



COMMONWEALTH OF AUSTRALIA

Proof Committee Hansard

SENATE

RURAL AND REGIONAL AFFAIRS AND TRANSPORT
REFERENCES COMMITTEE

Reference: Rural water usage in Australia

THURSDAY, 15 JULY 2004

SYDNEY

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SENATE

RURAL AND REGIONAL AFFAIRS AND TRANSPORT REFERENCES COMMITTEE

Thursday, 15 July 2004

Members: Senator Ridgeway (*Chair*), Senator Heffernan (*Deputy Chair*), Senators Buckland, McGauran, O'Brien and Stephens

Participating members: Senators Abetz, Allison, Boswell, Brown, Carr, Chapman, Colbeck, Coonan, Crossin, Eggleston, Evans, Faulkner, Ferguson, Ferris, Greig, Harradine, Harris, Hutchins, Knowles, Lees, Lightfoot, Mackay, Mason, Sandy Macdonald, Murphy, Payne, Santoro, Tchen, Tierney, Watson and Webber

Senators in attendance: Senators Buckland, Heffernan and Ridgeway

Terms of reference for the inquiry:

To inquire into and report on:

1. current rural industry based water resource usage;
2. options for optimising water resource usage for sustainable agriculture;
3. other matters of relevance that the committee may wish to inquire into and comment on that may arise during the course of the inquiry, including the findings and recommendations from other inquiries relevant to any of the issues in these terms of reference.
4. the Committee to make its report to the Senate on this matter by the last sitting day in 2003.

WITNESSES

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Committee met at 9.31 a.m.

CHAIR—I declare open this public hearing of the Senate Rural and Regional Affairs and Transport References Committee. The committee is inquiring into rural industry water use, and I welcome all here today. A *Hansard* transcript of the proceedings is being made. The committee has authorised the recording, broadcasting and rebroadcasting of these proceedings in accordance with the rules contained in the order of the Senate of 23 August 1990 concerning the broadcasting of committee proceedings.

Before the committee starts taking evidence, I place on record that all witnesses are protected by parliamentary privilege with respect to their submissions made to the committee and any evidence given. Any act by any person which may disadvantage a witness on account of evidence given by him or her before the Senate or a Senate committee is a breach of privilege. While the committee prefers to hear all evidence in public, the committee may agree to take evidence confidentially. If the committee takes confidential evidence, it may still publish or present all or part of that evidence to the Senate at a later date. The Senate also has the power to order production and/or publication of confidential evidence. The committee would consult the person whose evidence the committee is considering publishing before taking such action.

[9.33 a.m.]

EVANS, The Hon. David Mylor, (Private capacity)

CHAIR—Our first witness today is giving evidence via teleconference. Mr Evans, I invite you to make a short opening statement, and then we will go to committee questions.

Mr Evans—Firstly, thank you very much for the opportunity to say something on behalf of upper catchment farmers in the north-eastern part of Victoria. I will deal briefly with my submission, No. 12, and then also refer to a brief that is going to Senator Heffernan following a meeting in Wodonga in which he met with a number of landowners from that area. I think the committee may not yet have that brief, but it should be there very shortly. My submission will draw extensively on my own experience on my own farming property because I think it is typical of upper catchment areas. It is approximately 250 hectares in size. I run 140 cows, produce some sale hay and have an eight-hectare pine plantation and a small experimental cherry orchard.

Rainfall records show that from 1897 to 1918 the average rainfall here was 3628 points or 910 millimetres and from 1953 to 2002 it was 4149 points or 1055 millimetres, approximately a 15 per cent increase. Over the last five years, the average has been 3670 points or 920 millimetres, slightly above the 1897 to 1918 average, which of course was a dry period, and in the drought year of 2002 it was 2602 points. I state those figures simply to indicate the capacity to yield water which the property has and which many others in the upper north-east have.

In an average rainfall year about 2,640 megalitres of water fall as rainfall on my property. With a run-off yield of approximately 38 per cent, 1,000 megalitres per annum goes to the Murray system. The property slopes from east to west. There is a fall of 40 or 50 metres between the west and the east, and a well halfway up the slope rises and falls 10 metres per year between winter and summer. The water storage is in the topsoil. It acts very much like a sponge, and a dam put on that topsoil will behave in exactly the same way: it just will not hold water. The best sites for dams—and this is an important issue—are where deep gullies have cut down to the impervious topsoil. Dams built in the porous topsoil will simply leak. Under Victorian water law at the present, these best sites will be classified as waterways, with all the limitations they have.

I indicate that the white paper which was recently released by the Victorian government ignores the upper catchment submissions and needs. I suggest for equity that 20 per cent of sales water be set aside for the future use of upper catchment farmers. That equates to 10 per cent of the 1,050,000 megalitres of water yielded from private land east of the Hume Freeway in an average rainfall year. Any water set aside in this fashion will be taken up very slowly—it is not a major risk to irrigation farmers—and, until that time, it will continue downriver and form part of the sales pool. My estimate would be that at the most 10,000 or perhaps 20,000 megalitres would be taken up over the next 10 years, equivalent to a shower of rain over the irrigation areas.

The flood plains and valleys of the upper catchment have been used for intensive horticulture for well over 100 years—hops, vegetables, pome and stone fruits, berries, cut flowers, tobacco, dairying, lucerne hay and premium wine production. The potential for increased production is

enormous. The north-eastern agribusiness people have estimated that at risk is \$1.5 billion of future production. Natural rainfall provides much of the required moisture, and the porous nature of the soil, to which I have just referred, militates against salination. It is not an area subject to high salination. Losses through evaporation and seepage in the delivery channels are obviously significantly reduced, and water for irrigation is used much more efficiently and less wastefully nearer to its source—that is, in the upper catchment. And, of course, it is supplementary to natural rainfall.

Under current law in Victoria, development is very significantly deterred. Existing private dams, however, are licensed and their right to use stored water is secure. All rights in future have been removed by legislation. To build a dam you must first purchase a water right, even for water that has never left the farm. There is no absolute right of purchase. You first must find a willing seller, and then pay the market price for water, which previously was ours without purchase. Then there is the capital cost of building a dam and new environmental standards. I did refer in my submission to the Wentworth Group. I think it is probably a bit of a diversion and I will not go any further into that.

In addition to that, our cooperation is constantly being sought to carry out environmental protection works on our lands, such as fencing out streams, planting trees or installing troughs or dams so that stock do not drink from the streams. I have actually fenced, at my own expense, and planted trees along quite a bit of frontage of the main creek, the Boggy Creek. I have installed reticulated water in a number of paddocks, and there is a significant capital and recurrent cost for electricity and maintenance in those processes. Water from the flowing stream is not subject to breakdown; it is reliable. In summer I cannot afford to have the cattle without water for more than 24 hours, and I have a constant supervision problem.

Partnership on all these issues is a matter of trust. The manner in which my right to water on my property has been removed has severely damaged that trust. I now turn to the submission that we made to Bill Heffernan. I will refer to a section of that, which reiterates the point I have just made. New South Wales landowners have an as of right riparian water allocation of, we understand, eight per cent of water flow resulting from natural rainfall on their land available for irrigation. There is no such provision in Victoria. It was the strongly expressed view of those who met Senator Heffernan two weeks ago in Wodonga that an amount equal to 20 per cent of sales water should form an as of right pool to meet the riparian rights of upper catchment farmers, which the group believes equates to about 100,000 megalitres or 10 per cent of sales water.

The Baxter report, which was done by the Hon. Bill Baxter, a former minister for transport four or five years ago, proposed that a landowner should have a riparian right to store a proportion of the natural run-off water. I might mention that when the 1989 Water Act was put into place there was a committee of Minister Walsh, Lou Lieberman, from the Liberal Party, and Barry Steggal, from the National Party. I met with them at the time—I forgot to state that I was a member of parliament at that time—and I was promised that it would not affect the private water rights of upper landowner people. However, the Victorian farm dams legislation removed the previously existing right of a landowner to store for irrigation purposes any water moving across land before it entered a waterway. This was supposed to remove any ambiguity with regard to the definition of a waterway; in fact it removed the landowners' last undisputed right to irrigation water. Stock and domestic water remains as a right. No compensation was paid, in direct

negation of Prime Minister Howard's recently expressed view of the issue of no removal of rights without compensation.

Under the legislation, future on-farm irrigation storages would first require a landowner to purchase a water right from a water holder. Transitional arrangements provided for a subsidy on removal of that right of \$400 per megalitre for up to 50 megalitres of water per landowner to a maximum of 10,000 megalitres. That has been slightly increased. That is 2½ per cent of the current capital value of the water that goes from my farm in an average year. With regard to the take-up rate at this stage, I have a letter here from the Hon. Bill Baxter which says that five applications have been received from the north-east and most are less than 50 megalitres—they go from two to 80 megalitres. That indicates the amount of take-off and also it indicates, I think to some extent, the difficulty in getting at that water.

At the time that this was brought in, the going rate for water was \$800 per megalitre and the possibility that the government may purchase environmental water from willing sellers in future was published. The purchase of water rights to move back upstream will become increasingly difficult and much more expensive, putting at risk that \$1.5 billion of development that I referred to a minute ago. The cost of a dam then has to be added to it, expected to be between \$1,000 and \$1,500 per megalitre. The most efficient site, due to ground porosity—the only practical site in many instances—will be on an existing waterway with likely onerous or, indeed, impossible conditions to be met.

I have already referred to the north-east agribusiness report indicating that as much as \$1.5 billion in future production could be jeopardised. Irrigation in the upper catchment is more efficient than in the dry gravity areas, it is supplementary, and I have referred to the sorts of things that we grow up in the top area. I have referred also to the fact that 1.05 million megalitres of water is yielded from private land east of the Hume Freeway. More importantly, water right holders in the Murray gravity irrigation areas of Victoria regularly have an opportunity to access up to 100 per cent of water sales, and Goulburn irrigators—although it has been pretty dry over the last few years—also regularly access similar sales. This sale of medium security water is now part of a deal under which 80 per cent of that sale of medium security water will be given to these irrigation gravity farmers as a tradable right provided 20 per cent of sales water is retained for environmental flows.

The right to store water should be proportional to average rainfall—that is what we are proposing—and to the area of land held and not be transferable. The rights of immediate neighbours downstream would, as now, be protected by summer flow and planning provisions. Gravity irrigators—and, indeed, the VFF, because I have it in a letter from Paul Weller—will claim that downstream irrigators have built their business on the availability of water from all sources, including private land—or maybe. That is not an excuse to totally ignore any rights of those on whose land the water originates. As I said, a light shower will just about do it.

Increasingly over the years the water authorities have relied on the 1886 Water Act and seized possession of water by a more and more stringent interpretation of the definition of 'waterway' until virtually any flowing water anywhere was deemed to be in a waterway—and, of course, even water flowing across land not in a waterway has now been taken. If it moves one millimetre on my place, I no longer own it. I have read Deakin's speech in 1886, with the introduction of the 1886 act, and he refers to water flowing through the farm, not from the farm, and to water

barons—he did not call them that, but people exercising a right through riparian rights to take up all the water and stop anyone else getting it. That was the intention of the 1886 act, and I think that has been very much set aside by current provisions and interpretations. Those are basically the things that I wanted to refer to and I am happy to try to answer any questions.

CHAIR—Thank you. We also have a supplementary submission from you—12A—and I think you probably covered most things in that submission in your comments. Is there anything in particular you want to say to the committee about the Victorian government's consultation paper entitled *Securing our water future* as it affects you?

Mr Evans—I was certainly involved in a number of submissions to that. One was with the North East Catchment Management Authority as the coordinating body, where water users and landowners from right throughout the north-east met to make a submission suggesting that some water rights be returned to upper catchment farmers. I made a similar submission, which I wrote for the Victorian Farmers Federation. As a total aside, I am chairman of the board of an aged people's home with 250 residents and 120 staff in Wangaratta. We put in a submission with regard to the use of drainage and sullage water for recycling in that area. To the best of my knowledge, the important submissions are from the VFF in the upper catchment and NECMA, and both of those appear to have been ignored in the white paper. I obtained a copy yesterday evening and have only just read what I would regard as the executive summary, so I have not got into the details of the report yet—it is 160 or 170 pages. But it just appears to me that the upper catchment has been totally and absolutely ignored in the white paper by the government.

Senator HEFFERNAN—I think it would be fair to say that the committee understands the issue. Certainly I have a view that you blokes have been duded, but I have a couple of questions. We put some of this to the department yesterday. As I said to you blokes in Wodonga, when the original licences were handed out to the downstream blokes they really did not cost a lot. In fact, in some areas they were 30 or 40 quid or something, and they are now worth a million dollars. We suggested to the department that maybe a solution would be to allocate licences to some fellows up the river in the same situation as yours. But the department said, 'Where would that stop if you started to hand them out?' There would be this huge demand for them because they would be worth so much. I guess the only way you could overcome that, perhaps, would be that they be made non-tradable and attached to the particular piece of land. Do you have any view on the limitation? Would it be just opening Pandora's box if this allocation were made to you fellows—everyone would jump in and take up the full allocation straightaway? How would we overcome that?

Mr Evans—When we discussed it in Wodonga, I and others suggested that it should be non-tradable. The right to store water should be proportionate to the average rainfall in the area of land it held and not be transferable. The rights of immediate downstream neighbours would, as now, be protected by summer flow and planning provisions. So, yes, we are not suggesting that it be a tradable commodity, which is the case with the downstream irrigators, and that would put in place limitations. The farm dams legislation, which provided a subsidy for those who did decide to put in dams following the passage of that legislation, has had a very slow take-up, and I think that is indicative of how much water is likely to be taken up.

Much of the land in the upper catchment is not suitable for irrigation—it is fairly limited—but it is a very good niche market. I think those sorts of practical considerations would limit the

take-up. We have certainly suggested that it should be kept to a percentage only—and I am talking on behalf of the people who met with you in Wodonga a week or two ago—and be a percentage only of the total water that comes from private land, not the water that comes from public land. Thirty-eight per cent of the water into the Murray-Darling comes from the upper north-east, and most of that is from public land: a percentage only comes from private land; the rest, of course, comes from the Snowy River. Those practical considerations would, I think, limit any take-up, particularly if it were either tied to the land or tied to rainfall et cetera and, particularly, were non-transferable.

Senator HEFFERNAN—To use a hypothetical situation as an example: say I have a 10-meg licence and I build 10-meg dam and, to ensure that it does not leak, I build a waterway.

Mr Evans—Yes.

Senator HEFFERNAN—How do we regulate the 10-megalitre licence given that, in any waterway in any normal year, there would probably be two or three times the flow? In other words, you would keep the 10-megalitre dam topped up and you would probably use 15 megalitres. How do we deal with that?

Mr Evans—I might be a little controversial in saying this, but I think there is no reason why a meter should not be put on. We have meters for every other area. You have your entitlement and that is put through a meter. I have a dam licence here from 1972, which I gave to you that day in Wodonga. It indicated that, between November and April, I was supposed to let that water go through. People who put dams in at that stage—and I will be quite honest about it—used not to do that. It was not policed. That would need to be policed and handled through a form of metering or whatever. I do not think that is unreasonable. We are in a water shortage and a water stressed time at this stage and I think we have to accept those disciplines. That does not mean that, because of that particular difficulty, the rights of other catchment farmers to store the natural rainfall that never leaves their property should be totally removed.

Senator HEFFERNAN—One of the other issues we raised yesterday, which is an issue that will have to be dealt with under the National Water Initiative, is the harmonisation of the various regimes of water—in other words, harmonising what Victoria does with New South Wales and what New South Wales does with Queensland. As you know, in Wodonga I said, ‘Here you blokes are: you can’t capture water and you’ve lost your riparian right, and New South Wales has legislated to protect that.’ In Queensland we have one particular organisation that thinks it has a right to half of the entire catchment captured on their place.

Mr Evans—That nice little Cubbie house.

Senator HEFFERNAN—I am sympathetic with your cause and I am sure that we will be patient and have some recommendations from the committee. But in recent days, as you know, there has been some success and failure in EC applications from irrigators down the river. The Murray blokes say that normally they get a 200 per cent allocation of their entitlement and they are now arguing—this is how things get away on you—that they should have a successful EC application because this year they are going to get only 100 per cent of their water entitlement. They say that, without the 200 per cent allocation, they are not viable. The Goulburn blokes, who normally get 100 per cent, are going to get only 60 per cent or 50 per cent or whatever it is

and they have been successful. So there is some inbuilt thinking from a historical perspective that builds upon the case of the raw deal that you guys have had. Thank you for your application.

Senator BUCKLAND—Reading through your submission, I see that you say you cannot build a dam unless firstly you buy a water right to do so.

Mr Evans—That is right.

Senator BUCKLAND—If you want to catch 10 megalitres, you have to buy a 10-megalitre licence. What happens when you have the right to harvest water from a creek or river?

Mr Evans—Before I can harvest water from a creek or river I have to have a licence.

Senator BUCKLAND—You need a licence?

Mr Evans—Yes, that is right. If I want to build a dam I have to buy a water right—not a licence, a water right—from downstream and then I can store the water. In point of fact, there is a slight advantage. I think that buying one megalitre gives me about 1.2 megalitres of storage right. As I have indicated to Senator Heffernan, that does not give me the right to store summer flows. I would expect to have to let those go downstream. But I have to buy it before I can build a dam in the future. Dams that are already in existence are not caught by this particular provision. They are part of the water right that the gravity irrigators have. It is new dams that I am concerned about.

Senator BUCKLAND—I am not suggesting you would do this and I would not even like to go into the economics or the sense of it, but could you transfer your water harvest right to a right to capture water from the land?

Mr Evans—No, you cannot. What I have suggested here—and some may disagree with me—is that it should not be a transferable water right. I was a member of the Public Bodies Review Committee which in 1983 recommended transferability of water entitlement. That came in around 1990, I think. That was when the nexus between land and water was broken and water became a tradable right with a value. Up until that time it added to the value of the land but did not have a separate tradable right.

I am not suggesting that the water that falls on my property, and which might be part of any right I may have from what we have suggested as a water pool of 10 per cent of the water that goes from private land, be transferable at all. It would be nice to have it, but I feel that it would be fairer to those downstream if it were not the case. Any change in the amount of water that goes downstream, because of the slow take-up in the upper catchment areas, will be extremely slow. Any farmer knows that you have to build your business according to the seasonal conditions. I run my cattle farm on the basis that I will have an average season. If I do not have an average season it means I grow less grass and have less feed for my cattle, and my way of overcoming that is by having a hayshed in which I store fodder. I do it in that fashion. In the same way the irrigation farmers have to adjust their business according to variations that they can reasonably expect in seasonal conditions. You cannot have total security. Water stored in the likes of Eildon, Hume and Dartmouth dams gives a much better security but is not absolute.

Senator BUCKLAND—I have to say, Mr Evans, that I am finding it hard to ask you questions, because your written submission and the verbal submission this morning are not only interesting but also cover everything I want to ask you, but I will press on anyway.

Mr Evans—Thank you very much. I am pleased it does that.

Senator BUCKLAND—You talk about the watercourses. I have a particular interest and I will not go into that, but how do you describe a watercourse? I do not think you are talking of a grooved out creek that runs dry most of the time and has water in it for a bit of the time. What do you describe as a watercourse?

Mr Evans—It is defined within the act as having a defined bed and banks. That means that you have an obvious bank and water flows through it for some or all of the year. That definition is imprecise, and that has always been something of a difficulty. As I indicated in my submission, that difficulty of definition has been used by the water authorities to more and more capture the water that used to be able to be available for private landowners to store on their property, except between November and April. Then the farm dams legislation proposed to take all that indecision out by saying that waterways were no longer important, and they took away all the rights of the upper catchment people in doing so. But when you want to put a dam on it, a waterway is likely to be subjected to much more stringent environmental provisions than, say, a turkey nest dam on your property. I have indicated that a turkey nest on my property would probably leak like a sieve so I have to go into a waterway, and that could be used to inhibit my ability to store water on my property, which effectively means that more of that water goes on to form part of the sales pool. It is income earning for, for example, Goulburn-Murray Water.

Senator BUCKLAND—That is interesting, because, under one definition of a watercourse, a low spot on a slight slope where, when there is heavy rain, water would flow down to what I would determine as a creek not a watercourse—

Mr Evans—So would I.

Senator BUCKLAND—would not be a watercourse, because there are no defined boundaries to it, but in another definition you could not dam that flow because it is a watercourse.

Mr Evans—That is exactly right, and that is one of the problems with it. What we are saying is that, as of right, you should be able to put it on the most efficient site on your property, which may well be what is defined as a waterway. That also deals with the difficulties of the definition of a waterway. For environmental concerns, that is fine. There is no problem with that whatsoever.

Senator BUCKLAND—That is interesting. So if you were then to buy a right to store water and build a dam and it were to go onto one of those areas where in wet periods water runs down to the creek, you would dam that off?

Mr Evans—Yes.

Senator BUCKLAND—Would you then have to make provision by regulation for some of that water to go through to the creek in its natural flow?

Mr Evans—Our position up until now—and there is no reason it should not continue to be our position—has been that the flows between November and April should continue on down. One of the reasons for that initially of course was to prevent you robbing your neighbour of all his stock and domestic water. There were some bushrangers, apart from the Kelly gang, around in the 1880s and 1890s—and Ned, by the way, worked for my grandfather, so I learnt a few things—

Senator BUCKLAND—There are some around today, I think, too.

Mr Evans—I think you are right; you are quite correct. I know a couple. People would lock off somebody else's water supply, make their land less valuable and then say, 'Look, Fred, I'll buy it from you—at a discounted price, of course, because you've got no water on it.' That was done. One of the reasons for ensuring that water continued on down was to stop that sort of practice.

Senator HEFFERNAN—Just remind me, Mr Evans, of what the estimated run-off of the private land in the area to which we are referring is.

Mr Evans—It is 1,050,000 megalitres—whatever that is in gicalitres or litres. That was published by Campbell Fitzpatrick from the department of natural resources two or three years ago. I have never seen it in an average year.

Senator HEFFERNAN—You say there ought to be set aside 20 per cent of that estimated run-off. Just say, for instance, there was a cap—

Mr Evans—Ten per cent. I did say 20 per cent in the supplementary submission. The submission from the group that I was involved in in Wodonga is suggesting 10 per cent and 20 per cent of sale—

Senator HEFFERNAN—I am just about to talk you down to that. If we said 10 per cent—we would be talking 50 gicalitres—

Mr Evans—You would not have to buy that until you got to that cap. Over and above that cap, you would have to. It would come out of the sales pool. Effectively, it would reduce the amount of water for sales to the gravity irrigation. What we are saying is that the take-up would be so slow that the effect on the gravity irrigators would be probably no more than one or two per cent a year at the end of 10 years—

Senator HEFFERNAN—I understand that. But think about it in terms of harmonising the states. I think you should lower your sights 10 per cent and then negotiate. That was the main point that I wanted to make: I do not think you should continue to talk about 20 per cent, because we are trying—

Mr Evans—I know. I guess you can say it if you want to. In a sense, it is probably an ambit claim. My own view is that, whatever it is would be far less than that in practical terms.

Senator BUCKLAND—In relation to the preservation of the creeks that you have, with tree planting et cetera, what was the cause of you not seeking compensation for what you have done?

Mr Evans—I did not want to be beholden to anybody. I was quite prepared to do it. There were some advantages to me. By the way, the trees came via Landcare. We had very substantial damage in Boggy Creek, which is the one referred to. In 1993, there was a huge flood in the top areas—the biggest flood I have seen in my lifetime—and it did a huge amount of damage. I fenced it off so that it would repair. Over a period of time, with vegetation there, there will be a soil drop as floods come through. The land will in fact rehabilitate and hopefully I will have some timber there. I will crash graze it or control graze it, just to keep the vegetation down. That was the reason for it: I did not want to be beholden to anybody by getting any money from anybody else, because I felt that I was building up an obligation in the future.

Senator BUCKLAND—The final question I want to ask is: do you think the debate that is going in relation to water and the tradability of water is having an effect on investment and property values?

