averages of 2.4 after five years and five after 10 years and up to 10 or 11 after 25 years. Why is it you think that if those sort of benefits do appear, and they seem, as you say, to be remarkably pervasive - why is it do you think that if the government were to pull back gradually that the private sector wouldn't step in and say, "Goodness gracious me, with those sort of returns we'd be crazy not to put more money in here"?

**MR KEOGH (AFI):** Yes, I think there's a number of issues there. One is, I think, at the individual farm level it's very difficult to see that. You only see, if you like, the trends at an aggregate level and an industry level. So individual farmers - the larger ones certainly invest in R and D that's very specific to what they want to do, but there's not much of a spillover associated with a lot of that, I would guess. So I think that means that the broad industry would look at it and say - well, they'd be more inclined to under-invest than over-invest in terms of industry contributions.

**MR WEICKHARDT:** Yet some consistently over invest. If you look at grains, for

example.

**MR KEOGH (AFI):** Grains and the plant industries.

**MR WEICKHARDT:** If you look at wool, if you look at fisheries and you look at sugar, they have significantly over invested above the government cap. So why is that they have done that and other industries have under invested, even to not get the matching dollar and others sort of hug around that matching quantum.

**MR KEOGH (AFI):** I think there are some complex issues there around industry politics and the way the systems are set up. I'm surprised that you say wool has over invested. I'd have to have a look at those figures.

**MR WEICKHARDT:** They certainly invest more than the matching contribution.

**MR KEOGH (AFI):** Grains doesn't surprise me because I think the development of IP arrangements around the grains industry has encouraged both public and private sector investment there and benefit capture is available more readily there; less readily in livestock industries. I guess the other issue there is - and it get back to the social benefits and the spillover benefits. I think there is an argument there that says, "The community is getting a reasonable run out of this, why shouldn't there be some contribution?" and I guess more broadly the competitive issue internationally why Australia gets a pretty good deal out of its agriculture sector in terms of public investment, then I think there is some argument that says, "Well, maintaining that international competitiveness probably benefits more generally the economy and government adopts that approach in terms of R and D concessions to industry more generally and this is the arrangement that applies in relation to the agriculture sectors." So I think those arguments all come to that particular issue you're raising.

**MR WEICKHARDT:** As you would know - and it won't surprise you at all - we wouldn't sign on to "just because other countries give their industries a free break, we should do the same thing" and the government really, when they're spending our money, should only spend it where they're going to get a sensible return from spending our money.

**MR KEOGH (AFI):** That is a question that was raised. The conclusions at the end of your report seem to be a bit tentative in saying, "We thought the community would be better off more generally," in the last few paragraphs. I found that difficult to understand. Were you suggesting that the sort of returns available from investment in ag R and D are worse than some of the returns government might generate from investing elsewhere? I wasn't going to mention BER or pink batts or - - -

**DR SAMSON:** I think part of it, Mick, is this notion that if you put aside the actual quantum that we're struggling to focus on, just a strong view that we have got is that the current ratio of public to private investment and the ratio of public to private benefits that fall out of that investment are skewed at the moment and that the public investment - it's hard to see if there is as much direct return to the public from the public investment as there is from the investment of levy payers. I think part of what we're saying about if our recommendations were accepted that society as a whole would be better off is, certainly to my mind, at least in part, that refocussing of that cross-sectoral broader national interest public good work under, we believe, our recommendations would create a better focus to develop what those issues are and a better vehicle for actually delivering on those issues than currently exist.

**MR KEOGH (AFI):** But I note there was no projection of what that might mean in terms of rural sector productivity, for example. I guess you've got to try and discuss some of those issues we talked about before about the link between R and D investment and productivity and guess what the response might be of industries in terms of if that matching dollar was reduced what the industry's response would be. I think you would argue it certainly didn't look like it was going to improve rural sector productivity, the reduction in the public funding being made available.

**DR SAMSON:** Again, there are a couple of things here. One is that as part of our request for further information and input is thoughts on what the actual agenda of an RRA or whatever vehicle was tasked at looking at that public sector work. Quite genuinely we've asked for input on that. The only land and water and the old energy RDC that was disbanded back in 1996 give a broad sense of where you would go, but to operationalise that would be a lot of work. One of the things that we think is missing at the moment is the vehicle to do that and would see that this new body or whatever would have a very important role of working with government, working with the other RDCs, working with the representative bodies to actually, in a structured way, formulate what that agenda should be.

There is a bit of a sense at the moment that the current 15 RDCs when it comes to the government's agenda, for reasons I can understand, relatively speaking sit back quite passively waiting to be told what it is and I think, to be fair to them, often the government is not quite sure. So I think it is important that we look somehow to create that vehicle or some mechanism for helping all the players in this game identify with some precision what that agenda would be. I think only when you have done that can you then start looking at some of the very reasonable questions. But you'd have to think if there was a better R and D focus on the impacts of climate change on rural Australia everybody would be better off if that focus led to some worthwhile - - -

**MR KEOGH (AFI):** I don't disagree with that but I think beyond perhaps

commissioning some modelling from the BOM the CSIRO very quickly you would then move to, "Okay, what are we going to do about it? Do we have to look at different breeds of cattle? Do we have to look at different varieties of grapes grown in different areas?" and that straightaway becomes very much industry-type research, so I sometimes wonder about it. I think the bigger issue is climate change policy and, for example, if you want to reduce emissions out of livestock. There's enormous effort involved there and obviously it goes across industries and I guess in some respects CCRSPI is already doing that.

**MR WEICKHARDT:** Some of it clearly could go into industry-specific questions but some of it might run around what do you do about soil and how do you store carbon in soil or how do you conserve water in soil. It does seem that there is this expectation that has been built up over decades of practice. I think your submission showed - forgive me if it wasn't yours, I've read a lot - private versus public funding in a trend going back to the 1980s and then looking forward. In Australia, from memory, the private funding back in 1980 was 5 per cent, 95 per cent government funding, whereas in other countries it was already, at those stages, up in the 30 and 40 per cent.

There has been an expectation that the government will step in and do some of this stuff and we were given countless examples where you would have thought that it would have been in an industry's own self-interest to have funded and contributed to some work. One of the examples given to us by the LWA people was when they wanted to do some cross-sectoral work in improving irrigation efficiency, the largest industry using irrigation water was unprepared to put any money into it. I'm sure it wasn't because they weren't interested in the result, it was because they thought somebody else would do it. We just think it would be much more beneficial if the industry focused on what they had to do themselves to make their industry more efficient and productive and the government focused on what it had to do to ensure some of these cross-sectoral things that had maybe significant but diffuse benefits to each individual player, not enough to make any individual industry invest in them and focused on getting those employed and adopted.

The mixed model, despite all the sort of rhetoric from government to say, "You should be doing more of this," lead to a lack of ownership. There are people in the industry-specific RDCs who say, "This is all fuzzy, woolly, you know, do-good type work, we don't identify with it, but we've got to do it," so it doesn't really have a proper parent. The government look at some of the money being spent and say, "This is all very industry-specific, industry-focused, private, good stuff, why should we be funding that?" So our recommendation for RRA was really looking at the success of letting individual entities do what they're best at and the RDCs, the industry-specific ones, seem to be very good at identifying in the main the priorities and doing good productivity-enhancing research. Let them do that, let them raise

their levies without the heavy-handed government, "If they want to put more money in, let them do it." Let them not get constrained by government priority setting and yet let some other body focus on work that still needs to be done.

Lots of people pointed at things when we were going around and saying, "Nobody is doing work on weed research. Nobody is doing work on storing genetic materials in genetic banks." Everyone else looks at it and says, "Somebody else is out to do it." There seem to be countless examples of that sort of stuff that everyone expects - and they point fingers, "Somebody else ought to do that." We just feel there is a real risk the current model is going to fall between those two, it's going to compromise the efficiency of the productivity-enhancing research and it's going to compromise some of the public good work.

