COMMONWEALTH OF AUSTRALIA

Official Committee Hansard

HOUSE OF REPRESENTATIVES

STANDING COMMITTEE ON AGRICULTURE, FISHERIES AND FORESTRY

Reference: Future water supplies for Australia's rural industries and communities

FRIDAY, 15 AUGUST 2003

SYDNEY

BY AUTHORITY OF THE HOUSE OF REPRESENTATIVES

INTERNET

The Proof and Official Hansard transcripts of Senate committee hearings, some House of Representatives committee hearings and some joint committee hearings are available on the Internet. Some House of Representatives committees and some joint committees make available only Official Hansard transcripts.

The Internet address is: **http://www.aph.gov.au/hansard**

To search the parliamentary database, go to:
http://parlinfoweb.aph.gov.au

HOUSE OF REPRESENTATIVES

STANDING COMMITTEE ON AGRICULTURE, FISHERIES AND FORESTRY

Friday, 15 August 2003

Members: Mrs Elson *(Chair)*, Mr Adams *(Deputy Chair)*, Mr Forrest, Mrs Gash, Ms Ley, Mr Schultz, Mr Secker, Mr Sidebottom, Mr Windsor and Mr Zahra

Members in attendance: Mr Adams, Mrs Elson, Ms Ley, Mr Secker and Mr Windsor

Terms of reference for the inquiry:

To inquire into and report on:

The provision of future water supplies for Australia's rural industries and communities, particularly:

- The role of the Commonwealth in ensuring adequate and sustainable supply of water in rural and regional Australia.
- Commonwealth policies and programs in rural and regional Australia that could underpin stability of storage and supply of water for domestic consumption and other purposes.
- The effect of Commonwealth policies and programs on current and future water use in rural Australia.
- Commonwealth policies and programs that could address and balance the competing demands on water resources.
- The adequacy of scientific research on the approaches required for adaptation to climate variability and better weather prediction, including the reliability of forecasting systems and capacity to provide specialist forecasts.

WITNESSES

Committee met at 9.05 a.m.

DAVIS, Mr Chris, Chief Executive Officer, Australian Water Association

LEHMANN, Mr Rod, President, Australian Water Association

CHAIR—I declare open this public hearing of the House of Representatives Standing Committee on Agriculture, Fisheries and Forestry's inquiry into future water supplies for Australia's rural industries and communities. Today's hearing is the 19th for the inquiry and is part of the committee's program of hearings in different parts of Australia. We have previously held public hearings in Queensland, Victoria and South Australia as well as Canberra. I would like to welcome our first witnesses from the Australian Water Association. Although the committee does not require you to give evidence under oath, I should advise you that these hearings are formal proceedings of parliament and warrant the same respect as proceedings of the House itself. I would like to remind the witnesses that giving false or misleading evidence is a serious matter and may be regarded as a contempt of parliament. Do you wish to make a brief statement in relation to your submission and would you like to make some introductory remarks?

Mr Davis—Yes. Thank you very much for inviting us here this morning. It is a wonderful opportunity to share some of our ideas. In our submission we explained what our association is but, just to put it on the record today, we are a broad general group of stakeholders in water, mostly practitioners and organisations that have to do with water. Probably the bulk of our members come from an urban setting, but we have an interest across the whole water sector. Our expertise is not strong in an area like irrigation but we are very aware of water allocation issues and water resources.

If I may, I would like to table for the secretariat and the committee a selection of literature that we put out and literature about events that we are running to show what scope we have. It ranges from community consultation through to a directory of information, a journal and information on other technical and management conferences. We would be very happy to answer any questions or provide more literature if necessary. We submitted a reasonably sizable submission initially. We thought that for today we would like to pull out a few ideas and perhaps, if we may, go off at one or two tangents that had not been touched on in the original written submission. I will cover three short points and then Rod will pick up on three more.

There is not a single silver bullet that is going to solve Australia's water problems. We are a water-stressed country in some areas but for our population we are, in fact, nowhere near being a water-short country on the world stage, because we are only about halfway down the list. But a whole lot of different things need to be done to try to make water outcomes more effective, particularly in a rural setting. One of the issues that we feel is important is price. In many contexts, and in rural water supplies for irrigation in particular, the suppliers are not even recovering their recurring costs of providing that water, let alone covering any capital or sinking funds. We think that that fails to send a pricing signal to the users, and that means that a lot of farming is conducted in an inefficient way and uses too much water. Since about 75 per cent of water is used in irrigation, that means that any inefficiency there is much larger than a corresponding urban change. That is one point.

Another point is that we believe there is a lot of fragmentation in water. We are aware that every state has the prerogative to manage water under the Constitution, but we believe that at the federal level there is a lack of coherence in water management. We would much prefer to see a single minister having the full purview for water. We are conscious of the fact that AFFA and EA are both working much more collaboratively and that they are running the NAP with a joint management team, which is a very positive movement, but, in the long term, it would still be better to have a minister who is solely responsible for water and who can make it more coherent.

Another factor arising from the constitutional issue is that because the states do their own thing they have tended to come up with water licences, water laws and water regulations that are all different. One of the factors that holds back trading and better management overall is the lack of harmonisation. We do not think it is absolutely necessary to have a template that is completely rigorous but we do believe it would be better if laws generally were harmonised so that trading was facilitated and the definitions of different types of water were similar and comprehensible to different players, because it is a very confused scene. Those are the three issues I wanted to highlight. I will now hand over to Rod, who will pick up on three more.

Mr Lehmann—I want to briefly discuss the guidelines that the Commonwealth government has put out, particularly the national water quality management strategies. These guidelines have been the subject of some criticism, but in general we support the use of the guidelines put out by the Commonwealth government. The drinking water guidelines in particular have been well received at an international level, mainly because they have adopted a different approach to other countries where the approach to water quality management is more risk based than legislative. This is in contrast to the US, where legislation drives water quality. We think it is very appropriate for Australia to go the way it has and this has been well received in other countries. In fact, the World Health Organisation is adopting a policy that is similar to the Australian approach. One thing we need to do as an outcome of these guidelines is to set up a system of monitoring performance and putting it in the loop so that you can feedback information from systems and then adjust and fine tune the systems. We would particularly support investment in the monitoring and measurement of the performance of systems.

The other area about which we are concerned is small communities. We believe a lot of small communities do not have adequate supplies of water. It is very difficult for small communities to meet the standards we would expect in cities and large towns. We think there needs to be some investment in developing systems which can be adequately installed in small communities in a cost effective way. I think we need to rethink how we service these smaller communities to ensure they get a standard of service comparable with that available to city people.

Mr ADAMS—In quality?

Mr Lehmann—Yes. It is more about quality than quantity. Many towns have supplies which are adequate but which probably do not meet the standards we would expect. This is mainly because of the cost of operations, maintenance and treatment.

Chris Davis and I went to the World Water Forum in Kyoto earlier this year and it was apparent that quite a lot of work has been done internationally on climate change. We have not seen much happening in Australia in that regard. Planning internationally is quite advanced in Europe in terms of looking at the impact of climate change on their systems. There has been very

little fallout in Australia in this regard. We think that will particularly affect certain rural areas. It is hard to say, but there have been significant changes even on a smaller scale in a number of major water systems where over the last 15 years they have noticed a significant change in climate and in the amount of water running off. Perth is a particular example—the amount of water running off into their catchment has been significantly different over the last 15 years compared to the last 100 years. It is difficult to say whether this is due to climate change or whether it is just a small local effect, but if these effects really are due to climate change it is going to affect everyone. I think the planning has not been done to look at how we are going to manage climate change and I think we should be investing substantial funds to get on top of this problem.

CHAIR—Thank you; much appreciated. How is the Australian Water Association organised? What activities does it undertake? How are you funded?

Mr Davis—Like everything in Australia, we are a sort of federation. We are a not-for-profit company limited by guarantee. We have about 4,010 members—700-plus are organisations, from Sydney Water and French water companies down to one-person consultancies, so we cover the whole gamut. They are all in that directory that I handed over earlier. The rest are individuals, mostly practitioners in consulting, local government, research, teaching, the environment, management and so on. We have a modest subscription—an individual pays $125 a year to belong, students are a fraction of that and corporations pay more. We derive about a third of our income from membership subscriptions, and the balance comes mostly from running conferences and a trade exhibition annually. We run a bookshop and we have smaller events—training events and the like.

CHAIR—You did say earlier that the standards and equipment in smaller towns are not up to date or efficient. Who do you think should be responsible for setting those standards or funding them to meet uniform standards?

Mr Davis—That is very much a state or jurisdiction issue, because in several jurisdictions you have got a single agency responsible for the whole area but it is in some of those jurisdictions that some of the most problematic small communities are. There are two types of problems. One problem is remote Indigenous communities, where the communities, unfortunately, tend to be dysfunctional. One of the victims of that dysfunction is the water and sanitation system, despite quite significant investment. That is a very complex problem. In fact there is a new aid group being established at the moment which will address that and international developing community issues.

The other problem is just that small communities lack the critical mass to have the right technical support. That was what Rod was alluding to. I think there was a study—Rod might correct me—where somebody identified a cut-off of about 25,000 people. If you are less than that, your community just cannot afford the right technical support and logistics to actually deliver a good outcome. In WA the Water Corporation, for instance, manage all those small communities probably quite effectively but at a very subsidised price. They charge 65c a cubic metre, I think, and it might cost them $30 a cubic metre to generate the water. But in New South Wales and Queensland there are many small towns which fall below that threshold and which are not adequately funded. Of course the current New South Wales initiative to consolidate local

governments will address that for some of the doughnut shires but not necessarily for some of the other remote and isolated communities.

CHAIR—Thank you.

Mr ADAMS—We get a lot of journals across our desk in Canberra, and I look at a lot of them, when I get a chance. This one, *Water*, we have certainly dealt with—it has a mauve tap on it. It is quite interesting. I do not think you send it to Canberra.

Mr Davis—We send it to the Parliamentary Library, and various ministers get it. I would be very glad to add anyone else who is interested.

Mr ADAMS—I would be very interested.

Mr Davis—I can send it to you, sure.

Mr ADAMS—I think it would be a very good thing to have; thanks very much. You have touched on whether the Commonwealth should set priorities, and I think you believe that there is a leadership role there to do that. Should we be setting some goals for where we want to go with water reform? You touched on the price of water. That is one question. The other one is: are the banks aware that water is not being paid for at its full price in many areas, and that production is being generated probably by subsidised water?

Mr Davis—If I may take your second question first, I do not think the banks care if the water price is too low because it does not affect them. They care about having the collateral on which to base loans, and that is why there has been so much upset about disconnecting water licences from property. The banks are much more concerned about their collateral than they are about the financial viability of farmers. I guess some farmers have found that, to their cost.

In relation to the previous question, what concerns me is that much of the debate about water is very polarised. You get environment groups on one side espousing one issue and you get the farmer lobby on the other side defending themselves. There tends to be a gulf between the two, although NFF and ACF have collaborated on some issues. We do need goals. Our ambition would be to see some sort of water convention in some august building, like Old Parliament House, with representatives thrashing out water issues in a dialogue in a constructive way, rather than firing pot shots at one another from opposite sides of the fence.

Mr ADAMS—Something like the forest policy statement of 1992. I do not know if you are aware of that.

Mr Davis—I am not really well across that—I think David Connolly might have had something to do with that—but that sort of thing where you work out agreed goals and then people can subscribe to them, rather than just disowning them from day one.

Mr ADAMS—Do you favour the creation of a national management authority at a national level or through the states?

Mr Lehmann—Like a water management body?

Mr ADAMS—From a catchment perspective; where we have catchment plans, some are very advanced, some are well organised and others are in their infancy around the country. The Local Government Association will be appearing later day so I will be interested in talking to them about that. Do we need an overarching authority—a catchment authority—to overview all that?

Mr Davis—That came up in Causley's report a while ago on catchments. He urged, and we support, the notion that the Commonwealth can actually exert much more influence on water than it does. My feeling at the moment is that the Commonwealth agencies deliberately back-pedal on water issues so that the states and the territories do not feel put upon. But that means that you tend to sink to the lowest common denominator because the worst state is the one that prevails, and that is where things rest. Our reading of the Constitutional provisions is that some of the things that happen really do constitute unreasonable use of water, and that gives the Commonwealth the prerogative to step in and assert some control. Our ideal is not necessarily a unified national authority but some more coherent national approach driven more strongly by the Commonwealth than it is at present.

Mr Lehmann—The legislation is so fragmented with regard to water. At a state level, there are many parties involved in the management of water and it does make adoption of regional approaches very difficult because of the communications that you have to go through to get a consensus on issues.

Mr ADAMS—And this is the issue with different states having different water licensing regimes and different pricing. You mentioned earlier the difficulties of getting the trading regimes together. Is that a big problem?

Mr Lehmann—I was also thinking of issues like water recycling, which gets complicated when it is taken out of the city into the country area where the city owns the water but the country is the beneficiary of the water. In fact, the city may be the beneficiary. I am thinking of a particular project in Brisbane—the Lockyer Valley and Darling Downs project—where the beneficiaries are actually the city people through better quality water in Moreton Bay, yet the water is owned by Brisbane City Council, who see no merit in giving it to the farmers who want the water. So it creates all sorts of dilemmas.

Mr ADAMS—But if the environmental standard was high enough of what you had to do with the water, maybe there would be money spent by that council or the ratepayers of Brisbane to deal with their water efficiently and effectively so that it was not harming Moreton Bay.

Mr Lehmann—That is happening to a certain extent but I think the problem tends to be looked at more in their own backyard rather than looking at a catchment sort of problem. It is difficult to know with catchments because in rural areas the control of water is shared—in Queensland anyway—partway between state governments and local governments. When you transition between the boundaries of urban and rural areas, the issues of who owns the water and how it is managed are rather complicated.

Mr ADAMS—Do you think we have enough scientific data now? We have had some very good reports such as the catchment stuff and the Murray-Darling work. Is it time to move forward and make some bigger decisions than have been made in recent times? We have enough written material to tell us a lot of the issues that are there. Is it time to make some big decisions?

Mr Davis—I think it is. We know a lot more now than we did five or 10 years ago. We do not have good enough data on river flows, especially unregulated rivers which are not well understood, and the vagaries of our run-off patterns are such that there is quite a big hole in our knowledge. But our understanding of the mechanisms of river health and ecosystems has improved. I think we need to always have what we call adaptive environmental management, where a control regime is put in but it is constantly monitored and improved—I think Rod alluded to that earlier. So our knowledge is not perfect and we have big information gaps that we need to fill because people have progressively cut back on hydrography. But, yes, I think we can make big steps. I think it has to be done with shared goals and with a certain amount of pain on all sides.

Ms LEY—I concur with the deputy chair about the distribution of *Water* magazine. The library sends them on a media monitor system to some of us, so I have seen some of the articles. I am interested in your membership and that you focus on sustainable water use. Do you have any farmers or people with agricultural interests making up your membership?

Mr Davis—We have a few but they are very much in the minority. Just to give you the context, after the war there was a huge push to put in water and sanitation facilities in cities; there were night carts and that sort of thing. In the early sixties there was an attempt to get something multidisciplinary going. The engineers and the chemists would not allow anyone other than people of their own professions into their societies. Our members set up in 1962 as the first multidisciplinary group, but it was urban focused. From 1960 until 1975—even until the mid-eighties—there was a huge boom of building sanitation and water supply systems in cities and then that started to fade. By the mid-eighties we realised that we could not focus only on water supply, sewerage and stormwater and ignore everything else, so we became more holistic. In the last 20 years our membership has gradually become broader, but still most of our members tend to have an urban focus. We have legal people and some irrigators and farmers but they are a small fraction.

Ms LEY—With regard to your statements about the general sustainable use of water and the health of river systems, how do you get the agricultural perspective?

Mr Davis—Just from networking with agricultural people and trying to keep an ear to the ground. Agriculture is interesting and it is obviously much more complex than is appreciated in the media. We seem to run the whole gamut from some world best practice in irrigation through to some people who inherited lousy systems and just stick with them. It is obviously very difficult to change inherited and familiar practices, particularly where people do not earn enough money to invest in better systems. So we have a funny bipolar situation where a few farmers are exceptionally good and quite a few are on the rump. There are a lot of farmers—and I do not know the number but it may be half—who are just not doing well enough. All farmers spring to the defence of their collective group, so it is quite difficult to have a rational debate with farmers as to how big the problem is because they do not really want to admit to it.

Mr SECKER—That is a fairly bold statement. Farmers are some of the most rational people in Australia.

Mr Davis—They are, but the problem is that if you have inherited a farm that may have old practices and not particularly good margins it is difficult to change them because you do not have the capital to invest.

Mr SECKER—That does not mean that you cannot have a rational debate about it.

Mr Davis—No, I appreciate that.

Ms LEY—It is not whether you have inherited a farm with old practices, it is whether you have inherited a truckload of debt with the farm.

Mr Davis—Yes, that is a problem.

Ms LEY—You mentioned in your opening remarks that rural suppliers are not recovering the costs of the infrastructure that they are using to supply—presumably you are talking about some small irrigation operations. Can you expand on where you have got that information from?

Mr Davis—I am based in New South Wales and I know a little bit more about that than the other states. IPART set bulk water prices in the state and they have had a constant tussle with the LWC, now the DIPNR, about how much can be recovered, what fraction of management costs is allocated to the rural user and what is a community good. There is a constraint on recovering costs, and I do not think that IPNR recovers full cost at all yet in much of the state. I think the price regulators are misguided in defending the consumer, but using fairly narrow criteria. It would be better if they took a more holistic view and took externalities into account, and then priced to try and recover some of the capital cost to create a sinking fund and recover recurring costs.

Ms LEY—I am certainly not an expert on pricing but bulk water licence holders are responsible for maintaining their own infrastructure, so there are huge infrastructure, ongoing and maintenance costs that are quite clearly and transparently calculated in the price that farmers pay for water. That would therefore leave the IPART component consisting of, if it needs to increase from your point of view, a cost to capture those externalities. How would you see that being calculated?

Mr Davis—It is a bone of contention between the economists as to how you can convert an environmental cost into a dollar cost. That is debatable and it is hotly debated. My impression of IPART is that they do not even acknowledge externalities as a factor in their pricing so they do not even try to take a stab at it. They do not say, 'Look, it is an inexact science. Let's work on it and try and improve the system.'

Ms LEY—There are recognised ways of calculating the economics of externalities. Would that therefore need to increase the cost of water to water users?

Mr Davis—I think it would a little. There are many areas where people are only paying about $20 or $30 a megalitre for water.

Ms LEY—Not last year in New South Wales.

Mr Davis—Sure.

Ms LEY—They were paying $300 maybe.

Mr Davis—There is trading happening. One of the problems also is that we have a weakness in groundwater management because the connection between rivers and groundwater is not explicitly acknowledged. Quite often, if you curtail the extraction of water from a river, a farmer can just put a bore next to the river and take groundwater, which in fact is river water that has percolated into the aquifer. So there is quite a lot of weakness in groundwater management and that is exacerbated by the fact that different states do it differently. It is something like the Great Artesian Basin under several states that have different regimes of management.

Ms LEY—Yes, we are somewhat behind in our understanding of groundwater. There is no doubt about it. Do you have a view on forestry and forests as users of water? If you are establishing new plantations of forestry, should there be a calculation of the amount of water that is used?

Mr Davis—That is a can of worms. My goodness! It is really challenging. My understanding is that plantation forests are about 1.4 million hectares, compared to total irrigated agriculture at about 2.1 million hectares. So they are almost the same magnitude but I do not think there is any explicit calculation for the impact of plantation forests.

Ms LEY—There have been calculations of the number of megalitres of water a new plantation would use.

Mr Davis—Sure, but I do not know that that is factored into planning. One of the big issues—

Mr SECKER—We are trying to in South Australia.

Mr Davis—One of the issues we touched on in our submission was this business of 'virtual water', where you try to look at the embodied water in products and crops. The other issue is this whole question of green water and blue water, green water being what you have captured through evapotranspiration and blue water being in the rivers. CSIRO has done good work on that but I do not think we are taking that into account in trying to plan. It is important because if you get a catchment that is stressed and water is under contention, if you put some plantation forestry in, it is going to have a profound impact on the catchment. It has to be factored into planning.

Ms LEY—A catchment recovering after a bushfire will have a profoundly stressful effect on the water use in the catchment, too.

Mr Davis—Indeed, yes. We are organising a conference next month for New South Wales, looking at drought, and fire affected catchments is a big issue.

Ms LEY—I am interested in your subgroup, Women in Water. What exactly is that attempting to achieve?

Mr Davis—Unfortunately, Rod and I are fairly typical examples of the membership of our association—middle-aged males—and it is quite daunting for women to come into meetings and to functions and so on in a very male dominated environment. About seven years ago one of the more feisty young women, who is an environmental scientist, created this group as a bit of support group for women who felt that it was difficult to get ahead. They found role models—people such as Nancy Millis in Victoria, who is supremely successful, Christine Forster and others—and got it going. Unfortunately, it has slowed down a bit but it is still an active group in South Australia. The interest is there. Our membership has improved with women. We have probably got about 10 per cent or so, which is low but it is getting better; we would love to see 25 per cent. Last evening, we had the AGM dinner in Victoria and we installed a female president, which was great. She is not the first—

Ms LEY—I hope that was not the result of an affirmative action policy.