Mr Evans—I am not a land valuer and I am not a real estate agent, but the availability of water would certainly be an issue. I heard a gentleman from down further saying this morning on ABC radio that, because of concerns with respect to availability of irrigation water in the Goulburn Valley area, New Zealand farmers who had previously been coming across looking to buy dairy farms in the Goulburn Valley are now not so keen and they are going down into the Western District. That is just an indication—and I suspect it was overused. The issue is that summed up by the North-East Agribusiness Forum, who say that up to \$1.5 billion of future development could be put at risk.

What is happening at the moment is that water is being transferred from one use to another—from dairy farming into horticulture and perhaps to a certain extent from tobacco. Australia's tobacco is nearly all grown in the upper north-east now; very little is grown in Queensland. That transfer has been taking care of demand for the present time. Once that transfer ceases or slows down there will be a significant reduction in the ability of the very efficient upper catchment areas to develop, because water will become scarce, very expensive and, particularly if the government enters into the water market for environmental purposes—and they have signalled that they might—it will become very much harder to obtain.

Senator BUCKLAND—Thanks, Mr Evans, I appreciate that.

CHAIR—Thank you for providing assistance to the committee today, Mr Evans. A copy of the *Hansard* transcript will be available shortly and if you have any other issues or queries that you wish to raise with the committee you are certainly welcome to contact the secretariat. Again, on behalf of the committee, I thank you for appearing.

Mr Evans—Thank you for the opportunity.

Senator HEFFERNAN—Pray for rain.

[10.06 a.m.]

O'MALLY, Councillor Wayne Harold, Member, Executive of the Shires Association, Local Government and Shires Association of New South Wales

Councillor O'Mally—I would like to put an apology in for Councillor James Treloar. His plane got fogged in at Tamworth this morning and was not able to get out. Unfortunately, he has not been able to make it.

CHAIR—That is fine. I invite you to make some opening remarks before we go to questions.

Councillor O'Mally—In representing the shires and, in particular, rural towns and agricultural interests in the rural areas—local council is very much involved in those activities—I guess that the most important role that councils play and the No. 1 priority is the provision of water and sewerage services in rural and regional New South Wales towns. I cannot emphasise enough the importance of these rural towns needing a secure water supply. Councils have an obligation to provide this security and I believe, looking to the future, that this can be achieved through improved efficiency: more efficient water use; re-use of any available water, whether it be sewage, waste water or storm water; and more storage facilities and capacity, which may be needed in some areas.

The current drought—unfortunately, I have to say the current drought because it is ongoing and is not showing much let-up at the moment—has made this very clear. Coming to Sydney today has reinforced the idea that Sydney is certainly feeling the grip of the drought too. It is being pressured by increasing growth and I believe this is another very important reason why it is absolutely essential for rural towns throughout the state to have secure water supplies so as not to put further pressure on Sydney and on the coastal areas' water supplies. I participated in an NRAC meeting last week, and there is great concern being expressed at high government levels, certainly in New South Wales, about the pressures that are being put on coastal water supplies by rapidly expanding coastal development.

I mentioned that there may be a need to supply and secure more water supplies by additional storage. This, if planned properly and in strategic places throughout the state, would allow the storages to fill in good rainfall years. Australia is a land of extremes. I think it has become very clear to us all that we have a boom and bust cycle, whether we are talking about commodity prices or rainfall. In times of plenty, as far as rainfall is concerned, we have an obligation to plan better for securing and storing excess water.

I come from the west of the state, on the Darling River. When the Barwon-Darling is in flood it carries huge volumes of water—to the extent of the likes of the 1974 and 1976 floods. In any one day, 500,000 megs go past Bourke in the Barwon-Darling River—a western inland river. That is equivalent to the volume of water in Sydney Harbour, so it is pretty impressive. The river can get up to 15 or 20 miles wide without any problems. To have adequate storages strategically placed to store a fraction of that water in high rainfall years and high rainfall events makes good sense in looking to the future. It can be done with an absolutely minimal impact on the environment. You could put fairly large quantities into storage, and you are talking probably a

couple of inches off the top of those flows. That would certainly not have much of an impact on a 15- to 20-mile river. That seriously has to be looked at in the future. I know some states have a policy of not creating more dams or more storage areas, but we have to face facts. This current drought has highlighted the fact that we need to seriously look at that situation.

One of the other areas of great concern is evaporation. In lesser rainfall periods, and even in normal times, evaporation is a huge factor. The further west you go—and when you go into areas with higher temperatures—the bigger a factor it is. If I can refer to the west of the state again, moving from north to south there is an average of around 1½ metres of evaporation per year at the top end and closer to 2½ metres down at the Menindee Lakes, for example. I believe there is an opportunity for huge efficiency gains to be made as far as the water supply situation goes. Not only for town water supplies but for agriculture generally we need to have much more research and engineering activity done on evaporation.

I raise the Menindee Lakes again because around a third of their storage capacity is lost due to evaporation each year. Menindee Lakes make up a series of relatively shallow lakes, where the water literally goes up into the air. When we are talking about supplying a contribution from the Barwon-Darling into the Murray system—into South Australia and that western area of the state in particular—we need to be aware that losing those quantities of water through evaporation has a big impact on the overall water supply, which we all have an obligation to see through to the bottom of any river system. So I believe we need to target evaporation in a big way, and that will have applications throughout Australia as far as water savings go.

The recent National Water Initiative decision to get agreement between the states was very much a step in the right direction in bringing the states together to address broader water issues and recognise water property rights. But that has to be ongoing, and we have a couple of states that are not too keen to join that initiative. That brings me to what is happening with the Condamine-Balonne in south-west Queensland. That huge development is really an over development of a relatively small river system. I admit that I favour responsible irrigation because of the economic benefits it brings to our local government areas throughout the state, but I believe it has to be responsible. That is one area where nobody in their wildest dreams could say there has been responsible development. The Queensland government has to address that issue urgently.

There is a water-sharing plan for that area on the table at the moment. I know the New South Wales government has taken exception to it, and certainly all the people living out in western New South Wales who have been impacted by it have taken exception to it. My general impression of the water-sharing arrangement for that south-west area of Queensland is that it is pretty much status quo, more of the same, and it has opportunities for even further expansion of harvesting out of bank flooding. That really is not realistic, given the extent of the development that has gone on up there. The river cannot support it and it is not sustainable. The Queensland government has to address, as a matter of urgency, the situation it has created by allowing this development to take place up there. You cannot blame the individual property holders, the irrigators, as such. They have only acted, to the best of my knowledge, within the law of Queensland at the time. It is the government that must accept responsibility up there for letting something happen that really is not sustainable and is impacting throughout the whole Murray Darling system, right down into South Australia.

An example I can give of what has happened there is the January flow event of this year. After having been through a couple of years of virtually no flow in those river systems, or very little flow, in January there was in excess of 500,000 megs that came past St George, and something like 69,000 megs, or thereabouts, made it to the Queensland border. That is a distance of only about 100 miles. The bulk of the flow in that river system was diverted or pumped by irrigation—quite legally, I might add, under the current rules. That is really not acceptable and cannot be allowed to continue, because the impact from that kind of activity is just too great.

I want to move on to the direct concerns of local governments. Country towns' water, sewage and supply schemes are very necessary projects but, unfortunately, while a lot of councils and town suppliers are trying to become more efficient, ageing infrastructures are a major impediment to that happening. Governments generally have to recognise that there is much more funding required for water and sewage infrastructure in rural and country towns. Local communities cannot bear those types of cost alone. Their funding needs to be supplemented to a large degree by general government funding so that efficiencies can be created and programs put in place for the re-use of water and re-use of sewage water. All sorts of opportunities exist there, provided funding is available for those increased efficiencies.

I must mention that in some areas salinity is a problem. It has to be addressed where it is a problem and becoming a greater problem in the overall planning of water initiatives, efficiencies and use as far as town supplies go. There are some towns and cities in New South Wales where it is becoming an increasing problem, and also in some land areas. By the same token, I do not think it is as widespread as some people would have you believe. It is certainly not the case that it exists right across the state.

As far as town water supplies go, looking to the future—and I might mention again the rapidly increasing populations of the coastal and city areas—we need to keep people out in rural New South Wales. We need to encourage industry to develop out there so we have a more balanced population right throughout the state. All rural and city councils out in rural New South Wales would be only too happy to assist the city and the coast with their problems in catering for the expansion of population in New South Wales—we would be only too happy to have those people out in the bush.

To do that, we have to assure them, when we encourage them and when we put programs and incentives in place to encourage business to the rural centres, that there is an adequate water supply. I believe, getting back to my opening remarks, that we have to be a little bit smarter in looking at the future and in securing our town water supplies for a bit of development and expansion as we go through. I am sure the premier of New South Wales would be only too happy to see a bit more development out west of the ranges to take the pressure off the infrastructure in the Sydney Basin at the moment.

Getting back to the rural side of things again, I was interested in some of the comments of the previous speaker about stock and domestic rights. This is something that has to be taken very much as a basic right if we are to keep everybody out in the bush working the land responsibly—both in agriculture and in industry, in our towns and generally. All of that goes into one parcel. There needs to be an ability to bundle it all up into a package that is attractive, to keep people in the bush and to keep the population from drifting away.

I note, Mr Chairman, that you would like me to take only a few minutes for my opening comments. I will sum up by saying that research into evaporation prevention measures and efficiencies must be undertaken as a high priority. The Commonwealth government must continue to play a leading role in water, because of the reluctance of some states to address the cross border issues as far as water flows go. There must be more serious planning of our water resource, because without it everything will grind to a halt. The current drought has indicated that we have been deficient in planning for the future in many areas in terms of the water security of our town water supplies. We will not have a prosperous New South Wales—or indeed a prosperous Australia—without that security, and we will not have a sustainable agriculture to support our rural towns across Australia.

CHAIR—I might start off with some questions. You are probably aware that we will be hearing from the New South Wales government this afternoon through the Department of Infrastructure, Planning and Natural Resources. I wonder whether you would care to make any comments about the New South Wales water-sharing plan and the extent to which the Local Government and Shires Association of New South Wales has been involved or had any input in the process of preparing those plans, particularly given some of your comments about infrastructure developing to become more efficient in the way that water is being used. Would you like to comment on whether or not that is seen as being a high priority in the broader scheme of things.

You talked about the larger flood flow-throughs and the volume of Sydney Harbour passing Bourke every day when the river is full. How has that been factored into the question of water management for the future in terms of the initiatives being taken up by the New South Wales government? I guess my question is: is it being taken seriously as an issue for medium- and long-term planning? It has been mentioned in the past but most things are focused on security of tenure as far as water rights go, the question of compensation and, to a lesser extent, these secondary and tertiary considerations. I wonder where that sits in all of that, particularly town water and the availability of good supplies.

Councillor O'Mally—I certainly agree with the state government's approach to giving security of water access rights and I think it is a big step in the right direction. However, as far as the issue of security of town water supplies that I have raised here this morning goes, the New South Wales government has a policy at the moment of allowing virtually no more weirs. While that policy exists I believe it is going to inhibit proper planning of future water requirements right across the state, even in Sydney to some extent. I appreciate that there are environmental aspects and big issues to be taken on board, depending on where a new storage facility or dam is to be built, but I believe this current drought has very clearly highlighted that we just cannot turn a blind eye and have a total ban on any more water storage. There has to be some provision made somewhere in the state when there are times of plenty—you referred to the huge flows past Bourke, for example—for storages to be constructed in responsible places to secure town water supplies as a No. 1 priority. Depending on other circumstances, it could also be a big environmental benefit to have water available for the environment in times of low rainfall events.

CHAIR—Are you thinking beyond just the practice of putting weirs in place, though? Presumably, even with a weir you still have the problem of evaporation. Are there other things that the association has thought through and put to the government?

Councillor O'Mally—The engineering solutions that have been discussed quite widely are converting open channels to piping and basic engineering initiatives like that. They are a possibility. It comes back to cost at the moment. I can see that as a way forward in the future when I believe the cost of piping will come down with the use of synthetic type material. That will allow a lot more efficiencies to be gained in that area. The association has certainly put to the government that it does need to look at the ageing infrastructure as far as town water supplies go, which I mentioned earlier, to be able to cater for the future.

Senator BUCKLAND—Those are issues, and we have heard a lot about that. Trying to stop evaporation is something that we will have to take into account. I am a little bit in favour of weirs, if the truth be known. But with each weir you put in, you create an enormous capacity for evaporation to occur, don't you? They cannot all be deep and narrow. My knowledge of the river is such that you could not do that. In South Australia there are a couple of places where it would be great to put a dam up. The thing is that the water would just disappear through the sides—they are too porous. Once you start getting wide, the evaporation rate increases astronomically.

Councillor O'Mally—Exactly. That is my comment about Menindee Lakes. They are a series of relatively shallow lakes with a high evaporation factor. That is one of the reasons why I suggested in my opening remarks that a lot more needs to be done in evaporation research. To lose a third of the water in Menindee Lakes each year through evaporation is not efficient water use. You quite rightly make the point that any additional storages or dams need to be located in efficient water-holding areas with relatively deep sides and reasonably small surface areas to maximise the benefit of storing that water.

Senator HEFFERNAN—Do you know the annual evaporation at Menindee Lakes, when they are in full flight?

Councillor O'Mally—I can provide that to you very shortly.

Senator HEFFERNAN—You can take that on notice. I have always said that heaps more water evaporates at Menindee Lakes than is used at Bourke, but I would like to get the fine details on that. Also, does the shire have records on the flow of the Culgoa this year? There are bandits upstream, but 26 or 28 per cent of its flow used to hit Bourke. I think it is now around six per cent. Could you give us those figures?

Councillor O'Mally—I can certainly provide some figures. You are right that the Culgoa traditionally provided 25 to 30 per cent of the water that went past Bourke. It is now under double figures. There has been a huge drop in annual average flows.

Senator HEFFERNAN—You would be aware that I think what is going on above you is a national disgrace. I have said that many times, and I say it again this morning. I concur with your comments that, like it or not and come what may, the Queensland government has to do something about it. Yesterday we took evidence from Peter Cullen, whose consulting report on the condition of the Lower Balonne has been seriously misconstrued and misquoted. Like me—and I think the committee agrees—he thinks the interpretation that Queensland users are trying to put on the A and B licence regime that was proposed for bunded water and overland harvesting is just not a goer. While I understand from Peter Cullen that it is not in the draft that is out there now, in A and B terms—it is now called 'overland' harvesting; they do not call it

‘bunded’ water harvesting anymore—I think the principle is simply a national disgrace. As I said yesterday, I do not know where all the greenies are on this, but it just is not a fair go. It is a direct interception of the riparian downstream rights of you fellas, so we are pleased to hear you put your comments on the record. Would you like to make any comments about the separation of the local government’s rate base—that is, the separation in the valuation of water and land—and how you are going to deal with that? It is a bit to the edge of this inquiry, but I am interested to know.

Councillor O’Mally—No, but it is certainly something I want to raise. It is of great concern to local government for two reasons. Firstly, as far as the rating base goes, in most areas where you have irrigation, quite often the greater proportion of the value of a parcel—the water right and the land—attaches to the water. Under the separation that is going to take place, if you remove that value of water from the land, it leaves you with a very reduced ad valorem land value to rate. I know that local councils are trying to come to grips with how to address the issue of that impacting dramatically on their rating base. I know that ministers Knowles and Kelly in New South Wales are still trying to come to grips with it. There is no simple solution. It has the potential to really distort the rating base of a local council, as we know it today.

Senator HEFFERNAN—We asked the question yesterday. It could knock 90 per cent off the value of a property. Certainly I am concerned about the harmonisation of law across all states. In Victoria, for instance, they are now talking about trading stock and domestic water rights off a block of land. That would mean you really do have a stranded asset which would be, without someone else’s water rights, bloody valueless for stock. So that is an issue this committee should at least comment on as something that needs to be addressed before decisions are made, rather than after.

Senator BUCKLAND—I will carry on from that because I was going to ask virtually the same question. What you are saying, from the perspective of your association, is that the security of water is the security of your community.

Councillor O’Mally—That is the second point. The first point is the distortion of the rating base as we know it today. The second point is the fact that that water becomes tradable, which means that, potentially, quite a bit of water could be traded out of a local government area, and that would have huge socioeconomic impacts. It would be a gain for the area getting it but, for those areas losing it, it would create enormous problems.

Senator BUCKLAND—I was thinking of something as an aside that I had not put together until later when we were in St George. We had some who seemed to have an awful lot of water that we could all share but, downstream of that, we had those people who could not get water for irrigation—I suppose their pipe did not go down far enough into the river; I am not sure about that—and we had some who were totally reliant on flood irrigation and they had no other source of water for irrigation. How does a local government rate a property? Do you take into account their access to water—such as an irrigator or flood irrigator—or are they rated differently? There are all sorts of complexities because some of those who were drawing water have now not got the capacity to do it as the water is just not there. They would be really struggling.

Councillor O’Mally—Very much so. But your question of how a local government deals with it comes second to how the Valuer-General will deal with it in the first place, because local

councils set their rating base on valuations from the V-G. So the V-G initially has to address the issue of the hugely decreased value of a parcel of land with the water taken off it. That becomes a piece of paper somewhere which councils cannot rate. They can only rate on the rateable value of land.

Senator BUCKLAND—It does create all sorts of complexities.

Councillor O'Mally—It does.

Senator BUCKLAND—I am not sure but I think that to work that one out would be an exercise in itself, as we are doing with water.

Councillor O'Mally—I agree with you. It is certainly very much part of the water debate because once you transfer water it leaves behind a legacy for which nobody that I am aware of at the moment has come up with an answer to address.

Senator BUCKLAND—Yesterday people at Bourke said that their value had dropped by about 90 per cent. The Valuer-General does not rate the land that way. He rates the land because of where it is.

Senator HEFFERNAN—In simple language what it really means is that a class of stranded assets is going to be a hell of a problem for the local government rating base. As you say, I have not heard that anyone has a solution to it.

Councillor O'Mally—It is certainly one issue that was not thought through when the separation of water rights and land was brought into being.

Senator HEFFERNAN—The Gwydir aquifer dilemma, where a quarter of the licences are issued to people who do not actually have an aquifer, is another issue. For the record, in a typical shire—I know what Junee used to be—what is the rating base as a proportion of your expenditure? How much do you get from grants and whatever and how much do you get from your rating base? Would it be 40 per cent?

Councillor O'Mally—It is a ratio of about a third to two-thirds—about a third rating base and about two-thirds access—

Senator HEFFERNAN—This has got implications for government as well—and you blokes, obviously. I am not too sure what the solution is. Anyhow, I thought it was important to raise the issue of rating. I am not too sure about how much capacity is left in the catchment for new storages. I know it is a problem here in Sydney. There is the turkey's-nest phenomenon. Is there much of a move—I know there is around Moree—to rethink the evaporation rates of turkey nests: to double the wall height, halve the surface area and that sort of stuff? Is the Shires Association encouraging that sort of activity? Maybe it would be an issue for this committee to give consideration to a policy that gave some incentive to people to halve the surface area of their dams. There is all this talk of plastic coverings. Peter Glennie up there in Moree, for instance, is addressing the depth of the thing. Have you got any comments you would like to make about that?

Councillor O'Mally—Certainly. In the last few years there have been major reconstructions of quite a few of the off-river storages out in the west of the state to make them deeper and more efficient as far as storing water goes. In spite of that, there still is the big evaporation factor. I am very interested in the plastic covering concept. On smaller water storages that could be a short-to medium-term solution. I believe it reduces evaporation by something like 90 per cent.

Senator HEFFERNAN—If they got it down cheap enough, I can tell you I would put it on our ground tanks on the farm, because a lot of water, as you know, evaporates from them. We are buggered for water now at Booligal.

Councillor O'Mally—Yes. I suppose, hopefully, demand will increase, which will result in increased production and see a drop in the price for use on small areas. Of course on running rivers and big areas I do not see that as a solution at the moment. I wonder if there is not some other way out there. If governments were to commit funds to evaporation research—and I am talking about serious funds—you could save 20, 30 or 40 per cent off your evaporation figures.

Senator HEFFERNAN—It might even be possible to use a surface spray or something.

Councillor O'Mally—Something like that, yes—whatever may be there for the future that could have those potential savings. We would make so much of an inroad into water use efficiencies and our storage capacities could almost double without in-flows. In spite of the pipes for channels and all those reasonably obvious things for increases, the biggest single influence is the evaporation factor, and it really needs to be tackled in a very serious way.

Senator HEFFERNAN—Maybe the pilot for that ought to be Cubbie Station. Their main storage is something like 28 kilometres long. It was legislated—a stroke of the pen—to protect them from an environmental plan to keep it under five metres and they have this two-metre or thereabouts evaporation rate, so they evaporate half their water straight up. It is just a national disgrace.

Councillor O'Mally—Yes, it is. It is simply not sustainable. With regard to the impact it is having on their local production, if they could farm the same amount of country with half the water through evaporation savings, that would go a long way to solving our downstream problems.

Senator HEFFERNAN—Are you satisfied with the risk-sharing provisions of the National Water Initiative?

Councillor O'Mally—Yes, I think they are very much a good start. My personal disappointment is the fact that it is going to be about 10 years before those provisions become fully implemented. I would have liked to have seen a shorter time frame there, but obviously there are reasons.

Senator HEFFERNAN—You realise there are some serious reasons why that is so, but they are upstream from you!

Councillor O'Mally—Yes, I understand that. In the meantime, I think it is very important that a balance be found in addressing the whole water debate and the sharing of water between states

and even within valleys, because there are anomalies. We have the Namoi ground water situation in New South Wales, where another state is involved. That is something that needs to be addressed and is being addressed. The main thing is that in all these things there has to be a balance between saving water and the socioeconomic impacts of that on our local government communities, because—again—we need that investment from agriculture to secure the future of our towns and our cities out in rural New South Wales.

CHAIR—I might ask one final question. I was interested in your opening remarks, where you spoke about the population base of rural towns and investment in other industries. I wondered what you had in mind when you spoke about other types of industries, because predominantly the inquiry has dealt with the agricultural sector; certainly, the questioning has been towards that sector. Having said that, we have not really looked at that particular issue for rural towns—other types of opportunities that may arise, and then what the water access entitlement might be. Has that been thought through by the Local Government and Shires Association to the extent that people have an idea of other things that they want to do in towns to attract people or to keep people there, and then how you would deal with providing water access, as well as the whole question of whether there is enough scientific knowledge, for example, to deal with new development or new industry opportunities? It seems to me that if we continue down the current path, which is so much focused on the agricultural sector, presumably the size of properties will get larger and larger, the requirement for a labour force will get smaller and smaller and the access entitlements for the water catchment area will be pretty much taken up. Have you thought about those issues in the context of water catchment areas and towns?

Councillor O'Mally—In talking about that in my opening remarks I was not specifically applying my comments to agricultural development as such. There are other industries, depending on the area—whether they be mining or niche type industries of whatever kind—and there are many entrepreneurs out there who try all sorts of things. Even industrial type businesses, from a tyre business to a—

CHAIR—A car wash.

Councillor O'Mally—yes, a car wash or anything—all require some type of water. If the opportunity is there for those types of industries to expand because of the location of the town or area, there needs to be some water security for people to invest the capital that is required to put their businesses in those areas and keep them out of metropolitan coastal areas.

CHAIR—Are you confident you have the surpluses to be able to attract a range of different types of business?

Councillor O'Mally—Certainly in some areas of the states there are very attractive things for business to invest in, and I believe that, with the right government policies as far as incentives go, there could be much more use made of those rural areas for industry development—other than just agricultural development. Of course, I cannot let this opportunity go without saying that we need a good road and rail infrastructure to the areas to service them too. So it goes hand in hand. But that is what we are talking about: forward planning for the future, not only for water but for those rural communities to be able to access their seaboard markets when industry does move west and produces our goods out away from the seaboard.

Senator BUCKLAND—It is interesting that you made that comment about road and rail infrastructure, because all this water is useless to everyone if you cannot get the produce out in an efficient and quick manner. I think it is good timing for a comment like that to be made.

Councillor O'Mally—It is absolutely critical in the overall planning.

CHAIR—Thank you for appearing today.

Councillor O'Mally—Thank you.

Proceedings suspended from 10.50 a.m. to 11.07 a.m.