**MR KEOGH (AFI):** I don't disagree and I don't think there was much debate about the fact that it seemed the decision to get rid of the LWA was in fact driven by the Department of Finance requiring their pint of blood rather than anything else, it wasn't a strategic consideration and up until then the LWA had played a good role in bringing those cross-sectoral things together and putting some extra resources in. But I suppose the main issue most of the groups would have with the recommendation is it seems to be at the expense of R and D that could be encouraging productivity growth.

**MR WEICKHARDT:** You said in a second submission fairly recently on this issue of comparing the benefits of R and D tax concessions with the amount of money being provided to people through the RDC model and let me say 95 per cent of this discussion is not in dispute about the numbers. A lot of it is about what do you put in the numerator and what do you put in the denominator and there are multiple ways of synthesising that which come out with slightly different answers but to our mind they don't change the overall effect that in comparison the benefit available to an RDC or to a rural producer through the RDC model is greater than that provided to somebody through that R and D tax concession.

I note that in your subsequent submission you do incorporate some other, I guess, judgmental issues like the extent to which the RDC spends money on overheads or on public good and your R and D tax concession model assumes that nothing is spent on admin which seemed a bit strange to me.

**MR KEOGH (AFI):** In terms of the industry RDC tax concession model?

**MR WEICKHARDT:** No, the R and D tax concession model, the column has nothing for being charged against admin in terms of how much money is effectively flowing into R and D.

**MR KEOGH (AFI):** That's because the organisation can claim that as part of its R and D expenditure.

**MR WEICKHARDT:** Sure. So the RDC effectively the levy payers' money goes into a range of R and D and admin and - - -

**MR KEOGH (AFI):** But one falls before the tax is applied and the other falls after the tax is applied, so it's an incidence issue, not a quantum issue in some respects.

**MR WEICKHARDT:** That may be true but, of course, the other thing is in the RDC model, you've got the leverage that the RDCs apply by eschewing marginally priced R and D out of the universities that they deal with and the government then chips in more money to pay for infrastructure elsewhere and, of course, the RDCs get a huge difference in terms of what qualifies as R and D versus what an R and D concession provider would get. Most of the stuff that goes on in RDCs probably wouldn't get an R and D tax break under the R and D concession rules. All that is complicated and I guess we don't want to get into a war of maths in here.

**MR KEOGH (AFI):** No, but I would make the point that the comment that was made in the table on page 157 is wrong. We didn't include the numbers and the denominator as it claims in that box.

**MR WEICKHARDT:** Certainly if we've made a factual error there, we will try and clarify that and get that right and we will obviously continue to try and - we're not trying to present a distorted or tricky view of this, we're trying to objectively look at this. The caveats that you make at the end of your report, we would agree with and it's an area where you've got to look at these things from a number of different directions to say, "Is my perspective or view of that confirmed by wandering around the other side of the table and looking at it from another direction."

**MR KEOGH (AFI):** No, I think it was just when I saw the claim, I probably wouldn't disagree with the level of three times but when I saw 11 times, I saw that a little bit hard to get to.

**MR WEICKHARDT:** Okay. Cliff, you want to go somewhere else?

**DR SAMSON:** You touched briefly, Mick, on this issue of industry representation under the current scheme and obviously it's the representative bodies and industry bodies that have put a lot of effort into this. We spent quite a bit of time on it and, as we've tried to with most of things, we've tried to adopt a principles based approach on most things and certainly have come to a view whilst you've got the pure model, if you like, which is just the R and D, we've got some examples of R and D plus marketing and we felt form the principle based point of view if that's what levy

payers wanted, there was no absolute impediment to having R and D in marketing, as long as you've got the right governance structures to keep the money going where it should.

We've also got a few examples of the triple-headed beast where you add industry representation as well. There are much fewer examples of that. At the end of the day I guess where we are at the moment is taking the view, "Let's just hold off and let's see whatever reforms the government puts in place how they work through." We noted a few industries that have had some difficult times with their representative bodies. Grains, for example, have gone through a difficult patch. It's a difficult area in some ways that we more or less decided to leave it alone and see how we travel. One of the things, good things I think, that some of the RDCs have is when they've identified gaps in the industry, for whatever reason - perhaps the demise of GCA would be an example - a lot of the RDCs do absolutely with the best of intentions step up to the plate and try and fill that gap. Do you have any wisdom to share on it, because it's industry organisations that influence - sort of, you know. Like most things, it's cyclical, it comes and goes, depends who is at the helm et cetera. There was a view that was put to us that, "Well, you don't specify. Simply say it's an obligation of RDCs to consult with their industry and leave it up to them to demonstrate that they have."

**MR KEOGH (AFI):** It depends whether you're talking about "consult" in terms of what might almost be classified as extension. So in other words, how do you get the information and communication about the outcomes of the research to the industry and how do you get a sense from the industry about what the priorities should be. So if you look at - if you're talking about that aspect, I think there are some quite interesting and different models apply. If you look at grains, for example, grower groups are becoming more and more important as a conduit in two ways. I think cotton has long had that with their valley committees. Dairy has got it with the regional dairy organisations. I guess the broadacre livestock industries are probably the ones that haven't moved very far in that direction at this stage.

If you're talking about industry representation from a lobbying perspective, certainly I understand the models that are there at the moment in a couple of cases but I also understand they run into some problems with things like strategic plans that don't quite say the right thing from a minister's perspective and therefore don't progress as you might expect. So I think there is a difficulty there having representative groups in-house. I know they work to some extent but I guess my sense would be perhaps you're better off providing some resources to the representative group that's out of house rather than necessarily having it in-house. But I know that's only a personal view and I know there's probably others would have different views on that.

**MR WEICKHARDT:** Mick, in your paper on the private sector investment in agricultural R and D you show a table on rating of factors encouraging or discouraging investment in agricultural R and D by private firms in Australia. One of the positives that you note encourages private investment in R and D in Australia is rate of innovation adoption, which I was both pleased to read but surprised to read, because a number of people put it to us that rational behaviour in Australia would be to spend less money on producing more R and spend a lot more money on getting people to adopt stuff that was already there, that best practice took a long time to be followed.

We saw some examples of RDCs who sort of took this incredibly seriously and seemed to sort of take almost a socialist approach, that they should be helping the weak and the needy, and others who took the attitude of, "We'll work hard at getting early adopters and then it should be self-evident to everyone else that that's good practice." It's evident for them to see and they can follow. How do you see this whole area of extension and is this being appropriately managed, do you think, across the rural sector at the moment?

**MR KEOGH (AFI):** I go back firstly, to the comments in that survey, and bearing in mind not all but a lot of the respondents were multi-national organisations. I suspect their comments related to a comparison between the situation in Australia and, for example, Europe and North America where I think their view was the rate of uptake of innovation by Australian farmers was certainly a lot quicker than what they noticed in those other major jurisdictions that they were involved in.

On the issue of extension, I think it is quite problematic. I think in fact we've got to the stage now where in many but not all situations the state DPIs that predominantly have the extension role are not performing that function any more. They may have people in place but they're not, I don't think - generally speaking, not speaking specifically - regarded with much value by a lot of farmers. So that the models that dairy is trying, the model that cotton has had, the model that grains is trying in terms of grower groups I think is an interesting development. My experience with them is that it certainly does attract the leading-edge participants and the trickle-down issue is probably one that gets left by the wayside a bit there. But I'm not sure anyone has come up with a better model, given the resources that are available.

I think it's a bit problematic in terms of the broadacre livestock industries because geographically and production-wise they're not necessarily as coherent as, for example, the cotton industry is or the dairy industry is, for example. Horticulture I must admit to not being as familiar with in terms of that issue as the other industries. My only experience in discussions about these issues with horticulture is how incredibly fragmented and atomised, almost, the industry sometimes is. I was



given the example of - I think it's the Murrumbidgee Horticulture Council based down in Griffith which has 60 different organisations as members. So it's very much almost atomised, almost around packing sheds. To get contact and communication through that sort of structure is no doubt very difficult, particularly in a lot of those industries you don't have larger-scale operators necessarily available in some of those regions.