Mr Davis—No. She is a very effective person and is going to do a good job.

Mr SECKER—On page 10 of your submission you talk about the theory of imported farm products. It states:

> Imported farm products can be viewed as having an 'equivalent water value'. Thus, an option for addressing supply shortages is to import products that produce water savings. The same is true of exports—they represent an export of water (not just the water content of the product, but the water required to produce it).

It is a bit like saying we should get carbon credits for exporting woodchips, isn't it? It is a nice theory but it does not take into account value adding to the water by irrigation that we have in Australia.

Mr Davis—It ignores the value adding component; it just looks at the water balance. If you are stressed in water in one area, you could replace the local production by importing from a country which has a surplus of water and does not mind exporting that. We are one of the biggest net exporters of embodied water in the world. The United States is the biggest and we are about next, I think.

Mr SECKER—It is an interesting theory. It is almost anti exports, pro imports.

Mr Davis—It boils down to this: if you are water short, you are best off importing the water rich crops and growing the frugal water crops locally; if you are water rich, which some countries are, you can afford to export a lot of your water in crops.

Mr SECKER—Can you think of some crops where this might be applicable? As a general rule, we export 80 per cent of our agricultural produce. It is not as if we have a shortage of food here in Australia. We are more of an exporting than an importing country.

Mr ADAMS—Oranges are a prime example. Brazil has direct rainfall on their orange groves, and they can outdo us.

Mr Davis—Rice is a fairly water intensive product but it pales into insignificance compared to dairy where you use irrigation. The embodied water in rice is about 1,400 litres a kilogram of

product. But if you irrigate a dairy product, it probably consumes about 13,000 litres per kilogram.

Mr SECKER—Per kilogram of what?

Mr Davis—Of dairy product.

Mr SECKER—I would challenge that.

Ms LEY—I would have to take issue with both of those theories, particularly the rice one. It just could not possibly be correct.

Mr Davis—I have a paper which I can leave for the secretariat. Some good work has been done at the World Water Council about virtual water. They have some lead tables. I have not compared them with Australian figures and there may be a slight disparity, but the magnitudes will be the same.

Ms LEY—Do you mean these figures could be for growing rice elsewhere but not in Australia?

Mr Davis—Yes.

Ms LEY—That is a totally different enterprise.

Mr Davis—They have Californian figures, which would not be too dissimilar to ours. There has been work done on it in Australia as well. Jennifer McKay, at the University of South Australia, has done some work. It is quite interesting. People point the finger at rice as being a very water intense crop; but, when you get into dairy and meat and you put irrigation in the loop, they use a lot more water per kilogram of product.

Mr SECKER—That may be true, but I would challenge the figure of 13,000 litres per kilogram because that would mean they would be using billions and billions of litres on one farm to produce milk, which is about 99 per cent water.

Ms LEY—Dairy is incredibly variable too. Are you looking at Australian dairy figures or overseas dairy figures?

Mr Davis—Those figures that I have just quoted were based on US figures but I can compare them with Australian ones.

Ms LEY—We have a huge competitive advantage in dairy and the cost of production here is a lot lower, including irrigated pasture.

Mr SECKER—We use a lot of natural pasture as well. It is interesting because we have seen figures that show that, on a dollar basis per volume of water used, cotton and rice are far less economic than dairying. Dairying is still not anywhere near as good as wine, grapes or whatever. Here we have all these different figures based either on a dollar value or per kilogram produced so it makes it a bit hard. We have had overallocations of water—I don't think there is much

doubt about that, so we can blame the states, whether it is New South Wales or Queensland—but if we have to go down the track of reducing access to water because it is overallocated, what compensation should we be paying to those farmers who have invested heavily over the years on the basis of having an allocation that is now being reduced by government?

Mr Davis—That is a real moral dilemma because in many instances the farmers were there because government encouraged them to be there and they would not have set up independently without that promotion and the assistance to do it. From that point of view, morally you would say that the government actually owe them because they were responsible for putting them up. But what seems to happen is that the state and the Commonwealth government then say to each other, 'You should be the one that is ponying up the money.'

Mr SECKER—This is even though the states made the decisions.

Mr Davis—Yes.

Mr SECKER—We are used to that in federal politics.

Mr Davis—Some compensation is important. There seems to be a lot of misunderstanding about what water rights constitute. All water rights are only there at the pleasure of the appropriate minister, so they are not like property rights as such.

Mr SECKER—So you do not believe in property rights; you believe in the crown law set-up that we have here in Australia?

Mr Davis—We support the crown law concept but you do need a well-defined right so that the banks have some tangible—

Mr SECKER—I am glad to hear that. My last question is: do you believe that climate change and global warming are a high priority for your group?

Mr Davis—Yes. You probably came in after Rod spoke but he will pick up on that.

Mr Lehmann—We were in Japan earlier on in the year at the World Water Forum and it was certainly high on the agenda in the European countries. They were doing a lot of forward planning. I was saying that there are some areas where there have been significant changes in climate in the last 10 or 15 years but whether they are just short-term anomalies or are due to climate change is hard to know. There have been a number of areas where there have been significant impacts in the last 10 or 15 years. Looking at what was happening in Europe, there was an amazing amount of planning work going on to look at impacts and how they might manage all climate change but that does not seem to have carried through to Australia.

Mr Davis—The Institute for Sustainable Futures in Sydney is doing some work on climate change and its impacts, and the CRC for Catchment Hydrology did some quite disturbing work on how big a fall in run-off you get with a very small fall in precipitation. I cannot remember the exact figures but it is something like a 20 per cent drop in precipitation will halve your run-off, so you get very profound effects.

Mr SECKER—Yes, any farmer could tell you that.

Mr Davis—It is huge. I do not think people realise.

Mr SECKER—You do not get any run-off with half an inch of rain but with an inch and a half you get quite a lot of run-off.

Mr WINDSOR—This is a Commonwealth inquiry. We recognise that the states have jurisdiction over water et cetera but you refer in your document to the Commonwealth not using a heavy-handed approach. I assume you mean not using things like national competition payments et cetera to try to drive the debate, but you also make a reference to what the United States federal government is doing in its legislation. Can you elaborate on how we could relate to the US government experience and the impact it has across states that share common watercourses et cetera?

Mr Davis—The legislative framework in the United States is quite different. They use sometimes fairly devious ways of regulating water. They have a wildlife protection act—that may not be the right term for it—where they use fish as an excuse for managing rivers. They found a way through the legislation of actually regulating rivers quite effectively from a federal point of view by using some wildlife protection provisions. That is one thing they do. They are not a good model of water rights because California has an amazingly draconian first in, best dressed type of approach to water rights, and it has bedevilled their system. Our contention over water is pretty mild by comparison with California.

I think you were not in the room when we opened by saying that we feel the Commonwealth could exert more influence over water. In some instances you could construe what states do as being an unreasonable use of water, and the Commonwealth could come in more strongly. They seem to take a very light-handed approach so as not to be seen as bullying the states in any way, but we feel they should be more assertive.

Mr WINDSOR—Do you think they should withhold competition payments to try to encourage or drive—or whatever you want to call it—the debate?

Mr Davis—I think that has been an effective stick and carrot—yes. I think it was Townsville that did not go to a two-tier urban water pricing system. The Commonwealth withheld money, and that was really a good message to the Queensland government to get going. Yes, I think it is a good mechanism.

CHAIR—You made a couple of statements I would like to go into further concerning our lack of forward or future planning. In your submission you said we should have better water use efficiency, and this includes upgrading irrigation infrastructure and modifying land. I notice most of your membership is in urban land, and I will take the Murray irrigators out of this equation, but it is quite clear that in parts of Australia where we have heavy rainfall we have very high-density urban development.

Over the years we have pushed the farmers further onto barren land where they are using more water to grow the same number of crops. Yet in your submission it says we should be looking at modifying land. Should it be the other way around? Should we be looking at where we are

forcing our farmers to go? You made a statement before about the Lockyer Valley in Queensland, which is a perfect example of what I am talking about because those farmers now, who are in prime vegie-growing land, are going to the pushed further out. The system we thought was going to work—of recycling water instead of going into Moreton Bay to channel it through the Lockyer into the Darling—is on hold now because no-one can afford it. The farmers cannot afford it because they have gone through their worst drought in many years. The state government says that, unless the farmers come into this, they are not going to do it.

Who do you think should be taking control of this to make sure we are planning for the future and not doing it in an ad hoc way? In times when farmers are really hurting they are expected to pay for the infrastructure of getting water that is going into the bay—and probably doing damage out there—back into use in our dry areas. In other words, Lockyer farmers are going to fold up and move further out because they cannot afford the water licences and the restrictions. They will move further out to cheaper and drier land. No-one seems to be stopping this cycle, I would like a bit of direction from you as to who should be taking control and getting into future planning straightaway. The states are so ad hoc—no-one is really following a line.

Mr Davis—I believe what has happened with urban encroachment on previously agricultural land is a tragedy. Diversity is lost and we get these very homogeneous, boring cities that just spread out eternally, and the rich fabric of market gardens and close-in farms disappears. That means you have to ship produce further, you lose diversity and the farmers get displaced. You put urban development on good soil that should be used for farming. We had a meeting in Old Parliament House late last year with parties with agricultural interests and with water interests generally. One of the recommendations we came up with was that there should be a mosaic of land use that is coherently planned so that you get the best use, you protect good agricultural land and you have it close to the city. You would get a more interesting fabric, retain fresh produce close to the city and the farmers can be cost effective.

CHAIR—Is it too late for that though? For instance, my electorate was all farming area, but three quarters of it is now urban and the farmers are being pushed out on the fringe. It is too late to turn it around—you cannot knock down hundreds or thousands of houses.

Mr Davis—That is obviously the case, but I do think we should have a catch-up to try to retrieve what we can. I think that the New South Wales government—certainly with coastal developments—has asserted quite strong control and has taken over planning, but it could happen everywhere. It would be much healthier if we did retain the diversity and if we did keep agriculture in appropriate places. The ideal would be a GIS system which has a model that says, 'Given the slope, the location, the climate, the soil—what is the optimum use of this land?' and then planners actually take that into account. It seems to me that quite often development is very bottom-line driven and that the developers carry a lot of clout.

CHAIR—Again, the national competition money should be used as a carrot that says, 'If you do not do this planning, you lose future planning.'

Mr ADAMS—Can I just clear up the issue of restructuring of land usage in Australia and how we go about it. You hit on the point that, like other industries, it is an industry that will have to be restructured. The figures you have from California about the production costs in water usage

used for vegetables or fruit or whatever—will you make those available? There has been some work done in Australia and I would be very interested in having a look at that as well.

Mr Davis—Sure, I will pass on whatever I can find.

Mr ADAMS—Because that is pivotal to the argument about moving away from some industries to other industries where you do not use as much water. It is about getting the economics right. Will you make that available?

Mr Davis—Sure. One thing that strikes me is that if you look at the pie chart of how much water gets used on what, rice and cotton are not very big players. They use a lot of water specifically, but in the broad picture they are not in it.

Mr ADAMS—Rice is a bit worse than cotton, I think.

Ms LEY—I am going to have to leap again to the defence of the rice industry and just point out for the record that the value adding that rice has makes it valuable to the community and to Australia. If you just look at its farm gate value, you are just looking at a value to farmers. If you add the value that it transforms into, within the community, you are looking at a much larger value which covers the whole community—small businesses and towns as well

CHAIR—Thank you very much for your very detailed submission. You put a lot of work into it and we have been able to take a lot of it as evidence. I very much appreciate the time you have given to that and the time that you have given to the committee today. The report will be down in early February and we will make sure a copy of that report gets sent to you.

[9.55 a.m.]

MOSS, Mr Warwick Richard, Natural Resource Economist, Resource Conservation Program, WWF Australia

YOUNG, Ms Rachael Eve, Water Policy Officer, Nature Conservation Council of New South Wales

CHAIR—I welcome the World Wide Fund for Nature Australia and the Nature Conservation Council of NSW. I know we have a submission that includes two other organisations, and we are pleased you could turn up today and talk further. Although the committee does not require you to give evidence under oath, I should advise you that these hearings are formal proceedings of parliament and warrant the same respect as proceedings in the House itself. I remind our witnesses that giving false or misleading evidence is a serious matter and may be regarded as a contempt of parliament. Do you wish to make a brief statement to your submission or to make some introductory remarks? Once you have finished, we will go to questions.

Mr Moss—Thank you. We are very happy to be here, and we appreciate your coming to Sydney to give us the opportunity to speak to you. I would like to synthesise a couple of points from the submission. Also, since we submitted in November last year, there have been some significant new developments we would like to mention. We would like the chance to talk about them or to do that on notice.

In synthesis, we think the Commonwealth could take a leadership role in water management. There have been significant calls for a national water plan—including from the latest Wentworth group blueprint. You may know that WWF convenes the Wentworth group. The Wentworth group's findings are separate from WWF; the document is not a WWF document. Our role is to convene that and bring those people together. We take a great interest in what they have produced. Obviously, funding is one of the critical elements we think the Commonwealth has a role in. Most importantly, out of our submission, we feel that the continuation of the COAG water resources policy beyond 2005 is fundamental. Within that, we feel a much more holistic approach to water resources policy—which would be in line with national water plan developments—needs to be taken in future COAG meetings. I presume you will have some questions about that from our submission. The point is that the economic, environmental and social issues do not seem to be properly brought into those policies.

Obviously, getting the greatest use out of our water—for environmental, irrigation, urban and other uses—is of fundamental importance. That is why we think this inquiry is so important. We think the onus should be on all parts of the water-using community to improve, including with respect to the environmental aspects. We have a big concern about the relationship between all three levels of government. We know this is not just a role for the Commonwealth; we think the Commonwealth-state-local partnership needs some serious work from all three levels, particularly in NAP and NHT. While it is very difficult to say what a transition end point would be, given that we have such a significant problem, we are calling for the transition process to be as much a shared responsibility of everybody in the community as possible.

We think, because there is such a lack of trust and so much confusion, fear and defensiveness, in many ways, amongst all players at the moment, that some of those shared responsibility aspects are being lost. So we would certainly encourage the Commonwealth role to build greater trust, to encourage a better climate for cooperation and, most importantly, to improve the way that consultation has been done. We feel that communities have been consulted almost to death over many years now. Many of them are very frustrated that they still do not seem to feel that they are being heard and that the outcomes have not been produced. Environmental groups are part of that as well; we feel that as well.

Talking about new things, we do have some additional points that we would like to make. I mentioned NAP and NHT; we do have a couple of comments that are not in our submission. We would certainly like to discuss the status of some of the Ramsar sites in the country at the moment and what we see as a lack of Commonwealth support for people who have listed their properties under Ramsar. We have some comments to make about the Environment Protection and Biodiversity Conservation Act. There are some new points that we want to make about climate change. The WWF produced a report in February that we did not make available to you, as we submitted in November. Most importantly, I want to table with you a two-page document about an initiative that we have called FutureWater. It is a partnership between the WWF, the Irrigation Association of Australia and the University of New England, in which we talk about a community driven process for generating a water vision for Australia. I would like to raise that sort of partnership approach with you.

CHAIR—Thank you very much. Do you have anything to add, Rachael?

Ms Young—No.

Mr SECKER—Could I just get a clarification, Mr Moss? I thought you said that you were going to add a whole lot more things to the debate that we do not have before us yet.

Mr Moss—I was just saying that those are things we would like to make additional points on. I am leaving it up to you as to when I raise them. I can raise them now, but I thought you might have questions you wanted to ask on the information already before you.

Mr SECKER—It is just a bit unusual. I thought that you were going to go on with it, so I have not taken any notes.

Ms Young—I can make that supplementary submission if you would like me to.

CHAIR—Is that the supplementary submission you would like to provide?

Mr Moss—No; this is the additional information on only one of those things that I mentioned, which is the FutureWater initiative. I guess my thinking, however unusually, was that perhaps you had an agenda for the questions you wanted to ask on our current submission. But if you want me to—

Mr SECKER—I was interested to hear what you were going to say about some of those other things you rattled off, but I have not taken note of them.

Mr Moss—My question to you, then, Chair, would be: do you want me to say what those points are now? Do you think that that would be out of context?

CHAIR—No; that is okay. I would not mind hearing them first, so long as it does not take half an hour.

Mr Moss—I will be as quick as I can. The essential points in terms of the national action plan and NHT are that, like many groups, we have been frustrated at the lack of progress in the partnership between the Commonwealth and the states. The WWF has made public statements about that, so I think that you may know about those. Having said that, we are also very supportive that the Commonwealth should not just spend money quickly because there is that level of frustration. Getting the process right is very important. We certainly think that there is much greater need for an overarching set of nationally consistent principles to underpin water management through those processes.

In terms of Ramsar, Rachael will be able to speak more specifically about what is going on. From a WWF perspective, we have been involved in partnership with some private listings in the Macquarie Valley and in the Gwydir. We have now been involved in meetings with Environment Australia where those land-holders feel that they have basically been deserted. Once it was signed off to say that they now had a private Ramsar site, everyone took all the credit—a public award under the New South Wales government was won—and they have now been neglected. They feel that EA has not followed through that process and, in many ways, has backed away from supporting Ramsar. Rachael has a point about the Gwydir that she might want to mention.

Ms Young—There has been a singular lack of support in that area, to the extent that the Windella Ramsar site has been ploughed, cleared and laser levelled. So that site no longer exists.

Mr ADAMS—How is that possible?

Ms Young—This is the problem. EA has finally taken action on this, which we applaud, but we are a little concerned about the amount of time it took and that this action could actually have occurred. That is what we mean when we say there is a lack of commitment from the states and the Commonwealth in ensuring that these sites are protected. Listing them is quite easy but the follow-up—the management and the supply of environmental flows to protect and conserve these wetlands—is crucially important. This is where we are suffering from a lack of commitment at this stage.

Mr Moss—That also probably relates to the point I was going to make about the EPBC Act. This is obviously a controversial debate. Other groups are saying that the EPBC Act is causing them incredible hardship, and there is a Productivity Commission inquiry into that at the moment. Our view on the EPBC Act is probably more related to the Ramsar. We feel there is not really a strong commitment to implementing that in specific situations like this.

Ms LEY—Could you give an example of that work—the EPBC Act specifically?

Ms Young—The Windella Ramsar site is a really good example of lack of commitment. My understanding of the problem is that this clearing and activity in the Ramsar area has been going on for a number of years. It is only now, when it is almost too late, that action is being taken.

Mr Moss—Those Ramsar holders have approached EA on numerous occasions in the last couple of years trying to raise that profile. It is only now that EA is acting on it. In our view it is very difficult to nominate and list under the EPBC Act. This is not meant to sound like a gripe but many of our applications have been rejected. This is not necessarily that there is not a point to be made but because the process is very difficult and lengthy. In many cases the public are making these nominations, so there does need to be some understanding and support for people to be able to do that effectively.

Ms LEY—Can you give some examples of what has been rejected?

Mr Moss—In this case we have mostly had threatening processes rejected—threatening processes are obviously very difficult to handle. Things like water extraction, changes to natural flow regimes, changes to sediment loads and nutrients entering waterways, and barriers to fish passage have been rejected. I am not saying they should automatically accept them—

Ms LEY—Were these constructions and interactions new, existing or about to happen? Were they things you would have preferred to prevent and for which you put in an application—if so, can you give an example?

Mr Moss—Threatening processes are things that are recognised over time as having some impact on waterways.

Ms LEY—So most of those are existing features of our waterways?

Mr Moss—Yes. To give you examples I would have to go back to our EPBC unit. But from what I understand, getting threatened aquatic species and ecological communities up under the act has proved very difficult. One ecological community in the lower Murray got up. But apparently it is very difficult to get these things up. Obviously there is debate about whether or not they should be up, but my constituents are saying it is the actual process that concerns them.

Mr SECKER—What was the one you were just talking about in the lower Murray?

Mr Moss—I would have to take that on notice because it is not my area of expertise.

Ms LEY—If I can clarify that for my colleague, the New South Wales scientific committee has declared the entire lower Murray to be ecologically endangered. That happened relatively recently.

Mr SECKER—They declared that, even though it is not in their state?

Ms LEY—Some of it. I am assuming that it is the portion below Menindee.

CHAIR—Mr Moss, you can take that on notice.

Mr ADAMS—These are issues we do not need to get into in our limited time today. Mr Moss, please put in another submission if you would like to add anything else.

CHAIR—We would like the examples just to set the record straight and to answer Ms Ley's question.

Mr Moss—I will certainly provide that to you.

CHAIR—Thank you.

Mr Moss—In terms of climate change, the WWF produced a report in February, with the assistance of Monash University, which looks at the impact of climate change on the recent drought. I have only one copy of that with me today, but I could table it for you, if you like. Basically that report has argued that the temperatures in that recent drought were exacerbated by global warming and that had direct impacts on the amount of evapotranspiration in the system.

Mr ADAMS—Who wrote the report?

Mr Moss—Two people from Monash University and one from WWF Australia. Again, if there are any further comments on that report, we have a climate change campaigner who would be able to take any question on notice. At this stage the best I can do is furnish you with the report and say that it does try to assert the definite link between climate change and the increase in temperature and, therefore, the increase in evaporation.