DAVIS, Mr Christopher, Chief Executive Officer, Australian Water Association Ltd

CHAIR—Thank you for appearing here today and providing assistance to the committee. I invite you to make a short opening statement, and then we will go to questions.

Mr Davis—Thank you very much for the opportunity to address your committee. My association made a fairly substantive submission to the parliamentary inquiry into rural water a while back. Rather than repeating that exercise—I imagine your committee has access to all that from *Hansard*—I thought I would just draw on a few key issues in there and also ones that have come into currency quite recently. I will touch on nine different issues. Then I will be very happy to discuss them or answer questions or to go into other totally different areas your committee would like to discuss. My association—and I will leave some literature with the committee secretariat for the records—has been around for over 40 years and has more than 4,000 members around Australia. It is largely an urban based organisation, but it has a profound interest in water allocation and water resources nationally, because that is really where Australia's water systems will be made or broken.

The first point is that rural water use, at about 75 per cent to irrigation, is critical and the largest single water use in the country. We believe that the government should be trying to help farmers to improve efficiency and outcomes and also sustainability generally. We do believe that the health of rivers has been affected by the levels of extraction historically and currently. We do not agree with the interim report of the parliamentary committee into rural water, which denigrated the science attached to recognising problems with rivers. We applaud the current initiative to allocate 500 gigalitres of water and \$500 million nationally to trying to restore those six icon sites on the Murray-Darling.

We commend the ABS national water account report. Its second issue came out just recently. We think that is a very good step in the direction of monitoring and reporting our water use and water stocks. We hope to work with the ABS in refining and improving that report with time. We note that it has a complementary role with the national land and water audit, which we hope will also be sustained as a valuable way of recording the condition of water.

We are very supportive of the National Water Initiative. We think it is a very valuable way of wrapping up the COAG reforms that commenced in 1994, but we feel that there may be an over-reliance on trading as a mechanism to resolve problems with water allocation. We believe that, while trading has merit in certain locations and circumstances, it is not a panacea. It can have unintended social, environmental and economic consequences. We feel that trading is just one tool of many and that it needs to be implemented in conjunction with pragmatic regulation that is sensitive to the constraints that need to be applied.

I note with interest the Farmhand publications that came out quite recently. We think they are a good contribution to the debate about water. However, I was a bit disappointed that the main book, *Talking Water*, debunks a lot of the madcap schemes about what to do with water and then, among its proposals, promptly promotes one of the worst. That seems a bit inconsistent. It appears as though somebody wrote the book and somebody else wrote the foreword to extract

something from it. As discussion pieces, that report and Dr Patterson's contribution on water rights are very useful.

A concept that we think should be used more in the water debate nationally—it has relevance in the urban as well as rural context—is that of virtual water. Every product and every service can be associated with a certain amount of water per unit of service or per dollar of production. It is a useful way to be able to look at the question of whether water should be transported or whether the product should be transported. The national report on water and the Australian economy that came out about three years ago was very useful. It talked about moving agriculture up north where the water is, rather than trying to ship the water south. In the last submission you were discussing, you raised the question of rail and road—and of course there are constraints on moving product from the tropics and persuading people to work in the tropics. We feel that the concept of virtual water is very useful to promote debate and rational discussion on the impact of exports and on how you use water. In my written submission, I have given a URL for a very useful web site which discusses the concept of virtual water and quotes some figures.

Looking at the interface between urban and rural—which affects us a lot because of our core interests—there are two areas where things will be happening in the future. One is in recycling. At the moment, we only reuse about 10 per cent of water. The figures vary from perhaps nine to 11, but 10 per cent seems to be a reasonable estimate of total urban water use. In the future horticulture has the potential to use a lot more water. One of the documents I gave to the secretariat was the ATSE report *Water Recycling in Australia*, which is quite useful in that respect.

The other area where there will be an urban and rural interface is in water trading. When water becomes scarce—and most capital cities are now staring down the barrel of a water shortage in the long term—the need to trade water between rural and urban uses is going to get stronger. At the moment, in places like Shepparton, when there is a surplus of urban water they trade it into the farming community, but I think that process is going to be reversed in some instances. Several CEOs in water utilities feel that the trading option is more cost-effective than recycling—but that is debatable.

One comment I have picked up a lot in thinking and reading about water around the country is that New South Wales is the hot spot for water, being the state that uses the most water, has the largest number of dams and has the biggest storage. It probably lost control of allocation in the seventies to the greatest extent and, therefore, has the most work to do. I believe from the ABS water account that the average return per megalitre in New South Wales is lower than in the other irrigating states. I think that places a challenge on the New South Wales government to address the whole issue of water much more urgently than some of the other states. I suppose the fact that WA declined to sign the National Water Initiative probably indicates that they just do not feel that they are embroiled in that debate to the extent that the other states are.

The final point I would like to put on the table is that we believe education holds the key to improving community understanding and improving practitioner use in the industry, in the professions and in farming. It is important for schools to be able to get good resources about water education so that students become intelligent adults capable of participating in community decisions. We have made a strong commitment to education, and we are appointing a permanent education manager from next month. We hope to create a national network of water education

stakeholders, and we are collaborating with people like Questacon, WaterWatch and others, which we think is important. That is just a quick tour of the points, but I would be very happy to elaborate or go into a totally different area if you have an interest.

CHAIR—You say the Australian Water Association has been around for quite some time. For the record, and so that we are clear on the Australian Water Association, I wonder whether you might be able to fill in at least some of the gaps in my knowledge about the sort of work that you might undertake and how your membership is comprised, just so that we get a sense of whether you are representing a particular sector, industry or field or whether you have a particular interest in the scientific side of water use and allocation.

Mr Davis—After the war there was a huge backlog in water and sanitation around the country. In 1961, a representative from the World Health Organisation came to Australia and addressed a group of engineers and scientists about water and pointed out that there was no multidisciplinary group to look at water. The Institution of Engineers only allowed engineers; the Royal Australian Chemical Institute only allowed chemists. They did not speak to each other and they did not allow anyone else in. In 1962 we set up shop as the Australian Water and Wastewater Association, as it then was. We have grown since then to have a few over 4,000 members. Over 3,500 of them are individuals—a lot of engineers, chemists, managers, operators, researchers, teachers and some environmental activists, I guess—and about 800 organisations, ranging from the Department of the Environment and Heritage and Sydney Water through to consulting firms and French multinationals, down to one-person small businesses. We are very diverse, but I have to say that, having had that urban origin, most of our members still have a core interest in urban issues. About 15 or 20 years ago we began to broaden our interest when we realised how important rural water issues were, so we now take an interest. We collaborate with people like the Irrigation Association, the Australian National Committee on Irrigation and Drainage and the like. But our expertise tends to be more in the urban area and in hydrology, rivers and things like that. Irrigation is of great interest to us but in our membership we do not have a lot of expertise in that area.

CHAIR—Does that mean, though, that, given the recognition of the importance of rural water use, 70 or 75 per cent of use, you have established relationships with, for example, the farmer associations, the Farmers Federation, irrigators' council or the range of groups that represent farmers on the ground? I wonder to what extent there is cross-collaboration on work undertaken.

Mr Davis—It is limited. We collaborate with ANCID because they represent all the bulk water suppliers to irrigation. We have done several initiatives with them. We keep in touch with the national farmers and the New South Wales Irrigators Council, and that is about it. The degree to which we have actively collaborated on the ground is limited because their constituents tend to be in different places than ours, so interaction is restricted.

CHAIR—As a follow-on question, I am interested in point 6 in your submission, which raises the concept of virtual water. This is probably the first time I have heard that term used in the course of this inquiry. I wonder if you could expand a little on what you have provided there as a description of that, particularly in terms of the reference to the World Water Council and how that concept is used as part of an international arrangement.

Mr Davis—What happens is that every commodity grown or every product produced needs a certain amount of water for its production. So what you can do—and it is not always as easy as it seems at first blush—is calculate how much water went into the production of a unit of a commodity or product. For instance, I learnt recently that a commercial building uses 10 times its volume in terms of water embodied in its production—the raw materials and the construction process. Another interesting statistic is that if you carpet the floor of a domestic residence, that is equivalent to filling it up to the ceiling with water in terms of the water used.

In agriculture, obviously dryland agriculture uses less water. If you calculate the amount of rainfall used, you can calculate the embodied water or the virtual water there. If you go up the food chain through to, say, meat or dairy, you have the irrigation used to produce the fodder and the feed and you then have the water used by the animals, on the farms, by the feedlots and so on. So you have more and more water used. At a parliamentary inquiry, I dared to quote some figures for rice. One of the committee members was from a rice constituency and she tore a strip off me. So I am very cautious about quoting figures because rice practice in Australia is rather different to in Asia, Europe or the States.

There is a big variation in the amount of embodied water or virtual water in any given commodity. The World Water Council has done some studies in the traffic in water around the world. It pointed out that Australia and the United States were very big net exporters of virtual water whereas Europe is about equal—it exports a lot but it imports an equal amount. The example I quoted in the written submission is that Vietnam produces a lot of rice but it is of a very low quality compared to, say, Australian rice. The debate in Vietnam is whether, although they are not short of water, they should actually use a resource like that to generate such a modest income with a cheap product when they might allocate their water to something more cost-effective.

It is not an easy debate, but I think the concept of virtual water gives you quite a useful currency for comparison. The dollars per megalitre argument, which is commonly used in a lot of reporting, does not reflect diversity and does not allow you to make totally rational comparisons. Dollars are quite important, but I think virtual water is a good handle to discuss what we do with our water.

CHAIR—So you can compare an apple and an orange, for example?

Mr Davis—Yes, exactly.

Senator HEFFERNAN—We will not bite your head off: just tell us the difference in the rice thing.

Mr Davis—What happens in Australia when we irrigate rice is that, apparently, the typical approach is to use two crops in succession. So you first irrigate the rice, saturate the soil profile and then harvest the rice. In the saturated soil you then plant another crop which uses that water. So you cannot say, ‘Well, all the water got used up by the rice,’ because part of it was used up by the subsequent crop. Also the efficiency is very sensitive to soil type—and that is an area in which I am not an expert at all.

Senator HEFFERNAN—No, I am aware of that.

Mr Davis—Let us take cotton, for instance. If you irrigate cotton in a heavy clay soil, you can get something like 90 per cent efficiency using flood irrigation—which is not something you would intuitively expect. However, if you irrigate on a sandy soil, your efficiency goes way down. It is a challenging concept, but I think that if we are going to have a sensible debate then it is a good way to put a framework around it and make intelligent comparisons.

Senator HEFFERNAN—I am not in disagreement with you on the interim report, by the way.

Mr Davis—Oh, good.

Senator HEFFERNAN—Mr Chairman, this is just skirting to the edges of our territory here. I know Sydney Water have sort of given the idea of that recycling away—they had a hundreds of millions of dollars project. Forty per cent of Sydney's water use, or thereabouts, is industrial and commercial, is it?

Mr Davis—I do not have the number in front of me. I would have thought it was more like 20 per cent. I am guessing.

Senator HEFFERNAN—Commercial and industrial.

Mr Davis—Okay, yes; that is possible. Fair enough.

Senator HEFFERNAN—You are right: industrial is 20; commercial and industrial is 40. You have got things like the new Sydney Water headquarters out at Parramatta there. They want it to be self-contained—they have got those fancy things to capture the rain et cetera. There is a proposition around to have a massive interception of the outfalls of Sydney. Sydney's water was designed for four million people.

Mr Davis—Yes—from services, et cetera.

Senator HEFFERNAN—The challenge seems to be—and it is also the reason why Sydney Water failed with their proposal—to get industry and commerce to take up recycled water. Have you got anything you could tell us about what the drawbacks are there? Why are they reluctant? Is it because we have designed Sydney badly? One of the things that is obvious is that the industrial growth of Western Sydney is a long way from the water.

Mr Davis—There are several challenges there. One is that water is very cheap. It is less than a dollar a tonne, and no commodity can be delivered to your door for that price. So to purify water and deliver it again for less than that is very challenging, and it is almost impossible at present. The other challenge is that industry is a little bit risk averse. If you say, 'Would you like second-class water at a slight discount?' unless water is a major factor in production, and it usually is not, most industries would probably knock that off the back. The Singaporeans have taken a good approach. They have built two—and they are building a third—what they call new water plants, where they produce, effectively, drinking water. They do not actually use it in the drinking water supply, except for a very token amount of one per cent. Most of it gets sold to the electronic wafer manufacturing industry, which needs very high-quality water and for whom that water is better than drinking water. They have positioned themselves very well. The plants are

close to the factories, they deliver this excellent water, they give away bottles of new water for people to drink—and they have given away three million. In fact, I am on George Negus's show next week with us drinking a bottle of that water just to try and reinforce that it is potable.

Senator HEFFERNAN—And you look all right today.

Mr Davis—Yes, I am doing well. But it is difficult; and I think that somehow the message got mixed in regard to the Sydney Water project with the pipeline, because that pipeline was actually to take effluent to the sea. I think they had an ambition that, if they could, along the way they might sell some of it to the odd factory. The comment from industry players who are very active in recycling is that you have to be customer orientated. You cannot say, 'If you like, you can take some of this water and you can purify it and use it in your factory.' You must go and say, 'We will deliver this first-class water to you. It will come to your door at a certain pressure, the price is competitive and we will do it for you on a long-term contract.' I do not think Sydney Water's approach was commercial enough. They did not get in aggressively and they only recycle 2.6 per cent of water at the moment, so it is very low.

Senator HEFFERNAN—Is the proposal by the consortium for the interception of the three outfalls out there in the public domain? It was a confidential sort of thing at one stage.

Mr Davis—It is confidential. The details are confidential, but the essence of it is that they would intercept two of the major outfalls, ship the water towards Sydney airport, treat it and then send it back to the west for reuse, recycling or use in rivers. The challenge there, I believe, is the economics of it. That is an expensive proposition.

Senator HEFFERNAN—Let us take that concept, take the incentive, which currently does not exist, to take recycled water and take another proposition by some of the manufacturers of water reticulation. Some of them have a proposition that has been put to various levels of government that for \$900, for instance, you can put a little kit into the home and you can save 40 per cent of the internal house usage—you know, the Nylex thing. There would be two ways to go. You could give it to every household in a pilot situation for a start and say, 'In two years time we are going to double the price of water in your area, but here is the kit to save you half your water bill in anticipation of us doubling the bill.' That gets the price of water up, but not to the consumer. Would that then give you some room to play with your recycled water?

Mr Davis—Yes, that is a possibility, and a lot of good work is being done on the cost effectiveness of a rebate on any given product. If you offer a rebate on a trigger nozzle on a hose that stops wasting X litres of water, provided the rebate is less than the saving in the management of the water system, it is cost effective, and the Institute for Sustainable Futures at UTS in Sydney has done a lot of work on that. There are probably hundreds of different things that could be done to get better outcomes in the urban system, and you have to be ruthlessly rational about the economic payback of every one and say, 'Will this pay for itself? If so, let's do it.' Low-flow shower heads are very effective because they save much more in energy than they do in water, so you can get a good payback on them. A dual flush toilet has a good payback if you are refitting. It is not a very good payback if you have to retrofit just for that purpose. I hope parliament in its next sitting passes the legislation about mandatory efficiency labelling, because then you can get a gradual replacement of the current population of inefficient appliances with

efficient ones. But, of course, that is very slow, so there is a desperate need in the urban systems to have some faster retrofit that is actually going to make a difference.

Senator HEFFERNAN—Mr Chairman, this may seem a long way from our specific area but it is not. If we could do the Sydney outfall interception with the right incentives built into the program, it would leave some hundreds of megalitres of water which would be surplus—and this is without building any new dams or anything.

Senator BUCKLAND—I want to talk about recycling, because it is of interest to me and we do it at home. We practise it religiously, except that my wife is too law abiding and will not let me stick a grey water outlet in, so we carry it out of the washtubs. Apart from that, it is a very effective way, particularly for vegetable crops, to use that sort of water. You are probably aware that in South Australia they are now piping water from Bolivar up to Virginia and Two Wells for what we call our salad bowl, and it is very effective. There was a plan to take the water from Brisbane to the Darling Downs. Where is that up to? To me, that had a lot going for it.

Mr Davis—That got bogged down for the simple reason that the energy required to get the water from Brisbane up onto the Darling Downs far offsets the value of the water. While the cotton farmers on the Downs were thrilled at the idea of getting the water, somebody had to pay for the pipeline and the energy to pump the water up there and it just did not fly. There is a scheme to put water into the Lockyer Valley en route, which is much more affordable because it is several hundred metres lower and a lot of kilometres closer. I think that at the end of the day the Lockyer Valley is likely to succeed but the Darling Downs will not unless somebody does a lot of pork-barrelling to underwrite the capital cost and the operation. The trouble with water is that the further you move it the less valuable it is. It is a bit of an apocryphal figure at the moment, but Peter Cullen, I think, quoted the Israelis as saying that once you have pumped water 400 kilometres it has no value because you have spent all your money on getting it there. You have to be really ruthless about how far you can ever move water effectively, and it is a couple of hundred kilometres before the value is eroded in the capital cost of the pipeline and the energy to pump it.

Senator BUCKLAND—Given that we now have fairly ready access to solar and wind energy, it would be an interesting exercise to see whether the figures come up the same. Again, you would have to know that you are going to have the wind flow to drive the turbine or the sunlight to produce the power. Your statement does not worry me at all because I understand that and, in practical terms, I think you are right—I myself raised the question as to how much it would cost when I was in the Downs—but it worries me that it seems to be put aside simply because of the cost of power. There are other energy sources now. Putting in the infrastructure would cost a few shillings, I suppose, but would that really be outweighed by the value that you would get from it?

Mr Davis—I think you would have to do a net present value comparison, and I suspect that the capital cost of installing wind or solar energy would be so high that the time it would take to amortise that investment would far outweigh the value of the water. I think it just gets back to the straight economics of moving water: it is very heavy, so it is very expensive and it takes a lot of energy. With recycled water in particular, you can draw a radius around a particular source of water, and that is quite short distance. For recycled water it is just tens of kilometres perhaps before that is not economically worth doing. You have to get the returns. For instance, in Israel

they pump water from Tel Aviv down to the Negev desert, nearly 200 kilometres away, to grow flowers because the flowers are then flown into the world market and they have a very high margin—maybe thousands of dollars per megalitre, so that stacks up. But if they were going to do that to irrigate pastures, they would never, ever recover the money. It is counterintuitive, but there is very strict economic regimen that constraints where you can send water and still make a viable enterprise.

CHAIR—And sell your products.

Senator BUCKLAND—I think I have one foot through the fence of the boundaries of where this inquiry is going with this. I tend to think that in 10 to 15 years time there could be another inquiry about water, and we are going to have the same thing coming to us: the sheer economics. At some time the economic rationalists have to come into play, but it appears to me that the urban use of recycled water is more a matter of perception than it is of any harm or real effect on humans. I have drunk recycled water at Woomera that was from a very old plant they installed back in the forties, and there were signs up saying ‘Don’t drink it,’ but the water was better than they got out of the pipeline. People would not drink it because it had been down at the sewage farm. The fact is that it was better water.

CHAIR—That’s why you glow in the dark!

Senator BUCKLAND—Yes, exactly! I really think we need to campaign and educate people on the value of using this. Again, you come down to the cost of the infrastructure to put in second lines and things like that, but it worries me that we have this great amount of water that is either evaporating or that we are just sending out to sea.

Mr Davis—Yes, you are right, it is a challenge and there is that perception. But in general terms people have accepted it. There is the Homebush Bay plant in Sydney, there is the Rouse Hill system. Those are both very well accepted by their communities. It requires education and good information and a level of consultation so that people do not feel put upon, but, apart from a few loonies, most people are very rational about using recycled water.

Senator BUCKLAND—In a number of regional centres—and I live in one—the recycling of water, even stormwater, makes nice golf courses and we actually have greens on the golf courses. I do not play golf so I do not know much about it, but they have greens rather than the old black scrapes now. But that water could be, with very little energy, put into the town system, and we do not even consider that. It is more important to have a green golf course. It is people’s perceptions about water use that worry me. I have not taken that argument far but I have put it on record.

CHAIR—I suppose as a follow-on to what Senator Buckland has raised about the economics of moving water from one location to another and what you were saying about the cost of water in urban locations, would you say that at the moment—and this is for domestic consumption as well as for commercial, industrial and agricultural consumption—the price of water is too low? If it is, should it be increased, and, if so, to what level should it be increased to make it more cost-efficient? If people are going to invest in the infrastructure and energy required to get water a certain distance, what is an optimal figure, for example, for the cost of water per litre, perhaps, or however it is sorted out, to achieve the efficiencies in terms of production of products?

Mr Davis—That is a difficult area, because it is fraught with various tensions and vested interests. Typically, around Australia urban water supplies vary between about 50c and \$1 per cubic metre. That generally—in fact almost universally—recovers the cost of supplying the water. I think CSIRO has done some research to show that in some cases it actually covers externalities quite effectively as well. That may be a bit of a moot point. But, because it is quite a low figure in people's household outgoings, it does not provide much of a disincentive against waste. There is an idea that is gaining currency now and is applied in about half-a-dozen towns around the country already, which is about having what is called a rising block tariff. Your first 120 kilolitres, for example, is at one rate, the next 120 is at a greater rate, and as you go up it steps up. Perversely, I think, there is one town that actually decreases it at the moment, which is a bit odd. I think we will see more and more utilities charging a stepped tariff so that consumers do get a message about how much they use. In Sydney it is likely that IPART will probably find that the price should be something like \$1.35 after the first step or thereabouts, so it is not a dramatic increase.

In the rural context, there is a lot of debate about whether there should be a charge for water at all or whether it there should only be a charge for the services. I think the prevailing view is that if you charge for the water itself you are charging a resource rent. There are some economic arguments about it, and I am not an economist and so I cannot make intelligent judgments there, but you are extracting a resource rent for the water and that is counterproductive. But what does not happen adequately is cost recovery on the delivery of the service. In New South Wales, for instance, I do not think IPART has yet enabled DIPNR to fully recover the cost of delivering rural water. That means that you can get a perverse situation where a farmer may not bother to make efficient use because the cost of water is simply so low thanks to the non-recovery of costs.

The rational argument seems to be that every water supplier should be paid at least the basic cost of delivering the water, if not including the cost of maintaining the infrastructure which was built in previously. Anecdotally, where farmers are faced with cost increases they attend more to efficiency because it is in their interest to do so. But I would hate to stick my neck out so far as to actually put a number on the price, because that is really difficult.

Senator BUCKLAND—In point No. 1 of your submission you make the comment:

Farmers thus carry the burden of responsibility for better outcomes in the future and the Australian Government needs to support the efforts of farmers to do better.

Could you explain that? I am a South Australian, and that seems to be the reverse of the attitude and position of the South Australian government, which I support. That seems to be in conflict with their thinking, where the emphasis is on residential use. You seem to be saying that the farmers are carrying the burden; in South Australia it appears that residential property holders are.

Mr Davis—When you say 'burden', do you mean the cost burden or the responsibility?

Senator BUCKLAND—The responsibility more than the cost burden.

Mr Davis—Sorry, I think you have misconstrued what I was intending to say. Maybe it was the way I put it. What I was intending to say was that farmers really are the people who have the biggest impact on water in the country. Quite honestly, if a city gets it quite seriously wrong it can turn around and restore the damage quite quickly. For instance, Sydney's outfalls, which ran for 100 years perhaps and offended people mightily, were replaced with deep ocean outfalls and better treatment. Overnight the water cleared. A lot of the fish went away, unfortunately, but the system seems to have suffered no damage. Urban impacts are quite localised and short term, whereas rural impacts, because they affect rivers, big ecosystems and systems with long lead times and long residence times, have very profound effects which are enduring. Things like dryland salinity, for instance, may never be turned around. I am not saying that farmers carry the burden of the cost; I am saying that they carry the burden of responsibility, because they are the people who have the biggest impact.

Senator BUCKLAND—It would have to be said, would it not, that, if they carry the burden of responsibility, they would have to automatically carry a pretty big cost.