So I do think the whole issue of extension is one that is by default going through a fairly substantial change at the moment. I don't know that we know yet whether the models that are evolving are necessarily better or worse. I suspect in some respects they're better in terms of the grains industry and, I think, the dairy industry because I think they're more hands on. The participants are more involved in what is going on. I have observed in some respects they do some trial work. I think that has a limit, because I think they run into all the problems of trying to conduct R and D, you know, replication and all those sorts of issues. I think that's where some of those groups need a guiding hand. That's the approach that GRDC seems to be taking, of helping a bit. Allowing some individual initiative but helping a bit in terms of putting some structure across them. I know they're doing that in WA.

So I don't disagree that it's an issue that needs more attention. I'm not sure anyone has got a perfect model at the moment given the likely resources that are going to be available into the future and given the demise of the state departments.

**MR WEICKHARDT:** Yes, well, certainly as we went around we observed very different behaviours in different industries. I mean there were some where clearly the state governments were active in the past and now where private firms seem to be active. The growers we spoke with were entirely happy with that. One of the state governments said that they had consciously retreated from extension work but had found provided industries were given enough notice of that, and provided they believed that the government was actually fair dinkum and that they were going to retreat, they eventually found a way of doing it themselves.

**MR KEOGH (AFI):** If you go to somewhere like the region between Swan Hill and Mildura, for example, it was indicated to me there's 23 purely commercial private sector agronomists operating in that region in the cropping industry, and all making a living out of it and the farmers there seemingly working quite well with that sort of model. Now, okay, they're larger-scale operators, they've probably got the wherewithal to be able to afford that. The question then becomes where's the conduit from those 23 to the RDCs or to the CSIRO or to whoever else is doing the raw research? I'm not sure that's necessarily worked out just at the moment.

**MR WEICKHARDT:** Although you'd assume that a private sector agronomist

would think, "Unless I'm up to date with the latest stuff coming out of an RDC, I'm not going to be paid," so they've got self-interest at work there, haven't they?

**MR KEOGH (AFI):** That's right. GRDC has adviser updates and I was at one at Goondiwindi I think it was last year and there was 300 advisers there, so the process are there, how effective they are, I guess we'll see.

**MR WEICKHARDT:** Okay. Can I just go back to your comment about evaluation. I think you said there was general agreement with the groups that you've spoken to about perhaps adopting some of the recommendations that we've made on evaluation but a question about whether or not that should coincide with a strategic plan, that made sense to me. I guess the question is, is the strategic plan cycle, the five years, absolutely right and, therefore, should the evaluation cycle be five years or is three years for both a more appropriate metric? Can you give us any rule of thumb that suggests that a particular cycle is better than another? If you were thinking about most corporations doing a strategic plan every five years seems a pretty long period. The world changes pretty rapidly at times.

**MR KEOGH (AFI):** I think it does but I think on the other hand identifying, initiating, managing, finalising and getting some results out of an R and D program probably sits at a slightly longer time frame than a business involved in day-to-day commercial activities.

**MR WEICKHARDT:** Yet most of the RDC programs we're told are probably not longer than three years.

**MR KEOGH (AFI):** That would be the program itself but I suspect if you then added in the process of working out what they're going to do, identifying the priorities, commissioning the research and then evaluating it out the back, I'm not sure three years would be a sufficient time frame but I don't have any magic number for you. It just seemed after the first point coordinate the two so you're not at cross-purposes. Whether it's three or five, some of the RDCs might be better able to answer to answer that than perhaps I can.

**MR WEICKHARDT:** Okay. Another thing that we were conscious of in making that recommendation was to have some external review of both the merit of the science going on but also the transparency of the science because we received feedback from a number of growers saying that a lot of the work that went on in some of the RDCs wasn't very visible to them. They couldn't find out the outcomes of the research programs, they weren't well published and indeed some of the RDCs seemed to have arrangements that actually does put commercial-in-confidence constraints around the outcomes of some of the research. So it seemed to us that if you were having public money going into funding some of these RDC programs and

you were doing that because you were concerned about the issues of spillovers and productivity, that visibility and transparency was the first criteria in terms of getting adoption.

**MR KEOGH (AFI):** Look, I'd have to say that I couldn't really provide any informed comment on that, I'm not aware of it. I've never been aware of not being able to access information from the RDCs. Perhaps the membership model creates an imperative to make sure everything is a success rather than to report everything openly, including the stuff that didn't work. I don't know, I'm not really in a position to comment on that.

**MR WEICKHARDT:** Okay. Thank you very much indeed. Are there any other issues that you wanted to cover in this two-headed presentation that you were wanting to make?

**MR KEOGH (AFI):** No, I don't think so. I guess the only final comment I'd make is I accept your concerns about the projections made in the private sector research that we did. I'd just reinforce that what we found interesting was the commonality of the research intensity for the organisations involved in similar sorts of activities which is, as we explained, the basis for making those projections, certainly the sample size and all those sorts of things wouldn't really, you'd think, lend itself to making good projections. But it was interesting that the agrichemical organisations all seemed to have roughly the same level of research intensity that the farm organisations, except one, have quite a low R and D intensity but the others all had roughly the same sort of number coming up. So that was what led us to make those projections but recognising that the sample size involved there was probably too small to really be sensible about.

**MR WEICKHARDT:** The numbers in those areas I could quite happily live with. They were in range. It was in forestry and seeds that I was saying could I believe that and what other data have we got to verify the reasonableness of that number and that stretched my imagination.

**MR KEOGH (AFI):** Yes, I must admit I was surprised by the seeds one but some discussion with some others suggested that perhaps it's not that surprising.

**MR WEICKHARDT:** Okay. Again, if you're willing and have the time, perhaps spending half a day with the staff down in Melbourne or we will come to you, just to see if we can triangulate on some of these numbers and get any more confidence about what they all mean, we'd appreciate that.

**MR KEOGH (AFI):** Okay.

**MR WEICKHARDT:** Thank you again for your participation, it's been very useful and we would encourage you to continue to provide us arguments, whether they support our conclusions or not, good data and good evidence and good arguments are the things that will sway us to change our recommendations.

**MR KAY (CA):** They you are, they've promised to change their view.

**MR WEICKHARDT:** On the basis of good argument and good data. It's that old line, "In God we trust, all else bring data." We're going to adjourn now, thank you very much indeed, and we will resume at 1.30.

(Luncheon adjournment)

**MR WEICKHARDT:** We'll reopen these hearings and the participant are the Fisheries RDC. If you could just introduce yourselves individual and just say your name and the capacity under which you're appearing, please.

**MR WOODS (FRDC):** Thank you very much. My name is Harry Woods, I'm the chairman of the FRDC. I must just add a fairly newly appointed chairman from 1 September this year and in fact haven't had any board meetings yet.

**DR HONE (FRDC):** Patrick Hone, executive director, Fisheries R and D Corporation.

**MR RICHEY (FRDC):** Stuart Richey, deputy chairman, FRDC.

**MR WEICKHARDT:** Thank you very much indeed. If you'd like to make some introductory comments and we can start a dialogue.

**MR WOODS (FRDC):** Thank you very much and thank you for your welcome to be along here today. The FRDC very much welcomed the Productivity Commission inquiry and put a lot of effort and high priority in responding to the commission so as to ensure the best outcomes for both the industry and the FRDC. We worked actively with all the stakeholders, both in government and in the industry, to ensure they're aware of the FRDC's views and I think by and large I can say all sectors of the industry have a high degree of confidence in the FRDC. The review comes at a time when the PIERD Act is now 20 years old and probably in need of review at this time and like all government programs it's important to make sure that they are still relevant and demonstrate that they are an appropriate model.

That isn't always the case and I was only relating a little while ago that I did a review for the New South Wales government some time on a policy, a program that hadn't been looked at for 100 years. I won't mention what it was or anything.

**DR SAMSON:** Selection of the premier perhaps.

**MR WOODS (FRDC):** It's an opportunity to examine the changes that can improve the model we have and deliver better outcomes to stakeholders. I think it's fair to say the FRDC are quite comfortable with the draft report of the Productivity Commission. Over the years RDCs have collectively evolved their individual businesses, striving to match the needs of their stakeholders and that means that the businesses are different which is not surprising, given the diversity of all the primary industry sectors. I know when you spoke to the combined meeting of the RDCs down in Canberra not so long ago you did mention that some of the data you received was less than desirable, but I think we're hopeful that you found the data from the FRDC in particular, which we put a lot of effort into, quite acceptable. I

think at this stage I'll hand over to Patrick, the CEO, to make some further comments.