Mr ADAMS—We have received quite a bit of evidence along those lines.

CHAIR—When would they have been looking at our weather pattern? Would it have been over the last 25 years or prior to that?

Mr Moss—The main focus of the report is on drought since 1950. There are comparisons of temperature levels and evaporation for those main five droughts.

Mr ADAMS—Fifty years is not a very long period.

CHAIR—No, it is not.

Mr ADAMS—That is one of the problems we have.

Mr Moss—Exactly. As I said, if there are any questions on that specifically, and given that you have had a lot of technical information on this, I would have to put them to our climate change campaigner.

CHAIR—Why would they have picked only 50 years to do their evaluation? I think scientific proof shows that you would need to look at it for at least 200 years to come up with some sort of average or difference in global warming.

Mr Moss—My understanding is that they certainly do use the long-term trends and they certainly use the IPCC information. At the risk of getting this wrong, I think CSIRO information is in there. Probably because of the data collection, they have focused on temperatures and evaporation in the last five droughts, because presumably that is what they had the information for. Yes, they definitely do take into account the longer-term global warming trends.

Mr WINDSOR—You have talked quite a bit in the submission about support for the COAG reform process and that you would want to see that being encouraged.

Mr Moss—Yes.

Mr WINDSOR—Two of the major drivers that brought the COAG process together were that water trading be put in place and an appropriate definition of water property rights be recognised. Where does your organisation stand on the recognition of property rights, which effectively has not occurred in nine years, and the way in which the process seems to be moving towards tradability taking place without a properly recognised right? Do you think you can have one moving without the other? Doesn't it in a sense undermine the nine-year process that has been put in place? How do you feel about those sorts of conflicts that have been there for a period of time?

Mr Moss—We have lots of views on this. Given that we have put in a submission from four groups today, and this is one area in which even our four groups are not in full agreement, I certainly want to make it clear that these comments are from WWF. Over time our group has certainly become more supportive of water trading as a means to facilitate structural adjustment. We do understand that there are a lot of difficulties with that.

Initially, in fact, our groups were quite opposed to water trading because we really felt that it would lead to very high environmental dangers. We felt that, yes, water trading can benefit the environment but it can also hurt the environment, and it really depends on the rules being sufficient to make sure that only environmentally beneficial trades are actually going to take place. Our initial concern was that that might happen. We have been reasonably satisfied, by the talk about water trading over this nine-year period, that there is a very strong recognition of the need to preserve the environment and third parties through the rules. So our interest, of course, is in making sure those rules are appropriate.

We have also been concerned, as I said, about the funding for structural adjustment. At the moment we do not know where that funding is going to come from. Obviously, everyone is asking the Commonwealth to provide it. In essence, what convinced us again to support water trading more was that there was at least a mechanism to facilitate that internal adjustment. We think that, while there are obviously some equity concerns about water moving from low to high value uses and so forth, it is possibly one of the best mechanisms to make water available for the environment. So we are now much more supportive of water trading in that way.

In terms of water property rights, in our submission we have what is probably a confusing statement which I would like to clarify. We stated that at this time we think that clarifying and strengthening property rights is a mistake. I would like to correct the wording of that and say that 'strengthening' in the definition I am about to make is probably a mistake; 'clarifying' is definitely not a mistake. We think, probably like most people who have submitted to this committee, that one of the reasons we are in the mess we are in is that we do not have this clarification. This is where we certainly support the Wentworth Group's new blueprint in trying to really emphasise that greater clarification. We support that totally.

To explain the comment we made, our concern is that to entrench, or, as I said, strengthen, property rights in the current environment—which we all know is not working for irrigators, the

environment or non-water users—may actually have adverse impacts on a transition arrangement. We think that we need to have a shared responsibility to move to something that might be more sustainable. We cannot say it would be fully sustainable. Everybody—irrigators, environmentalists, urban dwellers, and taxpayers—is going to suffer in that process, but we need to see it as a shared facilitation process of adjustment. I am talking not about compensation but about adjustment there. Then, with something that does seem to be more sustainable and better for the health of the ecosystem, we would certainly be more happy to follow the path of, say, compensable, fully secure water property rights.

Mr WINDSOR—It seems to me that the market is not going to take care of the problem that people perceive. Where the market will not take care of it and some form of structural adjustment needs to take place—and there are a number of specific groundwater areas where the market just cannot deliver because the problem is still there, and people are impacted by the process—do you see that government should at that stage come in and compensate those who are impacted by the structural reform process?

Mr Moss—Absolutely. We have never supported compensation as a whole, but we certainly do say there has to be fair and equitable transition. In that sense, whether or not you call it compensation is relatively semantic. The reason we are focusing more on assistance and adjustment is that we would like to see that funding going towards a sustainable change. In theory, it is left to the person who receives compensation to decide what they do with it, and that is certainly valid once you have structurally adjusted to some extent. There are cases where people have suffered very badly and there should be a process of deciding on a case-by-case basis who should get what and when.

When you compensate, the difficulty is knowing what you actually compensate people for. You certainly cannot compensate them for expectation but maybe you can compensate them for specific losses. But because the value of people's assets is changing as they become more secure, just because they lose some water does not mean that they have the full value of their water; they have lost the difference between their initial value and their later value. People are actually gaining value with greater security. So how do you work out how much to compensate on that basis?

Mr WINDSOR—In all of this debate, it seems to me that one of the difficulties is that there are a number of players that are getting reasonably close to recognising where the problem is and how to rectify it. The missing ingredient is who pays for it. There is a tennis match between the states and the Commonwealth over that and then the various lobby groups get in on that and use it to their own agendas. What is your position on the Commonwealth government perhaps striking an environmental levy that is used as part of the structural reform process—salinity management, efficiency regimes et cetera?

Mr Moss—Our groups have been fully supportive of an environmental levy. We submitted to the Senate inquiry into catchment management that there should be an environment levy. In our election platform prior to the last election we lobbied both major parties for the introduction of an environment levy, so we are totally supportive of that. One thing I would like to say is that—and certainly again, I think this is a big shift in the environment movement over the last five to 10 years—we really do support the notion of the public paying for public good. There really do need to be contributions from the public to getting these things right. One thing that I am

certainly interested in is not just relying therefore on the role of government to say that the government is the arbiter of what is public good and how much to pay for it. But, if there are mechanisms available to get people to pay, and if they have a willingness to protect environmental goods and services or if they want sustainable management practices, they should pay. I also do recognise the difficulty that making people pay through higher prices for products affects our competitiveness. On the other hand, I think Australia would do well to come up with mechanisms whereby people who do actually value these things do pay for them.

Mr ADAMS—Have you ever published anything along those lines?

Mr Moss—I guess the direct answer is yes. In a response WWF did in February last year to a paper by Professor Jack Sinden from the University of New England on duty of care, we made that clear to the New South Wales government. An example of where we are trying to do this in partnership with the local community is in the Liverpool Plains in New South Wales where we are involved in a conservation auction trial whereby we are trying to pay for, if you like, environmental services provided land-holders who make changes on the basis of salinity, water quality and biodiversity benefits. Admittedly, a lot of the funding came from federal and state governments, but WWF contributed $170,000 to the process to say, 'We believe this is important enough for us as the public to contribute to. We're not going to tell you what to do with that money, we're just saying that, if you produce public goods, we're willing to pay for them.' I think we have shown quite a commitment to doing that.

CHAIR—Do you see this levy being paid by urban and rural land-holders?

Mr Moss—I think our groups would agree with that. Presumably in introducing anything like this, you have to look at the implications. If it is a regressive levy, obviously you are going to want to address the impacts and, if there are poor people in rural and urban areas that are adversely affected, obviously they might have a lower rate applying to them or they might be exempt below a certain income level. We are thinking that it would be a national responsibility.

Mr ADAMS—Why should an urban roll-out pay for a farmer or irrigator that is acting irresponsibly and using water wrongly or using land management practices which are detrimental to land? Who is going to make those decisions?

Mr Moss—It is the biggest debate. We obviously have internal controversy. Within the environment movement as a whole we have, like any constituency, a very wide range of people. There is certainly a view within the environment movement that yes, if people are doing the wrong thing, they should certainly not be supported.

Mr SECKER—Who decides what the wrong thing is? That is the problem.

Mr Moss—That is what I am saying; it is obviously very difficult. In the previous evidence from the Australian Water Association I heard about the question of externalities and the Independent Pricing and Regulatory Tribunal process and passing those costs on to water users. We have argued very strongly for that. We have also participated in the pricing tribunal process, and we have argued strongly that externalities are not taken into account and that water users should be paying a far greater contribution. But, on the basis that we assert there is a lot of current damage being caused by water extraction, at the same time we do recognise that it is a

shared contribution and that not all irrigators are causing damage, and certainly a lot of them do not want to cause damage. A lot of them need assistance to not cause damage, and there are also public good components that will even be beyond what irrigators can do. So our main focus is trying to actually get the signals right within the actual irrigation, which may mean things like externalities and so forth have to be paid for but, on top of that, the urban people in Australia benefit enormously from irrigation and agriculture generally—

Mr ADAMS—Through cheaper prices?

Mr Moss—It can be.

Mr SECKER—Just the whole thing.

Mr Moss—Just generally. At the same time, there is obviously a big debate that there are urban environmental issues and rural environmental issues, and you could possibly say that if the cities were not there then you would not have a lot of your rural problems because there would not be markets for agriculture to supply. Our groups would generally agree that it is a shared responsibility for everybody.

Mr SECKER—Hear, hear.

Mr Moss—Certainly, urban people should be paying for public environmental good in Australia.

Mr SECKER—I have only got one question, although it is more of a clarification. I noticed in your submission somewhere that you said there needed to be greater emphasis by government on protecting the rights and interests of non-extractive water users. Do you mean recyclers and reusers?

Mr Moss—Basically the entire community. It comes down to our principle of catchment management. The latest Wentworth group blueprint, in our view, sums it up. There is this whole question, that Mr Windsor was talking about as well, about what a property right is and how you clarify it. The catchment principle is basically that there are so many interactions going on within that catchment. For example, as I hear you have previously discussed, if you revegetate that has an impact on the water balance; if you increase irrigation in one area you might be affecting a downstream grazier. A new grazing development, in a sense, imposes a cost on an upstream irrigator, perhaps, if they are new, because they might have a requirement for some water. Our point is—

Mr SECKER—When you say non-extractive, do you mean someone who has not put a pump in?

Mr Moss—Basically, all non-irrigators who have an interest in water, such as boaters, fishers, Indigenous communities, graziers—everybody. I will cite an example.

Mr SECKER—I see what you mean now, that makes a bit more sense. I am not quite sure there is that much threat, but—

Mr Moss—I perceive that it is a major threat.

Mr SECKER—Yes, if you have a huge water extraction and it affects the next-door property, which is just a grazing property. But you could argue that even pasture is extractive; it is just the amount of water they extract.

Mr Moss—Yes. Our concern is that once you actually have a licence your political clout strengthens, because you are part of an identifiable group which has a strong claim to the asset and, therefore, if you are going to be affected by a change you have at least potentially a strong political voice. If you are also equally affected by a change but you do not have a piece of paper saying that you have got some right to that water or to use that water—and some of these impacts on non-water licence holders can be very difficult to fully identify and can be spread over a wide group of people—then you as a group find it very much harder to organise and represent your political view.

The case I have put forward quite a bit has been the example in the New Zealand fisheries individual transferable quota situation—while recognising that it is not an Australian example. There have been some studies coming out of the Victoria University of Wellington showing that Maori fishers and non-commercial fishers have suffered enormously from the specification of rights only for commercial fishers: the rights of commercial fishers were recognised more fully and protected better than those other rights which were not formally recognised. Our concern is that that certainly could happen here in Australia. That is again why we support the Wentworth blueprint which is saying: 'If we're going to clarify rights, we need to really look at all the uses of water in the catchment, from the direct to the indirect.'

Mr ADAMS—My question is really about land management and how we use land in Australia. You talk about structural adjustment and whatever, but don't we have to have the goals we want to achieve? Are we lacking that in Australia at the moment? We have quite a lot of diverse groups, we have done a lot of science and we have gathered a lot of stuff together, but don't we have to get some goals here somewhere to give us some guidance? Spending a year on this committee has basically said to me that we are really lacking goals. I do not think that people who are more concerned about the environment side than maybe the production side are lacking goals—and I understand why. This is an enormous issue and we have learnt as we have gone on. In 10 or 12 years we have learnt a hell of a lot more. When we start to look at the catchment we start to understand the top, the bottom and whatever.

I see the paper that has come down. I see they want to throw a lot of money—$200 million or $250 million a year for 10 years; that is a fair bit of money. It goes against what you have said in your submission, actually: that you do not think money is going to solve the problem. There are two points I want to ask about. There is the goals issue: do you think we have those clarified and would you like to see, from your perspective, more clarification of goals for what we do with water in Australia? And secondly: do you think it is just about money?

Mr Moss—I would like to make two comments and I think Rachael has some as well. The first thing I would like to do is to point you to the paper I have given you today about FutureWater. I have also noticed in a lot of submissions to your committee that especially a lot of the irrigator groups seem to be saying, 'We need a vision.' This process came out of a series of

public meetings, irrigation forums, to which environmental speakers were invited to discuss issues.

Mr ADAMS—That is pretty interesting. That is good, isn't it?

Mr Moss—This is the point I am making. This has been a very exciting venture in the sense that, while it is absolutely true we do not agree on everything, two things have come out of these processes that I think have been fantastic. The first one is that we have actually realised we have an enormous basis of common ground. We actually do not differ too much about some of the causes, the issues and the solutions as you might initially think. I mentioned trust before. The second aspect has been that I think trust between environmentalists and certainly irrigator groups is building strongly, and we are realising that if we provide the appropriate fora for people to discuss their common ground and their differences we can actually move forward. That is the basis for this FutureWater alliance: we decided as an irrigation body, an environment body and a university that we could maybe do something to try and address what we felt was a major gap in the vision for water in Australia. There is one thing I should mention. I think the Irrigation Association of Australia and also the NSW Irrigators Council are presenting today.

CHAIR—Can I clarify a point. The Irrigation Association are a supplier of irrigation equipment rather than irrigators. Do the irrigators themselves have a big say in this FutureWater alliance, rather than a supplier of irrigation equipment?

Mr Moss—This goes to the point that I was going to make, and you will hear this later from the New South Wales Irrigators Council and also from the IAA today. This is a new thing for the IAA. As you say, they are not a traditional lobby group and they do not represent irrigators. Because every two years they provide the biggest irrigation conference in Australia, they have a powerful influence to bring irrigators together to discuss these issues. At the same time they are linked in with the major groups such as the irrigators councils, Cotton Australia, rice growers et cetera. So in a sense they have taken on, through this process, bringing those people together, and we have talked to the New South Wales Irrigators Council before about how this links in with their youth irrigators vision processes and so forth. We have more work to do on that, given that the Irrigators Council have changed their executive officer, but there is a process of talking with them.

What we have realised is that we are only facilitators in this process. One of the things that we had to discuss in putting all this together was: did we have a predetermined outcome in mind or did we really feel that a vision needed to be determined? If so, did it need to come from the ground up? There are lots of visions out there. There are lots of people with ideas. There are lots of COAG top-down styles of visions. We felt that this was where we could really add something. Firstly, we would be community driven. We obviously need support to do that. Secondly, the University of New England have a consultation process. I cannot say too much to you about it, but we could take that on notice if you want to know more about their process. Their consultation process has been very well recognised and supported as a very good way of bringing conflicting views together and coming up with positive solutions.

Mr ADAMS—Yes, we would want to get that information.

Mr Moss—I will take that on notice. We felt that there was a big risk for us in doing this. We have tried to approach this by saying, 'We're an environment group, an irrigator supply group and a university. Are we just going to get together and say, "Our vision is for lots of irrigation and lots of the environment," and push our own agendas?' The approach we have tried to take here is one of saying: 'We are taking the risk that we have no genuine predetermined outcomes for this process.' We have no idea whether the outcome would be irrigation totally at the expense of the environment—just forget the environment completely. If that is what this process develops, then we as an environmental group have to really seriously take that on board. Perhaps the other outcome will be that Australians do not want irrigation anymore—they wanted it 20 and 30 years ago when they saw irrigation as the future—but now irrigators are feeling besieged and do not know what their role is in the community. If they hear from this process that the community do not want them, they have to wear that.

Mr ADAMS—That is a totally naive approach to anything.

CHAIR—If the rest of Australia does not want irrigators, that does not mean that they are going to go, does it?

Ms LEY—The rest of Australia probably does not want a car manufacturing industry or Woolworths or Coles but—

Mr Moss—It is naive from the point of view that we know that those two extremes would not happen. But I am saying the genuineness of the process is actually confronting whether you are prepared to engage on that basis.

Ms LEY—It depends on who is participating in the process, doesn't it?

Mr Moss—Yes.

Ms LEY—There is so much misinformation that people can develop a view which is totally misinformed and then if they have input into the process that you have just described you will not have a very sensible conclusion to it.

Mr Moss—I will provide you with more information about the process.

Ms LEY—It is interesting.

Mr Moss—Certainly we tried to say that the process is as important as the goal and that trust and community building is actually part of that process.

CHAIR—I congratulate you on FutureWater. My concern is that when we hear evidence from irrigators they always tell us that they are left out of the equation, that they do not get consulted and that things happen without an input or informed decisions from them. That is why I was a bit wary when I saw your title. It would give the impression that the irrigators support this, rather than it being an irrigation manufacturer supporting it. The only problem I have with it is this: have we left the irrigators out of the equation?

Mr Moss—The success or failure of this will obviously depend on how well we get those people involved, and that is certainly on our minds. But I agree with you: if we do not do it properly it would be a failure.

CHAIR—I wish you well with it.

Ms LEY—You have mentioned in your submission that urban people benefit greatly from agriculture generally but you have made a statement that the Snowy scheme has been 'an environmental and financial disaster'. Given that the Snowy scheme supports eight regional towns, 1,600 farms at a minimum and several thousand people in my electorate, I am wondering what sort of a statement that is in the context of wanting the two groups to come together.

Mr Moss—If you look at the Snowy scheme as it was at the time of being a nation building project trying to expand irrigation in Australia then from that point of view, as you are arguing, you would say it is a success. We would not be in this situation with the Living Murray initiative in the Murray-Darling Basin Commission if that was not an environmental problem. We would not have the Snowy inquiries and all the problems of the interbasin transfers if it was not an environmental problem. At the same time there have been studies done, which I could point you to—you have probably seen some of them—showing that there has been virtually no financial return from that investment in terms of getting a return on these assets or the potential for using the funds that were invested in that scheme in other ways.

Ms LEY—Except that, depending on the way you calculate it, it underwrites between $10 billion and $40 billion of agricultural output. So there has been an enormous return. There has been a social return, too. It supports towns and communities.

Mr Moss—I would say that it has been a matter for debate. Clearly you value those things and I think they are valuable. But at the same time, if the ultimate question for the Australian government is how you invest your funds in the long term to get the greatest benefit for the whole country then there is a serious argument to say that certainly an investment like that would never happen again in this country.

Ms LEY—Your argument ignores the wealth creation process in the modern economy. You are taking out income generation and the social good that it provides to everybody by removing a huge sector of activities. I think you are saying that the Snowy River in its pristine state has the same value as the Murray River to Australia. Would you say that?

Mr Moss—What I am not saying is that we have to go back. I accept the point that once it is a working river and once it is like this we can't go back. We accept that. I am certainly not saying that I think that that was not an unmitigated financial or environment disaster. It certainly created a situation where we now have communities which are dependent upon it and those communities are important to us. Of course we cannot abandon them. We have to make the most of it. But I would certainly be saying that if we were intending to do anything similar—

Ms LEY—I do not think we are.

Mr Moss—There has been talk from some proponents of turning rivers inland and greater interbasin transfers to address the water supply issues. Our group certainly opposes that, absolutely and completely.

CHAIR—We have to stop here because we have gone a quarter of an hour over time. We appreciate your submission and your attendance here. Our inquiry should have its findings and recommendations in February. We will send you a copy. Thank you.

Proceedings suspended from 10.43 a.m. to 10.55 a.m.

KNOWLES, Ms Jacqueline Louise, Policy Analyst, NSW Irrigators Council

MIELL, Mr Doug, Executive Director, NSW Irrigators Council

WARD, Ms Michelle Sarah, Consultant, NSW Irrigators Council

CHAIR—Although the committee does not require you to give evidence under oath, I should advise you that these hearings are formal proceedings of the parliament and they warrant the same respect as proceedings in the House itself. I would like to remind our witnesses that giving false or misleading evidence is a serious matter and may be regarded as contempt of parliament.

Mr Miell—Just as an introduction, I am the incoming Executive Director for the NSW Irrigators Council so I have been in the job for not quite two weeks. I will make an introductory statement and then pass over to Jacqueline and Michelle, who have much more history with the council and who were both instrumental in the submission that was presented to you. The NSW Irrigators Council represents approximately 10,000 producers in New South Wales. From the north to the south-east to the west, it covers the full diversity of the irrigated agriculture sector—cotton, rice, the dairy industry and the other grain industries. We have been actively involved in water reform for approximately 20 years, but since the COAG decisions of 1994-95 we have participated at a Commonwealth, state and local level and with the National Competition Council as well. We are also currently very actively involved in the Living Murray process and all other areas of reform that the state government of New South Wales is pursuing.