Mr Davis—It depends. There are certain things that farmers can do at no cost, just by improving their practices. There is quite loose talk claiming that if every farmer replaced flood irrigation with drip irrigation we would save 60 per cent of water or something. That is a bit facile. The capital cost of putting in drip irrigation is huge, so you have to have a good return on your crop. You cannot say to a pasture farmer, 'You'd better put in drip irrigation.' It would make no sense. But if a farmer can schedule better, be given better weather data to be able to plan ahead and can understand the value of replanting trees as windbreaks and that sort of thing, that is all built into farming practice. It is not necessarily at any extra cost to the farmer, but there will be an improved outcome. It is the farmer who has to implement that. It is difficult to regulate all of that. It is better if the farmers actually understand it, learn about it and actually willingly implement improvements that lead to better results.

Senator BUCKLAND—We have said several times that the majority of the committee, if not all of the committee, is extremely impressed with the rice growers around Griffith.

CHAIR—The MIA and the CIA.

Senator BUCKLAND—Something that certainly impressed me was their commitment to reduce water use. I do not know that I am so committed to cotton farmers in the same sense, because they have not shown me yet that they are serious—yet there has been a cost to them that they have had no compensation for. I am not one for handing out compensation to just anyone, but there has been massive investment on their part. I suppose they did it selfishly so that they can get better crops—I do not know what they did it for. But there seems to have been a massive investment on their part with no real assistance to get to the stage they are at. It has all been self-funded, from what I can understand. You mentioned dryland salinity. I had an intern two years ago who had worked on salinity in South Africa. That intern wrote a paper for me specifically for South Australia on the effects of that and about trying to reclaim what we are losing or holding the position we have. There is an immense cost to a farmer to put trees in. I have just done an exercise on 5,000 trees. It works out at nearly \$2.00 a tree to actually do that. That comes to \$10,000, if my figures are right. So there is a cost and there is no assistance to do that apart from a pat on the back.

Mr Davis—I agree. I think that is where there could be a case for government to assist. From my knowledge of the history of introduction of irrigation, it was generally promoted by government for soldier settlers. Rice was one of those areas. Rice was felt to be a good thing and the government actually encouraged people to farm. So it is difficult for a third generation irrigator who has inherited a small farm in an area that might be challenging, with a crop that is perhaps not very remunerative, to actually be required to do all of these improvements at personal cost. The rice industry obviously is viable. It can afford to invest and it is well organised. Nobody seems to have the statistics, but there must be a lot of small farmers who do not have the skill or the capital to make necessary improvements. I think that is where the government must either help them retire or help them to improve the system.

Senator BUCKLAND—I would like your views on moving some of our cropping and reliance on the Murray-Darling system to places such as the Ord system.

Mr Davis—My training is as a civil engineer and a water quality expert, not a farmer, but when I have discussed that with people they have said that people do not like living in the tropics—it is very hard to get people to work on farms up there. I gather Ord has been well below expectations in terms of take-up. So you have a challenge getting people to work there, it is a challenge getting the product out and a lot of the crops do not grow well—apparently cotton failed hopelessly when it was grown up there. Some of the fruits do well, but other crops that are temperate in nature do not grow there. As a technician I suppose I could say, ‘Yes, it makes logical sense,’ and certainly that report we alluded to earlier said, ‘Take the farming to the water and not the water to the farmers.’ It is intuitive but in terms of real, on-the-ground farming practice, it is challenging, because there are a lot of reasons why it does not necessarily work. It is a question that has to be asked but I do not think there is as intuitive an answer as there might seem to be at first blush.

Senator HEFFERNAN—One of those things that Senator Buckland raised and that I am insistent upon is that we must if we can answer the question of how a small farm that is inherited is to remain viable. One of the important ways in keeping that farm viable is to retain the capital wealth of the water. I am seriously opposed to—and I have faced some criticism to this—paper trading in water, where someone at Noosa, for example, owns all the water and accumulates the capital growth, which is the real wealth of water much more than the trading value of water. Do you have a view of that sort of thing?

Mr Davis—No. Personally I am not very skilled at that, but I have talked to quite a few protagonists about it. It is interesting—economists apparently say that a market works better if there are speculators operating in it because they sort of lubricate the market.

Senator HEFFERNAN—There are speculators in the market under the present arrangements, don’t worry.

Mr Davis—But I know that a lot of farmers feel that you get stranded assets and you will destroy communities by allowing them to trade their water away. I think it is one of those things where, in principle, we would acknowledge that trading has good potential to resolve some allocation issues but in practice you have to say, ‘Socially and environmentally, what happens if you trade from A to B? Do you destroy a community, do you strand the assets of 25 per cent of

the farmers in a given area or do you put a lot of water into an area that should not get that much water and therefore need constraints?’

Senator HEFFERNAN—Or, with paper trading, do you change the absolute culture of the industry to a tenant farming culture away from one that owns its asset? If you are in favour of going back to medieval times, I am not. I will not get into the northern argument. One of the reasons the Ord scheme has not worked is the internal arguments on land ownership up there with the local Indigenous community. I think that needs to be sorted out, but we will not get into the complexity of that. There are 14,000 hectares out of 70,000 hectares that have been taken up there. The rest of it would be taken up if they could sort out the internal arguments.

Mr Davis—I was not aware of that.

Senator HEFFERNAN—I have to say that one of the other problems we have identified, Mr Chairman, is that I do not think the Northern Territory government has the resources within the department that is supposed to manage their water to manage their water. I just do not think they have the knowledge or the expertise. They have taken a conscious decision not to grow cotton in the Territory, which is, as I have described it, a warm, fuzzy, hairy-arsed decision.

CHAIR—Thank you for appearing and providing assistance to the committee. If you have any issues or queries, please feel free to contact the secretariat. We will accept this two-page document as a submission.

[11.56 a.m.]

GALLIGAN, Mr Daniel Joseph, Adviser, Policy and Legislation, Cotton Australia Ltd

LEUTTON, Mr Ralph David, Program Manager, Policy and Legislation, Cotton Australia Ltd

CHAIR—Welcome. Would you like to make a short opening statement?

Mr Leutton—Thank you for allowing us to appear before you today. It is with some interest that we approach this committee, in the light of a National Water Initiative and how we will proceed further. Cotton Australia represents the cotton-growing community of Australia in both Queensland and New South Wales. We also represent the ginning—processing—organisations. We have about 1,500 enterprises in our organisation, depending on the state of the drought; in some areas cotton is an opportunity crop whereas in many of our significant area it is a very well-established and highly intensive industry. Cotton Australia has, over a number of years, been very involved in a best management practice program in cotton. In 1991 the cotton industry did an audit of itself and, in a number of areas, it was found wanting. At that time, I was working in the dairy industry and we thought that cotton was quite brave to actually do that. But we look back in history and see that, from that audit in 1991, they established the best management practice program in 1995. I will ask my colleague to comment further on the program a little later.

That program is in place now. We have major management processes for our use of chemicals. Right now we are implementing a new module, the land and water module, which is looking at how we manage our water resources. As part of Cotton Australia's process, we have developed quite an extensive policy position statement, which I will hand copies of to members of the committee now. This gives us a script from which all our cotton growers can quote on where we stand. We have established a quite clearly defined and annually reviewed statement on resource management. You will find a section in there on water as well. As we came towards the June date for the meeting of the Council of Australian Governments, it allowed us in the debate to support, with the National Farmers Federation, the addressing of the issues of overallocation and management of water. Subsequently, we have seen the outcomes in the National Water Initiative. We are quite pleased with the outcomes, but there also needs to be some more work done to address the immediate issues. In the light of that agreement it is really quite significant and, perhaps, incumbent on this committee as to how we now manage the future and the process of implementing the outcomes of the National Water Initiative. I will ask my colleague to comment on some of the content of the best management practice program to give you an idea of what that entails.

Mr Galligan—The BMP, as Ralph indicated, came about in 1991 when the industry undertook its first environmental audit. A number of issues came up surrounding the need for this industry to change and for some work to be done on cotton farms to address environmental issues. From that, the industry funded a project looking into how other agricultural industries handle these issues overseas, as well as in Australia. In 1995 they developed their first BMP program.

Essentially, the cotton industry's best management practices program is about environmental risk assessment. It is built on a process to assess environmental risk on cotton farms. It was established to follow a similar framework to ISO 14000, which is an international standard for environmental assessment, without necessarily overburdening farmers with the full ISO standard. We built the framework around the ISO standard but, basically, built a package that could be implemented on farm.

The real crunch time for BMP in the industry came in 1999, when the two key industry players, Cotton Australia as the peak grower body and our research colleagues at the Cotton Research and Development Corporation, invested time, money and people in implementing BMP on farm. I guess that is what has been the difference between this and other like projects around the world—we have had to stick a lot of people into actually doing this with farmers; farmers need help to do it. So in 1999 we committed a team of people to work one on one with farmers or with groups in their local communities to help them implement this process.

The focus of our training then—and this is the case now—was training farmers in a process to assess the risk of environmental impact from any farm operation. The key to that training, in terms of a process, is that that means they can deal with any issue. We were well prepared back then to understand that these issues change, either as research indicates there are better practices out there to be followed or as community expectations indicate that you need to change your practices. The farmers needed to understand that this could fit into any process of looking at how they are doing things now, looking at what the best practice should be and then making action plans for how they should achieve a higher standard.

Things have evolved again since 1999. Last year we implemented concrete standards for what had to be achieved to be certified to BMP. That meant there was a line in the sand, as we say, that a grower had to achieve so that they could be certified to the program. A key part of that program was then to have an audit or an assessment phase. At this stage, for a cotton farmer to be certified to BMP, they have a third-party auditor come on and assess this process to say, 'Yes, you're doing a good environmental assessment, you are improving and you have a framework for how you are going to improve your practices going forward.'

That was BMP. We have done a number of things to try to assess results. As I said, we have an audit program that monitors how many are audited and how many are certified. At this stage, 25 per cent of the industry farmers have been certified to BMP. That represents just over 50 per cent of the Australian crop that is produced under this system. We also undertook an evaluation of the program. As part of the federal government EMS pathways projects, we evaluated the BMP program last year. What that evaluation taught us was that, while we have a percentage of farmers that have been certified—they have been through the audit process and committed funds to an audit—most cotton farmers have implemented best practices on their farms, regardless of whether or not they have been certified. That shows that the standard of cotton-farming practices has increased dramatically, especially in the last five years, and enormously in the last 10 years. So we know we are getting somewhere.

The next big challenge, as Ralph has indicated, is that we are implementing a land and water management module, which starts to broaden the package out. The package used at the moment was originally focused heavily on pesticides—on how farmers apply and manage pesticides, as well as on good farm practice in terms of integrated pest management and farm design. Now this

land and water module takes it outside the farm and starts to help the farmer look at their impact on the catchment. Before now, farmers were very focused on their environmental performance inside their farms. Now we are challenging them by saying, ‘Now assess your impact on the overall catchment you’re involved in and develop action plans if you need to.’

That is a snapshot of where BMP has come from. We are looking at this land and water module to be a broadening of approach to help farmers look at all of those bigger issues—which is also, I think, what farmers are looking for. It is not like we have to convince them that there is an issue there. They know that they have issues and they are looking for tools, for support and for people to help them solve some of these problems. That is why we have committed to this process.

CHAIR—In relation to the position on water, how do you go about dealing with not just the policy on water but also the BMP when you have cross-border issues with different regulatory regimes, arrangements and practices? How do you bring them into line? For example, presumably the issue of Cubbie Station has come up, compared to what is happening in the Gwydir area. How do you resolve those differences?

Mr Leutton—Chairman, your timing is impeccable: Cubbie comes onto the agenda very quickly. It is not easy. Cubbie Station is probably an example of the complexity of our Federation. Cubbie and the water users in Queensland are working under a certain set of sovereign laws, as are the irrigators in New South Wales. We are talking about irrigators rather than cotton growers here, because any irrigator can grow any crop. The issue we face with our water policy is that, as a peak organisation, we do not get involved in valley issues because there are many different valley issues. We can support a valley in New South Wales which will have a set of circumstances which will cause almost the opposite effect in a valley in Queensland, so therefore we have to be careful. What we do look for and what we do support very strongly is the way the processes arrive at the outcome—what the processes are.

In particular, the process being used at Cubbie Station in developing the Condamine-Balonne water resources plan has been very sound, we would suggest. Whether or not we agree with the outcomes, we believe the process allows those outcomes to be assessed. There is a five-year review process in that plan which allows that group—the stakeholders, the government and the agencies—to sit down and say: ‘Is the plan working? Do we adjust the plan? What are the outcomes?’ In the particular circumstance where it is on the border, it has had to work in with that ministerial agreement across the border and make sure that the two legislative structures work together. Again, it is an issue of the Constitution and how we manage that is not easy.

Senator HEFFERNAN—In your Cotton Australia policy position, is the Cubbie clause where your organisation says that it ‘does not support the inclusion of environmental impact as part of best practice pricing’?

Mr Leutton—That means we do not want to see water pricing used as a tool to get environmental outcomes. The environmental outcomes we need are critical.

Senator HEFFERNAN—It is bushranger rules up there. No-one is breaking the law—I agree with you on that—in the Lower Balonne. As the manager of Cubbie said: ‘We’re just doing what we’re allowed to do. Even if we are destroying the environment, we’re allowed to do it. We’ve

been allowed to put in these five-metre turkey nests instead of what we wanted, which was 10-metre turkey nests, because the law was changed to get away from environmental planning.’ There is going to be a huge environmental cost to what is going on at Cubbie in a 50- to 100-year outlook. I actually disagree with you. I think that environmental best practice should have been put in place instead of all these bunded water banks. You would be put in jail in New South Wales if you did some of the things that are going on up at Cubbie. If environmental best practice had been included, what is going on there now would not be happening.

As you know, they rolled 51 licences into one with a stroke of the legislative pen in one of the worst of the excesses of a previous Queensland government, which I think is as dodgy as hell. I do not think any of that would have happened had there been a correct environmental plan put in place for the Lower Balonne. It is fair to say that the environmental plan there is first in best dressed and bugger the rest. It beggars belief—and I am sorry to do this to you, by the way—that you could say that there should not be some environmental aspect to water pricing. They are getting their water more or less for nothing. They have put in 170,000 or 180,000 megalitres. If you were growing cotton in New South Wales, you would value that amount of water at a minimum of \$1,000. Would you disagree with that?

Mr Leutton—It depends on the valley.

Senator HEFFERNAN—From \$1,800 down to \$700?

Mr Leutton—About \$500 or something like that.

Senator HEFFERNAN—Just take \$1,000 as a median figure. So that is \$170 million worth of water going into a turkey nest, and you know that half of it is going to evaporate before it is used because of these five-metre things. I just think that is outrageous.

Mr Leutton—You are right, but let us face some realities. There is a regulatory structure in Queensland and it is a sovereign structure. Unless you as the federal government can take over control of natural resources and address these issues so that that line called the Queensland-New South Wales border does not cause a problem, we have to work within the current structure.

Senator HEFFERNAN—I am pleased to hear you come a little way down this path.

Mr Leutton—Yes; but we have to work within the current structures. Everyone focuses on Cubbie, but there is a whole number of other irrigators around that are neighbours to Cubbie.

Senator HEFFERNAN—Ballandool are not too happy because they were included in ‘bugger the rest’—they were that part of the equation—and they did not get their water.

Mr Leutton—But, again, is that ‘bugger the rest’ the individual irrigator’s issue or is it the government saying, ‘Okay, there’s your licence; there’s your licence; there’s your licence’? I think the issue is the public policy set at the time; whether it was right or wrong, whether we agree with the particular government or not, that was the public policy. The public policy then allows that group to develop. With what that group has said now, we recognise there are issues. In your committee hearing at St George, you heard about them all taking voluntary cuts to allow the sleepers and dozers to further develop their water title.

Senator HEFFERNAN—But that is smoke and mirrors, with the present government.

Mr Leutton—But there is still that group there working together to try and sort out an outcome. The issue—and here I challenge this group—is not to say that what happened back there was wrong; it is what we do now to get the outcome we are after. With the structure we have in, say, Dirranbandi, there is an economic infrastructure now that has come about because of a series of irrigation enterprises having given outcomes.

Senator HEFFERNAN—There is an economic intimidation—that is what I would term it—because most politicians, as with the forestry issue in Tassie, are intimidated by the economic argument, even if it is a 100-year destroying of the planet plan.

Mr Leutton—That is a key point. Let us say that you people here represent the Australian government; what is your strategic plan for Australia for 2050?

Senator HEFFERNAN—This is why I am trying to encourage a robust debate.

Mr Leutton—Good, and that is what we need.

Senator HEFFERNAN—I think there needs to be much more public information—and we had excellent evidence yesterday on this. There needs to be much more public participation in what the issues are, to give politicians the political courage to do something about it. It is obvious that the present arrangement—where you can have the world's worst environmental planning for water in one state and the world's best in another, with them somehow meeting at the border—is nuts.

Mr Leutton—Chairman, the senator has answered your question about how we handle border issues.

Senator HEFFERNAN—I think it is not necessarily fair to say that environmental impacts should not be some part of the pricing of water. That water up there is more or less free, and why wouldn't you take it if it is free? It is \$3-something a megalitre. They say, 'But we're doing the earthworks'—

Mr Leutton—When you say it is free, you actually mean it is a very low price there. No-one can take water without a licence.

Senator HEFFERNAN—No, I mean in relative terms.

Mr Leutton—An image is being seen by the general public regarding irrigators—and it was good to hear Senator Buckland's comment about the rice industry. They are great colleagues of ours and we are glad they have learnt all of our lessons and are adopting them.

Senator HEFFERNAN—We think the plantation forestry industry could learn from some of the regimes that you have put in place for chemicals management et cetera.

Mr Leutton—Yes.

Senator HEFFERNAN—You have done some wonderful work.

Mr Leutton—The point you are making is quite valid: the issue is about robust debate on policy in this country. We as agricultural industries—and I cannot speak for every industry—need to sit down and internally ask, ‘What is our stance?’ Senator Heffernan, you raised a pricing issue. Our policy position is that we do not want pricing to drive environmental outcomes because that will not give the outcomes we are after.

It was interesting to hear Senator Buckland talk about the rice industry. Queensland cotton growers on the top end of the Downs and in Central Queensland have been involved in the water use efficiency program up there. Over three years, they targeted achieving a 10 per cent efficiency. In three years, we have achieved 12.8 per cent. I do not see major headlines saying, ‘Look how well the cotton industry has done.’ All we ever hear about is ‘those bastards down the other end’.

Where can we start to say that we are achieving outcomes? Dan mentioned that nearly 60 per cent of our cotton production is audited as best management practice. We are the greenest cotton in the world, you might say. We now have the WWF, World Wildlife Fund, for Nature recognising that; they take part in our structures to implement best management practice programs. Where is that recognised?

Senator HEFFERNAN—While we are on that, it reminds me of the institute. Do you sponsor the WWF?

Mr Leutton—Not all, no.

Senator HEFFERNAN—Not indirectly?

Mr Leutton—Not indirectly. We may have cotton growers who are members of it, but Cotton Australia has a relationship only through debate, robust interaction and policy development.

Senator HEFFERNAN—So there is no proposal that you are aware of to put a stamp on this as clean and green, with the cost of that stamp going to the organisation that puts the stamp on it as an indirect subsidy?

Mr Leutton—You have given us a new idea. No, we have not got that idea; it does not exist.

Senator HEFFERNAN—Can I raise another issue out of your policy document. I only just got it, but it says that Cotton Australia supports the protection of Queensland’s land, including farmlands, river and water resources through appropriate vegetation management legislation—and these are all very good motherhood statements, by the way—and other measures. What is Cotton Australia’s attitude to the principle of bundled water licences? There is this great unknown here environmentally in what we are talking about. Do you have a view on that? As you know, I do.

Mr Leutton—I am sure you do. We do not have a stated policy position on that. That is something we are debating internally at the moment. Really I could not comment. Dan might want to make other comments, but we do not have a policy position.

Senator HEFFERNAN—Can I just say, for your debate, that I think the principle of banded water is an outrage that should not be tolerated even for a minute. There has been the complete denial of environmental study surrounding it. The banks are already up at the lower Balonne in anticipation of this river of gold. I could do the same at the lower Lachlan. I have got 20,000 acres of flood country there and I could make myself millions of dollars just by putting a bank around it—bugger the environment. Given your earlier statement about environmental pricing not being included in the water, I would urge Cotton Australia to come to terms with some of these issues. If you would like me to come along to a forum and participate in the debate, I would love to.

Mr Leutton—We will take note of the senator's information and include that in our debate.

Senator BUCKLAND—I have not finished reading through the booklets you gave us. Going back to the Darling Downs, where I have been and discussed water with the growers, I can remember—I think it was 18 months or so back—they were jumping up and down on the balls of their feet with excitement about getting access to Brisbane reticulated water, but then recent reports suggest that they are not prepared to pay for it. I think you were here when we talked earlier about the cost of getting it up and pumping it.

It really makes me wonder about the commitment of an industry when they are not prepared to pay. If it were coal, they would put railway lines in, they would put power in and they would do all things necessary. I am not a great supporter of cotton. I do not say that to offend; I may not be sufficiently educated. It seems to be an industry that wants everything, takes a very valuable commodity but is not prepared to pay for something that is available. Pumping it up a hill is going to be costly, but the industry seems to go cold when money is spoken out. Yet other irrigators in lower sections of the river are prepared to fund water-saving measures. I just wonder why the cotton industry thinks it is different. I want to then come to some of the other things in your submission.

Mr Leutton—You are touching on some issues where really, with all due respect, there might be some confusion. The eastern downs would be serviced by that water. There are many people who have been strong supporters of that whole program. I believe the Queensland government itself may have caused the undoing of that program. But that program is not finished yet; that may still come to be.

Earlier I mentioned the water sufficiency program in Queensland. Many cotton growers invested quite significantly in that program. The Queensland government put some funds on the table for four industries—sugar, cotton, dairy and fruit and vegetables—to look at water sufficiency. Each grower who put his hand up to take part in the program was given an allocation of dollars to do some work. It was only a reimbursement against what they had already invested, and we had growers who were investing \$50,000 plus in programs of water sufficiency to get \$1,500 or something back from the government. So it was not a subsidy to get water sufficiency; it was an initiative for people to focus on water sufficiency. To say that cotton growers would not put their hands in their pockets for the money—I think you may have spoken to some that said, 'Yes, that was the case'—that water would not go just to cotton growers; there are a lot of irrigators on the Eastern Downs who would be using that water.

Senator BUCKLAND—There are a lot of irrigators in the Lockyer Valley, as I recall, who could and do want the water, and they still get access to that water.

Mr Leutton—Yes, and that is what we are pushing. The Lockyer Valley is—

Senator BUCKLAND—They are not up over the range.

Mr Leutton—And there are no cotton growers there; it is all fruit and vegetables—horticultural growers.

Senator BUCKLAND—Yes.

Mr Leutton—Taking the essence of that question and bringing it back to the National Water Initiative, a key part of the initiative right now is to identify where the hot spots are in this country, to allow some investment to address those issues. One is the Lockyer Creek. The soil in the Gatton area and in that valley is probably the most valuable soil in Australia, but it is useless and valueless without water. There is now water coming from that Brisbane outfall into the northern bay, causing significant environmental issues in the northern bay when it could easily be turned back into Lockyer Creek and be of quite significant use. That is an issue. We have issues in New South Wales with the Upper Namoi and so forth, where we need to make significant adjustment or investment to address issues like the ones you are raising. I think that is where we need to focus our energies now. We need to ask, ‘How do we get these things done now to make sure the outcome is all right?’

Senator BUCKLAND—I find it interesting that the ABS water audit indicates that New South Wales returns are lower in irrigation than other states, yet they produce 80 per cent of the cotton. What is your view on that?

Mr Galligan—Could you clarify the question?

Senator BUCKLAND—New South Wales returns are lower—

Mr Leutton—Per megalitre?

Senator BUCKLAND—yes—in irrigation than other states, yet they have 80 per cent of the cotton.

Mr Galligan—In cotton only?

Senator BUCKLAND—No, not just cotton, but they have 80 per cent of the cotton crop.

Mr Galligan—Am I correct that that figure relates to all irrigated farming?

Senator BUCKLAND—Yes.