**DR HONE (FRDC):** Thanks for that, Harry. Just reinforcing from an FRDC's perspective the report characterises us well. We're very happy with the comments that are in the report that described the FRDC's business. You've made the point that we are one of the six statutory corporations that is left. That model suits us very well and you've also noted that the type of business that we're in where it's trying to really strongly balance the government and industry benefit is very important to us to be at arm's length from too many people. Being able to sit there as an appropriate facilitator is very important to us and the PIERD Act allows us to do that. In our business trust in FRDC is absolutely critical to make sure that what we're investing in is above approach, we're not seen as having a pecuniary interest in a salmon fishery or having a pecuniary interest in one particular type of fisheries management approach.

So the statutory arrangements fit us well. Within that are contributions. You've noticed that we have a mixture of voluntary and one levy and that method works well for us. It reflects the types of industries that we are involved in, also reflects the fact that we have a very suitable method of collecting quite a lot of our money through the licence approach, which is the cost recovery for wild fisheries. So we're piggybacking on an efficient collection system already, so why develop another system which would add costs to the industry. You also noted the fact that FRDC, in terms of contribution, is doing very well. We do have above the maximum matchable contribution which is very good in terms of obviously demonstrating that the industry is willing to put the money forward for the research.

I think the key thing for us and the one that we were very supportive of your report was that at the end of the day we do have two types of funding sources. We have the traditional agricultural dry source which is the matching component and we also have the public good component. We believe that in our submission and I think the submissions that have come from either our government agencies or our industry partners that it's very important in our business that we continue to manage that as a whole, that we manage public industry interface in this natural resource management. It's a very important thing for us. We get the best outcomes for everyone in terms of research, the need to make sure that we're always taking an environmental perspective and our investment is key for us and being able to have that ability to do both things within our investment portfolio is very important for us. So it is quite clear that you've supported that in your draft and distinguished us from the dry side in terms of how they do collect their moneys.

I might hand over to Stuart. Stuart obviously come from an industry background, he didn't declare that at the opening.

**MR RICHEY (FRDC):** I'll declare it now. In real life I'm in the fishing industry and this is my part-time job. I just want to reinforce - and you probably picked it up in our submission - the support for FRDC is very strong both across the government and across the industry, that FRDC is seen as the honest broker and is seen as being able to pull together collaborators on projects to make it work together. That research plays a very critical part of fisheries management, both timely research and high quality research which is necessary to try and manage something that is very difficult to see or quantify.

So the difficulty for FRDC, of course, is always trying to address the priority issues and to do this we've established a network of fishery research advisory bodies that are actually comprised of industry, government, NGOs, fisheries managers to provide advice on how FRDC or what projects FRDC should be funding. That linked with FRDC's knowledge of fisheries across a number of jurisdictions means that we're able to fill gaps where other jurisdictions haven't picked them up. I could give you an example, if you would like an example, of one the ways FRDC has moved very quickly to fill a gap and that would be in relation to the south-east regional marine planning for Victoria, Tasmania, South Australia and, unfortunately, the initial drafts were going to have a very severe impact on the fishing industry and on the regional communities that rely on the fishing industry.

FRDC was very quick to provide funding, along with the Tasmanian government, to get some studies in place and in a very short time that initial funding managed to develop a proposal for government that actually increased the area of marine protection, that produced a better outcome for the government and minimised the impact on the fishing industry. So I think that is a very good example of a small amount of money being put to good use by someone who was seen as the honest broker by all bodies to actually pull together a good outcome.

**DR HONE (FRDC):** I'll just make a comment on the recommendations. There are lots of recommendations obviously on the report and I don't want to talk about the recommendations that apply to agriculture sector. From an FOC point of view we support the recommendations that are in the report. How we will approach it, if the recommendations then come through to fruition, like everything we do, we'll be looking to see if there is a demonstrated need from our industry. So if you change the legislation, for example, for a government director, an industry - and when we talk about industry we talk about government and commercial and recreational and indigenous. If they come to us and say, "We'd really like you to do that," then we'll do it. If you change it to include the scope to include marketing and promotion, if the industry want to take up that option and they come to us, then we'd be more than willing to talk to them about it.

But it needs to be driven by them. I think the recommendations would obviously bring the act obviously further forward in terms of where the industry has evolved over the last 20 years. When I first started - and Stuart can make a comment and even Harry, they go a lot further back in the fishing industry than I do. It has changed a lot in the last 20, 30 years. We know a lot about the fish stocks, the fisheries are a lot more sophisticated. We have a lot of very sophisticated regulatory systems in place and now the industry is very much looking at how we can evolve, particularly along the supply chain, we can demonstrate to the community what we're doing in terms of sustainability, getting those messages. So it has changed, probably some of those changes don't get reflected in our research because of the production based RD and E that we have to do at the moment and I think the changes that are recommended will probably allow us to marry new opportunities that will give industry - make us to be a little bit more relevant to them in some of the areas that they would like us to move into.

In terms of whether they ever opt for a levy or whether they do it voluntarily will be interesting with our industry. Our industry likes to do things voluntarily, so I'll be interested to see when it comes to the time how they do that. The last comment I'd just make and obviously we are very strong, active members of the Council of Rural R and D Corporations with Dennis Mutton and Sue McCluskey and spend a lot of time helping out. Recently we subcontracted one of our persons, seconded Jo Ruscoe to work for four months for them, working on their education component for the RDCs to get a better way about how we all invest in education and as of last night FRDC signed the lease for all the four R and D corporations to move into the same building. So that actually happened last night which was an interesting meeting in itself. So we will be moving in with GRDC, so that's Australian Pork Ltd, RIRDC and ourselves as of 1 March next year. That's now done and it's very positive.

I think everyone is looking forward to having a significant mass of people working in research that can draw efficiencies and also just draw experiences and skills from each other. I think from a Canberra based viewpoint - we're only a staff of 11, being in a larger group of people is going to significantly help us in terms of some of our fixed costs, so I know our board, while the figures don't stand up in terms of our current costs of location, in terms of shared services down the track there's real opportunities there for us, so we're very supportive of that.

We're very supportive of the cross-sectoral investment proposals that the council has been talking about. We can see real value in it. Again, being a small corporation it's very hard for us to invest in things like trade, in the energy-type research. We don't have a lot of money but if we can leverage money with the other RDCs to invest in those common areas, it makes a lot of sense to us and so to us, having a mechanism to do that efficiently - at the moment it's not the most efficient



system, it's hard to get 15 people to put their signatures to something, so developing a mechanism to make that easier - and I think the council is on the right track in terms of what they're proposing to do there - then we would support that. I'll just turn over to you, Harry, for any last comments.

**MR WOODS (FRDC):** I might just make some last comments a little later and wonder whether the commission want to ask us any questions on those matters.

**MR WEICKHARDT:** First of all let me congratulate you on getting the agreement to move into a common office in Canberra. I think that's a positive and intuitively it sounds like a sensible thing to do.

**MR WOODS (FRDC):** As Patrick said, the business case didn't really stack up but what we're looking for are the future benefits and the synergies that are there and that's the way the board looked at it. We had good support from the department and, I understand, the government in that move.

**MR WEICKHARDT:** Good. I think these things come a step at a time and being prepared to give a bit to cooperate is a good gesture and I hope it does work out well for you.

**DR HONE (FRDC):** We've got the other RDCs in Canberra a bit scared now because while we're small, we look like a shark.

**MR WEICKHARDT:** Thank you very much for coming along and thank you for your submission to the draft report which was particularly useful. Just picking up a few of the issues that you raised, if I may start off, one of them is the issue in the voluntary nature of most of your contributions and also the fact that compared to the government cap some of those voluntary contributions or in total those voluntary contributions are significantly over the matching fund. I think you quote 169 per cent one year and 137 per cent in another year. Some people have put it to us that if the government matching cap were reduced then the industry funds would reduce and yet there are RDCs - GRDC is one, AWI is one, sugar is another and I think you're another - where already the industry is contributing more than the matching cap whereas in some cases there are industries contributing less than the matching cap and sometimes they're hugging exactly that level.