We see this inquiry as a very vital link with the COAG proceedings of 29 August and what will flow on from that as well. We see it as part of the rigorous process that we expect to be actively involved in leading the industry in over the next 12 to 18 months, and perhaps beyond that. The three issues that we see as key to the irrigated agriculture sector, which Jacqueline and Michelle will expand on, are: security of access to water, involvement in the debate through the community and the industry on behalf of the industry and managing the reform process.

One of the issues that we would like to make clear is that most of irrigated agriculture in Australia is suffering significant stress from the drought, so we are very keen to make sure managing any further reform takes into account the circumstances that not only the producers but also the communities are currently feeling. Finally, we recognise the wealth creation role of irrigated agriculture through Australia and its contribution to food security throughout the nation; we feel that is a very important role that is sometimes overlooked on the producers' side of things. We will be taking a very proactive role and a leadership role on behalf of industry with all levels of government as the water reform debate continues in the coming years.

Ms Knowles—We will just briefly run through in a bit more detail those key issues that Doug has just talked about. The first thing he pointed out was the need for security of access to water. The reason why irrigators need security of access to water in the longer term is best illustrated through an example. There is a grower of citrus products in Griffith and he has just recently invested in significant on-farm improvements. He has converted his citrus orchard from flood irrigation to precision drip irrigation at a cost of between $7,000 and $8,000 a hectare, which is a fairly significant investment. You may have heard examples like this in Deniliquin too. It is a

significant investment to make and, as water management sits in New South Wales, the potential for his access to water over time to be eroded by the New South Wales government is quite significant in the legislative processes that we have in New South Wales. We have 10-year water-sharing plants, for example, but the security of your access to water diminishes throughout the period of that 10 years. So in the ninth year of the water-sharing plan you only have one year of security of access to water.

The other components of the legislation are spelled out in our submission in a little bit more detail, but the fact that the minister has quite significant discretion even during the period of the water-sharing plan to erode and create risk for that irrigator is not really defined. Providing security is about defining risk and who wears that risk. The Deputy Prime Minister has been making quite similar statements over the last few weeks, which is very pleasing. I think there is a misconception that irrigators want all of the water all of the time, which is not the case.

In your electorate, Ms Ley, general security irrigators are facing zero per cent allocations this year. That is a risk they acknowledge and it is part of their business planning. In some years there is just no water so they do not have access to water. But it is about ensuring that the management frameworks are in place so that people understand that, yes, drought and climate change are risks that we as irrigators wear and can build into our business planning. But there are other risks that are not tenable, and they are risks of government intervention in planning and management that are not defined.

Ms Ward—When we are talking about secure access rights, the New South Wales Irrigators Council position has always been in perpetuity, and I suppose that comes with the price tag which has been the ultimate stumbling block for New South Wales government. That is why we have got the water-sharing plan that we have got, because that in effect limits liability for the government in meeting future environmental needs. An important distinction that we wanted to make in what we mean by access rights in perpetuity is one that banks and possibly various members of government at the moment are talking about—the possibility of delivering entitlements in perpetuity. Really, that does nothing for the individual irrigator's security unless they have their access defined and strengthened. I think that is probably one of our key points of distinction.

CHAIR—Is there anything else that you would like to add?

Ms Knowles—No, but on that issue of security of access we have a one-page statement that we would like to lodge with the committee as an addendum to our original written submission. It indicates the progress and the clarity that the council have provided around the issue in the nine or 10 months since we provided you with our original submission.

CHAIR—Thank you, we will accept that. On the subject of your security, when you say that farmers are having to pay out $7,000 per hectare to put in world's best practice irrigation systems, what would you see for irrigators being the encouraging factor in farmers going to that practice? Would it be a continuity of permanent licensing rather than using temporary water supplies or would it be compensation from government as an encouragement to bring this irrigation equipment up to efficient use?

Ms Knowles—I think there are a couple of components to your question. There are a number of reasons why people will upgrade their systems, and the example that I provided there was the grower who actually improved the quality of his produce to the extent that instead of growing oranges for juicing he is now growing oranges for eating, which is a fairly significant difference in market price. That is one factor—where people are already driving that on-farm change because they can see benefit for their business. That is one component of it.

The other component—and the point that I was trying to get across—is that long-term security is required for that individual farmer to feel confident that the changes that he is making on his farm will be beneficial for the longer term. It might take 10 or 15 years to recoup the costs of investment in processes and investments, which is a fairly long time frame when there is potential for government risk throughout the process and not just the 10 years that the water-sharing plan is in place. That is the answer to your question. It is not necessarily about finding more water for growing and producing; it is about using the water that we already have in smarter and better ways. That is something that we would like to discuss a little bit further with the committee: how do we use the water that we have currently got in better ways for all sorts of different things—for irrigation, for the environment and for our communities?

Ms Ward—As Ms Knowles summarised, we think the market will drive individual decisions, provided there is security. So, if you know that you have continued access to your resource and you can see increased profits or reduced input costs over a long term, that is just a decision making process that every rational business maker goes through. Also, in recent times, we have seen an uptake of incentive programs. One of the key points that we wanted to get across to the committee today was the importance of community engagement with and involvement in anything to do with our industry. Obviously, you will have more success with incentive programs if you go to industry and find out what their information needs are, and tailor programs to suit. We would like to clarify that the principle of receiving assistance to do water efficiency savings is that if an irrigator is investing in water savings technology, that irrigator should be able to receive the benefit of those savings in terms of using the water that he saves to grow more product—or trade. Savings should be the property of the person who invests in them.

Ms Knowles—To add to Ms Ward's comments about incentives for people to start thinking about these ideas, in the case of the grower that I was talking about, his process for continuous improvement on his farm started with a whole-of-farm plan that was funded through the Murrumbidgee Irrigation Area Land and Water Management Plan, which is a program that was funded through state and federal government as well as through individual growers providing contributions to those programs. The initial incentive to go through a farm planning process that was supported by the irrigation supply company, governments and people with various expertise, was the impetus for him to then make those on-farm investment decisions.

Mr ADAMS—Isn't it fair then that some of the water that is saved comes back to the public good?

Ms Ward—It depends on when you start the meter ticking. If the incentive is to do a farm plan and that leads the farmer to discover some opportunities then in this case I think it is industry that is largely investing. Industry should own the rewards, but I suppose—

Mr ADAMS—No trade-offs?

Ms Ward—I accept the argument that if you are calling it a grant then it is an incentive and you are wanting to deliver benefits.

Mr ADAMS—But isn't the whole incentive of this legislation—this New South Wales legislation that you said is driving this guy to make these decisions—designed to drive readjustment, because this guy is going to lose water over a period of time. Isn't that the incentive to change?

Ms Knowles—The program that I am talking about is a 30-year land and water management plan for the MIA area situated around Leeton and Griffith in New South Wales. Eighty-one per cent of that funding—it is about a $285 million program over that 30 years—has actually been generated from the irrigators themselves, so it is a fairly big investment that that they are making. It is about 18 per cent, which is split between the state and the Commonwealth government, and they have actually got local government contributing through that as well.

Mr SECKER—That is an enormous amount of local contribution.

Ms Knowles—That is right; it is an enormous local contribution. Looking specifically at that program, irrigators have made a conscious decision over the last 10 years to get together and look at the priorities for their region and to say, 'This is important for us so we have to put our own money in.' Government saw that as a good opportunity and a wise investment through the Natural Heritage Trust.

Mr SECKER—Following on from that, a lot of farmers and irrigators in New South Wales have had zero per cent, five per cent or 10 per cent of their allocations. We do not want this to happen in the future, so has any thought been given to ensuring that we do not over-use or over-allocate water? I know that we have had a drought that has caused most of the problem but obviously the problem would have been less had there been better use of water in the couple of years beforehand. Is there that sort of attitude—'Let's try and do something so we don't have this again'?

Ms Ward—I think there might be a flaw in that assumption.

Mr SECKER—That would not surprise me!

Ms Ward—Sorry to be the one to point it out. The way allocations are made is that the individual bears the risk. When there are storages, and the essential requirements for town water supply and basic rights are being met, all the remaining water that flows in is put on the table. It is up to irrigators to decide whether to use, store or carry over. Irrigators are quite used to managing that risk. We have been through an extended dry period and we are reaching a record drought in some valleys, so there is no doubt that the drought has been an impetus for making irrigators think about how they can use water better. I am steering your question around to what we can do—

Mr SECKER—That is what I am asking. Are you looking at ways of using water better to try and avoid the current situation of zero allocations and small allocations? What is the use of having a licence if you cannot get any water? It is just a bit of paper.

Ms Ward—Using water better will not change next year's allocations but it might mean that we as an industry can save some for next year when it is a zero allocation year. In answer to Kay's question, we have touched in our focus on supporting industry programs in best management practices to use water better and on efficient and effective incentive programs. The other side of the coin is looking at innovative R&D opportunities like cloud seeding, which has been laughed at but is starting to be aired a bit more.

Ms LEY—Not by one of our colleagues!

Ms Ward—We were having this discussion before we came here. We think the biggest threat to our water supplies is not drought and it is not inefficient water use—it is actually the government imposed risks of the framework we are operating in and the lack of security we face as irrigators.

Mr SECKER—Would the vast majority of your irrigators be drawing water out of rivers? What percentage would be ground water irrigators, for example?

Ms Knowles—We represent both surface water and ground water irrigators. In terms of actual volume of water, I feel positive in saying that we represent more surface water than ground water. We represent ground water users in a number of valleys in New South Wales.

Mr SECKER—Is there any conflict between the two? I see them as quite different. You cannot have a one size fits all program for ground water and surface water. They have different problems.

Ms Knowles—I agree with you. The issue we are facing in New South Wales in particular is that the New South Wales government is trying to manage ground water as it has managed surface water in the past. We are gradually seeing that different ground water areas have very different problems, and these are different issues to surface water. Communities need to look at being a bit more clever in the way they manage ground water. I know that Mr Windsor has been very involved with those sorts of issues in his electorate. These issues are being faced by communities across the ground water systems in New South Wales.

Mr WINDSOR—Maybe I could help Dick and Patrick. New South Wales is fairly unique in that there are some systems within New South Wales; a general problem, which has nothing to do with the drought, is that there has been an overallocation of a resource for a long period of time. It is about getting the allocation of that resource back to some sort of sustainable limit. You have a market system that is activating the use of water licences, which would not or may not have otherwise been used, which aggravates the situation. It comes back to this thing about certainty all the time. If you have an adjustment process that has to take place—I do not think anybody says that it does not have to take place unless we create new water—you have to leave those who are left in the industry with some certainty as to their futures. So it is a water budgeting problem. It is not as bad in some of the other states as it is in New South Wales. It is worse in some areas. Jacqueline hinted about the ground water resource. It is very bad in some circumstances where you have a closed system. There are rural people who are suffering real damage through the adjustment process. The water-sharing plan that New South Wales has in place does not embrace that.-

Ms LEY—Of course it is now on hold due to COAG and it may well not be revived unless it is in a completely different form. You are talking about certainty and low water allocations as if overstressed and excessive water allocations—which I would not agree with in the area that I represent—are related to these low allocations. But it is the difference between high security and general security water. General security water grows annual crops and high security water grows permanent plantings. It actually works very well because the water is delivered to different points of the river system at different times. If everybody was in permanent plantings, the Murray could not do it. It could not deliver all the water in December and January, but because we have general security users growing annual crops, like irrigated cereals and rice, they are allowed to be flexible. Obviously nought is no income and that is horrendous, but the flexibility means that you do not have a vine that is going to die and wipe you out for the next few years. It is not necessarily related to overallocation. It is a response to the system, and it is not a bad one.

Ms Knowles—That was the point that Tony made, which I would like to clarify. Overallocation is a significant issue, particularly in the ground water systems, but it is a different story in surface water, which comes back to your comment, Patrick.

Ms LEY—Because of the cap on surface diversions.

Mr SECKER—But haven't there been overallocations in the surface water?

Ms LEY—We have a cap on surface water diversions.

Mr SECKER—Didn't they go over the cap?

Ms LEY—Only in Queensland.

Mr SECKER—I thought they did in New South Wales too.

Ms LEY—Not at all.

Ms Knowles—No.

Mr WINDSOR—You are talking about use rather than allocation.

Ms Knowles—That is use. Allocation is the water that is made available on a yearly basis to use. Entitlement is a different thing. That is the piece of paper that says that the total amount you can access, if there were unlimited water available, would be 1,000 megalitres or 100 megalitres. So they are two different things.

Mr SECKER—Have there been any compensation payments for restructuring where people have lost allocations? There have not been any in South Australia, but we do not have your problems.

Ms Ward—There is a very strong distinction between the words 'compensation' and 'assistance'. There has not been any recognition of reforms that have taken place probably over the last 15 years in some of the surface water systems. But in saying that, I suppose there has been a commitment to things like land and water management plans, which are helping

industries manage better. With regard to ground water, the New South Wales government has come up with a proposal in the Namoi, which Tony Windsor would know better than all of us around the table. There have been people taking up offers of assistance there. The quote I have heard from the locals is that the amount of dollars they get offered is approximately equivalent to 10 per cent of the water that they lose.

Mr SECKER—So it is not much of an incentive.

Ms Ward—It is interesting; it is meant to meet their needs. We are hoping to meet with the minister's advisers this afternoon to try to get some more sensible approaches to financial or reform assistance packages specifically for ground water.

Mr SECKER—One more question: are you promoting the idea that a farmer—for example, the one you talked about who went from flood to drip irrigation—should be able to get some sort of reward for efficiencies, for the trading rights for that water he is no longer using, because it is obviously going to cost a lot of money to do that? Is that what you are trying to promote?

Ms Knowles—Yes, I guess the message that Michelle delivered earlier was that the investor in the process that delivers savings should be able to use those savings, whether it is to be able to grow more crop or to trade excess water, but that is not to say that governments might not have an opportunity to invest in those sorts of savings as well. While we are on the issue of savings, a lot of the focus is about on-farm savings: the conversion from flood to drip irrigation and those sorts of things. I have a very good example, again in the Murrumbidgee, where they have been doing a lot of work—I know that you have had presentations from the prac group about the work that they have been doing—and Murrumbidgee Irrigation is actually investing significant amounts of money in their supply system. There is one area of their system which is essentially a 3,000-hectare drainage area that has quite significant evaporation. They are going through a project at the moment which will reduce the area that they require in that storage down to 1,000 hectares, reverting 2,000 hectares to wetland rehabilitation and saving 30 gig litres every year in evaporation. So those are works that that delivery company is investing in, in their region, to generate system-wide savings—not just the on-farm savings—and they are not the only people talking about it. The irrigation corporations in Sussan's electorate are looking at those same opportunities for what they do. I see there are opportunities there for governments to be partners in those sorts of projects to use water. If they invest 20 per cent then 20 per cent of those savings should be reverted to the government to use for whatever purpose they might find for it.

Mr SECKER—I have another question which is a bit out of left field; it is a little bit different. What is your view on water barons, whether government or private operators? Should we be doing anything, and what should we be doing about them?

Ms LEY—Haven't you read the water trading sheet?

Mr SECKER—I have not had a chance—I have been so interested in hearing what they have to say!

Mr Miell—Patrick, I can answer that one. I had experience some time ago of being a foreign exchange dealer. We believe that if the commodity is properly described there are plenty of examples in current financial and commodity markets where trading parameters can be

established that limit positions that people take. There can be trading rules established with it so it is not a case of—

Mr SECKER—Like the ACCC?

Mr Miell—Yes. You even have things like the way the Sydney Futures Exchange, for example, structures the various contracts that it has. The contract is defined and trading limits are defined for it.

Ms LEY—And you would prevent trading in derivatives?

Mr Miell—I do not think it is a case of saying we would prevent it. I think it needs to be explored.

Ms LEY—Because that makes it very dangerous—and speculative.

Mr Miell—Yes it does, because you can add leverage to that, but I think the point to make is that plenty of markets have been down the road of establishing a tradable commodity with the appropriate controls, and I do not see this as being any different. It is a commodity; it is just a matter of what controls need to be put in place to give the market confidence that there is no cornering of the market, that there is no denying of access to those who have a legitimate need to get to it.

Ms Knowles—To add to that, I think that some of the comments that we have been hearing over the last three or four months about 'free and open trade' and 'everything is going to change tomorrow' are probably a little bit misleading and are driving fear and a bit of hysteria into some. Our position is in the additional submission that we have just given you. As Doug said, like any market, there need to be rules around that market. Those rules need to look at things like protecting the rights of other users, the environment, existing users and communities. They are discussions that need to be explored and have not yet been explored. I think that that is one key thing that needs to happen. What are all the issues that surround trade? What are people's fears—are they real or not? If they are real then what rules do we need to put in place to ensure that those third-party and community impacts are minimised?

Mr ADAMS—The evidence we have received is that irrigating is the biggest user of water in Australia—is that pretty right?

Ms Knowles—It is.

Ms Ward—If you do not count the environment as a user.

Ms Knowles—That is something that I am sure was clarified for you in Deniliquin last week. Often we see figures stating that the irrigators use 80 per cent of the water, but it is actually 80 per cent of the water that is extracted from New South Wales. Figures that I have not brought with me today, but which I would like to submit to the committee, look at where we have got to in New South Wales with our water-sharing plans and compare the average annual distraction versus the average annual flow. For most systems the extraction is between 50 per cent and 65 per cent.

Ms Ward—Ours is actually low. Like a lot of the Northern Rivers, it starts at around 26 per cent or 28 per cent in the Macquarie and 40 per cent in the border rivers, so that is 40 per cent of the total flow-in in the system.

Mr ADAMS—These stats have come from—

Ms Knowles—They are based on the modelling that was used for the New South Wales water-sharing plan, which was: what are the average flows over a 100-year period?

Mr ADAMS—Are you going to give us that—

Ms Knowles—Yes, I will table those for you. I have not brought them with me today.

Mr ADAMS—Take it on notice and let us know—that would be great. The other issue I want to take up is about the savings. If government deals with the issue of saving—assisting irrigators and farmers to go to better systems—there is a saving in water. It has been put to us, with quite a lot of heavy science, that there will not be as much run-off if you go to drip systems—the systems that are used now—and that the run-off will not be coming back into the system, from underground rivers or whatever. So, unless you get a reward from the efficiencies, you are going to end up with less water back in the system. Your assertion earlier, from your point of view—and I understand that—not to give anything up, would certainly be in conflict with that science.

Ms Knowles—I could answer that question. I am assuming that you are talking about the Young and McColl paper that was recently published in the *Australian Economic Review.*

Mr ADAMS—Not specifically that paper, but that might deal with—

Ms Knowles—That addressed those sorts of issues.

Mr ADAMS—the evidence that we have received.

Ms Knowles—There has been a fair bit of discussion in much of the irrigation community and with hydrologists. It was acknowledged in the paper that they were 'back of the envelope' calculations—that every megalitre that you save on one farm means one less megalitre in the river. Although I am not a hydrologist, people are basically saying that those 'back of the envelope' calculations are fairly rough and the one-to-one ratio that people are talking about is not really on the money.

Mr ADAMS—So you dispute the science?

Ms Knowles—No, I am saying that there is good discussion about what is the actual situation, and I think that—

Mr ADAMS—Does your organisation have any evidence to offer us as a committee that counters the science that we have been given by some people who have been published, who have done the science and said, 'This is what we believe are the circumstances'?

Ms Knowles—We do not, and that is because we are not experts in hydrology. I guess all we can offer is that there are some very interesting concepts that a lot of people have not looked at or thought very much about. There need to be opportunities for those sorts of things to be reviewed by other experts in the field and for us to have a debate about them. If they are real—and I am sure the principles that they are talking about have some real impacts—let us define what they are and then choose what the better way of managing them in the future is.

Ms Ward—I just have a couple of myths to address. One is that currently irrigation run-off contributes to flows in the river. That is an absolute no-no, because irrigation, as with any other enterprise using water, has to have complete control of an enclosed system where there is absolutely no run-off into the system because there could be the potential for any kind of chemical or pollutant to escape into the river system. Irrigation farms are required to be completely closed systems. If the water they put on the field runs off, it is collected in the tail water, put into storage and used again. By improving efficiencies we are not reducing inflows into a system downstream.

The second myth is that deep drainage is good for the environment and in recharging our ground water systems. I am not a scientist but I certainly know that there has been decades of work done by scientists in trying to assist our industry and minimise that deep drainage because it causes a leaching of salts through the system and is actually considered as a detrimental environmental impact.

Mr ADAMS—There have been a lot of problems caused by irrigating too much water.

Ms Ward—Those two points are directly in conflict with the arguments raised.

Mr ADAMS—But you do not have any scientific figures?

Ms Ward—I could endeavour to find some reports on deep drainage.

Mr WINDSOR—There is plenty of stuff on leakage through a system. The message that the industry is getting is a two pointed one. It is that if you introduce efficiencies you may reduce the leakage into the system, which is also the message you are sending. Then you have exactly the same people saying to you that we have to do something about the water table and salinity levels. The people you are talking about conveniently ignore that issue when they want to talk about the total amount of water in the system, when one of the very things that we have to be looking at—and that the NSW Irrigators Council, WWF Australia and the Nature Conservation Council of NSW have to be looking at—is the quality of the water in the system. There is plenty of information that will relate leakage through the system to salinity, which is probably the major problem we are looking at.