Mr Galligan—So all irrigation farmers in New South Wales do not return as much per megalitre compared to all irrigation farmers in Queensland.

Senator BUCKLAND—Yet 80 per cent of the cotton crop is in New South Wales.

Mr Galligan—Yes, but there are also a whole host of other industries—

Senator BUCKLAND—Yes, sure.

Mr Galligan—in New South Wales, so we would have to look at the figures for other industries as well. We could not really comment without doing that.

Senator BUCKLAND—What about the efficiency of the South Australian wine grape growers?

Senator HEFFERNAN—He is just bragging about the wine businesses in South Australia!

Mr Leutton—Perhaps we should put it on the record that we should support the filtering of salty water into wine grapes to make some very good outcomes. I think it is an excellent outcome for the South Australian industry.

Senator BUCKLAND—Yes. In your cotton fact sheets, which are reasonably valuable, there is a page dedicated to water—I know there is a lot more about water in this and I do want to make some comments and discuss that with you. Here you say cotton uses eight megalitres of water per hectare, which is less water than other crops such as pasture, rice, maize, soy beans and citrus. That is pretty good and, reading it, I think, ‘I’ve got it all wrong’, but you do not actually show figures to support that. I wondered if you had or could make available to us the water usage per hectare of cotton—I do not know if that is the way to measure it—to show us how much water usage has reduced over a period of 10 years or so.

Mr Galligan—We can certainly make that available.

Senator BUCKLAND—I would be very interested to see that, because reading it makes you feel warm and cosy, but in fact there is nothing here to substantiate the claims you make. I am sure producers such as maize, soy bean and citrus producers would be interested to get around the table with you. It would be a pretty vigorous discussion, I think. I would really appreciate having some figures put before me, because you go on to say that more than 90 per cent of Australian cotton is grown under irrigation, which we are aware of, and that water is reduced by a series of factors which you discuss, but how much is it reduced by? How much water are you storing from natural rainfall? Where are you getting the on-farm water from? Are you pumping it out into dams or is it bunding? I would really appreciate you showing us something to support the claims made.

Mr Leutton—We would be happy to provide that information. We do not have it with us right now.

Senator HEFFERNAN—What do you think about the National Water Initiative in encouraging bulk suppliers like Coleambally et cetera to trade out of their area?

Mr Leutton—It is interesting because, if we come back to the issue of trading—and I heard the comments of the previous witness—we have quite a strong comment about trading in here

and we are very much aware of the impact of trading on the area. I think what we need to look at in this country is not just—and I say this very carefully—'free' trading; there must be trading rules. If you go through any kind of commercial arrangement, there are rules that govern that arrangement. We cannot leave assets high and dry; we cannot have the environmental impacts of shifting all the water out; we cannot just leave communities stranded. There need to be rules.

Senator HEFFERNAN—So there needs to be free trade with set rules?

Mr Leutton—Yes.

Senator HEFFERNAN—What do you think about paper trading?

Mr Leutton—Your usual question. I do not believe it is a major issue. As we heard from the previous witness, and as others have said during your inquiry, if we have the rules right, the paper trading will not be an issue. Paper trading occurs now.

Senator HEFFERNAN—There is this motherhood statement in the National Water Initiative that we are going to deal with water speculators. How do you think we are going to deal with them?

Mr Leutton—I could not comment.

Senator HEFFERNAN—That is the great mystery for me: there is a recognition of the danger, but how you deal with it—

Mr Leutton—Just to comment: that is why the National Water Initiative is not a completed task yet; you have to work those rules out.

Senator HEFFERNAN—I agree with that; I just want to keep reminding people. What is Cotton Australia's attitude to the phantom ground water licences in the Gwydir? Would you have an opinion there?

Mr Leutton—No, we cannot comment. That is a local issue that needs to be sorted out locally. What we need to make sure of is that the marketplace does work properly.

Senator HEFFERNAN—In the situation in the Gwydir aquifer, approximately a quarter of the licences are owned by people that do not actually have an aquifer and those allocated licences within the aquifer, even though there is no aquifer there, become part of the gross sum for the allocation of the sustainability of the aquifer so that the mature licence users are disadvantaged. Can I just say—so that Cotton Australia get the message directly—that, if the industry insists that they be tradable and that those people get whatever it is, \$1,000 or \$1,800 a megalitre, for something that was completely valueless when it was allocated to their land, it would be a massive fraud on the public purse to anticipate that.

Mr Leutton—I think that is a very correct position to take. Obviously we do not have a position. That is the challenge that is coming out of this whole National Water Initiative. The challenge I put to the committee is: what do we do in the 10 years to 2014, when the next formula comes into play? How do we address these hot spot issues. There may have to be some

structural adjustment. They might not get \$1,000 a meg. for that licence; they might get \$10—I do not know. But what adjustment process do we have to put in place? It is probably a similar story in the Namoi, but it is different again. It is another valley with different structures.

Senator HEFFERNAN—The Namoi is an example of gross mismanagement by governments of all persuasions. I feel sorry for the people there, especially the younger generation who have gone into the Namoi in anticipation and then had said to them, ‘Sorry, but back in 1984 Paul Landa decided to give a 30-year aquifer mining licence and now we are going to take away from you 85 per cent of what you went to the bank and borrowed money for in good faith.’ I think that is outrageous.

Mr Leutton—Similarly, in the Gwydir there was a public policy that said, ‘Here’s a licence.’ How do we address that?

Senator BUCKLAND—You keep referring to hot spot areas. Can you identify those?

Mr Leutton—We do not know them all yet. That is the challenge we will have in these next few months. If we understand the outcomes of the National Water Initiative and the communique, the Prime Minister did not put a bag of money on the table, as the states were anticipating, to say, ‘Here is your payoff.’ Perhaps he was quite strategic in doing that, because he has now asked that each of the states come back within a certain time and say, ‘This is where we have a concern.’ It could be rural water, urban water or any water issue across this country. It needs to be put on the table. Bilateral arrangements need to be worked out between the federal government and the particular state on how they address that issue. From a rural perspective, the Lockyer Creek in Queensland is one of those hot spots. How do we get the Brisbane grey water back to Lockyer? Is that a hot spot that needs some bilateral investment? There is the Namoi and the lower Lachlan. There are issues at Lake Alexandrina in South Australia. How do we address those? Should we automate the barrage? Is that an investment that should come out of this process?

Senator HEFFERNAN—Evaporation at Menindee.

Mr Leutton—Exactly.

Senator BUCKLAND—If the industry were asked to reduce its water consumption by 20 per cent over 20 years, how many would leave the industry? That is a bit hypothetical.

Mr Leutton—To what outcome—why?

Senator BUCKLAND—To have more water flowing down the river. Why shouldn’t this industry look at reducing its water use?

Mr Leutton—That is a good point.

Senator BUCKLAND—There is technology. Everyone else is going into new technology. I have a background in industrial manufacturing. If the manufacturing industry are forced—not asked—to invest heavily in research and development, nowadays with very little assistance, why aren’t you doing the same?

Mr Leutton—I will answer that with another question: aren't we?

Senator BUCKLAND—Show me how. You might produce for me what you have done.

Mr Leutton—Let us say we reduced our water use by your figure of 20 per cent. Do you think that would impact on the mouth of the Murray?

Senator BUCKLAND—I think it would.

Mr Leutton—I challenge that. Let us take the Murray-Darling Basin—and the water debate is larger than that—

Senator HEFFERNAN—Are we talking about 20 per cent of the cotton industry's use? Between 13,000 and 14,000 gegalitres are diverted. Are we talking about the total diversion?

Senator BUCKLAND—It is more a hypothetical question.

Senator HEFFERNAN—So you are talking about a couple of thousand gigs?

Mr Leutton—We could solve the mouth of the Murray issue tomorrow. I understand that 1,500 gegalitres would fix up this whole debate—wouldn't it? I think the cotton industry in the Murray-Darling system uses 1,500 gegalitres, so let us close the cotton industry down. Senator Buckland, do you want to take that decision? What happens in Moree? What happens in—

Senator BUCKLAND—I do not want to answer that, because I would probably say yes.

Senator HEFFERNAN—Do not, or I will dong you.

Senator BUCKLAND—My opinion may well change, but I would like to see what research and development has been undertaken by the industry itself to make it more water efficient.

Mr Leutton—I believe we can supply that. Through our water sufficiency programs, we have actually looked at that.

CHAIR—It would be helpful if you could provide something. I will respond to one of your earlier comments that, if we equal government, then as a committee we would make the decisions that you are suggesting as part of the hot spots plan. While we can make recommendations and, hopefully, influence the decision that government makes federally as well as—through COAG—the decisions of member states, the final thing is that I see this more as a partnership. We can certainly suggest or lead on change in policy but there also has to be an effort made by other stakeholders, particularly those in the industry, not just those in cotton but right across the board especially when you are looking at 70 to 75 per cent of water consumption being in the agricultural field. I will finish on that note. Mr Leutton and Mr Galligan, thank you both for appearing here today and providing assistance to the committee. A copy of the *Hansard* will be available in coming weeks if you wish to correct anything that may have been said. If you have any queries or issues, please feel free to contact the secretariat.

Senator HEFFERNAN—Chair, before we go to lunch I wish to put on the record that, unlike the Sydney top water bureaucrats who recently spent three hours and 15 minutes meeting and three hours and 45 minutes eating, yesterday we spent seven hours meeting and 1½ hours eating and today we are spending 4½ hours meeting and 1½ hours eating. Thank you very much, Mr Chairman.

CHAIR—Thank you, Senator Heffernan, for that contribution.

Proceedings suspended from 12.37 p.m. to 1.34 p.m.

MIELL, Mr Doug, Chief Executive Director, New South Wales Irrigators Council

CHAIR—Thank you for appearing before the committee today to provide assistance. I invite you to make a short opening statement.

Mr Miell—I would like to say that 2004 has been characterised in the water industry in New South Wales by some pretty remarkable changes, especially from 1 July. We have seen the National Water Initiative begin on 25 June, which was a pretty momentous occasion and it put a lot of principles down. Complementary to that in New South Wales, that also saw the introduction of 35 gazetted water-sharing plans and a lesser number of groundwater plans which have been held over for another 12 months, the corporatisation of State Water, the introduction of a number of Water Management Act amendments, all of which are complementary one way or another and all of which build on national competition policy. So one has stimulated the other, and it is really now a case for the industry of making the best of what we have got.

There are some excellent initiatives in there; there are still some where the devil is in the detail, as with most of these things, but we now have a very broad framework that really does create a lot of positive opportunity. It is up to us now to work with state and federal governments to put it all into place. So the outlook is still clouded, obviously, by extremely low levels of water availability across a lot of New South Wales, and you have probably heard of that. The further north you go the better it gets, relatively.

The Central West is really bad. You cannot overestimate and overstate how bad the Lachlan and Macquarie are, and the Murray-Murrumbidgee for this time of the year does not get much worse, but fortunately for them they still have a window of opportunity where they could pick up significantly between now and the end of October-November. Even the likes of Bourke, which I know you were in contact with yesterday, is just coming out of a very bad patch. They have got water but it is still to flow through into the economic environment. So while irrigation really is the mainstay of agriculture, in New South Wales in particular it is going through a very rough trot. Notwithstanding that, the initiatives that we have seen over last three or four months really do set the industry up for a very positive future, mother nature notwithstanding. I can take questions on any of this; there are obviously a lot of issues in all of this and a lot of detail.

CHAIR—I note you have also provided a submission. I wonder whether you want to make any quick comment about that and the key issues it raises.

Mr Miell—Probably not. A lot of things have moved on since then. The National Water Initiative, which was key and obviously in play then, has moved on significantly. The New South Wales minister has put things in place. So a lot of things that had been held in abeyance at that point have now been implemented. That is probably all I would say about that submission.

Senator BUCKLAND—Could you outline your membership?

Mr Miell—We represent 10,000 irrigators, and I will list our membership: Border Rivers Food and Fibre, based in Goondiwindi; the Gwydir Valley Irrigators Association in Moree; the Namoi Valley Water Association in Narrabri; Macquarie River Food and Fibre in Dubbo;

Lachlan Valley Water in Forbes; Darling River Food and Fibre, based in Bourke; the Hunter Water Corporation in the Hunter; the Murrumbidgee Irrigation Area in Griffith; the Murrumbidgee Horticultural Council; the Murrumbidgee Private Water Diverters Association; the Ricegrowers Association of Australia; Cotton Australia; the Murray private diverters; Murray Irrigation; the Murray Valley Groundwater Users Association; Western Murray irrigators and the New South Wales Farmers Association. They have what we call class A membership; they have voting rights. In class B, which is non-voting, we have two new members as of a couple of weeks ago: the Wine Grapes Marketing Board in Griffith and the Richmond-Wilson Water Users Association out of Lismore.

Senator BUCKLAND—When they are not voting, is that because their industry is not substantial enough or because they have to do an initiation time?

Mr Miell—There are two reasons: one is that the council is very concerned to keep its core membership to practising irrigators. The Wine Grapes Marketing Board is a complementary industry and they have a complementary membership with the Horticultural Council. They felt they wanted to join to be kept abreast of what the industry is doing, so they are quite happy with non-voting. The Richmond-Wilson Water Users Association is a new organisation representing unregulated river users, predominantly on the coastal streams in Lismore. They did not have the finances, so they chose to start off as non-voting members for 12 months while they got themselves organised. The council waived their fee for the first 12 months. They would hope to progress to a full voting membership. We claim to represent, under all those organisations, about 10,000 irrigators. The irrigators we do not represent are basically unregulated people. By establishing classes of membership, we can offer individuals membership to the council in their own right should they choose it. We have got that flexibility.

Senator BUCKLAND—Are the fees paid by people to be members of an association like yours based on their industry or their size, or is it a standard fee?

Mr Miell—It is just based on a per megalitre voluntary contribution, so there is no statutory thing. It is just 7c a megalitre.

Senator HEFFERNAN—So what do you think you should do with one of the biggest water users in New South Wales, who are not affiliated with your irrigators council: the plantation forest growers?

Mr Miell—They are water users by virtue of catching water prior to it entering a stream.

Senator HEFFERNAN—Intercepting.

Mr Miell—Basically it is not so much what we should do with them. The National Water Initiative sets—

Senator HEFFERNAN—Do you have a useful dialogue with the plantation industry?

Mr Miell—I have not started that yet. I have had discussion with them through the process of the National Water Initiative.

Senator HEFFERNAN—They are coming through this denial phase.

Mr Miell—Now that you are starting to look at the licensing regimes that the National Water Initiative has put in place, we need to certainly get closer to those sorts of people.

Senator HEFFERNAN—So you would support this committee if we had a recommendation along the lines that, if you were a plantation grower and you insisted on growing in the high rainfall area, you actually should take a licence out of the system to grow it. If you are intercepting two or three megalitres per hectare per annum out of the run-off, which has to be part of—

Mr Miell—The whole equation. We have not actually formally addressed that. We have obviously had a lot of discussion in the context of national water and how you do it. That is one of the things that we would classify as work in progress—and serious work in progress, because it is a real issue that has been identified. Similarly, in the same vein, what was identified in the National Water Initiative was conservation farming and conservation tillage. Some people were running the same argument that they are storing water. Both of those issues—

Senator HEFFERNAN—Let us look at that argument. We have the work—the science—complete. Once you get below a 28-inch rainfall—certainly when you get down to a 24-inch rainfall—the differential between a plantation forest of eucalypt or pine and a pasture, whether it is lucerne or whatever, is buggar-all. There is not an argument there. Kate Carnell, representing her constituency, argues that she wants equal treatment. I am happy to give equal treatment, because there is nothing to discuss once you are in the lower rainfall. But, as you know, I think it is reasonably argued that it would be unfair to Australia's irrigators to go down the Murrumbidgee and say, 'We're going to knock off 40 per cent of your allocation returns for water for the environment,' and go back in 10 or 15 years and say, 'Look, sorry, but we've got to take another 40 per cent because we forgot about the forests under the 20/20 vision.'

Mr Miell—That is certainly an issue that we have to put more resources into as an industry. As I said, the dialogue with those people is the first place to start, because they were not active participants in the National Water Initiative. I am not saying that they were not, but we did not see them in any of the areas that we were in. They certainly did not seek us out. It is an issue that is incomplete—work in progress.

Senator HEFFERNAN—You may or may not be aware that I have a view on the groundwater situation in the Gwydir. I do not know whether the irrigators council participate in the policy formulation side or the allocation side. I have a pretty strong view that the approximately one-quarter of the Gwydir licences that have been allocated to people who do not actually have an aquifer should not be eligible for any compensation or whatever, because it seriously disadvantages the allocation to the mature licence users as it is. Do you blokes have a policy in that area?

Mr Miell—We represent those people. For the two hours preceding my appearance here, I have been doing battle with the local department on that very issue. I have a full agenda in front of me. We have just today been able to, for the first time, brief Gwydir and all our groundwater issues on the New South Wales government's current proposal. That proposes an equal treatment across both sleepers and dozers, as they are referred to, and active water.

Senator HEFFERNAN—I do not want to pre-empt the government, but you have mature licence users, you have dozers and you have what I call phantom licences. I think it will be a fraud of the public purse if in fact it becomes a reality, but is it proposed that people who have an aquifer licence but do not have an aquifer would be eligible for compensation?

Mr Miell—At this stage, there is a two-tiered proposal. The water has put an imputed value on the land and then there is the production value. That is basically what the draft says. I have just come out of the meeting so I have not even had time to evaluate what it actually means. But that is the proposal on the table.

Senator HEFFERNAN—If you do not have any water under your land but you have a bloody licence, isn't that a fraud?

Mr Miell—It is certainly one of the inequities that we have to look very closely at. Basically we are keen to protect the productive base that is currently being used by groundwater. One of the proposals they put up does appear to give those sleepers, dozers and phantoms—where they exist—a share of an allocation which they have never used or which, as you say, might not necessarily be there.

Senator HEFFERNAN—I do not have a problem with the dozers, but I have a serious issue with the phantoms. If there was compensation, it would be maladministration of compensation rather than real compensation because it is a nonsense to have issued licences to people who do not have access to the aquifer.

Mr Miell—One of the points we have made is that we need to be sure that any compensation is going to those who justly deserve it—and where possible the maximum amount of water is kept in production. So we do not want to see the productive base that is associated with existing water reduced unnecessarily.

Senator HEFFERNAN—I do not want to put you on the spot, but we took evidence in Moree from the people we are talking about who thought that they would be eligible or ought to be eligible for compensation.

Mr Miell—There are a lot of expectations out there. Now that we have this proposition in front of us, we can start evaluating it. We have some serious reservations about that.

Senator HEFFERNAN—When I originally raised this with the minister and minister's office—and I have to say that there is a lot of goodwill in Craig Knowles's office on all of these water issues and I congratulate him on that—they did not actually believe what I was telling them. They came back within a few days and said, 'For whatever the reason, it is a fact.' I went to the New South Wales Farmers Association and said, 'Hang on, why are you blokes silent on all of this?' They said, 'Senator, you've got to understand that we have a lot of members who own those licences.' If we are going to be fair dinkum in the water debate, we have to look at this sort of thing. Anyway, I have made my point.

Mr Miell—It is work in progress. As I said, I have the file here now. Now that we have seen the proposition, we will be doing a lot of work on analysing just what that means in the next week to 10 days. A lot of that also gets caught up in the National Water Initiative, because one of

the things that the Prime Minister said when he announced the agreement was that hotspot compensation—or what is called initialising overallocated systems—will be subject to the consideration of joint state-federal government funding. This proposition is to try and give the federal government enough detail to be able to perhaps put some money into that.

Senator HEFFERNAN—In the Murrumbidgee aquifer this could not have happened because there you either use it or lose it. You get a licence and you test it. You have to use it or else you lose your licence. Up there, for whatever administrative reason, this has happened. If there were a compensation case to be made, it could be made by the mature licence users who are back to only 50 per cent of their allocated licence because of the plethora of licences that have been issued—because the Gwydir aquifer is not all that large. So not only have they been disadvantaged but also we are thinking about compensating the people who have caused the disadvantage.

Mr Miell—I suppose the comments you are making really highlight that in New South Wales groundwater is a really complex issue because of its history, where in some instances there have been deliberate strategies to mine it.

Senator HEFFERNAN—The Namoi, for example.

Mr Miell—The Namoi is one example. There has also been a ‘use it or lose it’ approach to licences. That has not been imposed in all cases. So you have a whole raft of expectations out there that we now have to manage.

CHAIR—So what do you do in the cases—and I hear what Senator Heffernan is saying—of those who originally thought they were getting a legitimate entitlement to access water but, having found out in later years that there was nothing to access, have used that as part of the process of raising capital; for example, with banks? Presumably you would have some members in that situation.

Mr Miell—I am sure we have, but we have not identified them and they have not identified themselves. They are the real unscrambling of the egg issues. I suppose in some instances you could take the view that that is just—

Senator HEFFERNAN—‘Buyer beware’.

Mr Miell—or the rub of the green, yes. Nobody ever gave any guarantee. There was obviously a lot of good science and a lot of goodwill put into it, saying ‘We think there’s water there.’ There were a lot of tests. All that stuff was probably done, but I do not think anybody gave a guarantee.

Senator HEFFERNAN—If you were buying a bore licence, the first thing you do is to check that there is a bore water supply. So I would call that ‘buyer beware’.

Mr Miell—There are probably two or three different cases. If you bought a property with the expectation that water is there—

CHAIR—Doesn't that make the state government liable, if they went out there plugging what you call the 'rivers of gold'?

Mr Miell—Look at the comments one of my members made this morning. Five years ago there was no money on the table for compensation. Now, even in the last budget, the New South Wales government put up \$38.4 million. They have put up money before. There are some conditions with that, but, all of a sudden, if there is a matching contribution from the federal government then there is potentially \$110 million there for groundwater compensation. As I said, five years ago there was not a dollar, so obviously a lot of people have had a lot of thinking time and there has been some acceptance that perhaps there is some genuine need to have public funds applied to getting things back into balance.

Senator HEFFERNAN—And public mistakes, such the Namoi mining question: public money for public mistakes.

Mr Miell—A lot of that was probably because there was poor policy attached to it; it was obviously a learning process. At least with surface water you can see it running across the ground, so you have an idea. If you have a dam, you can measure it. As for groundwater, I do not think anyone would say that it is an exact science in terms of what is underneath—the recharge, the quantum, the different layers of an aquifer. I think people have done well to get any handle on it at all. If you look just at the Namoi, it is complex, with town water, stock and domestic water and the various aquifers. That is probably the most complex. Then you get down into the Murray where, if they are not allowed to pump—and we had a discussion this morning about putting that position in—it creates rising ground water, so you have environmental problems. So there are some conflicts that have to be worked out. Now that we have got past all the National Water Initiative issues and those sorts of issues, this is probably the most complex issue we have immediately to resolve.

Senator HEFFERNAN—Where we run in to the border—and once again we may as well raise what Craig Knowles called exhibit 1, the Lower Balonne—there is some potentially serious disadvantage in the long term to your irrigators in New South Wales with the supply to Burke, for instance, or the Culgoa. How do you cross the border?

Mr Miell—The way we cross the border is through an organisation called Irrigators Inc., which represents South Australia, Victoria, New South Wales and Queensland—the Murray-Darling Basin members. That is how we have our industry dialogue there. The way we cross the border is through that. We respect the fact that what Cubbie Station has done, as I understand, was legal with respect to the Queensland legislation. Whether that is right or wrong, they have done that according to that. We operate in here—

Senator HEFFERNAN—There are laws that are silent.

Mr Miell—Sure. If that is shown not to be delivering the most desirable outcomes, hopefully now we have a National Water Initiative that can start focusing on that. But three months ago we did not have that. Sure, it is not giving immediate solutions—

Senator HEFFERNAN—No, but it is setting up for it.

Mr Miell—Yes, it sets up the process. If we look at the last four or five years, the focus really has been, ‘The Murray River’s dying.’ So that has got a lot of resources. We have the Living Murray, with \$500 million. The next symbolic one may very well be the Cubbie. But I take your point: that does impact on our members further down into the Darling. But I do not know yet whether that is having as much impact on my members as does the inequity we would see in how Broken Hill’s town water supply is being secured through lack of infrastructure management of Menindee Lakes.