Have you got any comment - and you've got, I guess, particular feedback about this in terms of the fact that your contributions are voluntary in most cases - what is it that goes through the minds of a growing group, fishery group when they're figuring out how much they should contribute and to what degree does the government matching cap influence that decision, do you believe?

**DR HONE (FRDC):** If I just make a couple of comments. First, our business is so different from the dry side sometimes I think primary industries wonder why fish is even in with them. The link between research and fisheries management is absolutely one of the unaidable rules, you've got to have research to drive fisheries management. Fishermen know that good research drives good outcomes, so there is a very strong incentive for them to have good research to actually demonstrate to the government and to the stock assessment processes to make sure that that works. So the incentive to invest in good research for them is very good, especially if there's gaps in knowledge.

A classic case - and Stuart might make a comment - is a lot of stock assessments struggle to take into account the change in catchability of the stock due to environment, so when the fisheries stock assessment people go out and do assessments, they base it on catch per unit effort and they see it going up and down and they think it's because we're overfishing but it's because the environment, the fish just might not have been there that year or the weather was difficult to catch that year, so the catchability changes. Doing good research to be able to actually put in environment as a factor into the stock assessments has meant that we've been to smooth those lines out and so the industry sees that benefit.

In the South-East Fishery at the moment we're getting a significant amount of money above the contribution because they see the benefit of getting that data to demonstrate the status of their stocks. You might make a comment about that.

**MR RICHEY (FRDC):** I'll add to it from a bit of a different tangent in that some of the work that FRDC has funded has been towards co-management and a lot of our fisheries are now devolving more responsibility to industry, but to do that there has needed to be and still needs to be a lot more work done on actually developing the ground rules so that there is an operating framework for industry to operate within. In other words, the community's resource is protected by better research to develop the ground rules to do it. So industry are putting their money forward to be part of that in the knowledge that sooner or later some of the functions being devolved to industry, industry will be able to do a lot cheaper than government can do. So they're looking at a long-term investment to actually lower their cost of operating in the future by investing now to get the ground rules in place.

**DR SAMSON:** Can I ask, this sort of enlightened understanding on the part of the industry as to those issues that you and Patrick have talked about, is that inherent in the DNA of the fishing industry or does the FRDC actively pursue strategies that make your stakeholders aware of those things? We're trying to struggle between industries to try and see if there is some sort of logic to why some embrace this concept of, "R and D is good, we must invest regardless of government matching or not."

**DR HONE (FRDC):** In our industry the FRDC does play the honest broker role very much so and the industry sees that. That's taken a long time to get to that point. If you look back into the 90s we were nowhere near getting any of the matching dollars and so with time we've built that trust and now every time the industry see they're going to put some dollars in and they want it to be managed, they'll give it to the FRDC because they see it's an efficient, effective way to do it. This is about the private benefit fisheries management component.

Just as an aside by the way, we have two parts of our business in the commercials, we also have the aquaculture side. In the aquaculture side we don't get above the .25 per cent. It's only the wild capture sector that drives the voluntary contribution above the matching. In the dry side we still struggle, I suspect a bit like grains farmers or horticulture people, to convince them to put more dollars in. In fact at the moment we're having quite a lot of trouble with the Atlantic salmon industry even to convince them to put the full .25 per cent in. So, you know, it's not as easy in that farming sector as it is in our wild capture sector. It's the wild capture sector where we have the majority of the success with the over cap, the extra money.

**MR WEICKHARDT:** As Julius Sumner-Miller used to say, "Why is this so?" Do you have any understanding of what - is there a factual, logical basis for this? Do the returns to the aquaculture guys from R and D differ from those on the wild side?

**DR HONE (FRDC):** It's probably fair to say in the aquaculture side they can privatise the benefit easier than you can in a wild sector. So where they can privatise the benefit they'll do it on their own.

**MR WEICKHARDT:** Okay.

**DR HONE (FRDC):** But where they have to do it collectively - so if you look at our aquaculture investment, it's mainly in the environmental areas, it's where you have to do collective things around carrying capacities, environmental footprints, disease management, biosecurity or even things like nutrition where it's hard for any one company to capture the benefit. But as soon as there is a private benefit - and you can look at pearls, for example, there's no way we're going to be able to do research with Paspaley that they think there's a private benefit because they'll do it themselves and they won't give us the money because they don't want it to be in the public arena and that's fair enough, that's something they want to capture.

**MR RICHEY (FRDC):** If I can add to that from the wild catch side with the additional investment going in from there, I think we could trace this back probably five or six years. There's been a huge culture change in the industry over that time; that there was a restructure, you may recall, three or four years ago. Most of our fisheries had been going through difficult times, there had been a lot of overfishing

and there was a need for a lot of recovery action to be taken, so that those who remain now are the ones who want to be there and see it as a business proposition and are prepared to invest for the long term. The lifestyle, the cowboys, most of those are now gone. So the additional money they're putting into research is basically a business proposition. They're investing for their future.

**MR WEICKHARDT:** Is there something in human nature that means that because most of your levies are voluntary that people are prepared to, if you like, be more generous or more aggressive in terms of what they'll commit to? I don't know whether they commit on an annual basis or more frequently but if they commit on an annual basis, are they prepared to be a bit more adventurous and give more than they would if they were voting for a compulsory levy that might be in place for a number of years?

**DR HONE (FRDC):** In our submission I think we made the comment that the voluntary nature is in apostrophes. In the Commonwealth it's actually regulated. It's part of the licence. The fishermen, once it's set by the committee, have no choice but to pay it as part of their licence. In some of the states it's 100 per cent voluntary because we don't know what we've got until someone hands it over to us, so it does vary. Is there an inherent view? I think one of our great strengths with the industry is to always convince them that this is hurt money, that we're always working with their money, it's not just some abstract concept of money and we spend a lot of time making sure that the industry is aware that we know it's their money and as long as they're comfortable that they've got a relationship with you, and that's why we do a lot of work and have a lot of committee structures and structures to make sure that the grass roots are actually telling us how to spend that money.

The trick is when you've got fisheries, you know, 500, 600 people, how do you actually manage that conglomerate of people? Obviously the industry councils become very critical to us, the industry structures. We support a lot of the industry structures, try to help the industry structures, go to a lot of their meetings, work with them and those industry structures become the bellwether. When we see their membership changing or their chairs changing, it gives us an indication that we might have to change as well, so they're very important to us. I think it's fair to say that the industry councils run our industry and we spend a lot of time with those people.

**MR WOODS (FRDC):** I'd hazard a guess that there's no inherent advantage in voluntary over compulsory.

**MR WEICKHARDT:** Okay.

**MR WOODS (FRDC):** That's only hazarding a guess though.

**MR WEICKHARDT:** It's an interesting story that over time, putting aquaculture to one side, that you say you've started significantly below the cap and over time because of a sense of no trust or belief in the value of this - because your own evaluations that you quote here suggest benefit cost ratios of maybe five or six to one which you say is not surprising, given the fact that there are probably large public benefits in some of your research than elsewhere. But there are other parts of the rural R and D landscape where people are saying, "Even if the BCA is 11 to one, if the government stopped contributing, would it stop contributing immediately?" It doesn't really hang together with the sort of experience that you're quoting of having, over time, got people confident that even a BCA of five or six to one is worthwhile privately investing in.

**DR HONE (FRDC):** We've just been down at the Sydney Fish Market with Grahame Turk, the CEO of the fish market, and Grahame's biggest issue at the moment is convincing the community to continue to eat seafood because of sustainability issues. So anything that we can do in research - and it's very hard to quantify them in benefit costs about how you maybe improve the perceptions of the school prawn fishery in New South Wales or if you improve the perceptions of the scallop trawl fishery. The industry is very keen for us to continue because all that information adds to that, social operate/licence to operate data that allows them to operate with the community and so they see that as valuable.