Ms LEY—I do not think it is leakage through the system. I think that this underlines, as Dick said, that we just do not have the science on the interaction between ground and surface water, and that is well acknowledged.

Ms Ward—We could certainly do with more information there.

Ms LEY—And we do not have that.

Mr ADAMS—I really have to stress that we know that the salt is getting into the rivers, and the salt comes through the system.

Ms LEY—The salt is in the system anyway; it has not come through the system from irrigation. If you look at the salinity mapping in the Murray-Darling Basin, you will see that we have an underground sea that is moving and pushing very hard up from the Mallee and down from eastern New South Wales and emerging in South Australia. But to say that that emergence of salt in the river system is because of irrigation is, I think, another fallacy.

Ms Ward—I think the key point there, in supporting Sussan on that point, is that if you look at the land area that irrigation covers, it does not make sense to relate the contribution to the salinity problems in the rivers to irrigation. The way we viewed it in the Macquarie Valley, which I have the most experience in, was that irrigators were actually being impacted rather than causing the impact, because salinity is a whole of catchment problem and it is a problem of land use in dryland parts of the catchment. Things that we talk about in the Macquarie are that run-off and deep drainage are bigger problems in the upper, dryland parts of our catchment and that we need to assist those parts of the community in changing land management because irrigators are going to be the ones that are not going to be able to grow the crops that they need to have certain water quality.

Ms LEY—The biggest problem in the Murray catchment is dryland salinity.

Mr ADAMS—The issue is land management isn't it? The whole process is about land management and where society wants to have land management. There is a lot of argument about how we are managing the land, how we have done things for 150 years, how we are looking at doing them another way or doing them differently, whether farming practices—the way we grow things, what we grow and whether we give up growing certain crops and grow others—will change and what sort of impact that is going to have on the future of irrigation and the way we do things.

Ms Ward—One very simple message I would like to give is that you cannot be in the green if you are in the red. I think that is what every farmer feels: threatened about the future security of access to their resources, whether it be their dry land or their access to water. If there is one message we give today it is to recognise that security of access to resources is fundamental in fixing up the whole framework and making people take those initiatives, be innovative and change their management. It is not to say that security of access fixes, or will deliver, the full answer. The second point is probably along Sussan's lines: I think the federal government could really provide leadership in sorting out some of our information needs. Jacqueline was going to talk about the land and water audit as an example.

Ms Knowles—I think the land and water audit was a great start in pulling together the base of information that we have. We as a council use that information, but we look at it and we think that the best information that we have at the moment is 1995 and 1996 information. There is a real need for a commitment to ongoing information collection and monitoring and for that information to be incorporated into our decision-making processes. When you talk to people who were involved in the development of water-sharing plans in New South Wales, they say, 'The most frustrating thing about it was we just didn't know what we were dealing with.' We do not have the good information which we need to say that in Macquarie in 1996 we gave up 13

per cent of our allocation to the Macquarie Marshes for environmental benefit. We do not have the detailed monitoring to know what that achieved. That applies to all sorts of social information about what our communities are doing and what the impacts on our communities are and also economic information: what are the forecasts for and the history of our crop production and all those sorts of things. It is a data issue.

Mr ADAMS—It is a data and monitoring issue. Are we not looking at changing land management, which includes the way we are farmed? Isn't it like restructuring the clothing industry, the car industry or the steel industry in Australia? Aren't we looking at restructuring a big part of Australia that we abuse?

Ms LEY—Why don't we import all our food from overseas?

Mr ADAMS—Order! Because of the way we have done things in the past, there is pressure on us to look at new ways of doing these things. Are we saying that we are not going to look at them or that it is not going to happen? That will probably be driven by the urban people more than the regional people. But I am asking you, as a group representing the people who you represent, whether you are looking at those changes and whether there are going to be changes.

Ms Knowles—I think that you picked up on a good point there. There are a number of drivers of why people change. We look at an industry such as the rice industry, where they have invested extraordinary amounts of money in research into and development of new varieties of rice that are more suited to Australian conditions. You probably heard a lot of that information in Deniliquin last week, and Sussan would be very aware of the progress that the rice industry has made.

Ms LEY—Unfortunately, the deputy chair was not there to hear that.

Ms Knowles—Good oil on the rice industry. I have the numbers here that I can repeat.

Mr ADAMS—I have had representation through my own party in that direction.

Ms Knowles—A driver of the changes was that their businesses could be more efficient, and that is something that has been snapped up by the industry. We were in Barham yesterday at the rice growers annual conference and they were talking about striving for even better improvement in the varieties that they use: four and five new, different types of rice that will (a) suit the markets that they are trying to target; (b) be higher in protein; (c) be more efficient; and (d) get more tons per hectare off the crop. So there are a lot of drivers of change, and where people see benefits in that change then they are more than willing to snap it up, because it makes good sense to do that.

CHAIR—I am sorry that I have to interrupt you there. We have, unfortunately, gone over time but I know Sussan has not asked a question.

Ms LEY—I appreciate that, Chair. My question is a little away from what we have just been talking about. How do you feel about the issues to do with environmental flows being captured by a total integrated catchment management strategy, given that the Murray-Darling Basin Commission and those looking at the COAG processes are saying, 'Of course, it's not just about

water in the river; it's about integrated catchment management'? I am interested in how you think that will play out on the ground with the catchment management authorities that we have set up across the state.

Ms Ward—Firstly, Sussan, I think it is exciting that there is a concept to realise that we are dealing with integrated systems and that, rather than having a debate about how many megalitres we are going to take to deliver some unknown environmental outcome, we are saying, 'Let's look at the needs of this system.' It might be something that is not related to taking water from irrigators that has the biggest environmental benefit. That is just a point to start from.

I think the current catchment management boards are probably in a state of flux, needing to be linked to some kind of environmental flow management group, and that should have a community focus and also a rate of return focus. We did not touch on it before but we strongly believe that environments should be able to participate in the water market. It makes sense for the water market to decide things like this: this year the temporary price of water has skyrocketed; we need funds to do erosion control works so we are going to sell water at a massive profit. That makes good environmental and economic sense.

The key points about how I can see it playing out are that there is community control and involvement and that it is skills based; that is, that the people set up to manage these processes and these flows know what they are talking about, that they are accountable and that there is investment flowing directly through to them rather than through government departments. I think the Macquarie is an exciting example where, despite the water-sharing plan, we have been able to set up a community owned environmental flows group that makes management decisions based on trying to define environmental objectives and using a range of tools besides just thinking: we have 50 megalitres, what do we do with it? I can see that group working almost like a working group of the catchment management board.

Something that we have not done well is integration between ground water and surface water, dryland and upper catchment and lower catchment. That is probably where we could do with some leadership from the federal government.

Ms Knowles—To add to that, that movement to the whole of catchment process, the integration of the different parts of the catchment and having community ownership will allow that catchment management authority to say, 'We have so many dollars to invest; it might be in water for environmental flows, it might be in vegetation management or it might be in research in a particular area where we have an issue that we do not know how to deal with.' It will provide flexibility for the community at that catchment level to set their own priorities and look at the catchment as a whole.

Ms Ward—Did they receive the ICM paper?

Ms Knowles—Yes.

CHAIR—I have one question I would like to get on the record. What are your thoughts on cloud seeding? Can you give a short answer on what your council's thoughts are? Is it something we should have more scientific investigations into? Have you thought of the ramifications of rain falling in the wrong place at the wrong time?

Ms Knowles—I think you have heard a lot of evidence from different people who are experts on cloud seeding. One of the things that is coming out is that there has been a bit of a hiatus in the research, particularly on cloud seeding in New South Wales. That needs to be the starting point again. Are there technologies that are available to us that we could use in a year like this year when even the smallest amount of inflow into the Hume Dam could be beneficial for irrigators and the environment in the Murray region? That has been the clear thing that has come out of it. There was work done in the 1950s, 1960s and 1970s but there has been a big gap in the research. They are all opportunities and we need to grasp those opportunities.

Ms Ward—For some reason the trials got knocked on the head. There were going to be trials in the 1990s in the Namoi.

Ms LEY—There are conspiracy theories around that.

Ms Knowles—Our members point to the Tasmanian example all the time, saying, 'If it works there why can't we see if it works here too?'

Mr ADAMS—There is a lot of work being done in California too. A National Party member of our committee from the Mallee, John Forrest, has written a paper.

Ms Ward—We have had presentations from the guys who know about it.

Mr ADAMS—It is worth fiddling with.

CHAIR—Thank you very much for your input and your submission. Our committee should bring down its report and recommendations by next February and, when we do, we will make sure that we send you a copy.

Ms Knowles—We will get that information to you.

Ms Ward—If we can assist you any further, please let us know. I do not know whether we gave a very clear message today; we followed a line of questioning.

CHAIR—The submission was fairly detailed and there is a lot of information in that.

Mr ADAMS—It is fine. We had a good discussion. There is still a long way to go but we discover new things as we go down the track.

Ms Ward—Discussion is the key rather than closed door decision making.

CHAIR—Thank you.

[11:52 a.m.]

BRASSIL, Councillor Patrick, AM, Chairperson, Water Management Committee, Local Government Association of New South Wales

SMITH, Ms Stephanie, Senior Policy Officer, Water, Local Government Association; and Shires Association of New South Wales

CHAIR—I would like to continue our inquiry, and I call on the Local Government Association of New South Wales. Although the committee does not require you to give evidence under oath, I advise you both that these hearings are formal proceedings of parliament and, consequently, warrant the same respect as proceedings of the House itself. I remind our witnesses that giving false or misleading evidence is a serious matter and may be regarded as a contempt of parliament. Would you like to make a brief statement before the committee asks questions of you both?

Councillor Brassil—I am here representing the Local Government Association of New South Wales but also the Shires Association of New South Wales, to the extent that the Shires Association and the Local Government Association both have members on the Water Management Committee, which is jointly run by the Local Government Association and the Shires Association and reports to both organisations.

The Local Government Association and the Shires Association are intimately involved in water in New South Wales. They are so because, except for the cities of Sydney, Newcastle and Wollongong, all water in New South Wales is supplied by local government. They normally own the reticulation systems and they reticulate water to everybody in the state. There are different structures for this but it is mostly a council that acts as the water supply authority and also acts as the sewerage authority. So both the provision of water and sewerage services is by local government except for those three cities.

Mr SECKER—What about irrigation supplies as well?

Councillor Brassil—No, normally we do not. As a local government entity, it was the state government up until recently. There are such things as Murrumbidgee Water that supply irrigation water.

Mr SECKER—I just wanted to clarify that.

Councillor Brassil—Local government has never been involved in it, to my knowledge.

CHAIR—Is that all you would like to contribute?

Councillor Brassil—That is only half of local government's interest in it. The other interest in it is that local government is also the planning authority in most areas of the state and should have, and does have, an interest in what happens to various things connected with natural resource management insofar as water and rivers and river and drainage systems and their

impact on us. Local government is also interested in the welfare of its people, so it gets all concerned when water licences are sold down the river or up the river. Local government is concerned that the economic activity in its own area is being shifted out of the area to some other area. Naturally local government also exists in the area where it has been shifted to. Normally a council is pretty pleased when economic activity gets shifted into its area and displeased when it gets shifted out of it. So we have the general sort of level of the third tier of government and the interest that it has in the welfare of its people. As well we are a water supplier and a sewage authority. I think that more fully explains the position of local government.

CHAIR—Thank you for that. I will invite members to ask questions.

Ms LEY—Stephanie, you might be able to answer this question. My local governments have presented to me serious concerns about the issue of water trading. If we separate the title to land from the title to the water, local governments can only charge rates on the land portion and if we take that to its logical conclusion—and I do not know about this—that would mean that the value of water that was previously attached to a land title is now not rateable. Have you done any explorations of that? Do you have any thoughts on that?

Ms Smith—I know that our associations are very concerned about it. We have raised it with the Department of Local Government. I think Mike Montgomery, who is the President of ALGA, has raised it in his capacity of working with COAG, so we are hoping that that will be addressed not just in terms of New South Wales but in the sense of councils across the nation. The Department of Local Government is working on it and has agreed to put out a discussion paper. It has been very open in trying to discuss these issues with the 30 or so councils that it has earmarked as being significantly affected by this problem.

Ms LEY—Do you have direct links with that working party?

Ms Smith—Yes. I suppose that at this stage it is not a working party. The Department of Local Government has been working on it. It has been working closely with our economic policy officer. The discussion paper on the options that they have been looking at has not been fully formed yet.

Ms LEY—I was just wondering if or how the results of that are going to get into the COAG deliberations.

Ms Smith—It has been raised. I think our association has raised it with ALGA as one of the issues. That is understood to be an issue that does need to be looked at within the context of the things that COAG are looking at at the moment. I am afraid that at this point in time I cannot give you much more than that amount of information.

Ms LEY—It is important that it has been raised.

Councillor Brassil—It is a highly complex issue because local government is restricted in New South Wales as to what increases it can have on its rates. So this total income is much the same as the previous year's.

The separation of land and water changes the structure of the rates. You could leave the rates exactly the same but then your total income would go down from a council's point of view. So you would want to change it and you would want to charge a higher rate on the land because that would give you much the same income as you had last year.

However you are spreading the burden differently. As soon as the valuation of a property does not consider water then you are going to challenge the rates on that property unless you change the whole system. But you are going to change the burden. If you are happy with the way your burden is distributed amongst your ratepayers at the moment, you are going to have to do something about it. This is what is concerning many councils. Not a lot of councils; a lot of councils are not concerned because they do not have irrigation in their area. But it is your area of course and many councils are concerned. So there is a lot of work to be done.

Ms LEY—Is your association generally happy with the level of input you have had into natural resource management issues?

Councillor Brassil—No, it is not. You are never sure when you are answering these questions whether you are colouring them with your own prejudices or not, and I may be. Local government has been concerned that it has not been consulted enough on natural resource management issues. I am very concerned that local government has not had sufficient input into the natural resource issues. So that is why I say I may be colouring it. I am very concerned local government has not been consulted enough.

There are two extremes. Local government could take no interest in it whatsoever or it could regard itself as not involved. There is a tendency for that extreme point of view to be the current one simply because the water act, that has been in a couple of years, set up water management committees or river management committees and they got their membership more or less by the government nominating the members. Local government had very few members on these committees. The committees did start to work and, I think generally, worked well. But they have deep responsibilities because they make decisions that affect planning matters which are rightly matters for state government and councils.

Local government have been making noises saying local government should be more represented on the river management committees than they have been and state government has gone as far as to say that, yes, they all should have some local government representation. There was a stage—and I might be a bit out of date—where, for instance, the Murrumbidgee Catchment Management Committee had two members of local government. I do not know how many local government areas there are along the Murrumbidgee but there are a few more than two. There would not be much input from local government into such a committee.

Local government is beginning to make noises about it but so are other people who are beginning to notice that the people who are on these committees are making decisions which are basically far reaching. They are reporting to state government representatives who report to the minister. Local government is not involved. I think that we have to do something about changing that, and I say 'we' in local government, but also state government and other involved people have got to notice the planning issues and how they are being tackled.

Mr SECKER—You are the one that ends up implementing a lot of the policies. I think it has always been a failing of state government not to consult the people who are eventually going to implement the policies. I totally agree with what you are saying.

Mr ADAMS—The federal government does that quite often as well.

Mr SECKER—Yes.

Ms LEY—Those are not federal government appointments on the committees, however. I am just clarifying for the record that you mentioned governments, and it is state government appointments on the committee not federal government appointments.

Councillor Brassil—Yes.

Mr SECKER—I want to ask about the issue of rainwater tanks. How many local government authorities in New South Wales, for example, have a policy of new homes having to have rainwater resources? It may be under a different guise. I know that some councils in South Australia have brought in rainwater tanks under the guise of providing firefighting resources in case there is a fire.

Councillor Brassil—It would be very helpful with its taxation too, I would imagine.

Mr SECKER—Yes.

Councillor Brassil—I do not know how many local government areas require them for new buildings. I understand, but only from newspaper reports, that in the Sydney area they are required. I understand that is because the state government said that is to be required. I am from the City of Wagga Wagga, and we do not require rainwater tanks. In fact, we are a bit concerned that they are put in with proper regard to health regulations and things like that, so I could not comment. But I think that most councils in the Sydney, Newcastle and Wollongong areas are keen on rainwater tanks in new areas.

CHAIR—Many councils in Queensland and Victoria are subsidising the use of water tanks. They give back just about half of the cost of the tanks. Are there many in New South Wales doing that?

Councillor Brassil—I believe that all of the Sydney, Newcastle and Wollongong areas are offering such a scheme. I believe that they are financed by Sydney Water or Newcastle Water or whatever it happens to be, they being the water supply authorities. There is pressure in country areas for people to say, 'Do it as they do it in Sydney. You're the water authority here in Wagga Wagga. Why aren't you doing it?' There is a good answer: we do not want to.

CHAIR—Why? I would have thought it was conserving water.

Councillor Brassil—The number of tanks that you would have to put in to make a significant difference I see as being very high. To me, the cost of them does not justify their usefulness. I think you could do a lot better if you are looking at them to conserve water. I think you could do a lot better by simply restricting the water supply for gardens. The amount of water that you are

talking about is very little. When you look at town consumptions of water throughout New South Wales and compare them with the water needed for irrigation and other uses, I would guess that you are talking less than five per cent of the available water. It is a pretty insignificant amount. I do not mean that you should therefore not worry about restrictions or anything like those; I do mean that you should look very carefully at what you are proposing, to see how effective it would be.

CHAIR—Do you have water meters in Wagga Wagga?

Councillor Brassil—Yes.

CHAIR—For what reason do you put water meters on—to charge excess or to control supply?

Councillor Brassil—We do not have a concept of excess water now. We charge for the first drop of water that you get right through to the last drop. We even charge you for having the water supply going past the place, even if you do not use any of it.

Mr ADAMS—If you are in a municipality, you pay rates for the pumps and the pipes, so there is a rate set for that and then you pay for the water as well?

Councillor Brassil—Yes. There is a basic charge set for water. For that you actually get no water. As soon as you use the water you are charged for the water.

Mr ADAMS—Yes, but that original payment is for the pumps and the pipes, isn't it?

Mr WINDSOR—And for the delivery.

Councillor Brassil—Yes, there is the supply charge.

Mr ADAMS—Then you pay for every drop of water that you use.

Councillor Brassil—Yes.

Mr ADAMS—Does that go up after you get to a certain level? Is there a difference?

Councillor Brassil—No.

Mr ADAMS—There are not different tiers to it?

Councillor Brassil—There would be if I had my way, but I am only one councillor. So it varies from council to council.

CHAIR—Why do you have meters if you are not charging for the usage of it?

Councillor Brassil—You are charging.

CHAIR—Sorry, I thought you said that whether you use one drop or not—

Councillor Brassil—No, it is every drop. The supply charge is set. In Wagga the Riverina Water County Council is the water supply authority. I think it is 20 bucks a quarter; I am pretty sure it is. I should know as I am the chairman, but I do forget.

CHAIR—That is okay. If your ratepayers then put in a tank, what would the loss be to the Wagga Wagga City Council for the use of that tank water?

Councillor Brassil—It would not be significant. Water supply authority is a mad business. We encourage people not to use it. We encourage people to restrict their use of water as far as possible. In fact, through the last drought, we have been very strong on that. It is a silly business philosophy, but we do it. We supplied an enormous amount of water in the season that has just finished—it has been a record breaking amount of water—and we have still been on people's hammer not to use water. We even put restrictions on it because we thought water use was getting too high. We have made a fortune and we have advertised about restricting the use of water, but that is what we want to do.

In New South Wales, most people would now have water metres, although some would not. Most would have the two-tier system—that is, a flat charge for whether you use anything or not and then a charge for so much. There are still some councils that have a rate with minimum water and they pay for excess—they get so much water for their rate—but the state government is actively trying to discourage councils from doing that. The state government is very keen that we do not do it any more. Generally speaking, because the state government exerts certain powers over us—to give us capital grants and things like that—we will end up doing what it says.

CHAIR—Can I assure you that, when they do give that base—and I know because my council works under that system—there is no possible way that you would not get an excess water bill, because what they allocate to you would not sustain you, let us just say, so there is no loss on the council. My reason for asking that question is that, in local shires in my area where dams were particularly built for irrigators, the irrigators cannot use them at all because they are all used for urban use rather than what they were intended for and water tanks were taken away. The majority of people in those towns seem to think that, if the tanks were put back, the dams would be left alone. That is only a theory. I just wondered how it worked in New South Wales.

Councillor Brassil—Very few places would depend on tank water now. Many, many years ago, it used to be a measure of good housekeeping if you could get your rainwater tank to last from one rain to the next, particularly in western New South Wales—in, say, the Macquarie. I lived at Warren years ago. Now there would be very few people who actually depend on the rainwater. A lot of people do have rainwater tanks but very few really depend on them.

CHAIR—Thank you.