Senator HEFFERNAN—That is another argument.

Mr Miell—There are inequities everywhere. Let us face it: the whole thing is being exacerbated by the serious dry condition we are going through. All these things really highlight how fragile the management is.

Senator HEFFERNAN—It is very timely to be engaging in.

Mr Miell—Yes. So that is a very serious one. But I think that, immediately, the Cubbie Station one has probably had its greatest impact on the flood plains out there and the graziers, because clearly, in a dry area, they were obviously hoping to get some relief from the floods that came through.

Senator HEFFERNAN—It is a pretty tough situation when the chairman of the Murray-Darling Basin ministerial advisory body has banks on her place which are quite legal, which have no environmental planning attached to them and which have to be breached to allow a downstream neighbour to get any water at all. It is bloody outrageous.

Mr Miell—I know the person you are talking about. I have flown over Cubbie but I have not been there, so I do not know the exact layout. I think it is one of those things that we can now hope that the National Water Initiative will enable consideration of. Perhaps if there is a resolution that is required to get greater equity, that provides a mechanism to do it.

Senator HEFFERNAN—Do you think the Commonwealth could make out a case to involve itself at an environmental level in all this water planning? There is no environmental planning at all in the Lower Balonne; they have waived the legislation to enable it to occur.

Mr Miell—In the first instance the constitutional bounds limit how much you can weigh in. In talking to all the ministers that I have talked to, the Commonwealth can normally make its way in with a chequebook; it can buy its way into anything. Clause 97 in the National Water Initiative opens up the opportunity for it to do that. In just about any issue with respect to allocation of a resource, if somebody wishes to pay realistic compensation, it can be overcome—if that is the most appropriate way to do it. So to that extent the Commonwealth can play a leading role.

Senator HEFFERNAN—At the same time I think the Commonwealth would be wary. One of the reasons there was a bit of haste about getting what is now described as the overland harvesting licences or the A and B regime in place was to legitimise what was a wink and nod system originally. Much of that stuff up there is wink and nod because the law is silent.

Mr Miell—Is this in Queensland?

Senator HEFFERNAN—Yes. I think we would be very conscious of enabling them to become eligible for compensation if there was any withdrawal.

Mr Miell—I understand. I have read the Balonne plan, I have read Minister Knowles's response to it, so I have the background but I do not have the knowledge of the history to it all. The Commonwealth has demonstrated in the Living Murray initiative that it has a leadership role to play. I think its \$200 million was the catalyst to encourage states to put money into a genuine process. We would welcome the Commonwealth's participation where required in other areas.

Senator HEFFERNAN—I take it that you would welcome some harmonisation of the regime between states because it would be in your irrigators' interests. For instance, there are the constraints, which we have heard about in the last few days, on the upper Murray landholders in terms of what they can capture as a riparian right in New South Wales versus the other states.

Mr Miell—I suppose it was the underlying premise of the National Water Initiative that we start to get some of these national principles. At the moment, there is some good state based cooperation along the Murray between Victoria, South Australia and New South Wales and also between New South Wales and Queensland. So it is not as though we do not have a lot of cooperation, but you can always improve it. You can always highlight where those areas are—you mentioned overland flows—where things have changed en route. We have not got a perfect system but I think—

Senator HEFFERNAN—In your discussions have you detected a lot of goodwill these days?

Mr Miell—Yes, absolutely. Minister Knowles and Minister Anderson can genuinely be credited with driving a successful outcome to the National Water Initiative. They have then used their other networks around the states to bring other people on board. I hope that time will tell, as we implement it, that we can keep that goodwill there and it demonstrates that we have got a good outcome. I am sure there are going to be things that we will find in the National Water Initiative that will not quite work out and we will have to revisit them. But we are likely to have a much better regime come out of the National Water Initiative in 12 or 18 months time than we have ever had before.

One of the big things is going to be that the Commonwealth will continue to have to play a leadership role. Even with the infrastructure to get a better balance between extractive use and the environment, investment in infrastructure can play a big role in using the water that we have in a better and smarter way. One of the classics there that the state water general manager tells me is what they call multilevel intakes and discharges in the dams. You get rid of putting out freezing water from the bottom of the dam, but you take it from the top. By doing that there is still a significant investment, but it works. Every time you discharge water you are getting an environmental benefit. We need to seriously look at some of these things. Perhaps that is where the Prime Minister has indicated that he would look at basically a state by state or perhaps a project by project basis at some Commonwealth funding or Commonwealth initiatives in some of those areas. I think that is what industry would be looking for from the Commonwealth government over the next four or five years.

Senator HEFFERNAN—My final question is whether you can supply the committee with any information as to what the irrigators council is doing to encourage its irrigators to greater levels of efficiency and what you think should be happening as initiatives in that area?

Mr Miell—I will tell you now, and I can come back to you. That is very much done at a local level. The two examples I would use there are rice growers—I think they call theirs ‘environmental champions’—and cotton growers, with their best practice management programs. That is what our members do. Even within the Murrumbidgee area you have a lot of people in the citrus sector who have gone onto high pressure systems and moved away from furrows. We facilitate that, but most of the action comes from our members. Working with Pratt Water is an example of private-public industry cooperation. All of that shows that a lot of people are interested in water, there is a lot that we know about water but that there is still a lot more that we can learn and apply.

CHAIR—That raises that question of how the efficiencies should be obtained and whether or not that should be done primarily under the leadership of farmers themselves or left to the marketplace through infrastructure investments, for instance. Do you see those as being compatible and able to work together, or are you saying that one should precede the other?

Mr Miell—I think they will all work in harmony. Obviously, at some point one may run ahead of the other, private or public. But we have a principle that he who pays for the infrastructure and for the savings should keep those savings. If farmers are encouraged to invest on farm and water efficiency projects then they should be able to recognise, use and retain any saving; and similarly for government. Where there are jointly funded projects, you share the benefits. There are good examples of that happening, even in environmental water. There are enough examples that I have seen occurring in the industry to show that we have an industry on the private sector side that is very conscious of using its resource smarter and better. That is even on farms. While the trading regime may now allow some of that water to move, we have seen a lot of examples where the higher value commodity is actually moving to where the water is. So individuals are saying: ‘I own this asset. I don’t have to sell it for it to provide a greater economic output; I can bring a new productive technique or commodity to my water.’ We have seen the Pratt Water groups and a lot of state water investments, so there is already a lot of investment in infrastructure. Look at the hierarchy of investment for the Living Murray, where it is going to be in-river operational efficiencies, in-river infrastructure and on-farm infrastructure. That is showing that there are different places where money can be spent on infrastructure for efficiency. Sometimes it will be public, sometimes it will be private and sometimes it will be a mixture of both.

Senator BUCKLAND—You said there were 35 water-sharing plans and that they are complementary. Is that complementary to each other?

Mr Miell—They all have the same principles. They are complementary to the National Water Initiative. They were based on the principles of sharing the allocation of environment and extraction use, getting back into sustainable levels of extraction and managing the whole ramping down from where we are now to where we want to be in 10 years time, for example.

Senator BUCKLAND—Does that include initiatives to reduce water usage?

Mr Miell—It is not so much about initiatives, but it does drive efficiencies. Where an aquifer, in the case of groundwater, or a river reaches dramatically over allocation, that has to be brought back into balance. If you want to maintain the same level of production it does necessarily mean that people are going to look at investment inefficiencies—infrastructure, farming techniques or the commodities they grow—so it does have that effect.

Senator BUCKLAND—I do not know how much water is used, so the easiest example for me is a megalitre. If you have a property using a megalitre of water a year from the river system and their efficiencies bring that down to 0.75 per year—I keep getting into hypotheticals because I am not sure how to ask the questions, but I know what I want to get the answers to—in real terms what is that irrigator going to do? Is he going to increase his crop by 25 per cent to take advantage of the 25 per cent additional water he has, or is he going to sell that 25 per cent water entitlement?

Mr Miell—There will be a mixture of responses to that. If he is able to, he may very well increase his production. He may diversify his production. He may temporarily sell some of that water. If he thinks it is a permanent saving that he has gained, he may choose to permanently trade that water. Obviously, a lot of that is going to depend on his own financial circumstances, the seasonal circumstances or the demand for water. So there is no black-and-white answer. But I think all of the things that you say are correct, and two neighbours would react differently.

Senator BUCKLAND—Of course. Let me preface the rest of this by saying that I sympathise with that but also support irrigators. I think they are having a terribly hard time at the moment. Some of them I might be a bit more critical of, and I will go to one shortly—although I am not going back to Cubbie Station; I think we have run it to death at the moment and we can rely on our good Senator Heffernan to take care of it. But, if it is right that they would plant additional crops, diversify or sell off that 0.25 per cent of the entitlement, there is no real gain for the river system, because that water is still going to be utilised. Nothing additional is going back into the river. There is really no additional gain.

Mr Miell—But the water-sharing plan will already have predetermined what the environmental share is. I would be assuming, in response to your question, that the water the irrigator has left is in compliance with and satisfies all the conditions of the water-sharing plan, after the sharing of what has to go through for the environment. So this is his asset that he now has left. He introduces new technology that gets the same production with a 25 per cent saving on his water, so he basically has a surplus asset. It depends on any number of factors what he might do with it. So it is not as though the environment does not get any extra benefit, because it has already got its benefit as per the water-sharing plan. This is a personal benefit the irrigator has got by investing in smarter technologies, different crops, trading or whatever.

Senator BUCKLAND—I am not going to go into the trading part; we have done it to death here today and on many other occasions, and I think we know our position on it. But you talk about investing. What about individual irrigators investing in research and development for their industry?

Mr Miell—A lot of that comes back through the various commodities that they grow. Just about every agricultural commodity has a research and development corporation or proponent, so you have that sort of R&D that is always ongoing.

Senator BUCKLAND—Say I am a fruit block owner and I am paying into an association or body. How much of my contribution goes to research and development? I know it will vary, but how much?

Mr Miell—It is probably one or two per cent maximum. I do not know. Every commodity, pretty much, has got it. I think the Rural Industries Research and Development Corporation looks after a lot of the smaller industries that do not actually have a structured R&D process. Research and development, both private and public, is substantial in Australia's agricultural sector. On top of that, you have the public sector with the cooperative research centres and CSIRO. If you look with respect to water, there are two or three bodies—CRCs—that are focused on water. The CSIRO has just started off its healthy futures project. So there is an enormous amount of R&D that is already applied to irrigation. A lot of it is driven by the public sector, for sure.

CHAIR—Probably in as large amounts as the rice growers.

Senator BUCKLAND—The rice growers example is one that I think we can look at.

Mr Miell—Yes; rice and cotton. Cotton has a very large program up at Narrabri.

Senator BUCKLAND—Let us go to the cotton growers. We had them before us this morning. This is why I asked you about the water-sharing plans that have been developed. They put before us today some books about their policy directions and stuff like that. I have to say as a unionist of many years that I have read it all before. There is a lot in there that makes you feel very warm about it and you think, 'Gosh, these blokes are fair dinkum.' I signed off on many similar agreements. We did a lot of talking but I can tell you that on both sides of the fence there was very cautious implementation of those words. Commitments I made and signed off on back in 1991 are getting near fruition now. I am sceptical of it. I am just wondering how many of these 35 water-sharing plans, whilst they make us feel good about it, will be very slow coming into practice.

Mr Miell—First of all, they have been introduced by the government. We have fairly strict guidelines on what you can extract, so irrigators' extraction levels will be reduced in line with those water-sharing plans. A proposed five-year review of those water-sharing plans will be done by the department. That was to be independent, but they have just taken that process back in house. That will be built on also by the Natural Resources Commission that the minister has established here in New South Wales. They are very well documented. That is the guiding principle. An irrigator's extraction limits will be set purely and simply in line with what is outlined in those water-sharing plans. They were agreed by a fairly extensive consultation process between irrigators, communities, environmentalists and local government, so they are fairly comprehensive.

In some instances, what was agreed in the regions was then changed, not necessarily for the better, by DIPNR here in the city. All we can say is that the industry is committed to them. We do not have any choice. They are the rules that we have been given so we have to apply them and abide by them. We are obviously concerned about the social and economic impacts of them because they go not only to our members but also to the broader communities. But they have been gazetted and they are a government instrument, so the rules that are in those have to be

applied. We do not have a choice. We have just come through a process with groundwater where we have been told quite clearly that future changes to the groundwater system are not part of the compensation package.

Senator BUCKLAND—The irrigators keep telling us that they are committed. I cannot lump all of them in one box, as that would be totally unfair and quite stupid, but, whilst there is a lot of commitment, so many of them do not have measuring devices to measure the water that they are extracting from the river. We are expected to take that on good faith.

Senator HEFFERNAN—Some of them in South Australia do.

Senator BUCKLAND—Absolutely. Some have been caught too and I think they should be prosecuted. But it worries me that we are to take it on good faith, because the most decent person will say, ‘I think I’ve got my quota—maybe I will just top it up a bit more because I don’t think I did.’ That worries me. Aside from all of the plans that are being discussed and put in place and directions that we are following, the real thing is to make people do it and to police it. I know that government has a role in that, but the industry itself could be a bit more forthcoming with getting these processes going.

Mr Miell—One of the initiatives that I am working on for council at the moment is the development for New South Wales of a real-time metering capability so that, irrespective of what water you take, that water is metered and measured. We want to demonstrate that we as an industry are responsible managers of the natural resource that we are using. If somebody comes and says, ‘We need more for the environment,’ we can say, ‘This is what we have extracted, this is how we have stored it, this is where we have used it and this is what we have produced with it.’ At the moment that data is dated. It does not reflect the capability of the industry. Also, you might know that the National Water Initiative has metering and measuring as a significant part of its process. While we accept that, sadly, there are some people who will bend and stretch the rules and a lot of water is not measured, one of the future initiatives that we have got going is how you measure every bit of water—and that includes stock, domestic and the whole lot—so that we all know where the water is coming from, what it is being used for and how it is being used.

Senator HEFFERNAN—Will that regime be used in other states?

Mr Miell—I am looking at developing the policy for this council, and we are talking about—

Senator HEFFERNAN—And interstate.

Mr Miell—Once we have developed it and shown it can be delivered, there is no reason why it could not be applied Australia wide. If we can drive a golf buggy on Mars, we should be able to measure real-time a bit of water being pumped out of the Darling River north of Bourke. The technology is there. There is a cost involved without question, but it is a matter saying, ‘By having this data we could better manage the natural resource.’

Senator HEFFERNAN—Congratulations on that.

Mr Miell—It is not going to be easy because some people are asking, ‘Do we need to measure stock and domestic?’ My view is you start off by saying, ‘We should measure everything and then let’s look at the cost of it.’ Is the cost prohibitive? Are there some areas of small use where you can make an assumption? It is the principle that we need to be able to measure it. Every time somebody flicks a pump, it starts dropping data into a database.

Senator HEFFERNAN—That would include gravity.

Mr Miell—Nothing is insurmountable, but you have to identify overlap flows, gravity flows—

Senator HEFFERNAN—As you are probably aware, with the metering system on some of those gravity things people say, ‘I think we might have taken—

Mr Miell—Yes. We think that that is where natural resource management with water has to go so that we have all got a better handle of exactly what is being consumed, where it is being used and, from our point of view, that we are demonstrating responsible resource management.

CHAIR—Thank you for appearing. I think this is the second time you have appeared, so thank you for assisting the committee again. A copy of the *Hansard* will be available over the coming weeks. If there are any issues that you wish to raise, please contact the secretariat.

[2.18 p.m.]

HUCKEL, Mr Andrew Ian, Senior Analyst, New South Wales Farmers Association

STREAT, Mr Jonathan Russell, Policy Manager, Conservation and Resource Management, New South Wales Farmers Association

CHAIR—Welcome. I invite you to make an opening statement.

Mr Streat—I would like to take the opportunity to thank the inquiry for inviting us to appear before it today. I am sure you are all aware there have been considerable changes in water law and the structures with which it will be dealt with at the catchment level in New South Wales. Those changes occurred through the COAG forum and through the new water amendment bill that recently went through the state parliament.

Farmers have seen a number of positive things in these changes. At the state level, of primary interest to us in the water amendment bill are the stock and domestic provisions to ensure that farmers are not unduly impacted upon by rapidly expanding subdivision. We think this is also a significant win for the environment. In areas where you would normally have a right for stock and domestic purposes to harvest pretty much indiscriminately from the river, having that compounded through subdivision obviously puts an unnecessary strain on the water resource. A situation where a farmer's existing rights are not impacted upon but future rights for subdividing the landscape take that pressure into account is welcome.

Under the National Water Initiative—which Andrew will fill you in more on—there have been a number of steps forward that have been welcomed by farmers. We think the framework set out through the most recent COAG agreement provides us with an opportunity to invest in a manner that should generate some efficiency dividends for agriculture, through that making more efficient use of the water generally for the broader community.

A property right notion is welcome. Again, as I guess you would have heard from the New South Wales Irrigators' Council and the like, it does attach a value to it. That means that landholders can conceive of it as something that they can own, trade, sell or pass on. That gives an ownership notion that we would argue slants towards better management and longer term planning, whereas the annual licence or five-year licence is weighted against that. I guess that is the classic argument of the commons, and we argue that clearly some ownership notion gives a vested interest in protecting the resource.

Equally, the commitment the New South Wales government have given to the water-sharing plans seems to suggest they are a bit serious about the way in which they will deal with what is recognised as some adjustment in allocations in some systems. Again, farmers would probably argue that they did not hand out the licences and the government did. That the government is tackling this is a good step forward. It is well recognised by us that this is a complex and emotive issue on all sides. You are dealing with a significant natural resource and there are always going to be arguments about that. In general, we are quite supportive of the way in which

the New South Wales government and the federal government have approached this. There are a lot more complexities and issues for the future.

CHAIR—Mr Huckel, do you want to add any comments on the National Water Initiative?

Mr Huckel—It is a great step in the right direction. What has been particularly satisfying from the point of view of the farming community is that politicians of all political persuasions have largely put politics aside for the first time in a very long time with regard to water management. Obviously, they have formulated a National Water Initiative which will provide increased investment certainty and water security for both farmers and the environment. It will put in place some significant incentives for the farming community to improve water use efficiency, and there will be a lot of focus on achieving tangible environmental outcomes. What I mean by that is not necessarily more water down the river channel for the sake of it but a focus on some icon sites like wetlands and flood plains to ensure that environmental outcomes are achieved and not just talked about.

Obviously in the coming months there will be a focus on overallocated and overused water systems. What quickly comes to mind is the Cubbie Station issue and some of the ground water systems, particularly in New South Wales, which are massively overallocated. Through the National Water Initiative there is a framework, a platform, to address those types of issues. At the state level you have the water-sharing plans, which were implemented for the surface river systems here in New South Wales a couple of weeks ago, on 1 July. The whole point of the water-sharing plan is to share water between consumptive users such as farmers and townspeople and the environment.

Farmers in New South Wales, on a statewide average, have taken a cut of around three per cent in their entitlement. Obviously it is higher with some systems and lower with others. We are prepared to cop that initial reduction over the next 10 years, for the sake of the environment. Beginning at 2014 under the COAG risk assignment proposal—which is fancy jargon for ‘Who foots the bill when more water needs to be returned to the environment?’—there is then the three per cent model, which Ralph Leutton from Cotton Australia and Doug Miell have probably spoken to you about. Basically that risk assignment model caps the liability which farming communities have to pay with the return of water to the environment.

Mr Streat—I believe the three per cent is over the life of the water-sharing plan, which I think is 10 years.

Mr Huckel—It is not a cliff-face drop or a reduction in your entitlement in year one; it will be phased in over a 10-year period.

Senator HEFFERNAN—What is your background? What were you doing before taking on this job?

Mr Huckel—A bioresearch degree at the University of Sydney funded through the Cotton Research and Development Corporation. For about two or three years I was based in the cotton industry around Narrabri and I have been with the association ever since.

Senator HEFFERNAN—In the Gwydir aquifer, a quarter of the licences are owned by people who do not have an aquifer. I talked to your president about this the other day and he is not across the detail at all. In earlier conversation with a policy person from the New South Wales Farmers' Association I said, 'Why is the New South Wales Farmers' Association silent on the fact that a quarter of the number of old licences in the Gwydir aquifer were issued to people who do not have an aquifer and that the allocation of what I would call phantom licences as opposed to sleepers is disadvantaging mature licence holders, because their licences are used in calculating the allocation of the aquifer?' Do you still believe that the owners of those licences, which are completely valueless on the farms they have been allocated to, should be compensated?

Mr Huckel—That is a very good question. A couple of hours ago I was at a meeting with the government, talking about that very issue. Although they might be ghost licences, the licences which have been issued to those inactive users—

Senator HEFFERNAN—But I did differentiate.

Mr Streat—Phantom licences.

Mr Huckel—Yes, phantom licences.

CHAIR—Sleepers are a different category. I could make out a case for sleepers.

Mr Huckel—In a perverse way, the licences which these people purchased—although they are ghost licences, as you say—increase the value of their land; secondly, obviously they are now in possession of an asset which in the marketplace is perceived to have some value. So to compulsorily acquire—

Senator HEFFERNAN—Do not go any further; we will argue this right through. At the moment, without the separation of that licence from the land, it is a completely useless asset: do you agree?

Mr Streat—It is an asset that has value.

Senator HEFFERNAN—But it is useless.

Mr Huckel—In terms of production it may be; in terms of value on paper it is not.

Senator HEFFERNAN—It is useless; it has no use. It is a licence for a bore and is attached to a piece of land that has no bore. This is an administrative balls-up, I have to say.

Mr Huckel—Absolutely, but we did not create the problem.

Mr Streat—I would argue that it has a use because it is an asset.

Senator HEFFERNAN—But in terms of productivity it is useless.

Mr Streat—That is different; yes.

Mr Huckel—Absolutely.

Senator HEFFERNAN—If I bought a farm with an aquifer licence attached to it and I went to the bank and paid an extra \$100 an acre for it but did not use the buyer beware model—in other words, I did not ask the question, ‘Is there any water?’ which is the buyer beware model, isn’t it?

Mr Huckel—I think you are right. You have hit on a very good point. A very clear demarcation or distinction is needed between licences which have an inactive component to them—although they could pump water, if need be—and ghost licences which do not tap into any aquifer whatsoever. Within the Gwydir groundwater system, on the figures you have been given, around a quarter of the licences are ghost licences. I will have to look into that to get the proper numbers.

Senator HEFFERNAN—Please supply them. That was just an estimate, with no accuracy at all, that we were given in our hearing in Moree many months ago. A lot of anguish was expressed by the mature licence users, who were back on a 45 or 46 per cent allocation because of these ridiculous bloody phantom licences. Some of the people that were involved told us that day that they would expect to be compensated. I think that would be a fraud of the public purse. You can make out a compassionate case because it is an administrative—

Mr Huckel—These people bought these licences in good faith.

Senator HEFFERNAN—If you have a decent solicitor and you are buying something, you make sure there is something under the front page.

Mr Streat—I agree. There is truth in that. But, equally, because it is an administrative error, to expect people to take the buyer beware principle to the next level and, say, do their own groundwater aquifer tests or something is a bit—

Senator HEFFERNAN—But hang on—

Mr Streat—The licence was issued. It is a phantom and it is an error.

Senator HEFFERNAN—One of the requirements of issuing a groundwater licence in other aquifers—for instance, the Murrumbidgee aquifer—is that within a time constraint you have to put down a test bore and come up with an outcome, and if you do not use it you then lose it. This is a pretty tough argument, and the response I got from the New South Wales Farmers’ Association 12 months ago was, ‘But, Senator, you’ve got to remember we’ve got a lot of members who have those licences.’

Mr Streat—I do not know how many members do; we would have to find out.

Mr Huckel—We could be jumping the gun a little bit, but obviously the groundwater-sharing plans within New South Wales have been delayed for another 12 months. They will not be implemented until 1 July next year, and I would imagine that this issue of ghost licences will be addressed over the next 12 months.

Senator HEFFERNAN—We want to differentiate the phantom licences from the sleepers. Do not be too alarmed: when I first raised this with the minister's office they thought I was mad.