It doesn't necessarily come out as the best benefit cost, but it does help them effectively protect their livelihood, their ability to continue to fish. The recreational sector is no different. To them a benefit cost is really difficult to do because they don't really value the fish in the traditional economic sense of the word, it's all about the opportunity that you're trying to protect for them. There's a lot of people who are very keen, for example, to protect the Coral Sea as a place to go fishing in the recreational sector and I can tell you probably 99.99 per cent of those people who are trying to protect that will never go there to fish. It's just the opportunity that they might be able to. It's the aspiration to go fishing there.

**MR WOODS (FRDC):** I think your comment about confidence has a lot to do with it. If you remember in my opening remarks I mentioned that the industry sectors do have confidence in the FRDC. If I can look at that as an outsider for a moment, I live at Yamba which has quite a large fishing industry and know quite a lot of those people before I took this job on, they do have a confidence in the FRDC.

**DR SAMSON:** One of the things we looked at in the draft report and seeking some help on - and an RDC is perhaps not the automatic person to ask this question - is about sanction. As you know there are several versions of the model and we have the six statutory authorities, then we have the industry-owned corporations. Perhaps,

particularly with the industry-owned corporations, we've been struggling a little bit but historically most have travelled well but we all know there are times when there are some serious problems emerge and the system as it currently stands where an RDC is governed by statutory funding agreement there's really, in terms of sanctions against a corporation or a board that is in some way seriously underperforming, a somewhat Draconian - and it's a sort of zero one approach almost and the main sanction that exists at the moment for the government is simply to withdraw funding which has never happened and if it were to happen the collateral damage is quite severe and a lot of innocent people suffer in the process because levy payers don't get the research done, research providers, suddenly the money is not there and they've done nothing wrong.

We have been looking quite hard amongst ourselves. Is there something before the nuclear option of withdrawing funding and we've hit a bit of a wall I have to say amongst ourselves, so we're hoping that wiser heads than ours might have some ideas in that regard. So perhaps asking Dracula how much blood is in the blood bank isn't the right way to go about it. But given your professionalism, we'd be grateful for any thoughts you might have.

**DR HONE (FRDC):** First of all, I think that obviously applies to other parts of the business, not to us. The issue is how do you actually ensure that the RDCs are appropriate in an acceptable behaviour to the various stakeholders and that's not just the government, it can be communities, it can be various members of your clients, whether that's your prawn farmers or your prawn wild fisheries people. The key thing is about having clear messages. I've now been the CEO just over four years at FRDC and it's very difficult. We get very strong messages from industry, as in the commercial, recreational and indigenous groups. The message from government is very difficult to interpret. It's very difficult to understand that and I could understand how some of the RDCs might not be listening to all of the signals in terms of how that works.

So I think having a much clearer message, and I think in your report you've clearly said you were going to talk about having a standard set of principles and guidelines and information to communicate. I think if that could be done really well, that would make a big difference. At the moment DAFF is a big department. You might be dealing with a levies group, you might be dealing with a research group or you might even be dealing with a fish group and you'll be getting different types of messages and so being able to try and get a consistent message would be good for all concerned.

In terms of sanctions, from a Fisheries R and D Corporation's perspective I think we've never had a sanction or had a need for a sanction but the minister has had the opportunity through our act to give us a direction and the direction is always

sitting there at the minister's opportunity. He can give us a direction; if he wants us to do X, he can do X. Also because of the nature of our business, because government is so important to us in terms of the priority setting process, we have quite a deliberative process to ensure government actually informs us of their investment needs and because of the public good nature of our work we have quite structure, so it's hard for me to comment on the agriculture and forestry sides because they have quite a different structure from us.

I think it is a difficult area, Cliff, to talk about in terms of sanctions because the problem is as soon as you start putting in processes where governments intervene, governments don't always intervene for the right reasons and they're not always the most effective ways to do things. I like incentivised systems, I like systems that create incentives for things. I think that is the best way to do it where you create incentives where people will actually produce the outcomes that you're looking for. Whether there are the incentives at the moment there for everyone to do exactly the sorts of things, you could ask yourself, "Are they there? They should be there." Certainly from our perspective, if you actually look at our alternative income sources, DAFF is our largest - outside CRCs - other government source of income and that's very important to us. They give us a lot of voluntary contributions as well every year where we run projects. We've just got an extra 1.7 million to run a recreational program for them. So listening and talking to them and making sure that they are comfortable in our systems is critical to us because that brings in a large amount of our income every year for us to do other things. It is a really hard one that one but I would be very nervous of any legislative-type approach.

**MR WEICKHARDT:** I understand the nervousness and we too, when thinking about options were nervous for that and a variety of other reasons. But if you get one RDC that is clearly not delivering to its stakeholders and, as you say, there are a multiplicity of them, it has the potential of weakening the whole system. The public lose confidence, politicians lose confidence, the next moment you find that the desire to continue to support this structure is reduced. People start questioning, is the structure wrong rather than is the execution wrong. We were scratching our heads to think how do you make the punishment fit the crime? It may be that simply a quiet chat is enough to get people's attention and everything is fixed up.

But if an RDC continues to ignore either its stakeholders or its levy payers or the government funders or the needs of the public or whatever, how do you get their attention after they've stopped listening to admonition?

**DR HONE (FRDC):** Just remembering the environment that we operate in is that there is always going to be noise. The RDC is by nature investing in research which is to try and create change and there are a lot of people who either want to invest in research to stop change or they will invest so they want to ask more questions to stop

people actually getting ahead or they are just opposed to that change full stop. We all draw that line where we're trying to make sure that we are promoting change and good research that informs more productive and better systems and there are often winners and losers in that debate.

The other area about how the RDCs read the message of government and make sure that they're doing the sorts of things government wants, I think it's fair to say that all the RDCs have different capabilities of working with the government different skill sets and maybe that comes from the process by which they interact. We find it very easy for us because in DAFF there's actually a fisheries branch. We can actually go straight to the fisheries branch and we have a very strong - in fact I'm talking in the fisheries branch tomorrow, giving a presentation. There is a direct one-to-one relationship with us in the department. I think I would find it very difficult in say horticultural, grains or pigs or whatever, to find where my one-to-one partnership - because their programs change quite a bit. So having that relationship maybe more clearly defined might give them a better way of talking to the department and hearing that message.

I think also the system depends on - a lot of works call them voluntary, but irregular meetings with the government, the council meetings et cetera; having a more systemic approach of meeting with the government and meeting with the departments. I think that's the great breakthrough with having Sue McCluskey there and Dennis, is that if we can create a more systematic way of talking with the government and all the RDCs being with that, instead of the RDC council being seen purely as a networking meeting but as a more efficient way of talking with government. I think again that's a positive thing. You've been to those council meetings, Stuart, you can make a comment on what the past - - -

**MR RICHEY (FRDC):** I'd rather not. I mean I'd be surprised if the RDCs weren't in the main willing to take the government messages. I think the fault, if there is a fault, probably is in a diminished communication between the government and the RDCs, because in a philosophical sense the government is there so that they have an ability to direct public policy. If it's not happening I think it's a communication problem there.

**MR WEICKHARDT:** Do you feel that the recommendation we've made in the draft report that DAFF themselves prepare an annual report where they articulate what they see are the performance of the RDCs being and areas that sort of are going well and areas that might not be; could be a helpful way of, if you like, forcing that communication?

**MR WOODS (FRDC):** Yes, in a sense I think all government departments are hesitant, often enough, to put their foot forward and say what they want. I think that



would be of great value to a lot of people if they were - if government departments generally were forthcoming with the message, as it comes from the government, if you like.

**DR HONE (FRDC):** So my only comment there is I like efficient systems. I don't like creating bureaucracy of reporting, whether it's for DAFF or ourselves. Certainly if it was a small report in one page and relatively easy to produce I would support it. Again, I think the key for the communication message is that the person who communicates the message has to have the authority to say it loud and clear. I'll give you a classic case. When Susan Ley was the minister, the parliamentary secretary for the RDCs, we had this massive debate about collaboration. How do the RDCs collaborate more?