Mr WINDSOR—I have two questions and I will ask them both in the same breath. This is a Commonwealth inquiry. What does your organisation hope may come out of it in terms of the constitutional arrangements between the state, the Commonwealth and local government? Is there a wish list or a preferred recommendation that may come out of it? The second question,

particularly given where you come from, is about the aspects of water quality and the implications of salinity and water table on urban development and the costs of that. I do not want you to be too prescriptive. Does local government feel as though it has a role there or is it just a recipient of what happens around it?

Councillor Brassil—Again, I suppose I am answering for some local governments. Generally speaking, local government is acting as though it has a role there in New South Wales. As you might remember, Wagga Wagga was the first place to nominate the fact that it did have a salinity problem and it took some time before other towns were game enough to say that they had the same problem. They did, so we started to work on it with the active help of the state government at the time.

I say that local government in New South Wales seems to have indicated that it has an interest because there was a big conference at Dubbo a couple of years ago that the Premier was present at, and it indicated a big interest in salinity and that work should be done. Generally speaking, both state and federal governments are going to be interested in it and actually have been because it is too big for most local government areas to handle themselves and it is too widespread. It needs to be attacked. The state government and the federal government are going to have to come to the party. The federal government, of course, are the ones with all the money—we like them if they give some of it out. It is a national problem and it is not affecting just town infrastructure; it is affecting farm infrastructure and transport industry infrastructure throughout the state. It has to be attacked. Yes, it is being attacked but I would like to see more.

Mr SECKER—What about your roads? It is not all salinity, but as I understand it quite a few of your roads are actually having maintenance problems because they are breaking up from the soil salinity.

Councillor Brassil—That is true. That is what I meant when I mentioned transport infrastructure. They are breaking up.

Mr ADAMS—I have a couple of good questions. You just said salinity is a state or a federal government responsibility, but that is a natural resource management issue. You claim that local governments in New South Wales do not have much of a play. Wouldn't it be that the state government was trying to get something done and, therefore, it has set up its structures to do that?

Councillor Brassil—The state government is definitely trying to get something done, yes. The structures have been set up and members of local governments would be aware of them but to varying degrees. I only thought that local government was not doing its proper task in natural resource management with regard to the new water act and the establishment of those committees. Otherwise it generally has a go at this natural resource management.

Mr ADAMS—I have read about local government in New South Wales, so I know there is some reuse of water—and Ms Smith might be able to help here. There is a line of thinking about reuse of water in Australia, and many other parts of the world reuse water constantly. We do not do that very well. What are your thoughts on that?

Councillor Brassil—Do you want Stephanie to answer that?

Mr ADAMS—No; you can both answer it.

Councillor Brassil—We are looking at reuse of water. Local government in New South Wales is generally looking at it but it seems to me to be looking at it in various spots. For instance, Wagga tried out a reuse scheme that was associated with the CSIRO. It involved spraying sewage effluent on to forests and creating a forest, and it worked well.

Mr ADAMS—This was some years ago, wasn't it?

Councillor Brassil—Yes, we called it Flushing Meadows. It is still there. The trees are still there. I think CSIRO thought—

Mr ADAMS—How are the trees? Are they still there?

Councillor Brassil—Yes. It was a success but it is not a continuing success because as soon as you do that sort of thing, you are doing it to get rid of phosphorus and nitrogen generally. You want to take them away, so you should harvest those trees. There is one down at Griffith at the moment that is growing fodder crops with them. They are harvesting, feeding the crops off the farm somewhere else. That seems to me to be having more success, providing that they keep doing that—that they take the nitrogen and phosphorus away and use it. That is basically all you are doing when you reuse the water.

Mr SECKER—A lot of golf courses use it as well.

Councillor Brassil—Yes; though they do not take it away very much.

Mr SECKER—No; but they cut it, I suppose.

Councillor Brassil—Yes.

Ms Smith—Just to build on what Pat was saying, the only funding program in New South Wales is the Country Towns Water Supply and Sewerage Program. Over the years, a number of councils have been saying that we need a different program or to have the program expanded because it only looks at backlog. I know that Rous Water have recently raised with the associations that there is a real need for funding to assist councils to look at reuse programs.

Mr ADAMS—To look at innovative ways?

Ms Smith—Yes, and at the support base, in terms of being able to share the risk, particularly in a transitional stage from having a traditional town water supply to having dual piping systems.

Mr ADAMS—For 10 or 15 years now there has been federal money for innovative ways of doing things like that. So there is not very much in the shire system?

Councillor Brassil—There is not as much as you would like to see. But it gets fairly well publicised. We have a water conference each year and reuse of effluent schemes is normally one of the topics. Various people try things out, but it is hard to get a sustainable system where you continually reuse. There are some areas, one of them in Wagga, with dual piping. I think that was

set up with state government assistance. They have two separate water supplies in their houses: the ordinary reticulated water supply and a reticulated grey water supply.

Mr ADAMS—Is that the purple tap?

Councillor Brassil—I do not know whether they are purple or not. Maybe they are in Queensland!

CHAIR—Do you see a need for protecting future planning of prime agricultural land? I think a lot of pressure is put on rural councils, especially with urban creep, where they subdivide, lose prime agricultural lands and push farmers out into land where they are using more water. Do you think there should be some body—whether national, state or council—that puts this agricultural land on hold and says it definitely cannot be subdivided, to protect some of our prime lands? Do you think there is a need for that?

Councillor Brassil—Various schemes have been tried over the years, like the green belts around Sydney which apparently slowed development in some areas for a little while. Towns expand into prime agricultural land only because the prime agricultural land does not give the return that it will as residential land. It is a terrible thing but those are the facts of the matter. So the land will tend to its most valuable use. People say this should not occur, and in planning you try to avoid it. But at the end of the day, if the town is growing and somebody wants to subdivide land for residential use, the council is going to say that it can be done and by whom.

Mr ADAMS—There is some other thinking, and we heard some this morning in evidence, that maybe we should start looking at this in another way—that we should not be pushing market gardens out and that we should be trying to find ways, as a society, to incorporate them instead of pushing them further out and increasing the costs of transport to bring the food back in. We have just about eliminated every dairy farm from close to urban areas. Maybe we need to have another look at planning in that way. I agree with you that the market drives that, but maybe we should look at whether having diversity is the best way.

Mr SECKER—That was brought in in South Australia 30 years ago. It is the same thing: keep your green areas.

Mr ADAMS—We have not kept it going.

CHAIR—I do not think we plan enough.

Councillor Brassil—The market gardens areas of Sydney are highly productive. A lot of people do not realise they are still there.

Mr SECKER—Are they zoned that way so they can never become residential?

CHAIR—Yes.

Mr ADAMS—That would be the way to do it. You would say, 'You can never build on these places.'

Mr SECKER—If I was the owner I would hate that—

Councillor Brassil—I do not think you can deviate consistently in a democracy.

CHAIR—I understand that there is pressure put on rural councils for their rate base to increase too to make them sustainable, but I have spoken to a lot of people during this inquiry and have seen first-hand the way we are pushing everybody inland and not utilising our water in the best way.

Councillor Brassil—But I think you are getting them all down to the coast. It is dreadful what both state and federal governments are doing to inland NSW. There will not be enough land left to bury a man out there shortly.

CHAIR—What are the feds doing?

Councillor Brassil—The feds are doing it too.

Ms LEY—Tell me how so I can take it on board.

Councillor Brassil—It was not to do with the water inquiry, really.

Ms LEY—But what are we doing?

Mr ADAMS—Planning.

Councillor Brassil—I believe that Australia generally should be adopting a plan which is more of a population distribution plan than anything else. There are lots of economic circumstances that come into play to decide where people are going to live, and governments affect them. They should be affecting them to give a better, more even, distribution of population over the states—NSW is the one I know. To me it is ridiculous that you have this enormous city down here. I was pleased with the taxi driver; he managed, in all this maze, to find where 70 Phillip Street was, which I thought was pretty clever of him.

Ms LEY—But isn't there is a water limitation on people to the west of the great divide? I agree there should be a lot more.

Councillor Brassil—Yes, but there is not an effective—

Mr ADAMS—Not if they reuse the water.

Councillor Brassil—Or even if you leave it as it is. Supposing you doubled domestic water use—not farm water use or anything else—there would still be plenty left. You could double the population without any worry at all along all the western rivers. There are very few towns in NSW that are not on a river. Really, water supplies for most towns are pretty reliable. I know that there are the vagaries of rain, which at least in southern New South Wales have been less than vague over the past couple of years, but there has still been plenty of water available. At times it has got very low, and the dam levels in Burrinjuck and Blowering are dreadful, but there was an inch and a half of rain there just recently; that will come again.

Mr ADAMS—Do you think we can use migration if we have got new Australians that might want to live there, through incentives or zoning or whatever? Do you think that would be the way to go?

Councillor Brassil—I do not like to pick out migrants and pick on them. It seems to me that people want to live in places like Sydney—God knows why, but they do.

Mr ADAMS—I agree with you

Mr SECKER—Totally.

Mr ADAMS—I live in a country town.

Mr SECKER—It is bad enough going there for a holiday.

CHAIR—They are all moving to Queensland, too.

Councillor Brassil—We should look at the incentives we have in place to get people in NSW to move to Sydney. Nearly every government department moves its servants to Sydney.

Mr SECKER—Exactly. They give a lot of lip service to moving them out into country areas, but they move them to Sydney. Nearly every move that there is to make generally involves moving people to either Canberra or Sydney. We go to a lot of trouble to try and do it—for example, we are going to spend a lot of money and make Sydney airport more effective so that people can get in and out a lot easier.

Mr ADAMS—Macquarie Bank paid too much for it; they have got to make it pay.

CHAIR—But if we do send them out to regional areas—and I am only talking about Queensland and the regional areas that I know—we are going to put pressure on the water systems out there that are already being pushed to their limit, so we would have to put some infrastructure there also.

Councillor Brassil—In my opinion, the areas where they are being pushed to their limit are very small. I would like to have a really good look at those areas.

CHAIR—This is where I am probably talking about the urban creep in Queensland: people have got a tendency to move away from the city and set up their one-acre blocks in rural areas and there is a lot of pressure being put on there and the infrastructure has not caught up.

Councillor Brassil—They are all up and down that coast.

CHAIR—They were but they are now starting to move inland and they are taking over our prime rural land.

Mr SECKER—Is that the urban creeps or the urban creep?

CHAIR—We will leave that one alone! Thank you for your time today, Councillor Brassil and Ms Smith, and for your submission. Our inquiry should be concluded in February, and when the report comes out with its recommendations we will make sure that you get a copy.

Proceedings suspended from 12.31 p.m. to 1.34 p.m.

BURNETT, Mr Jolyon, Chief Executive Officer, Irrigation Association of Australia

CHAIR—Welcome. Although the committee does not require you to give evidence under oath, I should advise you that these hearings are formal proceedings of parliament and consequently they warrant the same respect as proceedings in the House itself. I remind you that giving false or misleading evidence is a serious matter and may be regarded as a contempt of parliament. Do you wish to make a statement, and then we will go into questions?

Mr Burnett—I would like to make a few brief points. Firstly, the Irrigation Association of Australia is, we believe, the only body representing the entire value chain of the irrigation industry. We have within our membership government departments who regulate access to water and natural resources, management departments and departments of primary industry and agriculture. We also have most of the major water wholesalers and retailers—bodies like Sydney Water and Watercorp of Western Australia. Many of the rural water supply authorities are members, such as Goulburn-Murray Water.

We have all the major manufacturers of irrigation related equipment and technology and many of their distributors and retailers. Most research and tertiary educational institutions that are involved in irrigation are our members, including CSIRO Land and Water, the University of Southern Queensland and Charles Sturt University. We also have as members most of those involved in both urban and rural irrigation installation contracting and consulting. And last, but by no means least, we have a large number of irrigators as members, including companies such as Twynam farms, which is one of the biggest irrigators in Australia. The association believes that this gives us quite a broad perspective and the ability to present to inquiries such as yours a fairly balanced view.

I would like to make four points in support of the association's submission. Firstly, we see a strong and continuing role for the Commonwealth in the management of rural water, particularly in the development and coordination of policy and of, particularly importantly, vision. We believe that there is a profound lack of national consensus on how water should be managed, particularly in the rural environment, but also in the urban environment. While it is not our view that it is up to the federal government to develop that vision, it is our view that it is up to the federal government to show leadership in the facilitation of that vision and the policies that would then flow to help implement that vision.

Secondly, we see a role for the federal government in the harmonisation of regulation. One of the greatest frustrations of the irrigation industry at present is the confusion with regulation and requirements and compliance across the various jurisdictions in Australia. There is a tendency to see the Murray-Darling Basin as the only irrigation jurisdiction. Our membership extends well beyond that and there is some frustration that it is being left behind and dragged along in the wake. Harmonisation does not mean absolute consistency of regulation, but it does mean coordination of regulation.

Thirdly, there is strategic support and funding—once we have a vision and a policy framework to support that vision, once we have harmonised regulation to help implement that vision, then it is very important that we have strategically targeted support, both financial and other types, to

encourage participation in the implementation of that vision. To some extent that is occurring but it is sometimes poorly targeted and at other times perhaps ad hoc.

Finally, we want to emphasise the importance of continued research and training. Research and development has received quite a deal of attention and the government is certainly to be commended on the funding of the Cooperative Research Centre for Irrigation Futures. We believe that training has received less attention. The participation and levels of training and qualification in the irrigation industry are some of the lowest throughout primary industry and yet it is increasingly one of the most technologically sophisticated areas of farming. Just recently, the Australian National Training Authority has endorsed for the very first time ever national qualifications in irrigation, independent of agriculture or horticulture. We see it as vital that support and encouragement is given to get the industry participating in those new qualifications.

CHAIR—Thank you. How do Australia's irrigation practices compare to those of other countries? Are we leading the field in some areas and behind the eight ball in other areas? Could you just give us an overview of that, please?

Mr Burnett—In many areas Australia leads the world in irrigation technology and the practice of irrigation. Indeed, many new technologies, while they are now imported into Australia and sold around the world by foreign firms, were actually first developed in Australia. It is perhaps a common tale. Australian irrigation, like many things, is a broad church and we range from some of the most efficient irrigators in the world to some that perhaps have still a long way to go. I doubt that there is a great deal that our industry could learn from overseas that is not already here. We could implement it a lot better and more widely but we are not importing much intellectual property. That would be the association's view. We are importing a considerable bit of hardware and technology.

Mr ADAMS—So we have intellectual property in Australia?

Mr Burnett—Absolutely.

Mr ADAMS—Do you think we can increase our manufacturing base, or aren't we big enough?

Mr Burnett—We certainly can increase our manufacturing base, and in part that will depend upon how the COAG reforms play out and the irrigation industry thrives. If we can collectively arrive at a formula that allows the growth of a sustainable and profitable irrigation industry in Australia, then the manufacturing base that supports that can definitely grow.

Mr ADAMS—What are the drivers for farmers—and not only farmers—to drive new technology? How are we going to do that? How are we going to get that out there—to use less water, have more production, and that sort of thing?

Mr Burnett—First and foremost, as with all small to medium sized businesses, the driver for the implementation of new technology is improved profitability. But there are many other aspects that confuse that particular driver. Access to capital is probably first and foremost, but there is also the intellectual capacity and knowledge to implement that new technology. The

point has been made to me—and it may be overstating the case somewhat—that asking a grower to move from, for example, flood irrigation to subsurface drip irrigation would be like asking an office to move from writing left to right to writing right to left. It would be a profound change in the way they managed their business and, from some strategic decisions at the highest level down to very mundane day-to-day operations, things would have to change. So it is often no easy task to ask a farmer to implement new technology, even though from an outside perspective the technology is there, it may clearly work and it may clearly lead to water savings and even cost savings and improved profitability. If they do not believe they can implement that new technology without a severe disruption to their business, then all those other things do not matter.

Mr WINDSOR—That is borne out, I believe, in the rice and cotton industries, where there is a degree of capital floating around in terms of investment but there is a return on the capital as well—they can afford to actually invest.

Mr Burnett—Indeed.

Mr ADAMS—In new technology.

Mr Burnett—But perhaps on the positive side, Australian farmers are some of the most innovative in the world and have a long track record clearly demonstrating that. There are other drivers that can be used. Australian farmers are, by their very nature, fiercely independent and often quite competitive people, looking over the neighbour's fence. One thing that can spur a farmer on to change their practices more than anything is the fact that their neighbour is getting a better yield from the same area than they are or doing better than they are.

Mr ADAMS—Absolutely.

Mr Burnett—Those sorts of levers can be used quite well through the acknowledgment of people who are operating at best practice through award systems, incentive schemes and those sorts of things. It does not necessarily have to be just financial handouts or incentives; it could be other means of acknowledging people who have taken the risk and adopted new technologies.

Mr SECKER—The biggest risk in all of it is the money involved in changing from, say, flood irrigation to subsurface irrigation. I do not think anyone doubts that you are actually going to get greater water savings and, for example, savings on the electricity or diesel used for the pumping of your water, depending on what your pump is. But there is that initial cost, and whilst farmers are very innovative through experience they tend to wait until one person does it and see how they fare before they all go into it. If they see the benefits over the other side of the fence they are the first ones to jump in. But again, you come back to what was said in one of earlier hearings: you cannot be green or efficient if you are in the red. There is often a huge changeover cost that is a pretty big disincentive.

Mr Burnett—I would not want for a minute to contradict the impression that certainty is important for the irrigation community. They have been through a number of decades now of significant change and uncertainty, and certainty is important. But that needs to be mitigated by the fact that a certain amount of uncertainty can lead to a preparedness to perhaps embrace a

greater amount of risk than you would otherwise and to try new things. So there is a bit of balance in there.

The other thing I would say though, Patrick, is that identifying those early adopters is exactly what the commercial sector is good at. The sales and technical reps of the distributors and manufacturers of new technology are very good at identifying early adopters in farming communities. They are the people that they spend their first efforts on and, as you say, if they can get a respected community leader in a farming community to adopt a bit of new technology then often others will follow. That is just one example of where the sorts of networks that the IAA has can be better utilised than they are currently. It is disappointing that the commercial sector of the irrigation industry, for sometimes understandable reasons, has been somewhat left out of the debate and the planning on how the COAG reform agenda might be implemented. The Department of Natural Resources and Mines in Queensland have acknowledged that and are assisting us in supporting an industry development officer with the specific role of engaging the commercial sector more in encouraging farmers to adopt new technologies.

Mr SECKER—I daresay that nine out of 10 farmers would have very little knowledge of what COAG actually does.

Mr Burnett—Indeed. I was making the point to Alex earlier that the two overriding impressions I get as I move around the country and speak to groups of those involved in the irrigation industry are, firstly, a sense of frustration that their voice is not being heard and that people do not understand the particular problems that they face, wherever their region is, and secondly—how can I say this politely—the low level of understanding of the context in which these changes they are facing are occurring. Sometimes farmers simply do not know who COAG is or that the changes to the regulations under which they operate are not harsh and unusual punishment being visited on them or on their area alone but are actually part of a larger national reform agenda.

I am not necessarily saying that awareness makes it any easier for them, but I think it allows them to enter into the debate in a more informed manner. I think that is a significant task that faces us all to raise the level of understanding of what is trying to be achieved at a national level. All too often the responses to inquiries like yours, or the presentations that are made at regional fora, are based on a very parochial and local understanding of the issues. While that is important, I think we would get a better outcome if more people understood the broader context of the reform agenda that is happening.

CHAIR—Could you give an estimate of irrigators that would be using new techniques?

Mr Burnett—No, I cannot. It is a great embarrassment—and that is perhaps the point we make in our submission—that the level of knowledge of what is happening in the industry, who is doing what and the statistics we have at hand to help us inform the debate and help underpin the debate are very poor. ABS census notwithstanding, there are a lot of people collecting a lot of information, but it is neither being shared nor being collected consistently; so, even where it is shared, it is very difficult to correlate it and extrapolate from it. That is a very good example where I think there is a clear role for the federal government to help improve the level of consistency of the data being collected and the access to that.

Mr SECKER—I am interested in your school of irrigation. You do not have to be a brain surgeon to do flood irrigation. You open a gate and shut it when the bays are filled. Is this about teaching about all sorts of irrigation so that someone could go from flood to spray to subsurface or—

Mr Burnett—With the greatest of respect, flood irrigation is not a simple process.

Mr SECKER—Could I say, though, for example in our area, there would be two or three day schools each year that the local farmers can go on about using water more efficiently. Around where I come from it is a matter of opening the gate and shutting it, making sure you do not overwater, and trying to get more water down to do it more quickly. It is just from experience, and people could work that out.

Mr Burnett—Most irrigation farmers, whether they recognise it or not, are highly skilled and have a fairly high level of knowledge; but, if we continue irrigating as we are now, then we will continue getting the same result in terms of the environment and the efficient use of water that we are now. Things have to change, and I believe one of the committee made that point earlier this morning. I do not think anyone would deny that things have to change. While many irrigators understand very well how to irrigate as they currently are, to make changes with confidence requires a level of understanding slightly deeper than most irrigators currently have; and that is where the great opportunity for training is. If you are going to change your practices and risk yield and production, then you need to have an understanding not simply of how you currently do things but of the underlying principles so that you can begin to understand the effects of some of the management changes you would make. That is why I come back to this point that these nationally recognised qualifications in irrigation are so important. You would perhaps all be aware that to access scheduled chemicals now, a farmer needs to have undertaken a farm chemical users course.