Mr Huckel—What is happening now is that we are starting to discover how many of these ghost licences exist within some of these water systems, because some of the monitoring and reporting structure within New South Wales over the last 20 years has been very substandard. Obviously there is a component in the National Water Initiative which will address and hopefully improve monitoring and, particularly, baseline data. Rest assured that over the next 12 months that issue will definitely pop up.

Senator HEFFERNAN—What is your attitude to paper trading and speculation in water? I know that the banks think it is a river of gold. I do not agree with the banks, to give you a tickle.

Mr Huckel—That is another contentious issue. Under the National Water Initiative there is a prerogative to open markets in water trading. Water trading has been occurring in Victoria for quite some time.

Senator HEFFERNAN—But not in a paper way.

Mr Huckel—No. The inquiry was to have a look at the document produced by the Department of Natural Resources and Mines a couple of years ago called *The value of water*.

Senator HEFFERNAN—I want to separate trading from paper. What I am talking about is Thames London potentially buying all the irrigation licences in the Moree district.

Mr Huckel—I will give you a good example. I am originally from Forbes, from a mixed farming community. Obviously a lot of people within that area would be disturbed if a lot of water was to be traded further downstream to, say, Hillston, where they are growing a higher value crop like cotton.

Senator HEFFERNAN—But that is not the issue. I do not have any trouble with trading to a higher user, trade between users or trade within a geographic catchment, although there is a danger and there need to be some constraints in trading all the water up the river, because of what that would do to the health of the lower river. I am concerned about what happens if we—the New South Wales farmers and others—go along with the banks' line that you can move to the Gold Coast and set up Jonathon Streat Water Traders Pty Ltd and buy all these licences and lay back on the beach and drink coffee. Trade is one thing, screwing your margin annually out of a person who has to use the water is one thing, but removing the capital base of the value of all that water and the equity from the people who have to use it, to enable them to borrow money to improve their efficiency, is the issue I want to address.

Mr Huckel—A paper licence—an entitlement or a water licence—will be attached to a particular water-sharing plan, a particular water source. So, if you are a speculator, if you purchase water licences within the Gwydir Valley, those licences will obviously be attached to the Gwydir River. The Gwydir River is not really physically linked to, say, the Murray or rivers in Victoria. You have physical constraints with regard to how that paper licence can move throughout the landscape. So, as a speculator, you would have to enter a market and you would have to buy entitlement within a particular valley.

Senator HEFFERNAN—Yes. It could be a connected valley, but you have picked out a restrained valley.

Mr Huckel—Exactly. I suppose it will be an open market to a large degree and, just like any speculation, you are going to take risks. At the moment, water is very valuable, because it has been dry for quite a few years.

Senator HEFFERNAN—There is no risk for the capital base of water. It is absolutely riskless.

Mr Huckel—If, say, you entered the market now and you bought water for \$1,500 a megalitre and then we had significant rainfall, the next couple of years—

Senator HEFFERNAN—Hang on. Don't lay that on me. The long-term capital base value of water is always going to go that way, and 6.2 per cent of Australia's run-off is in the Murray-Darling Basin. If we remove half the activity, it still has a serious load to carry. I am not concerned about the trading from year to year where, as you know, you can trade the water short term, long term or permanently now between users. Sure, the temporary transfer of water went up—\$300 a megalitre last year, which is almost the permanent value of some water. Some of that happened—and I know this, because I know the blokes who did it and I could nominate them to you: they were having a little speculative spin on their own—because people withheld the water. I am concerned about banks putting pressure on farmers and saying, 'I'm going to sell your water, son, to meet your capital repayment requirement, and you can operate on the spot market,' and then the government comes along and says, 'We're going to take 40 or 50 per cent of your allocation because of the environment and overallocation et cetera.' The farmer then says, 'Gee, mum, we can't pay the school fees and we can't pay the car off unless we go to trickle irrigation instead of furrow. We'd better go to the bank and borrow half a million dollars.' The farmer goes to the bank, and the bank says, 'Where's your equity, son?' and the farmer says, 'I've sold my water, Mr Bank Manager,' and the bank manager says, 'What's your farm worth without the water? I'm sorry we can't lend you the money.'

Mr Huckel—I suppose, under the National Water Initiative—

Senator HEFFERNAN—There is a motherhood statement.

Mr Huckel—Yes, the days of governments being able to come in and arbitrarily slash your entitlement without providing you with compensation are over—they are finished.

Senator HEFFERNAN—Sorry—after 2014.

Mr Huckel—In New South Wales the minister has made it clear that, as far as he is concerned, farmers under these latest water-sharing plans have borne enough risk—

Senator HEFFERNAN—Read carefully.

Mr Huckel—If you take it even further, the Natural Resources Commission will be reviewing things, to see whether these water-sharing plans fulfil their environmental objectives.

Senator HEFFERNAN—In any event, do you at least concede the point that, if the New South Wales farmers agree—and you young blokes are probably going to be telling your bosses what they should be doing—that the ANZ Bank can set up an investment vehicle in which people on the Gold Coast invest, you will deliver the greatest flight of capital from rural New South Wales for 30 or 40 years?

Mr Streat—I understand exactly what you are saying. It is my understanding—and I am happy to check and get back to you on—that the policy of this association is as follows. There are two separate things. There is the National Water Initiative and then there are the mechanics of a market to deliver the tradability of water, however that may be achieved. It is my understanding that the association's position was that any trading market that would be set up would be sufficiently regulated, so you would have proper structures in place, as we do with other markets—the stock market or whatever other market it is—to ensure that the speculative type gain that is going to have a negative impact on either rural communities or the national interest would have to be considered by some appropriate body. I would imagine—and I can check but I would think the association would—

CHAIR—But you would have to have a trading regulator, wouldn't you?

Mr Streat—Absolutely. You would have to have some mechanism. It is a serious concern.

Senator HEFFERNAN—There is a motherhood statement in the National Water Initiative that says, 'Yes, we are going to deal with this,' but you blokes are going to have to work out how.

Mr Huckel—Clause 58 of the National Water Initiative refers to it. It has things like appropriate protection of third party interests, so there is a clause within the National Water Initiative which touches on this very issue. But there needs to be, and I agree with Senator Ridgeway on this, some sort of regulatory authority. For example, the Corporations Act 2001 requires a person who acquires a substantial holding in a listed company—more than five per cent of the voting shares—to give notice to the company within two business days. You have the Trade Practices Act, which prevents anticompetitive practices that limit or stop competition. These types of principles, which are incorporated within existing acts and legislation, obviously need to be applied to the creation of a water-trading market.

Senator HEFFERNAN—But if it is a regulation and if there is a government change and, for instance, there is a completely different persuasion of thinking, you blokes would be held to ransom under what is proposed. All I am doing is putting you on notice that you will do your farmer members a serious injury if you do not get your minds around what happens and has happened in other places. Central Africa is a really good example. Thames London, which has recently been sold to a French company, have gone in there and absolutely bought up the water and have then put a price on it that has priced people out of the water. There will be a flight of capital. Do not get bogged down in thinking, 'It will be a wet year or a dry year and it will only be worth this, it will be temporary trade and why would anyone buy it or trade it for that margin?' It is about the capital base, it is about the wealth.

Mr Streat—I am pretty certain this association does have its head around it. We are certainly looking at it. I do not think, in the terms of the COAG agreement and the policy initiative, that we are at that level of detail yet.

Mr Huckel—Another important point is that these speculators that you talk about actually might be some of our members who are farmers, so they might benefit. They actually might be mum and dad farmers.

Senator HEFFERNAN—Hang on, that is what worries me. What worries me is the greed factor, in view of the phantom licence factor, which influenced the New South Wales Farmers' Association 12 months ago. Then there was the idea that, 'Shivers, we've got some people who are going to benefit,' to the great disadvantage of everyone else that is having a go. Do not lay that on me—that you have got a few people who are going to benefit. It would do untold long-term damage to rural Australia if you let the capital wealth of water escape to an investment vehicle. There is nothing to argue about.

Mr Huckel—The COAG senior officials would probably argue the point with you.

Senator HEFFERNAN—I am sure. I think they have already argued it.

Mr Huckel—I am sure they have. You are quite right. It creates advantages but obviously we have got to be very careful of some of the disadvantages which could emerge from it, hence the need for adequate checks and balances within a national trading market. That is the next stage.

Mr Streat—There are also some key features of the market that would be likely to eventuate. About 80 per cent of the total volume of water is held in about two or three irrigation companies and those irrigation companies will be in the market as the players. I think that is a legitimate concern and an appropriate mechanism would need to be established to ensure that the capital does not leave rural communities. That would be something that I am sure our membership would be concerned about.

Senator HEFFERNAN—I would like to put you officially on notice—through you, Mr Chairman—that I actually want a response about what your position is on this, and we will dissect it very publicly.

Mr Huckel—We are a member of the National Farmers' Federation Water Task Force, so their policies in regard to water, expansions of water markets and water trading—

Senator HEFFERNAN—Do not feel bad about this, because no-one has the answer.

Mr Huckel—No. It is a good debate.

Mr Streat—It is. It is important. As I said, I think there are two key areas. First of all, our policy position does include some regulation. I do not think we would have an open market entirely. I am sure the association would argue that. Secondly there is the actual structure of the water market itself, given that there are only two or three big players, and those companies internally have all sorts of restrictions and issues about how they move water around between themselves. So I think the structures are there to form a base.

Mr Huckel—That is a very good point. A lot of entitlement is actually carried by the corporations.

Mr Streat—That is absolutely right. It is 80 per cent, I think.

Mr Huckel—Hence, as a farming or a—

Senator HEFFERNAN—But at the moment it cannot be separated from the bush.

Mr Streat—I understand that. That is what I am saying.

Senator HEFFERNAN—That is my only point.

Mr Streat—I am saying that between those two elements I think there is a sufficient framework for that problem to be solved. It is important that you address it—and forums like this are excellent for that—but I think the basis is there to provide a structural framework around that. I do not think you want to move away from the benefits that are attached to having some trading—

Senator HEFFERNAN—No, I am not against trading.

Mr Streat—so it is a safeguard.

Senator HEFFERNAN—I am interested preserving the wealth for the bush. In New South Wales there has been a lot of goodwill in the water debate. There are a couple of other issues that seriously bother me. For instance, do you think the national action plan is using its money wisely—this may be too difficult for you to answer—in its salinity program? So that you know where I am coming from, I actually think it has been a sort of confetti operation.

Mr Huckel—I do not think the money has been used wisely to date. Some of the reforms under the National Water Initiative and here in New South Wales in natural resource management might hopefully see a lot of that NHT and NAP money flowing directly to local catchment authorities and bypassing the government agencies and bureaucracies. A lot of this money has been lost in the black hole of bureaucracy. We want to see NHT and NAP flowing directly to cash management funds—

Senator HEFFERNAN—You do not want to see what happened to Landcare, where they had money for computers, cars, coordinators and offices, but none for the trees.

Mr Huckel—Exactly. It has to be on-farm conservation.

Senator HEFFERNAN—Which brings me to this point: do you think that the New South Wales Farmers' Association would give consideration to support for a proposition on the plantation of forestry, where we gave encouragement to the foresters, on behalf of your irrigators, to bring some of the forest plantation plans out of the higher rainfall, high interception areas, where you can get up to three megalitres per hectare interception—this is also an administrative oversight; there has been no work done on this; it is happening now—down into the 24- to 30-inch rainfall areas where the forest will mature more slowly but will get a salinity

credit? We could have a system perhaps where, once we identify a forest hub—which would obviously be done with regard to the geographical economics of transport of the logs—we could say to people, ‘We think this is a suitable area for a salinity credit and a forest. You tender. How much assistance do you need to grow your crop plantation here instead of up behind Batlow in 60-inch rainfall country, where you are going to take three inches of rainfall? And by the way, if you do stay up there, we think you should buy a water licence and take it out of the system.’ Do you have any fundamental disagreement with that?

Mr Huckel—So that type of proposal is being worked out as we speak?

Senator HEFFERNAN—Yes.

Mr Huckel—It sounds like it has a lot of merit in it. We would love to see any type of work that has been done on it to date. Obviously we would have to run it by our elected officials.

Senator HEFFERNAN—I encourage you to create a dialogue with, for instance, Kate Carnell, who looks after forest industry people. She will say—and she has said this to me and to this committee—‘We only want equal treatment,’ which is fair enough. In other words, I am a farmer, I grow a lucerne paddock. You have to consider the interception. But we know from the science already in place that, below 24 inches, between a plantation pine or eucalypt and a lucerne paddock—

Mr Streat—There is not much difference.

Senator HEFFERNAN—there is bugger all run-off anyhow. But that was another issue. I actually think the New South Wales Farmers’ Association—and I spoke to your president in Temora the other day and gave him a bit of a run-down on some of these things—could get heavily involved, because these are long-term issues. Australia’s irrigators are going to be short-changed unless we come to terms with these issues.

Mr Huckel—I know it is an emerging issue for a lot of our members. It is obviously something which you have brought to the attention of the public. What we exactly do about it is the next challenge. If people like Kate Carnell are developing some options on how to handle the issue then we would be quite happy to look into those—and obviously our elected officials in particular would be. So we are open to any suggestions on that one.

Mr Streat—Those sorts of schemes would also have greenhouse benefits and all sorts of other things you could attach to them. So there is real value in targeting your plantations to get a maximum salinity outcome. I understand that issue. A lot of the agroforestry stuff done in some of those lower rainfall areas has been a bit slower off the mark, principally because of the desire to get a quick return, an easy situation. But there is real benefit to doing that closer to the central west—that type of area. Our landholders would be concerned about big organisations buying out little farms to do that.

Senator HEFFERNAN—Believe me, the poor old farmers up at Delegate and Bombala used to fish in their local stream and there is no stream there anymore.

Mr Streat—I have certainly talked to farmers about some issues up there with pine plantations and forestry. I do not see why there is not the ability to reach an amicable solution, and there may well be some benefit from dialogue with our forestry cousins, so to speak.

Mr Huckel—It is even something that in the future might need to be incorporated within water-sharing plans in New South Wales—trying to get to the bottom of how much these pine plantations are actually extracting from the landscape.

Senator HEFFERNAN—One of the great dilemmas—a bit like that Gwydir aquifer dilemma—is what has happened thus far. Another is what do you do now. Some of the private investment plantations—I will not nominate the areas—that were put in by some people who were tax driven in earlier years had very poor environmental planning. They planned it through class 3 and 4 stream ways et cetera. What do you do when they mature? A lot of them are mature and deteriorating now. The New South Wales Farmers' Association needs to be looking at this and having good dialogue with the plantation people, because the committee has been told that the 2020 vision—if it is delivered; it is behind schedule to blazes now—will deliver something like an interception of 1,000 gegalitres gross and 600 gegalitres net out of the southern Murray-Darling Basin. If you attach that to the climate change figures that we were given, which say that we are going to have something like a 20 per cent reduction in the run-off, and if you attach that to the 1,000 gegalitres we are going to lose because of the nine-year regrowth period due to the fires down there, there is a lot of thinking to be done about how big the water cake is before we cut it up.

Mr Huckel—It is very much an issue that needs some thought. Obviously you have been campaigning on it for some time now and it is something which some of our members are starting to approach us with as well.

CHAIR—We have a separate inquiry going on that too.

Mr Huckel—I thought as much.

CHAIR—Mr Streat and Mr Huckel, thank you very much for coming along and providing assistance to the committee. I think there were a number of undertakings to provide certain information. The secretariat will be in touch with you about that. A copy of the *Hansard* will be available in the coming weeks. Again, on behalf of the committee, thank you for both appearing.

Mr Streat—Thank you for the opportunity.

Proceedings suspended from 2.54 p.m. to 3.12 p.m.

ALVAREZ, Mr Kim, Director, Water Management, Department of Infrastructure, Planning and Natural Resources

SUTHERLAND, Mr Peter Donald, Deputy Director-General, Department of Infrastructure, Planning and Natural Resources

CHAIR—Welcome. Mr Sutherland, would you like to make some opening remarks?

Mr Sutherland—I understand that your inquiry is looking at the relationship between water reform and the National Water Initiative. I propose very briefly to run through the recent reforms of water resource management in New South Wales and how they align with the National Water Initiative. In terms of overview, Australia's water resource challenge is to make the best and most productive use of water resources available for extraction so that water dependent industries remain viable and so that unique ecosystems are protected. That is a quote from the National Water Initiative, and that certainly is the underpinning philosophy of the reforms in New South Wales.

Briefly, I wish to go through the three phases of reform in recent years. Phase 1 was the introduction of the Water Management Act 2000, which introduced the concept of tradable entitlements, licences and 10-year water-sharing plans. Phase 2, which is nearing completion, will amend the water act to bring the principles and practices of water resource management into line with the principles of the National Water Initiative and flags the third phase of the water reform agenda in New South Wales, which is about ensuring the return of adequate water to the environment.

To set the scene, the problem throughout Australia in terms of water resource management has been that, while governments own and control the resource, industry relies on secure access to that resource for generating jobs and high-quality goods and for supporting sustainable regional communities. In 2001-02, the gross value of agricultural production in New South Wales was \$10.2 billion. A significant proportion of that production depends directly or indirectly on water resources available in the state. Over decades the overuse of the resource has been compounded by climatic change, population growth and changes in land use. In addition, we have seen the health of our rivers, lakes and wetlands degraded in terms of increased salinity, toxic algal blooms and reductions in bird, fish and other aquatic organisms. Consumptive use needs to be reduced to sustainable levels in many systems, in the interests of both the environment and the industries that depend on the resource.

Historically, under the legislative framework in place in New South Wales under the Water Act 1912, the minister had wide-ranging powers to amend water entitlements without any form of compensation. In many systems, water licences over many decades have been issued beyond the limits of the resource and there has been a lack of certainty over the access rights, which has affected the confidence of both the banking sector and lending institutions and the farmers in investing in irrigation development, particularly capital intensive investment in more sustainable irrigation technologies.

The solution that the New South Wales government, in signing up to the National Water Initiative and in introducing its most recent legislation, has committed to requires setting clear rules for allocating water to the environment and to licence holders for extraction, establishing a transparent framework for reviewing water allocation rules and encouraging industry to be more efficient and productive, particularly to provide industry with certainty of resource access and to maximise the opportunity for water to move to efficient and high-value uses.

To briefly recap the highlights of the three phases of reform, the Water Management Act 2000 was the culmination of a number of reforms in New South Wales between 1995 and 1999 in response to a 1994 document on the strategic framework for water reform. In that period we saw the signing of the Murray-Darling Basin cap, the identification of stressed rivers throughout the state, the establishment of interim environmental flow objectives and pricing measures to encourage more efficient and effective use of the resource. The Water Management Act 2000, which replaced the earlier legislation, established a framework for acknowledging the fundamental rights of the environment. It established 10-year water-sharing plans, which have just been implemented under the new legislation and which collectively return in the order of 220 gegalitres to the environment.

The legislation under the Water Management Act 2000 also introduced access licences separate from land ownership, thereby allowing tradability of access entitlements with separate site use and works approvals. Over that intervening period, more than 36 water-sharing plans were prepared, of which 31 were formally brought into place following the legislation brought in last month on 1 July. They are now operating in most of the major regulated surface water systems throughout the state, accounting for about 80 per cent of the total resource in New South Wales. There have been a number of major groundwater-sharing plans which have been deferred for a further 12 months pending further work to finalise the structural adjustment package in partnership with the Commonwealth.

In terms of the phase of the reforms which, essentially, has just been completed with the passage of new legislation on 24 June—in fact, the day before the National Water Initiative—COAG's August 2003 agreement to develop a National Water Initiative had the principles of improving security of access licences, encouraging expansions of water markets, implementing regimes to protect environmental assets at a whole-of-basin or catchment level, and encouraging water conservation in major cities. The New South Wales legislation—the amendments to the 2000 act—essentially align water resource management frameworks within New South Wales with those principles. In particular, the legislation brings into effect a transparent framework for reviewing water-sharing plans based on catchment outcomes with the involvement of an independent Natural Resource Commission so that both industry and the community at large can be confident that future changes to water-sharing plans are based on good science.

The legislation also for the first time introduced perpetual access entitlements as shares of the available resource for consumptive use consistent with the principles of the National Water Initiative. Together with those initiatives, there is a robust licence register being brought into place. The intention of government is to have that effectively of a similar level of guarantee as the Torrens title in the case of land title within three years. There is a commitment in the new legislation to increasing tradability of water and streamlining approvals in relation to works approvals and water access entitlements licensing processes. The legislation left open the case of the risk assignment model, which was being debated prior to the finalisation of the National

Water Initiative. It is the intention of the New South Wales government now to amend the legislation to reflect the risk assignment model that was agreed to at COAG. That will happen within the next 12 months.

In terms of the final phase of reforms beyond the current legislation, the next phase of water management in New South Wales will be characterised by increased investment in sustainable irrigation development and returning water to the environment. Some of the key initiatives of the New South Wales government are: participating in the Living Murray initiative, totalling \$500 million, in the first-step decision to return water to the environment for icon sites in the River Murray; participating in a \$350 million joint venture to return water to the Snowy; and working with Pratt Water on an innovative water efficiency program particularly focused on the Murrumbidgee Valley. The new legislation establishes a water innovation fund to kick-start and seed-fund innovative projects in relation to water use efficiency. The government will shortly be establishing a water innovation council to advise it on international developments and trends in water infrastructure and water use efficiency.

Finally, an important part of the new reforms in New South Wales is in relation to increasing the involvement of regional communities in the decision making associated with sustainable water resource management—in particular, through the new catchment management authority framework that has been established across the state. The new legislation provides the new catchment management authorities with important new powers—in particular, to coordinate future water-sharing plans and their amendment and to monitor catchment health, which will be the basis of audits by the Natural Resource Commission in terms of reviewing the effectiveness of existing plans.

The CMAs will be responsible for administering water conservation trusts which will enable them to buy and sell water for the purposes of environmental outcomes—in other words, trading water to industry in times when the environment does not require it and buying water on the market to top up flood flows and additional environmental water required for wetland watering. The CMAs will administer environmental water licences that will be assigned to the CMAs by the minister.

Finally, work is well under way in looking at the long-term water needs of Sydney beyond this initial drought—30 years ahead, in terms of balancing supply and demand. I will leave the presentation there, and I am happy to answer any questions.

CHAIR—Mr Alvarez, did you want to add anything?

Mr Alvarez—No, I am just here to answer questions.

Senator HEFFERNAN—For a start, I congratulate the department and the minister on some of the leadership you have shown and some of the goodwill you have displayed. I think it is just terrific. In terms of overallocation—obviously, this covers a number of governments of different persuasions and the public administrative mistakes, to put it impolitely—let us go to the Gwydir aquifer. We have just had the New South Wales farmers in, trying to get their minds around it. In the Gwydir, roughly 25 per cent of the licences have been issued to people who do not actually have an aquifer. I rang Craig's office to alert him to all of this. He could not believe it when I first told him.

There is a little debate out in the irrigating community regarding people who have had a licence issued in the Gwydir aquifer. If those licences had been issued in the Murrumbidgee aquifer, they would have test-drilled, found nothing and lost the licence. In the Gwydir aquifer, unfortunately, these people have had these long-term phantom licences which have become part of the calculation for the mature licence users' allocation. There has been a disadvantage to the mature licence users. My attitude to it is that, if you buy a place that has a water licence on it—especially if it is a bore licence—and it has no water under it, it is buyer beware. I am aware there have been some discussions as late as today on this. There is a view in the community that there is a compensation case to be made for those people.

Mr Sutherland—Just taking the broader perspective in terms of ground water systems, in the context of finalising the 36 surface water-sharing plans that came into effect from 1 July, the minister explicitly deferred the six major ground water-sharing plans, including for the Gwydir. As you are probably aware, in many cases those systems require in the order of a 70 per cent reduction in entitlement to bring them back into balance and to sustainable levels.

Senator HEFFERNAN—That would be the Namoi, would it?

Mr Sutherland—That includes the Namoi, the Gwydir, the lower Murray and the Murrumbidgee. Essentially, as you indicated, successive governments have issued licences which, when the final status of the resource was known, were well beyond the limits of the resource. In addition to that, there are problems where, even though a licensee may have an entitlement, because of the particular configuration of the aquifer, the licensee cannot realise that because of effects of adjacent bores.