It really was difficult because the way the department was communicating the collaboration method, some of the RDCs just couldn't understand it because they're thinking, "We spend our whole time forcing collaboration," you know, between CSIRO and that industry group or that research partner. They just couldn't understand what this collaboration message - but it wasn't about collaboration. All it was was someone should have said, "We want you to spend 10 per cent of your money on cross-sectoral research which supports government priorities." That was the - but it took years to get this narrowed down to what the exact message was. The result was that the RDCs produced reports on collaboration and data on collaboration and all these bits. It was very difficult, as again supporting - - -

**MR WOODS (FRDC):** Just listening to what Patrick is saying, I mean I'm certainly not advocating more reports or more communication, just more effective communication and more direct communication.

**MR RICHEY (FRDC):** Certainly from a personal level I always found it very, very useful when you have a government director on the board that I, as a board member, could understand where the government was coming from; clearly enunciating government policies that - not trying to direct the board in any way but was making it a lot easier for board members to understand what the government was expecting. I found that the government members we had, in particular, were always very, very good in doing that. But Uhrig in their wisdom decided that shouldn't be the way to go, but I've always felt that was a real loss for our RDC, anyway, in not having that expertise around the table with us.

**MR WEICKHARDT:** So if the government accepted our recommendation to allow a consensual appointment your message, I assume, from what you've said - the government would be - if you appoint the right sort of director from your side we'd embrace that?

**DR HONE (FRDC):** Yes, very much so. We have an open invitation to them to come every meeting anyway. But it becomes difficult because when they're not a director how do you handle board and confidence papers? So at the moment we have this strange system where they come and observe and we sort of try and give them the papers.

**MR WEICKHARDT:** Yes. No, a number of RDCs made the point that the dynamic of an observer is quite different from the dynamic of a director who has responsibilities in sitting around the table. As a director they therefore take reasonably seriously reading the papers and making sure they contribute.

**DR SAMSON:** I guess only the final thing from me really is - appreciate your comments at the start that you're basically comfortable with the draft report. If you were in charge of the computer disc with the draft report on it, is there anything that you would change?

**DR HONE (FRDC):** I would have liked you to - said something more about how good our data was. Yes, the only thing it would have been nice to had a little bit more commentary. I think you allude to it in the report where you talk about how some of the RDCs have started to try and work out a mechanism by which components of the supply chain invest in the research. We know that MMA have got processes in horticulture. It is difficult to produce a base model, because not all the benefits accrue in the private component of our research back to the producer. So building mechanisms and incentives in the system to allow people who process or wholesale or retail or - in that component of the business. Particularly when the government makes investing in the supply chain such a priority, it's sometimes difficult to convince the people who are growing the fish or catching the fish that's a priority.

I think the only other comment I'd make is that in the report - and I don't think we have good metrics on this - is that when I started in the scheme back in the 80s fisheries was a relatively simple business. I'm sure that the people who started in the 60s probably thought it was very complicated then but the creep in activities, the continuous scope broadening of the activities that we now have to work in with the same sorts of resources - I don't think we probably saw out of your report enough to actually allude to the fact that the RDCs have actually had a very large productivity gain in terms of how they've been able to actually address all these new issues that are on their table, you know, whether it's international food security, whether it's the WTO work, whether it's the work that you're doing on bio-security or ballast water, whether it's the work on Farmsafe and the health and safety issues.

There's so many things now on the table from education coming through universities and, you know, I know - is our board balancing this broadening, this

continual broadening of the issues and priorities? It's very difficult because how do you balance human safety-type research against biological integrity-type research? It is getting very difficult sometimes to say where can you put your money and make a difference. The danger for the RDCs is you become paper thin across the issues. That's something that we try not to do. We try to be effective because we've got to try and deliver an outcome. But there needs to be some recognition, I think, in the report that the issues that have been put on the whole rural sector are broadening. How do we manage that as a community and make it happen is one of our challenges over the next 10 years.

**MR WEICKHARDT:** Do you have any ideas? You're not going to, by wishing it, make the world a simpler place; so recognise it is complex and probably becoming more complex. What do you do about that?

**DR HONE (FRDC):** In our game we are fortunate. We are very fortunate that we have a broader marine research community that sits behind us, whether it's groups like the Australian Institute of Marine Science, Geoscience Australia, Bureau of Meteorology, who are all studying the world's oceans and marine systems. So we have a large school of people working with us. So for us it's about working out where we should put our effort to deliver it to our clients and spending our whole time really focusing on who are clients are, what do they want. For us it's the attribution of benefits to fishing and agriculture; so if it has got a high benefit to fishing and agriculture. So that means we can't get dragged off into the sea bird issue too much, can't get dragged off into the sea lion issue too much, can't get dragged off into the Caulerpa issue in Lake Macquarie too much. We try and focus it really down.

We also try not to get into studying the impacts where we're not responsible for them, so stormwater discharges and those sorts of things. They all impact on our fishing industry. We're not responsible for them so we try not to get - we know it's an issue. The industry always is wanting us to do research in that area, you know, the impacts on estuaries and all that sort of work. But if we got into that, measuring, quantifying all these impacts which are not caused by our industry, we would quickly lose all our funds. We would argue that that's a better place for the catchment authorities, the land management groups, other groups who can invest in that area. So yes, we spend a lot of time saying what's our core business, what's our attribution and making sure we understand what our partners want in that. But it is an issue. Marine-protected areas debate as an example is massive thing that has been happening over the last decade that has increased the scope of research for us.

**DR SAMSON:** Just for the record, thank you for the data you did supply. Our frustration really, I think, is in the broader universal system, nothing specific there - - -

**MR WOODS (FRDC):** I appreciate that, because I did pick up on your comments in Canberra about the data, so it's good to hear that the FRDC - - -

**DR SAMSON:** A universal frustration.

**MR WOODS (FRDC):** It's good to hear the FRDC was at least satisfactory.

**DR HONE (FRDC):** So can I just make one comment? I think - we've been talking here about the R and D corporations, we're talking about rural industries and rural research. There's a broader policy around the government around research, full stop. It's normally run out of Minister Carr's office, because that's where it is. The state governments also do a lot of research. So there is quite a large research platform in a government sense in Australia.

I think the new innovation committee that has just been established Minister Carr needs to play a much more central and pivotal role in policy formation, and particularly around data, because one of the things we find even from our sector is the inability to distinguish the data that comes out of the ABS. So when you go to ABS and you're trying to get processing data on who in the fishing industry is processing, they don't categorise us as processors, it's just all processors. So getting better data - now, that won't happen just because the fishing industry wanted it and it won't happen just because the whole primary industry wanted it. It will only happen if we as a collective community of everyone wants to get better data.

**DR SAMSON:** Part of the solution is to actually identify genuine need for it - just the collection of data for collection's sake - - -

**DR HONE (FRDC):** Correct.

**DR SAMSON:** Not going to get anywhere very far.

**DR HONE (FRDC):** But in our game, 101 fisheries management is: bad data, bad fisheries management. Without data you can't manage.

**MR WEICKHARDT:** In your submission, you showed a table showing the investment criteria for FRDC investment where you show, I guess - I took them to be the benchmarks of returns that you used to assess proposals coming forward. If I've got that wrong let me know, but you had, sort of, for example, benefit-cost ratios of nine to one after five years, 17 to one after 10 years, 28 to one after 20 years. Those are extraordinarily high returns. If those are the sort of, if you like, investment benchmarks that you're using, is there lots of other still worthwhile research that doesn't make that cut but nonetheless would make a plausible investment case that's

not being done because you've set the bar so high?

**DR HONE (FRDC):** First of all, those are the outcome of reporting on what you've done, not on the process of how you get to what you're actually investing in. So the question is what - - -

**MR WEICKHARDT:** So it says Investment Criteria but you say they're not - they're actually ex-post results, are they?

**DR HONE (FRDC):** They're ex-posted results.

**MR WEICKHARDT:** Okay.

**DR HONE (FRDC):** Yes. Just looking at that heading I was just thinking that's not the right - they're the post-results of all of those reports. I think we sent you 18 benefit-costs and that's the summary of all of them.

**MR WEICKHARDT:** Okay. I'm trying to reconcile that with your comment that sort of on average you were getting benefit-cost ratios of 5.6 to one, as you say in the paragraph above that.