The IAA believes that that sort of approach is worthy of investigation in the irrigation industry and that perhaps some link between demonstrated competence or training and continued licence access is worth investigating. Exactly how that would operate and to what extent it would be mandatory need to be looked at.

Mr WINDSOR—I notice you said that there was a need for a broader understanding of what is happening and that we do need change. One of the things that the committee is seeing is that most people agree that there has to be some change, but there are slightly different aspects as to why. Why does your association believe there has to be change? What is wrong with what is happening?

Mr Burnett—There are a couple of reasons. Firstly, on balance, the IAA believes that scientific evidence is that current irrigation practices are not sustainable into the long term.

Mr WINDSOR—In what sense?

Mr Burnett—In the sense that the MDBC, for example, has spent hundreds of millions of dollars intercepting salinity build-up in ground water and there has been a paper circulating recently from the Institute of Public Affairs that states that salinity levels in the Murray at Moreton are similar to what they were pre-World War II. That may well be so, but a simple

indicator of river salinity levels at one point is not a good criterion on which to base whether irrigation is sustainable. There are a number of other factors, on balance, that would indicate that we are running down the environmental capital on which the irrigation industry is based.

Ms LEY—Are you suggesting that irrigation is causing those increased salinity levels?

Mr Burnett—Not entirely, but it has its part to play, as indeed all land usage does.

Mr WINDSOR—Therein lies one of the great problems—because we have these blanket statements. I would agree with you in relation to certain areas of Australia, but there are other areas of Australia where that sort of logic does not necessarily apply or there is not enough scientific information to say that there is a direct linkage. This is why you have individuals, these committees and communities very concerned about the process. I noticed you said that they should have a broader knowledge of what is actually going on. But people have not been able to tell them what is actually going on. There are these sweeping interpretations coming through to them of what is happening, and they say, 'Well, I live in this area and that is not happening here. If it is happening at the bottom end of the Murray-Darling like it is happening somewhere else, let's look at it.' Even in some of the ground water systems, some of the scientific evidence has proven to be something different each year.

Mr Burnett—You are absolutely right. It is very misleading to state that the interaction between irrigation and the environment is consistent throughout Australia—it is absolutely not.

Ms LEY—Or that it is the main cause of salinity?

Mr Burnett—Indeed, that is simply—

Ms LEY—In fact, the Murray-Darling Basin Commission, at their last public meeting in my electorate, said that the Living Murray has nothing to do with salinity.

Mr Burnett—We are opening up a wide range of issues here. My fundamental point is that the balance of current scientific opinion is that irrigation practices, broadly speaking, are not sustainable as they currently exist.

Ms LEY—We have had the director of land and water before this committee saying that the science about environmental flows is 'pretty thin'.

Mr Burnett—And that is absolutely true; I am not arguing with that. I am not saying that any individual piece of science is indisputable. What I am saying is that the balance is that things have to change. The COAG reform process is an indication that that is an accepted view. If things do not have to change, what is the COAG reform process about?

Mr WINDSOR—Good question.

Ms LEY—It is quite right that there are critical environmental issues in the Murray-Darling Basin, but I think that what you have just said is that those factors are due to irrigation.

Mr Burnett—No, I have said that they are linked.

Ms LEY—You have suggested that irrigation is the main driver of those factors.

Mr Burnett—No, I have not suggested it is the main factor; I said it is a factor. It is absolutely a factor. The extent to which it is a factor varies—as Tony quite rightly pointed out—from area to area. In some areas irrigation plays a larger part, and in other areas it plays a smaller part. I do not know if it is useful at this point to debate those sorts of specifics because, as you have all pointed out and as the evidence has been put to you, the jury is still out on that. But that should not stop us taking action to improve the situation. There is uncertainty in all areas of business. Most small to medium sized enterprises in Australia operate in a climate of some uncertainty and risk. Irrigation is no different. In fact, it could arguably be said that farmers operate in a much more risky environment than many others. What I would say though is that many of them have a less well-developed understanding of risk management principles than other businesses, and perhaps we need to improve risk management in the irrigation industry.

Mr SECKER—It is interesting because my local area—and I know I am only talking about one area—was virtually all flood irrigation. They were all encouraged to go to centre pivots, which were supposed to be more efficient—nowhere near as efficient as sub-surface, of course. They all did that and, in quite a few areas, found that yields were halving. They were just not getting the seed yields; this was a specialised area of lucerne seed production. They were all encouraged under the guise of becoming more efficient with water use, but it just has not worked. One farmer is now actually doing trials with sub-surface irrigation. I think that, because of the formal trial with centre pivots, which I am sure many of your members would be using, they will be reluctant until they actually see the proof of the yields compared to what they were getting under the previous situation.

Mr Burnett—That is absolutely so. It is a very common experience that, when a farmer introduces new technology, yields suffer as a consequence and it may take a number of seasons, until they finetune the technology, to get the yields back. Indeed, in some instances yields may never recover. You have to understand that the management principles they are applying to their current irrigation practices have been developed over many decades.

Mr SECKER—Usually by farmer experience.

Mr Burnett—Yes; usually by harsh personal experience. To expect new technology to operate at a similar level after one season's experience is perhaps unrealistic.

Mr WINDSOR—Embracing the wide range of the irrigation industry, is there any research into cutting back on evaporation from open water storages that could be significant in the future?

Mr Burnett—It is not an area I know a great deal about, but I understand there is research into spray-on plastic and other polymer films and into the use of physical barriers to evaporation. A number of technologies are being investigated.

Mr WINDSOR—It would be handy if you could get that information to this committee. It is where we are getting water loss.

Mr Burnett—I believe the Pratt Water group are looking at some of those technologies, as well as others. I will undertake to see what I can find out. I will see if my membership are involved in that sort of work.

Mr ADAMS—As you have heard, we have received evidence that there are rivers in the Murray-Darling Basin that are under a lot of stress, and there is over-allocation of water to irrigators. Do you accept that as being a fair indication of what is occurring?

Mr Burnett—The IAA accepts there is a wide diversity of views about the health of our river systems.

Mr ADAMS—Do you deny there is any pressure or stress on them?

Mr Burnett—Absolutely not. Some river systems are under significant pressure and others seem to be holding up extraordinarily well. The overall context is that, until Australia as a nation determines what it wants to use its water for, it is very difficult to resolve these sorts of conflicting views. Do we want to import rice—possibly from countries whose environmental record is far worse than ours? Do we want to use synthetics rather than Australian grown cotton? If we want Australian grown rice and Australian produced cotton, what are we prepared to allocate to make that possible? Are we interested in playing Australian Rules on synthetic turf? Would we like to see the parks and gardens of Melbourne looking like the parks and gardens of Canberra in a dry period? These sorts of decisions need to be made as a nation so that we can say, 'If we agree that is what we want as the outcome, these sorts of compromises and programs need to be put in place to get us there.' But at the moment there is no consensus on these sorts of issues, and so it is very difficult to put together coordinated programs to get us to an endpoint when we do not know what that endpoint is.

Mr ADAMS—So we should be refocusing on what the vision is for Australia and water.

Mr Burnett—Indeed. From the early 1900s right up until the 1980s, there was a consensus in Australia about using water: that water was a valuable resource that could be used for nation building. Many dams were built. Irrigation schemes were put in. Farmers were encouraged to turn what had been vacant land into productive land. And Australia is the better for the implementation of that vision—there is no doubt about that. But it would appear that that vision is either no longer appropriate or, at the very least, no longer widely shared, so we need to replace it with a new vision. That is the starting point, because what we could achieve when we had that shared vision of using water as a nation building resource was absolutely remarkable. The Snowy is just one testament to that, but there are many examples. The whole MIA—the Murrumbidgee Irrigation Area—is an example of what we could do as a nation when we had that shared vision. If we had another shared vision, we could achieve something just as remarkable.

Mr ADAMS—What would the capital figure be for what is sold per year in Australia? Could you take on notice to let us have the capital growth in irrigation output from your members' sales over the last 20 years? Is there a graph to show us increases or decreases—I should imagine there are increases?

Mr Burnett—I am sorry but that sort of commercial information is very difficult to extract from business of any type, and irrigation manufacturers and distributors are no different. I will

endeavour to get you the best information I can. We have approached our members on a number of occasions trying to get some indication of the size and value of the irrigation equipment—both physical equipment, and consultancy and intellectual services—and found it very difficult to get any figures that I could put before you with confidence.

Mr ADAMS—There must be some figures somewhere. Is there a statistical base anywhere?

Mr Burnett—Not that I am aware of. DFAT have some figures on the amount of irrigation related equipment that is imported, but as far as I am aware there is no collection of sales figures for equipment within Australia. As I say, our approaches to the commercial manufacturers have not met with great success. It is a highly competitive industry and there is a great deal of rationalisation going on at the moment. Sales figures, turnovers, market shares—it is fairly sensitive information at the moment.

Mr ADAMS—But I find it extraordinary that the organisation does not have those figures. We have had a look at tank manufacturers. They can tell us how many tanks are sold in Australia. From the pumping industry we could probably find out how many pumps were sold in Australia. I find it extraordinary not to be able to find out how many pivots are sold.

Mr Burnett—So do I.

Mr SECKER—Am I right in saying your push seems to be for greater efficiency but there does not seem to be a simultaneous push to say that, if a farmer can become twice as efficient with their water use, they can reap those benefits and might be able to irrigate 1.8 times as much or something along those lines? I have not read that into your submission. I would have thought that would benefit your group.

Mr Burnett—As we said in our submission, the views of the IAA membership on those sorts of issues, as on a number of others, are as wide and varied as the membership. Being a broad church is both a blessing and a curse. But I can say that where savings are achieved by on-farm efficiencies, the farmer should be able to benefit from the investment that they have made in achieving those efficiencies. At the same time, it would be useful if there were mechanisms in place to provide some incentive to the farmer to consider other alternatives other than simply increasing production with those savings. We are certainly not saying that is an option that should be denied to the farmer. If the farmer has invested in making those savings—as the New South Wales Irrigators Council representatives put forcefully—they should be able to benefit from that investment in savings. But we should explore the opportunity to provide other options to farmers, particularly as one of the committee made the point that, if the government has also invested in achieving those savings, perhaps it is not unrealistic for it to have some say in how those savings might be distributed.

Mr SECKER—That is why I suggested instead of 11.8—that is some sort of arbitrary figure—they should be able to get some benefits out of that greater efficiency. Some of it may go back to the public, but the irrigators are more likely to do something if there is a bucket at the end of it. That is just commonsense.

Mr Burnett—Absolutely. And if it is clear that they have some control over how those savings are going to be used, they are much more likely to participate in achieving savings.

Mr SECKER—Absolutely.

CHAIR—Thank you very much for being here today and for your written submission and additional information. The inquiry should be bringing down its report, with its recommendations, in November, and we will make sure we get a copy of that to you.

[2.14 p.m.]

CAMPBELL, Mrs Christine, Executive Chairman, Twynam Agricultural Group

FINNEY, Mr Bruce, Central Region Manager, Twynam Agricultural Group

KAHLBETZER, Mr Johnny, Operations Director, Twynam Agricultural Group

CHAIR—Although the committee does not require you to give evidence under oath, I should advise you that these hearings are formal proceedings of parliament and consequently they warrant the same respect as proceedings in the House. I would like to remind our witnesses that giving false or misleading evidence is a serious matter and may be regarded as a contempt of parliament. Would you like to make a brief statement and our committee will then proceed into questions?

Mrs Campbell—Yes, thank you. Bruce is the one who works on our natural resource management policy in depth, so we will defer to him as our leader and then obviously you are welcome to ask us questions. I think that of our group he has the in-depth knowledge of this aspect of today's hearing, so I will defer to Bruce and he can make the statement. Then please feel free to ask questions and we will hopefully be as relaxed as we possibly can be.

CHAIR—Unfortunately we may lose a couple of our members because there are certain schedules for planes that they have to catch to get back to their electorates. When that happens, don't think they are walking out on you; it is a matter of commitments to get their aircraft. Please proceed.

Mr Finney—Thank you for the opportunity to make a submission today. Security of water supplies for Australia's rural industries and communities is obviously a key issue not only to Twynam but to agriculture as a whole and our rural communities. This inquiry seems to be one of a number of meetings and important agendas in which such issues are being addressed. We hope that this one can also contribute to some useful outcomes.

As some background, Twynam now operates some 17 properties across New South Wales. Its principal operations are irrigation and the production of cotton, rice, cereals and oilseeds on some 30,000 hectares of irrigation development and it also has large grazing holdings—in total over 430,000 hectares of land in rural areas supplied from six catchments, from the Barwon and Gwydir, through to the Namoi, Macquarie, Lachlan and Murrumbidgee. It has a large presence in New South Wales and employs over 400 staff and interacts with all of the communities in these regions. So Twynam has an in-depth knowledge of the water issues in each catchment and participates in discussions of those in the local communities.

Our position on natural resource management issues is that there needs to be a responsible approach to agricultural production which is in harmony not only with the goals of our production and our economic needs but also with the community's needs and social and environmental outcomes. We believe that we are addressing our production in the light of that balance. I invite Christine or Johnny to make any other comments.

Mrs Campbell—We have been working in this debate since 1994 and over that period of time we have seen this debate move from individuals back to local environments and local areas of water-sharing plan management, where I think the situation in New South Wales has been for many years. In some ways we have neglected the catchment area and I think there has also been a naivete over the approach of the total basin. So we are seeing today, as we are getting down to the core day of bringing in reform, that at the basin level we probably have not worked as a coordinated group out of the spirit of COAG from 1994, when we felt that while going through the nineties we would have actually had a partnership with government so that we would actually see this process working up whereby you had farmers and government making decisions together. Today we see a disjointed process. The water-sharing plans in New South Wales have not come to fruition in an orderly way. There has been a lot of disharmony over that, a lot of misconceived perceptions of how those outcomes would come about and a lot of misinformation.

So we have come through a process whereby the water-sharing plans in New South Wales have been deferred, and today we have a lot of hope that the coming COAG meeting will be one in which government can come together. We look forward to the point in this debate when we share the responsibilities going forward and get the opportunity to participate. I think the bottom line is that that is the big issue. We have put in submissions. I would say that to date there has barely been one person commenting on the depth of our submissions. We have had acknowledgements that they have been received but right throughout this debate we have not actually had anyone come back to us and say, 'That is a good point,' or 'We like that idea.'

Mr ADAMS—Or 'We didn't'.

Mrs Campbell—Maybe they have said that. If they had said that, we probably would have had a look at it and said, 'We're listening,' and we would have had to redirect our thinking. But we have not had that opportunity; we have been speedily going down a particular road, but we would like to get that opportunity in the future.

CHAIR—Thank you.

Ms LEY—I read your submission with great interest. In your supplementary submission you mentioned community based management committees. Could I have your comments on those, please?

Mr Finney—This has evolved, as we have seen through the Commonwealth initiatives of the Natural Heritage Trust and now the national action plan, where we see the catchment management boards as key instruments for delivering environmental change. We would support that in comparison to the water-sharing plan process. We see a whole catchment board looking at not only water issues but also vegetation, salinity and biodiversity as the future. We see that that should be initiated, directed and funded at a Commonwealth level with the catchment management boards providing local ownership and the skill base to support them. We see that as a very powerful process for getting change with ownership, because we cannot do this without ownership at a local level. Historically, the relationship between the states and the Commonwealth in delivering these changes has been problematic. So we see that this would be a much better model if the states could potentially play a secondary role in that—and that is a big 'if'.

Ms LEY—Does the current structure of catchment management boards answer the needs that you have just described?

Mr Finney—I think it is evolving. There have been issues with the selection and capacity of the individuals and the skills base. I think we have all recognised that there are opportunities to improve there. The actual process is fine. They started with what you would call idealistic goals and targets for catchment improvement. I guess one of our concerns was that they would become legislated goals rather than idealistic. If catchment management boards are going to be incorporated with supervision of the funding, ensuring outcomes and accountability for that, we need to make sure that the goals that they are setting are realistic, supported by science and owned by the community, rather than set in some idealistic vision.

Mr Kahlbetzer—I think it is important that those catchment boards have a good representation from the community or that catchment and are clear as to what their role actually is—are they the control entity, are they an implementing body? Those rules have to be very clear. Today, those catchment bodies have quite airy-fairy positions as to what role they are actually playing.

Mr ADAMS—It is an evolutionary thing.

Mr Finney—The potential is there.

Mr ADAMS—We have been looking at developing policy, and catchments have come together just to fix up some of the degradation at the bottom end of the catchment or whatever.

Mrs Campbell—I think the problem is that we have been working with a lot of emphasis on the water-sharing plan area, which has been under ministers' plans. By being under a ministers' plan regime, we actually moved away when we could have gone back and looked at legislative issues and actually walked through and said, 'You've got complying legislation.' Our catchment issues were not defined before we started that process. That is the big issue. Five years ago we should have been where we are today or trying to be today—where we had our catchment plans in place, we actually understood the bigger picture and we had an umbrella sitting over us. Then we could have taken it down to the very local level, at the water-sharing plan level. Having that ownership at the catchment area, we would have been able to address broader issues and have the skills base there.

Mr Finney—The same applies to the vegetation management plans. They could have come under that umbrella. You had two planning processes that were regulatory and then you had another one that was visionary, I guess—catchment blueprints rather than a regulatory process.

Mr WINDSOR—This inquiry is about what impact the Commonwealth can have, and obviously you know the constitutional difficulties with the states et cetera. One of the things that the Commonwealth—or the Commonwealth minister—has been involved in and has the capacity to have some influence in is the national competition payments. As I understand it, it was said about 18 months ago that, with the catchment management group blueprints—which are starting to filter through the system now—the Commonwealth does have some capacity to withhold funds if those blueprints do not identify some of the things you were talking about earlier. Of the catchments that you have had experience with, do you know of any blueprint that

actually starts to identify some of those areas where the Commonwealth should withhold money?

Mr Finney—No, I am not aware of where the catchment management boards have identified where money should be withheld. I am aware of community concerns about how the priorities have been set for Commonwealth funding to the various catchment management boards. One example, I believe, was the Murumbidgee, and tree planting in the upper catchment there. The issue of withholding tranche payments has been around for a long time and it has been raised a number of times by irrigators with respect to COAG reforms. I have not heard it raised in terms of catchment management processes as yet, but we would support accountability for outcomes being held by the Commonwealth with the funding. That needs to be strengthened. When we have discussed it previously, we understood that the legislation did not allow the Commonwealth to do that, but we have heard discussion that there is a desire to make that legislation more effective. Maybe you could explain it to us.

Mr WINDSOR—The federal minister is on record as saying that, if the blueprints do not identify property rights, for instance, that would be a trigger for withholding money from the states.

Mrs Campbell—A couple of times, in previous submissions through the water-sharing plan process, we have participated in requesting the federal government to withhold those tranche payments. Each time we have had a report come back from the authority, the NCC, that says that the state governments are working within their legislation and that it has been an ineffective request on our behalf as irrigators. If we were able to say that these blueprints and their obligations had meat in them, that would be a very big plus.

Mr WINDSOR—Is it proper, Madam Chair, for the secretariat to get the *Hansard* on what has been said at a federal level? It is a key issue. This is a Commonwealth inquiry and most of the arrangements over water are at a state level. We are trying to determine what people want the Commonwealth to do in relation to this. One of the things we keep coming back to is that the Commonwealth might provide the leadership and/or the money. In fact it is supplying some of the money now—but to the states, who are not doing what is expected by the Commonwealth.

Mrs Campbell—We recognise that the Commonwealth does not have the legislative powers. That has been pointed out to us several times by state legislators in South Australia and Victoria and other places. It has been going on I think since 1912, and some of the decisions that have been made in water management throughout the basin have been gathering pace over time since that date. But we are living with legislation. What would we like the government to do? We would like the government to look at the legislation and unwind it. That would be a starting point, but it is not practical. One thing we think the federal government can have a major impact on is getting us security of tenure. At the moment, there is state legislation that actually has different tenure periods. Most of them are short term. We have been working with the federal government to try to get a commonality of tenure across the Murray-Darling river basin so that when we look at our rights of water we start off with a relatively common base. That gives us security in being able to deal with the water in the most efficient manner. That is a starting point that we think is a high priority. It sort of says that you have got security, you know what you have got and you know what your rights are to be able to use it, and you go from there.

If we could get that to function and coordinate government work—both local and state; the role of local government has not been as strong as we would have liked it to be in the past—then we could get cooperation that says: 'We can get commonality of right, and fair use of that right, and security for the longer term.' That is a big point. It then comes down to state legislation in the catchment areas to say how you access that right—what you do to actually get the water. That is where the managers of catchments come into major play, because they should be looking at our infrastructure, the efficiencies of how the water is currently being delivered, how sensitive the environment is in a particular area, how many farmers there are—that is, whether the industry is intense—and whether we have been progressive to date and proactive about managing the future. If we were to look at all of that at that level, then we could say, 'The rules and regulation are common, so we do not have conflict'—there is conflict at the moment at state borders—and we could work through the whole river as a whole-of management process.

At the moment, the Murray-Darling river system has an overall layer of communication, which is federally funded, but there is no coordination below that because of state responsibilities. We have seen enormous efforts in the last couple of months to try to get that to function, but we have been going since 1994, so we have a catch-up issue. That catch-up issue is intellectual debate. If we could discuss things easily, instead of people seeing things from their own slanted point of view, then we would be able to see how to share this resource and ensure that we are productive from it—that is, that we end up with healthy, working rivers. The word we require in that equation is a 'working' river.