In the process that is being proposed, to both adjust the licences and in a sense look at providing assistance for the loss of value that has occurred in those aquifers, the government is looking at the history of use as the focus of how those licences should be amended and at how assistance should be provided to ensure that we minimise the economic impact on those regions. For areas of the aquifer where it is difficult to realise the entitlement because of either peculiarities in the aquifer or third party effects, the process of assistance will not necessarily compensate for that but, because the entitlement holders will now have a perpetual access entitlement and the ability to trade that entitlement, they will be able to trade it and realise some of the value from it. In a sense, that will be a mechanism to get the resource accessed in the right places within the aquifer.

Senator HEFFERNAN—That would be fair enough if it was actually a declined aquifer within the region, but what if there is no aquifer?

Mr Sutherland—Where there is no aquifer, the issue has been whether in fact that licence should be—

Senator HEFFERNAN—Are they still going to be able to trade them away?

Mr Alvarez—Senator Heffernan, I think you may have been misled a little by those stats. I think the 25 per cent figure we are talking about is where the infrastructure on the ground is not capable of taking the full entitlement. For example, they might have a 1,000 megalitre licence but they might have only one bore so far, which may only be able to take, say, 100 megalitres.

Senator HEFFERNAN—That is a sleeper situation. Have you identified the phantom situation?

Mr Alvarez—They are only phantom in that the existing infrastructure is not capable. But, if they put in three or four more bores, they could do.

Senator HEFFERNAN—But there are people who have bore licences and do not have any bore water.

Mr Alvarez—No, there are not any that do not have any bore water.

Senator HEFFERNAN—That is not what some of the neighbours tell me.

Mr Alvarez—It might not be at the rate at which—

Senator HEFFERNAN—At an economic rate.

Mr Alvarez—At an economic rate. The process of issuing a licence means that they get a licence to drill a bore. If they do not find any water, they do not get a licence.

Senator HEFFERNAN—That did not happen in all the cases up there, though.

Mr Alvarez—There were expectations—and the water is there.

Senator HEFFERNAN—What happened is more or less unique to this aquifer. There are not many others like it around.

Mr Alvarez—There are some areas of cracked rock where the amount of water they were granted was greater than the amount they could ever get out of it. There is no doubt about that. But, over all aquifers, it is about the rate at which they can take it.

Senator HEFFERNAN—A commercial aquifer.

CHAIR—What does that mean for the commonly held view about overallocation and overuse?

Mr Alvarez—That depends on your definition of ‘overallocation’. If you say that overallocation is where the water is allocated and cannot be taken then, yes, that is an overallocation. Will a change in these entitlements make any difference? No, it will not. It will not change the physical capability of the aquifer to provide water.

CHAIR—But what if you have the infrastructure to access more?

Mr Alvarez—They could put in more bores to access more water.

Senator HEFFERNAN—I live at Juneë. If I put down a bore, I would actually get water, but it would only be enough for the house. If I happened to attach a 1,000 megalitre licence to the

bore, in anticipation of putting a bore down and knowing that it was going to get enough water, why should I be able to trade that?

Mr Alvarez—You would not be able to trade it.

Senator HEFFERNAN—That is the answer I am looking for.

Mr Alvarez—The fundamental thing about licences and trading is that, if you are in a particular water source and have a certain entitlement to water, whether you can access it or not is somewhat irrelevant. The licence entitles you to have your water account credited with a certain amount of water—your share of that aquifer.

Senator HEFFERNAN—Where a person gets a water licence for water that he cannot access, isn't that a fraud on the public purse? In ordinary black-and-white terms, isn't that a fraud? You do not have to be scientific about it; it is a con job.

Mr Alvarez—If he has not yet put down sufficient bores to take it—

Senator HEFFERNAN—But, if he cannot access it, how can he trade it? Sure, you can legislate to do it, but why turn all these people into—

Mr Alvarez—Hang on. We have not got trading now. The whole part of the package is that we take from the overallocation down to the sustainable yield—that is step 1. Once the sustainable yield matches what that aquifer can actually yield, then you have a tradable entitlement.

Senator HEFFERNAN—But why should you allow, for the purposes of calculation—and to the disadvantage of the mature licence users—licences that cannot access water?

Mr Sutherland—That is, in a sense, one of the reasons for moving to this history-of-use methodology. Under the history-of-use methodology, if that licence has not been active and there has only been a minimal amount of water used, that will be taken into account in terms of reducing that licence entitlement preferentially.

Senator HEFFERNAN—Anyhow, I can end it. You blokes are onto it, too.

Mr Sutherland—Yes, we are certainly aware of the issue. I think you will find that, in areas where for whatever reason there has been a low history of use—whether because of the nature of the aquifer or the level of development of the farm—under the proposed structural adjustment regime the entitlements of those licences will be reduced preferentially before the active licences—

Senator HEFFERNAN—You could understand that mature licence users are not very happy about it.

Mr Sutherland—Exactly.

Mr Alvarez—But the key to this is to recognise that there are two impacts in a reduced access regime. One is the impact on those who have actually been using the water—and that is about future production, future incomes. The other is the loss of the asset value for the person who has not used his water but knows that the value of his land is enhanced by the fact that he has a water entitlement.

Senator HEFFERNAN—Even if he cannot access it.

Mr Alvarez—Yes.

Senator HEFFERNAN—That is the commercial risk for the buyer.

Mr Alvarez—Correct. And that is why, in our adjustment of entitlement, there is a high bias towards history of use, which is much more important—

Senator HEFFERNAN—I am happy with that.

Mr Alvarez—and there is a lesser emphasis on the capital asset base.

Senator HEFFERNAN—So there is some sort of decline.

Mr Alvarez—Yes.

Senator HEFFERNAN—I will go to plantations then. The obvious question is: why has it taken till now to understand the interception thing with plantations? Obviously it has been another oversight—and no-one is to blame. Everyone is guilty—I am guilty; all governments are guilty. What is the government's thinking on calculation, given the 2020 strategy of growth plantations? I think we are behind in it. Are we behind by 80,000 hectares or something? Where are you blokes up to with that?

Mr Sutherland—I think there are two things. Firstly, clearly the New South Wales government is signed up to the provisions in the National Water Initiative to tackle this problem. There are still lots of uncertainties with the detail of impacts. But I think the key is that a tree is going in the right place and, clearly, we have an interest in plantation development or revegetation in areas for the very reason that trees do use water and can help solve the salinity problem. However, in high-yielding aquifers with good quality water, there is clearly a threat to the water production potential of those aquifers. So New South Wales, together with other states and the Commonwealth, is certainly exploring this: firstly, getting the scientific knowledge right in terms of how we model that and, secondly, using the best range of policy instruments to provide incentives or disincentives to industry so as not to see plantations established in those high-yield catchments.

Senator HEFFERNAN—Would the New South Wales government be interested if the Commonwealth government of whatever political persuasion—with wit, wisdom and political courage—said, 'We might use some national action plan money to add an incentive to some sort of tendering system to get plantations down into the salinity credit areas of the slopes'? Would you be interested?

Mr Sutherland—I think already in New South Wales there is a range of incentives through joint programs such as NAP and NHT to attempt to do exactly that. Obviously they are of modest scale, but I think the concept is one that is generally not accepted.

Senator HEFFERNAN—I have to say that I think the plantation industry, to its credit, has come through the denial phase in all of this and is facing up to the fact that it is not necessarily a good idea to plant plantations in areas behind Batlow with 60 inches of rainfall—unless, of course, you want to buy water licences.

Mr Alvarez—Correct; that is the key to it.

Senator HEFFERNAN—I have a number of issues to raise. We have this discrepancy in regimes across the states. New South Wales has legislated for stock and domestic riparian protection—some of that has been withdrawn in Victoria. Do you have any advice for the committee on how, under the National Water Initiative—and I think New South Wales has an eminently sensible position, by the way, which is legislated—we can get uniformity?

The minister in Victoria recently announced that he was going to make stock and domestic water tradable in some of the channel schemes. The added activity in the market and the dollars in the pocket would be minuscule. I think you would set up a class of stranded assets. Do you blokes have any ideas, in the mood of goodwill et cetera, how we could get some harmonisation of riparian stock and domestic rights?

Mr Sutherland—Clearly different states have developed different approaches to some of these issues. I think a fundamental issue has been getting a trading regime, particularly in relation to irrigation entitlements. The position taken in New South Wales is that those special purpose licences, such as stock and domestic, are not perpetual access rights that are tradable in the same way as irrigation rights—

Senator HEFFERNAN—So you cannot trade them off.

Mr Sutherland—because they are specifically linked to a particular use at a particular location. As you indicated, we do not see it as a major issue in terms of either the Murray-Darling Basin cap or interstate trade. It has not arisen as a point of conflict between states at this stage.

Senator HEFFERNAN—We will leave it at that. In your water planning for the various catchments, in terms of the thinking behind the policy, were you able to give priority to the environment ahead of the pumping? In other words, did you work out an allocation for the environment first and then say, ‘This is what we need for the environment; this is what we have left,’ or did you say, ‘This is what we need for the pumps and this is what we have got left for the environment’?

Mr Sutherland—Under the NSW Water Act there is, firstly, a requirement to provide what is called fundamental planned water for the environment. That is water for the environment that is hard wired into the water-sharing plan based on rules. The consumptive use is then allocated on top of that. I think increasingly what we will see is the importance of the second-class environmental water that is provided for in the legislation. That is called adaptive environmental

water, which is water that is actually allocated through licences—and in our case it will be allocated through licences administered by CMAs. Water will be recovered from the consumptive pool by either purchasing it on the market or generating savings in losses through better infrastructure and water efficiency programs. I think that sort of environmental water is going to be increasingly important in redressing the balance over time and assisting the Murray.

Senator HEFFERNAN—I would like to point to the lower reaches of the Lachlan, the Macquarie and the Murrumbidgee where there has been a serious decline in the environmental outcomes in recent years. There has been a huge dieback in rivergums et cetera. In the plans that you have put in place, is there an anticipation where you have allowed for some sort of flood sequence for that country in terms of a number of years?

Mr Alvarez—Probably the best way to attack that is by giving you an example. Let us take the Namoi River. The process in our last planning exercise that led to these plans was to ask the community what they wanted to see—what they really wanted. They used the scientific evidence available and came to the conclusion that the best indicator of environmental health for that river was actually the frequency of flooding in the three- to five-day flooding range in the middle of the river—that is just west of Gunnedah. That is our test of significance. They said, ‘What are the rules of access we need to put in place to achieve that gain?’ They achieved a 75 per cent return from the measure of the cap to natural, so the answer to your question is: yes, they have put the environment first and then what is left over is for the irrigators.

Senator HEFFERNAN—How have you resolved that on the Lachlan?

Mr Alvarez—On the Lachlan?

Senator HEFFERNAN—Yes. I declare an interest, by the way; I have land on the Lachlan and on the 'Bidgee. I went to a meeting in 1967 in Forbes, just to change the conversation a bit. It was a dry year. We had no water, the river had dried up—‘It’s going to dry up again in April if we don’t get any rain.’ The people in Forbes said, ‘If you’re stupid enough to live down below Booligal way, then you don’t deserve any water.’ There is this huge flood plain which extends down to the Juanbung swamp which, in the last 20 years, has dramatically declined. What does the community think is a fair thing on the Lachlan in terms of an environmental outcome?

Mr Alvarez—I cannot tell you exactly what the details were, but the process was the same.

Senator HEFFERNAN—Can you provide that to the committee?

Mr Alvarez—Yes, I can.

Senator HEFFERNAN—The Macquarie Marshes have had some sort of recognition but the poor old lower Lachlan has been done over. As you know it is seriously over allocated. I realise there is a political ambit to all this, but I would be very interested to see—

Mr Alvarez—The process was the same. They said: ‘What do you want achieve on the Cumbung? How do you achieve it?’ They set out to achieve an increase in watering frequency in the Cumbung and the mid-river system.

Senator HEFFERNAN—What do you call the mid-river system?

Mr Alvarez—In and around the lakes.

Senator HEFFERNAN—What lakes?

Mr Alvarez—Cargelligo-Brewster.

Senator HEFFERNAN—That is bullshit. The flood plain does not open up until you get to Whealbah, which is halfway to Hillston. Didn't they give any consideration to the flood plain?

Mr Alvarez—Yes, they did.

Senator HEFFERNAN—What is the flood plain plan?

Mr Alvarez—This is—

Senator HEFFERNAN—We do not have to flood the flood plain?

Mr Alvarez—Hang on. The plan that we have is a water-sharing plan, which is about sharing the extractive components.

Senator HEFFERNAN—I understand that.

Mr Alvarez—There is a separate flood plain plan which is being produced at the moment. It is a different aspect.

Senator HEFFERNAN—It has not been done.

Mr Alvarez—No, this is not a—

Senator HEFFERNAN—How can you not do that? How can you divide up the water of the river without having calculated what you want to do with the flood plain? I have been there for a long time watching it decline—and I do declare an interest, as I do in the Macquarie and the lower 'Bidgee. I am trying to get people in all these lower reaches to understand that if they do not make some noise, then they are going to get done over big time. If you tell me we have got a river management plan on the Lachlan but we have not done the work on the flood plain, then you have put the cart before the bloody horse.

Mr Alvarez—I am not saying it is a river management plan; I am saying it is a water-sharing plan.

Senator HEFFERNAN—Sorry, if you have done a water-sharing plan and you have not done the calculation of what is required—how can you do that?

Mr Alvarez—They have done it.

Senator HEFFERNAN—How can you do it if you do not know what you need for the flood plain?

Mr Alvarez—The broad geographic distribution of water along the flood plain is not volumetric.

Senator HEFFERNAN—Should we lock up all the flood plain for a national park?

Mr Alvarez—No, I am not suggesting that.

Mr Sutherland—There is certainly no dispute that the flood plain has to be addressed.

Senator HEFFERNAN—By the way, do not take offence at anything.

Mr Sutherland—No. We are obviously facing one of the worst droughts on record and clearly that is a major issue in terms of the flood plain.

Senator HEFFERNAN—I understand that. I am acutely aware of what has happened in the Macquarie Marshes. We would be grateful for any information you could provide on the input to the environmental side of your planning.

Mr Alvarez—Yes, we can do that.

Senator HEFFERNAN—I will move on. Do you blokes have a position on the tradability of water, and the paper trading and the capital flight that can come from that? And the impact, based on evidence we received this morning and of which I was acutely aware, of the distortion of the rating base that can occur?

Mr Sutherland—I will pick up a few of those issues in turn. Firstly, under our new water legislation the government is committed to water trade as one of the mechanisms of getting adjustment in overallocated systems and to water moving to higher value uses.

Senator HEFFERNAN—No-one disagrees with that.

Mr Sutherland—No. On the issue of water moving out of districts and leaving problems such as stranded assets and reduced economic activity, one of the issues that we favour in the discussions on the Murray-Darling Basin work that has been looking into different trading regimes—interstate trading regimes—is to have tagged entitlements so that there is a capacity to ensure those water corporations or water authorities that are responsible for maintaining the assets in an irrigation district can continue to do that, even though water might move out of those districts. We see that as preferable to a system of exchange rates, which would not necessarily provide any mechanism for authorities that are responsible for maintaining infrastructure to maintain the viability of the system. There are other processes, such as exit fees, that we are exploring as well, although they have some risks of being potentially misused as barriers to trade if they are not properly regulated. Essentially that is our position in working through these issues.

Senator HEFFERNAN—If you set up Peter Sutherland Pty Ltd and moved to Noosa, do you think you should be able to buy all the water entitlements in the Gwydir aquifer?

Mr Sutherland—There are provisions in the New South Wales legislation whereby the minister must approve the trading regime and can take into account any impacts that trading might have, any concerns about monopolies et cetera. However, the basic reliance would normally be on the ACCC and the normal trading regulatory regimes.

Senator HEFFERNAN—I would like to sow a little seed in the department's thinking. What worries me—and this committee gets sick of me talking about this—is the flight of capital that could come from freeing-up paper trading of all the capital base value of water. Say I am out at Bourke and I have furrow cotton. The pressure is on and we cannot control Cubbie Station—and your minister is trying to help us with that. I am cut back to 30 per cent of my water allocation, so I go the bank and say 'We've got to grow more cotton with less water. We've got to put in triple.' The bank says to me, 'That'll cost you \$1 million. What have you got as equity?' I say, 'I've got the farm.' The banks asks, 'What about your water?' I say, 'I've sold that to Peter Sutherland Pty Ltd in Noosa and I'm operating on the spot market.' There is a hell of an escape of capital, which brings in the issue of equitable banking. That is the big danger. It is not the ability of Peter Sutherland Pty Ltd to screw a margin out of Wayne O'Mally Pty Ltd of Bourke for his cotton crop for that year; it is the long-term escape of the capital.

Mr Sutherland—I think the only issue with speculation in water that is a bit different to land is that it is pretty unlikely that a speculator will buy water and not want to get a return on it in terms of its use, unless they are a philanthropist and want to use it in environmental flow.

Senator HEFFERNAN—You can trade water at five per cent or seven per cent usually. With great respect, if I buy water and I am the fund for the London superannuation fund for the local community, seven per cent is fine. The capital thing is always going to be pointing that way. I am really worried about this. It will be just this great escape of capital from the bush, which in turn will change water farming to tenant farming in the longer term.

Mr Sutherland—A lot of farmers are acutely aware that the value of their property resides in their water rather than their land. I think the market is becoming a lot more sophisticated than perhaps it was in terms of that problem.

Senator HEFFERNAN—There are a lot of carpetbaggers busting to get into the water market, I think.

Mr Alvarez—It is interesting that you say that. In fact, a lot of the big carpetbaggers have actually got out of water.

Senator HEFFERNAN—Cubbie Station is for sale, if you make the price, and so is Ballandool Station. They are all worried what the future holds in legislation. That is why they are getting out. The long-term capital base value of water—I will put my house on it or you can have my farm—is always going to point that way.

Mr Alvarez—As long as it is a better investment than investing in buildings.

Senator HEFFERNAN—The Murray-Darling Basin has 6.2 per cent of Australia's run-off and 70 per cent of the farming activity. There is not enough water to go around. It is always going to get dearer. It is the same with housing land in Sydney. It is the same thing—supply and demand.

Mr Alvarez—It will go up so far as it can get the same return as an investment in buildings or other income producing—

Senator HEFFERNAN—There are lots of investment vehicles that are invested in property that has a minus capital base return. I can assure you that will not happen in water. Anyhow, can I move on.

CHAIR—In the climate that you are describing, particularly in terms of water trading—and I noticed that in your opening remarks you made reference to the review of water plans—how are you going to deal with that in respect of cross-border issues so that there is some synchronisation between a review being done on this side of the border and Queensland? Leading up to a period where, if there is speculation, for example, in the water market, people know that there may well be a reduction in the allocation made available, could you end up conceivably with what Senator Heffernan is talking about—flight in some form, a bargain basement sale or people basically getting out altogether? Have you thought through those issues in terms of how the reviews would be done?

Mr Sutherland—It is an important issue. In particular, I think Minister Knowles, in his support throughout the development of the National Water Initiative, saw that as one of the key issues. If, in a country like Australia, we cannot come to grips with sharing water across jurisdictional boundaries then there is not much point having the National Water Initiative. We are pleased that, in the intergovernmental agreement on the National Water Initiative, there is a requirement for jurisdictions to review interstate agreements in relation to water-sharing and, in developing water-sharing plans that impact on other jurisdictions, to acknowledge and build in the principles of the National Water Initiative. We are certainly in consultation with the Queensland government to see that, in terms of renewing the memorandum of understanding in relation to border rivers agreements such as that for the Condamine-Balonne, we collectively bring the principles of the National Water Initiative to bear. That is easier said than done at the moment, but I think we will certainly be keen to ensure that we live up to the expectations of the National Water Initiative and call on other jurisdictions to do the same.

Mr Alvarez—The same thing happens on the southern border, and we are trying to align the Victorian rollover sequence with the New South Wales sequence in terms of timing.

Mr Sutherland—This means that, in terms of reviewing of plans, we would see it as being important to take a whole-of-catchment approach where we can, even though that may be across state boundaries.

Senator HEFFERNAN—Could I just go to the issue of water savings and the state government's thinking on what we can do in the area of the evaporation—the Menindee Lakes thing? I will just colour the statement by giving my congratulations to everyone who was involved in the Gundabluey capping of the bore scheme up there at Lightning Ridge, where now one month's capped supply is derived from what was one day's drain supply. It is just a

magnificent achievement. That brings me back to the flight of capital issue. It is going to take a lot of capital to do all of those sorts of things everywhere in the bush, which is why I cannot emphasise enough to be careful of trading. We were given evidence earlier today that the evaporation question is every bit as useful a saving as any other issue, given that the Menindee Lakes evaporate many times as much water as Bourke uses et cetera. What ideas do you have for the future to build some incentives into that sort of stuff?

Mr Sutherland—I think we see that as critical in delivering on the objectives of the Living Murray and the Snowy recovery, but also more generally in restoring stressed systems throughout the state. We have an active program now of investigating projects which can generate or realise systems savings, like the Darling anabranch project, in which potentially you have a channel supply in the order of 40,000 to 50,000 gigalitres at the moment delivering a stock and domestic requirement of three gigalitres, which is not terribly efficient. So that project in particular is at the EIS stage and we are actively moving into the design and detailed feasibility phase—and similarly with projects like the Menindee Lakes pipeline. Collectively, we have on our books, if you like, projects at various stages of readiness that potentially could realise anything between 300 gigalitres and 400 gigalitres, and many of those are designed around reducing evaporative losses either in storage lakes or in channel systems.

Senator HEFFERNAN—At the convenience of the government and in due course, could you provide some details for me on that?

Mr Sutherland—Certainly, yes.

Senator HEFFERNAN—It actually opens up an interesting discussion, because one of the great tragedies of the Lower Balonne is that to avoid the environmental planning requirements—there is absolutely no environmental planning at all in the Lower Balonne—they passed legislation in the Queensland parliament for landholders so they keep their banks under five metres. If we had kept them at 10 metres, we probably would have had another 150,000 or 200,000 gigalitres of water down the river that would not have evaporated.

Mr Sutherland—I dare say.

CHAIR—I would be interested to hear from you about the provision made in the IGA about Indigenous access: how the New South Wales government is going about dealing with both access to water—and management issues—and the question of native title.

Mr Sutherland—Certainly. These are some important initiatives in the New South Wales legislation. Across the state, the New South Wales legislation allows for Aboriginal cultural use licences for immediate use by communities for direct domestic and cultural purposes. In some of our valleys, there is provision for—and certainly there is provision under the legislation for—Aboriginal commercial licences. The government has committed \$5 million initially for an Aboriginal water trust, which we expect to be up and running in the next month or so, which will provide funds for assisting Aboriginal communities either to purchase water for commercial purposes or to invest in other infrastructural or business costs in setting up businesses related to the water sector. Certainly the legislation provides for native title in relation to water, subject to the claims process through the normal processes.

Senator HEFFERNAN—Do you want me to give you some examples of bores in the Gwydir that have no aquifer?

Mr Sutherland—I am sure we will be able to follow that up if you would like us to investigate that.

Senator HEFFERNAN—No, but if you do not think they exist I can actually supply you with the details.

Mr Sutherland—Okay.

CHAIR—That concludes today's hearing. I thank Mr Sutherland and Mr Alvarez for appearing here today and providing assistance to the committee. If you have any issues or queries that arise over coming weeks, feel free to contact the secretariat.

Senator HEFFERNAN—Mr Chairman, could I thank the department and could I ask you to send a note of thanks to the minister for the leadership and goodwill that he has displayed in the lead-up to the National Water Initiative. Perhaps we can send a letter to that effect as I think it is important that people get some recognition for good work.

CHAIR—Yes. Mr Sutherland and Mr Alvarez, thank you both for appearing before us.

Mr Sutherland—Thank you, Mr Chairman. I will table a recent publication which may be of use for your research purposes on the New South Wales reforms generally.

CHAIR—Thank you.

Committee adjourned at 4.06 p.m.