**DR HONE (FRDC):** That's right. So if you actually look at the results from all of those studies that's what the average was, was the 5.6. That was over the - I'm pretty sure that was over the 25 or the 30 year period. It was whatever the council decided was the point we would do. FRDC has its investment criteria. We actually don't try and invest optimised or maximised benefit. We actually try to optimise. The reason for that is if you tried to maximise investment in our industry you'd probably spend all your money in Atlantic salmon or something like that, because we've got little fisheries like the herring fishery or we might have new, emerging industries which are very hard to quantify benefits in those. Important for us to be always looking at the optimal benefit. Then there's areas where it's very hard to quantify. How do you quantify not catching another dugong or catch another leather back turtle. Those things are hard to quantify but reducing interactions with protected species is important.

**MR WEICKHARDT:** So what are these numbers in benefit-cost ratio that I read after five, 10, 20 and 30 years in that table?

**DR HONE (FRDC):** So they're the - if you actually go to the summary report. We provided you a copy of our summary report. You've got all our reports. They're the benefit-cost from the select reporting of those that was put in that report of the 18 clusters that were done.

**MR WEICKHARDT:** How does that relate to the 5.6 to one number?

**DR HONE (FRDC):** Because the 5.6, if I remember right, is the average when you actually discount it across the whole portfolio.

**MR WEICKHARDT:** Okay, all right.

**DR HONE (FRDC):** So there's a difference between the individual clusters, the 18 clusters in total and then taking it across the whole 36 clusters or the 36.

**MR WEICKHARDT:** Okay, all right. Sorry, I was confused with the heading - - -

**DR HONE (FRDC):** That's why - I mean we provided all those reports because we knew that there was a lot of detail and trying to put all that detail in one small submission is not easy. I take my hat off to whoever had to read all those reports.

**MR WEICKHARDT:** You mentioned, and I think you're in good company here, that you don't want sort of increased bureaucracy. But one of the things we did say in the draft report is that we were conscious, having looked at the RDC framework and the environment they operate in, that there's lots of money going into the rural research and development pot from all sorts of different sources: private, different parts of government, different states, different jurisdictions but also different portfolios. It looked to us as if on some occasions different funders didn't really understand what other funders were doing. So we suggested that we thought some sort of coordination mechanism would be a good idea, so at least you weren't having a situation, which may or may not be accurate, but one research provider said, "It's very easy to play off different arms of government because they never know what the other is doing, and in some cases we can sort of get two for the price of one." Do you have any concerns about the fact that there is this rather uncoordinated funding mechanism that goes on at the moment and do you have any ideas of how you might have an effective but light-handed method of better coordinating the different funding and the objectives behind that funding?

**DR HONE (FRDC):** So in our area, the fishery and agriculture area, I think we have quite an effective system because we have another group called - and we have alluded to that - the Oceans Policy Science Advisory Group, which has all the agencies that fund or do marine science. So we sit on that with AIMS, we sit on there with DAFF, with Minister Carr's portfolio. We will sit in that group. That group effectively has 95 per cent - because there's a state person there from the - we have an administrative council, there's a thing called the MACC, Marine and Coastal Committee. There's a Marine and Coastal Committee person there, the head of the R and D committee from that. So having all of those people at the table we actually have quite an effective way and we regularly meet and we have teleconferences and

we all have to put in a situation report, what we're doing, at every meeting so everyone gets to see who's what. We've got Defence Science there, we've got the navy there, so that's a very good forum for us.

From FRDC's perspective the one that's missing - there are groups that are missing, like the Australian Research Council. It is hard to get visibility in the Australian Research Council. We try to involve ourselves with the Australian Research Council but it is a hard one to do, because they have a competitive system. They're not really into planned investments. They don't really want to sit down and put together a consortium of dollars. Their preference is to running a grant system, and that's counter-intuitive to what we do. There are programs that the government runs which are not really about R and D but more about extension research, so like the Start schemes and the COMET schemes and those sorts of things. We have always done very well in the fishing industry with them. They've often taken our research and then taken it to the next stage. We were very successful with our oyster breeding genetics program that we got money out of one of those schemes to actually build the company that actually took the genetic program forward. So normally we've done quite well but there are - I would say it's the exception, not the rule, that you get those. Occasionally you get tripped up over them.

ACIAR, we would like to do better with ACIAR. We did very well in the wild fisheries. We would probably prefer to do a bit better with the aquaculture side but hard because of the - they work in developing agriculture countries so the technology is quite different from ours, but we'd probably like to work but then that's just - matching of portfolios is probably not as easy. But Geoff Allan, who runs the ACIAR aquaculture program, also is the leader of one of our hatchery technology forums, so we have good linkages with them, it's just the matching doesn't always work but I wouldn't say it ends up in duplication in that area. I don't know enough about the agriculture or forestry side to make a comment on them.

**MR WEICKHARDT:** This committee that you refer to, the Ocean - - -

**DR HONE (FRDC):** Oceans Policy Science Advisory Group.

**MR WEICKHARDT:** Does that provide, do you think, any sort of model that one might be able to build on saying, "Well, that works in one sector, could something like that in the agricultural side help to, if you like, get some better coordination of what other arms of government and other funders are doing and trying to achieve?"

**DR HONE (FRDC):** It works well for us because of the thank that in fisheries we are the game in fisheries and agriculture. We fund 60 per cent of the innovation in fisheries and agriculture in the country. But in marine science, we're probably less than 10 per cent. So it's important for us to be involved with that other group, that

bigger area and it's a good mechanism for us to know what they're doing and for them to know what we're doing. Also because we have one of the biggest client bases in the marine environment, we have a very strong stakeholder process for getting advice. They often call on us to find out if something they're doing is going to get politically difficult for them, so it works for us.

Yes, maybe in the dry side if there was some sort of joint council. But to my mind that coordinating committee that Minister Carr runs, the one that the council sits on, that Sue sits on, if that was an effective body - because it ARC, it has CSIRO - theoretically that should be the body that does that. Cliff, were you ever on that? I used to go with Ian Thompson. It used to be called the Coordinating Committee on Science and Technology.

**DR SAMSON:** I think I avoided that one.

**DR HONE (FRDC):** It would be fair to say that probably in the old days RDCs and DAFF we went more along to listen than to take an active participation, that would be a fair comment. Probably we need to be more active.

**MR WEICKHARDT:** Okay. Thank you very much indeed for coming along. Thank you for your input. If you have some comments that you would like to take note of, over and above anything you have said today, please send us another submission. It can brief, one page is fine. All such input is gratefully received.

**DR HONE (FRDC):** I suppose the question for you is, is there any other information or data that you would want from us and again we're more than happy to provide anything.

**MR WEICKHARDT:** We know your number and we'll call if we do.

**DR HONE (FRDC):** I know quite a few industry people are planning to put in those one pages.

**MR WEICKHARDT:** Multiple one pages are fine provided they all contain useful and interesting and different facts.

**DR HONE (FRDC):** The 168 submission, was that a good number? I thought that was quite a - - -

**MR WEICKHARDT:** It's always quite hard to predict how many there will be. I'm not sure whether the betting among the staff team of the number of submissions was convergent around the table.



**DR HONE (FRDC):** We have those bets too on applications.

**MR WEICKHARDT:** The thickness of some of the reports surprised us but - - -

**DR HONE (FRDC):** There were a few trees cut down for some of those reports.

**MR WEICKHARDT:** There were.

**MR RICHEY (FRDC):** Thank you very much for the opportunity today to meet with you and I can assure you the board does strive to interpret the government's issues and needs and the industry's and we're looking forward in the next little while, as Patrick said, to the co-location and the synergies and cooperation that might bring but not only with those we're co-located with, but it might also bring opportunities for cooperation with some of the RDCs that aren't there and along the lines you were just talking about there might be opportunities. Thank you very much and let us know if you want anything else.

**MR WEICKHARDT:** Thank you.

AT 2.38 PM THE INQUIRY WAS ADJOURNED UNTIL  
FRIDAY, 5 NOVEMBER 2010