Mr SECKER—Security of tenure is a very important issue. I will give you a personal example. On a Sunday nine years ago I went to buy a farm which had a fair bit of irrigation on it. I asked the real estate agent, 'The present owners have a licence for so many hectares, but what is my guarantee?' He said that he could not give me a guarantee. There I was, about to sign a $1 million cheque, and I did not know whether the irrigation was guaranteed. That is one hell of a risk. It was not until I found the public servant I needed to, on the Sunday, and got her word that they always give it over that I was then game to sign it. If I had had to borrow from a bank or organise things, that would have been a different story.

Mrs Campbell—On that point, recently there has been an assessment done by a representative of the National Australia Bank that has said that the current process of reform in New South Wales reduces the tenure. He assessed that there would be 30 per cent less liquidity available to the farmer over the time of licence because they would have to amortise their loans, which actually restricts their ability to access working capital. You could look at the core capital issue, but when it came down to going through a 10-year cycle, with potential droughts and so on, they saw the liquidity issue for a farmer being dramatically impacted by not being able to get a longer tenure, with responsibilities.

Mr Kahlbetzer—The length of tenure is obviously highly relevant. At the moment, there is no tenure. People have been working off the word of the state government, and the licences within an area historically are renewed every three years. In that three-year process, you run some sort of risk as to whether renewal will occur. We are at the point now of asking: what are we going to be left with and, in going forward, what is a fair and equitable way of managing this, given that both federal and state governments have encouraged the irrigation industry to spend billions of dollars to create the very strong industry that it is, especially in rural New South Wales? I think there has been more a moral position than a legal position which the irrigation

industry has been following. Given the emotion, the feeling and some of the different sides to the equation in the environmental debate, without some sort of tenure and security for the future it is going to be very difficult to get improvements in the efficiency of the irrigation industry and continuity of investments in processing within the general communities as well.

Mrs Campbell—I would like to say in support of that that Mr Anderson was making the comment as recently as yesterday, when I was in Canberra, that without economic security you cannot actually expect the farmer to look to the environment and say, 'We are in partnership with you,' because they do not see that then as something that they are actually being given stewardship of because they are not being given ownership of it to participate with.

Mr SECKER—Exactly, if they cannot hand it on to their kids.

Mrs Campbell—In that respect, most farmers want to say, 'My farming outlook is a long-term sustainable one that is compatible with what people's expectations are for our environment.' I do not think we have an impasse on what our goals are—it is basically about how you share it. If we are going to have to pass back from the farming community to the environmental area then what we are really saying is that if you do that it either has to be done in a way so that there is compensation that allows people to easily move across into that light or, alternatively, the public have to pay, which means you are taking away productivity.

Mr ADAMS—I do not disagree. You are probably right—there are a lot of ideas that are similar in this debate. Somehow, we do not seem to be able to pull them together to move forward in a lot of ways. There is the certainty issue, for example. I look at fishermen, who get a licence every year to catch so many fish. If the science is right the amount of fish they catch will be right. They work on a yearly basis and they argue about banks lending them money for new gear and modern technology and innovation. I guess the guarantee thing is not easy, and in this whole debate there has not been a legal connection between water and land, which is what is emerging. This debate is about land management, basically, and how we manage land, and maybe there is a change happening in the current way that we do things or the way we want to do things in the future. That seems to be emerging, and it will be the urban people, I suppose, that will help drive that because of the numbers that exist there. I guess my questions are: how do we get to some of the areas that you talk about? How do we set the goals? How do we get your particular concerns into a position where we can move forward?

Mrs Campbell—With respect to the tenure issue, at the moment we are trying to develop in partnership with government—and we need the Commonwealth government to help us get through this—a definition of what people perceive to be a right. What is it? If we were to get that defined we could go forward from there because we would then understand what we are actually talking about. Is it a share of the dam? Ideally, it would be great if we had a dam and there was, for example, a productive share of that dam and an environmental share of that dam and that worked out the equation. If you actually moved that equation then somehow or other you would have to work out how that worked financially. There is a lot of work being done around that. Ideally, that would give people certainty.

It then rolls into whether you have a piece of paper that says you have got a certificate, like a land title, or whether somebody might say you had a certificate like a share title. That is the big difference: you could have one that is like a piece of land, but if it were to be like a share then it

could change, because people could raise a rights issue tomorrow or they could change the formula. So if you start off on the basis of saying, 'That is what we have got,' then if that particular infrastructure requires restoration or whatever then that is what the catchment area would have to work out—that is, how do you share that cost? How does it increase? Does it give more water because of the way you manage it? How do you actually hold the water? How do you deliver it? How do we on-farm manage it? There are a lot of issues there that we can actually address together to improve how we work with the facility we have currently.

Mr ADAMS—But isn't the other side of the argument the worry that if those ideas are worked out too early there will not be enough water to overcome the stressed rivers and areas of concern that people have about environmental considerations?

Mrs Campbell—If those equations had to move in that direction, all we say is that the public should pay. The government has issued these licences in recent years. This is not an old history; it is a very recent history. So we have actually given something that has pioneered an infrastructure. We have done that together and, at this point in time, if it has to be rebased, all we are saying is, 'Let's look at the equity of rebasing it. How do we achieve it and hold a national productivity base?'

Mr Kahlbetzer—Earlier, you mentioned the fishing industry. What you said was exactly right: in New South Wales there has been a precedent set whereby they have paid compensation where there have been reductions in quota given. I guess what we are saying is that we believe it is only fair and equitable that irrigation receives that same treatment.

Mr Finney—I think it is important that, in establishing that access and security, there should be equity in any changes. Any change will happen only if there is good science to show the need or the benefit. If the community as a whole can see the cost of making that change for that environmental benefit, they will start to weigh it all up—is that really what we want? We have seen a minimum of 10 per cent loss in our average available water across New South Wales and we have not seen any structural adjustment and we have not seen any environmental benefit. So when you talk about the Living Murray initiative and a 15 per cent change in available water, entitlement or whatever, you can understand why we do not have confidence if the people who are responsible for driving that change are not accountable in having to show environmental outcomes and the true costs.

Mr Kahlbetzer—You need to understand that, from our company's perspective, that loss to date is around $20 million of asset value that we are not able to access. That is a stranded asset.

Mr ADAMS—People would argue that you will protect your company's capital—and that is fair enough; that is legitimate—and would ask what contribution your company makes to the environment through resource management et cetera.

Mr Kahlbetzer—That is a good argument.

Mr ADAMS—They have changed the way that we farm and the way that we manage land in Australia, and the pressure is on to say that we have to change that. Whether that is right or not, I am not debating—but that is where the pressure is, and water comes into that. I would value your views on that.

Mr Finney—That is an important point. As we said at the beginning, our view is about a balanced outcome between our production and the environment. I guess, historically, farmers would say that they are good stewards of the land, but knowledge changes and obviously we have to change with that. It is one of the Commonwealth's roles to provide that knowledge and support for change, whether it is support on the ground or for extension teams or R&D—plus the funding that we have talked about. That is critical to making those changes. Farmers will provide public benefit in terms of environmental outcomes if they see that there are stewardship issues for their own production. But when that cost becomes so great that it is beyond their capacity, that is where we see the role of Commonwealth and state funding. That could be through incentives, rather than regulation. I think that would be a far better outcome.

Mr Kahlbetzer—As Bruce said earlier, we have already contributed to the environment 10 per cent of our asset base. That is like saying that every house in Sydney should give 10 per cent of their backyard to planting vegetation. If that happened in Sydney you would have an uproar.

Mrs Campbell—I work outside our own company as chairman of Cotton Australia and also on the executive of National Farmers. What is quite disappointing in this debate is that there is a perception by some people—and we say 'some' people—that the smaller farmer will not be able to survive this debate. That is where it is even more important to us because it impacts on our tradition and our culture and it impacts on our communities. We are only a conglomerate of 17 farms so when you break us up into those areas, the thing that actually impacts us is that we have the responsibility to geographically manage our farms well. But we are only integrating with the community. If we survive and that community of farmers does not survive, it is very inequitable to say, 'You can survive this,' if there is an expectation you can put your hand in your pocket and you can pay for it when someone down the road is doing exactly the same thing but you are going to adjust them out of the industry.

That is where I feel that the Commonwealth government have a responsibility to work out how they want to see regional Australia. If they think that regional Australia is a combination of farming activities that complement the geographic base and we can economically, socially and environmentally responsibly produce from those geographic bases, that gives the outcome that we are all looking for, as opposed to the unbalanced debate where you say, 'The environmentalists are telling us that we are bastardising the land. Therefore, stop, and we will see later on whether we were right or wrong.' We are really saying that we already know that today we have taken some steps to minimise damage. Some people might say that they are mechanica, but what is wrong with a mechanical solution today that could actually minimise another issue? Some people who are purists say, 'That is not a long-term solution,' but in our world I am sure that some of those mechanical solutions will be long term.

Mr Kahlbetzer—It comes back to that definition of a working river.

Mrs Campbell—If we have responsibility for afforestation it should be the right afforestation. If we have responsibility for our river management we should all understand it and share it appropriately.

Mr Kahlbetzer—We have got clear goals for what we are after.

Mrs Campbell—If you look at us as a larger irrigator, we have off-river storage facilities where other people do not.

Mr ADAMS—How much is that? How much storage do you have?

Mr Finney—We have approximately 100,000 megalitres.

Mrs Campbell—It is spread across a few of our farms, but we have that.

Mr Kahlbetzer—Six catchments.

Mrs Campbell—But nobody has sat down with us and said, 'How can we manage that off-river storage in partnership with you,' or, 'We can utilise them better. Are there issues that, as irrigators, they can be better utilised in this total debate?'

Mr Finney—We have invited participation from state governments to look at opportunities to share that resource.

Mrs Campbell—In some ways, that can be to our benefit as well as the environment's benefit. It can be for lots of issues. So there are a lot of things that have not been explored yet that we could do better together as we go down the line.

Mr ADAMS—We have received evidence of some of that today: about the best times to take water out or sometimes you leave it or how wetlands might need water or later on when an irrigator wants it they might not.

Mr Kahlbetzer—It is a regime of managing your flow rate.

Mrs Campbell—Maybe you raise the level of those dams. There are things that one can do.

Mr SECKER—How have you made cotton growing more efficient up there—for instance, with your water? What sorts of water efficiency gains have you made?

Mrs Campbell—I will pass this to Bruce. He is our expert in this. He has an agronomy background; I have an accounting background. But I can say that when we first started growing cotton in 1986 on the Macquarie our economic expectations were to use over 11 megs per hectare and to gain 2.3 bales to the acre. Today, our expectations are that we should not be using more than 8.5 megs to the hectare and our yield should be closer to 3½ to four bales to the acre. We have achieved those increases.

Mr SECKER—That is close to a 100 per cent increase in efficiency on those figures.

Mrs Campbell—Not quite, but that is what we have achieved over that time span and that was during the nineties. Hopefully we can achieve more, but I will pass to Bruce to talk about how.

CHAIR—I am going to interrupt because we are going to lose our quorum and we will go into a subcommittee for a few minutes.

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

That this committee authorises publication of the proof transcript of the evidence given before it at public hearing this day, and that a subcommittee consisting of Patrick Secker and Kay Elson be appointed to take evidence.

Mr SECKER—Mr Finney, could you describe how you come to that? Is it just by watering less, or are you using more efficient—

Mr Finney—It is a combination of management strategies: we employ tail water return systems, so that the whole amount of water per irrigation is recycled and we have no losses; we have better scheduling of irrigations, using more advanced tools for measuring soil water; we have better soil management, so we have changed our management practices in order to improve soil health and their productivity; we have changed our management of insects to improve the capacity of the plant to yield. Probably one of the most important things we have done is improve the varieties. The industry has improved the available varieties and their yield performance over that time. So it is a package—

Mr SECKER—Would you be using BT?

Mr Finney—Yes, 30 per cent of the industry area is planted to BT cotton, which is modified to be resistant to heliothios insects, and that has been a great tool for improving environmental management of cotton as a whole. There are similar improvements in rice.

Mr SECKER—But you are still doing all flood irrigation—you have not tried subsurface irrigation yet? I would have thought a group like yours, which is big enough and has 20 per cent of the cottons, would be the ideal group to be doing the research.

Mrs Campbell—We are trialling that, and Bruce can inform you on the downsides of that with the kind of crop that we are using.

Mr Finney—We have an area of pressurised drip, a research level in this season of low pressure drip, which is quite interesting, and also sprinkler irrigation, with centre pivots and linear moves for irrigated cropping. We have been looking over time at the suitability of each irrigation system to the crop, the soil type and the location. We are trying to match those three factors together. You can get significant economic benefit from the high investment cost of sprinkler irrigation and drip, with a higher value crop obviously and on a soil type that is more suitable to draining and less efficient for flood irrigation. But where you have suitable soils—heavy clay soils, like in the north-west of New South Wales—the water use efficiency advantages of drip versus the economic cost results in a return that is not as good. It is probably negative, if anything. That is why in our heavy soils in the north-west we have focused on managing the slopes of the fields by levelling—

Mr SECKER—Increasing it, so gravity—

Mr Finney—and the run length, and making that system as efficient as possible. It is quite feasible to have irrigation farms on that soil type, with flood irrigation being 80 per cent efficient. The economic benefit of taking that from 80 per cent to 95 per cent with drip is questionable. It is cost prohibitive.

Mr SECKER—You have not tried subsurface irrigation yet?

Mr Finney—Yes, we have subsurface drip at Hillston on 130 hectares.

Mr SECKER—And it is not doing any good?

Mr Finney—No, it is doing very well. It is the economic cost of replacing existing flood irrigation that we are looking at.

Mr SECKER—That is right, which is what I was talking about earlier.

Mr Finney—It is more for new development that we would look at that alternative.

Mr Kahlbetzer—Talking about the north, that 80 per cent to 95 per cent would still be debatable. I do not think the difference would be that dramatic. When you speak to people who have trialled drip on both soil types in the north they say they have not seen much of a benefit at all, because they also have losses in the channels and storages et cetera. When you actually get to the edge of the field, the gains are not that great for those types of soils. Other soil types are—

Mr Finney—Generally what has happened is that the people who have made those savings in water have actually employed those savings to generate a higher yield, either on more hectares or on the same hectares.

Mr SECKER—You have had to reduce yours by 10 per cent, so, yes, you do not have any sorts of outside gains from your efficiency. If I could—

Mr Finney—No, we have managed to retain our productivity and our economic base through those efficiency gains.

Mr SECKER—I do not think I have seen a submission yet—and I am not trying to be too cynical—that has not said that decisions on water usage are to be on a sustainable basis. What is your understanding of a sustainable basis? Is it the reservoirs being at 50 per cent at the end of the irrigation season? Is it water flows being at certain levels?

Mrs Campbell—I think continuous accounting will take account of the knowledge—

Mr SECKER—What kind of accounting was that?

Mrs Campbell—What we call continuous accounting is basically where people get to carry over their water and when we actually get that as an expectation of how we manage the dams. That a dam will fill and be emptied every year is not an expectation. If we move away from that expectation and say, 'How do we manage our dams whereby we can get a sustainable level of productivity that satisfies the national interest of that commodity?'—if you talk to us as cotton producers and say, 'Okay, you can produce out of it and you'll get a million bales a year as the national crop'—you will actually probably kill the productivity of the industry. If we are going to be competitive in the international marketplace, there is a critical mass that we require so that we can actually supply that marketplace. Our industry is developed as an export industry, so wherever you look at your productive base you have to have vertically integrated infrastructure.

What sustainability is talking about is to say, 'If we are farmers and we can produce efficiently and compatibly with the environment, and cost effectively so that we can make a dollar at the end of it, that has to then be compatible with our infrastructures, it has to be compatible with the goal.' If the government said to us, 'We don't worry about the fact that you dropped those $3 billion of export trade and all those other things—

Mr SECKER—Not too many governments would say that, would they?

Mrs Campbell—That is right. If you have a higher priority—our environment has a higher priority—that whole infrastructure has to rebase and it is a vertically integrated industry. There are 36 cotton gins that actually support our production base.

Mr SECKER—You are not just talking about environmental sustainability; you are actually talking about industry sustainability as well—it is the whole gamut?

Mrs Campbell—The whole gamut of what you call sustainability. It is community sustainability and people, in more recent days, have used triple bottom line as the new jargon. Four years ago we were probably saying sustainability and tomorrow we will probably use another word, but if we could actually call it something at the moment, the jargon is triple bottom line, and look at the whole sustainability of a community: people, animals, water, river, salinity and birds living together.

Mr Kahlbetzer—The problem with this terminology of environmental sustainability is that not one government body has actually put down the objective goals of what they want and what they want to call environmental sustainability.

Mr SECKER—I am a little bit cynical about the phrase. I did not want to be, but I am because that is what comes out. Everyone says, 'We've got to be sustainable,' and I do not think they actually know what they are talking about. It sounds good.

Mr Kahlbetzer—And that is where my biggest issue sits with regard to water-sharing plans, the Living Murray: with science or the community saying, 'This is what I want to achieve, I think I need this to achieve it,' in 10 years time, if we have not achieved it, we will go back to step one and start again with something else. We are just trying to pull rabbits out of a hat thinking that this sounds good when potentially we actually do not have a problem in some areas, although in other areas I am sure we do. We are seeing that salinity levels in the Murray have not changed since the war but we have done a lot to decrease salinity through man-made activities. But we do definitely have problems with wetlands along the rivers dying off, like the river red gums. But part of that issue is that when we have big flows down the river, we are actually chopping them back so that other areas do not flood.

Mr SECKER—Exactly; that is what I said the other day. Flood mitigation actually should be part of the whole process.

Mr Kahlbetzer—These wetlands cannot flood every three years if every time there is a big flow we are chopping the top off so a town does not get flooded. We cannot say the environment is destroying itself if we are actually destroying it by our management of the river system. We are totally in conflict with what the right and left hands want us to do.

Mrs Campbell—Another farcical exercise that was just seen in its reality was that the water-sharing plans in New South Wales were going to be sanctioned and announced as practice on 1 July, and yet a week before that, and still today, nobody has given a definition of 'water' and 'land'. So you get the local government coming up and saying, 'I don't have a rateable base.' How destabilising is that for regional Australia?

Mr SECKER—The one that you have come up with is one of the better definitions I have heard.

CHAIR—I know time has run out for you, Patrick. Witnesses, I have a lot of questions that I wanted to ask today so would you mind if I sent them forward to you? Unfortunately I cannot keep the meeting going.

Mr Kahlbetzer—We can answer them for you here if you would rather that.

CHAIR—I know you could, but I have to take the answers as evidence and I cannot do that once I lose my quorum. Otherwise, I could sit here for the next two hours and ask you questions—and I would be happy to do that. While Patrick is still in the room, I will ask you these questions. What is your total entitlement of water? How much of that entitlement would be used for your four cotton farms. In other words I am asking you what your entitlement would be for the 17 farms and then for those other farms. I am trying to get a perspective on this because before our inquiry I do not think the word 'cotton' was mentioned on every occasion.

Mr Finney—Our total entitlement is of the order of 300,000 megalitres, of which a third is groundwater. Annually we would produce 15,000 to 20,000 hectares of cotton. That would require eight megalitres per hectare on average.

Mr Kahlbetzer—There is this continual discussion about what the crop is, whether it is cotton or rice. I do not actually see that as being part of the discussion. The way the history of water in New South Wales has worked is that there has been an entitlement given to you as a farmer, you have then received an allocation and then, by what governments say and by general business practice, you use that water in the most efficient manner that you possibly can. In each catchment that water use gets driven by what is the most profitable per megalitre usage of that water, so I do not necessarily think that just calling it cotton, grapes, rice or whatever achieves a whole lot. There might be other environmental issues which one of those crops may have. In rice, for instance, everyone says, 'It uses 15-plus megalitres of water a hectare. That is too much water.' But it is one of the most efficient crops in the world in respect of converting water into carbohydrates. Also, it is the only crop in Australia which is strictly regulated as to what ground you can actually plant the crop into. You need to be licensed and it needs to be checked. Maybe we need to tighten those regulations in some areas. That is fine, but we cannot just say, 'Rice is a bad crop because it uses a lot of water.' If we are the most efficient water users that grow that crop in the world, it cannot be a bad thing.

Mrs Campbell—That comes back to the point I made a moment ago. If governments say they do not want a rice crop, okay they do not want a rice crop. But that then means that you have rice mills, infrastructure, growers and towns that—

CHAIR—It is not easy to cut off an industry that produces so many jobs.

Mr Finney—We have responsibilities regardless of the crop. Irrigated agriculture has responsibilities—legal and community ones—as to how it manages the resource, so it is not just crop specific.

CHAIR—Thank you very much not only for your submission, because it has generated a lot of questions—and you will get a few more because there are some others that I particularly want answers to—but for the time you have given us by coming here today. We know what an important role you play in our export industry and we take seriously what you are saying. Our report should be wound up by about February. We will make sure that you get a copy of the report and its recommendations.

Subcommittee adjourned at 3.04 p.m.