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Proof Committee Hansard

SENATE

RURAL AND REGIONAL AFFAIRS AND TRANSPORT
REFERENCES COMMITTEE

Reference: Rural water usage in Australia

WEDNESDAY, 21 APRIL 2004

MELBOURNE

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SENATE

RURAL AND REGIONAL AFFAIRS AND TRANSPORT REFERENCES COMMITTEE

Wednesday, 21 April 2004

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

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

Senators in attendance: Senators Buckland, Heffernan, Ridgeway and Stephens

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.

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Committee met at 9.30 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 everyone here today. It is a public hearing and 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 submissions made to the committee and 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 a 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 that committee is considering publishing before taking such action.

[9.31 a.m.]

JAMES, Mr Ross Andrew, Acting Superintendent, Hydrology, Bureau of Meteorology

PLUMMER, Mr Neil, Acting Superintendent, National Climate Centre, Bureau of Meteorology

STEWART, Mr Bruce James, Assistant Director, National Operations, Bureau of Meteorology

CHAIR—I welcome our first witnesses today, representing the Bureau of Meteorology, and I ask you to make a short opening statement.

Mr Stewart—Thank you for this opportunity to appear before the inquiry. Firstly, I would like to apologise on behalf of Dr Geoff Love, the Director of Meteorology, who is unable to attend this hearing because of prior commitments. The Bureau of Meteorology is an executive agency of the Australian government under section 65 of the Public Service Act 1999 and it operates under the Meteorology Act 1955. The bureau is challenged with meeting the needs of all sectors of the community and all levels of government for those weather, climate and related services that are essential to their safety and general wellbeing and for the support of Australia's overall social, economic and environmental goals. I am pleased to table today a book for your information that provides an overview of the bureau's role and operations and the service it provides.

Meteorology is of both short- and long-term importance to most aspects of rural water usage because it represents the spatial and temporal distribution of two key meteorological variables—rainfall and evaporation—that ultimately determine the availability of the resource. The bureau has had a longstanding commitment to, and a role in, the assessment and management of Australia's water resources, especially following the establishment of the Australian Water Resources Council in the early 1960s. In fact, Dr John Zillman, who was Director of Meteorology at the time, served on successive ministerial councils until his retirement in the middle of last year. He was probably one of the longest-serving members of that set of councils. The bureau operates the official national rainfall and evaporation networks and collaborates with relevant state agencies in the operation of stream flow networks. It provides weather and climate information including both short-term weather forecasts and long-term climate outlooks.

The bureau's written submission attempts to assist the inquiry by presenting three complementary cost-cutting perspectives on the influences of meteorological and hydrological factors and services in relation to rural water usage. Firstly, in section 2 of our submission we have elaborated on each of 12 of what we believe to be key meteorological and related issues that are of importance to rural water resources usage in Australia. Secondly, in section 3 of our submission we have essentially mapped these issues and our views onto the three individual terms of reference of the inquiry. Thirdly, in section 4 of our submission we have elaborated a little on some of the current and future bureau services and issues as they might bear on future rural water supplies in Australia.

I am not going to take up any time here by repeating any of the detail in our submission, but I would like to highlight at least a few of the key issues that we have referred to and elaborated on in section 2 of our submission. The first issue relates to long-term monitoring of weather and climate, surface and ground water and access to this data and information. The benefits are substantial in terms of well informed management of Australia's rural water resources. Secondly, we draw attention to the need for appropriate standards and consistency of data collection. The quality of data, homogeneity of standards and continuity are absolutely essential if we are to understand the varying nature of the resource and use that information in a predictive sense. The third point is the benefit of improved management in research capabilities in a wide range of aspects of the water or hydrological cycle. The fourth point is the fundamental role of good observations and networks in the detection, monitoring and prediction of climate variability and possible long-term climate change. The fifth point relates to the scientific basis for, and regrettably the limitations of, weather and climate forecasting. The sixth point is the status of climate forecast verification and the need to undertake rigorous forecast assessment prior to the adoption of any new system for forecasting. That is essential on all time scales. The seventh point is the potential use of cloud seeding as a water resources management tool.

The bureau representatives here would be pleased to respond to any of your questions. Mr Neil Plummer is currently the manager of the bureau's National Climate Centre and represents Australia in the activities of the World Meteorological Organisation's Commission for Climatology. Mr Ross James is currently leading the bureau's Hydrology Unit and is involved in a range of national activities in support of water resources management. I am the bureau's assistant director in charge of national operations. I am also Vice President of the WMO Commission for Hydrology, and I am involved in the activities of the UNESCO International Hydrological Program. I also represent the bureau on a range of committees that support the activities of the Natural Resources Management Council and the Primary Industries Ministerial Council. We are pleased to attempt to answer any of your questions.

Senator HEFFERNAN—Who can talk about climate change? One of the things we are concerned about is the availability of water. Obviously, in the Murray-Darling Basin, we have—as I keep saying—6.2 per cent of Australia's run-off plus the ground water and a serious overcommitment of that resource. One of the things that the committee would be interested in looking at is the impact of climate change on future run-off in the Murray-Darling Basin. While you suggested earlier that it might have been an issue for the CSIRO, I just wondered whether, from a forecaster's point of view, there is a movement of the weather south, as it were, and whether we will be getting someone else's weather in the future. There have been comments along those lines, all of which we have read about in the papers. I do not know whether it is right, wrong or indifferent.

Mr Plummer—As we mentioned earlier, in terms of that specific modelling, the bureau has not been involved in that work. The bureau has looked at the trends over the past century and found that for Australia as a whole we have had a slight increase in rainfall, but there have been some trends that have shown decreases in rainfall. They have been principally, since the second half of the 20th century, in the south-west of Western Australia and in all the significant areas of eastern Australia, where, since about 1950, the rainfall has decreased.

Rainfall variability over eastern Australia is driven by the El Nino southern oscillation phenomenon, so in recent years we have seen some years with marked decreases in rainfall due

to El Nino events. In 2002-03 the El Nino related drought had a significant impact on the Murray-Darling Basin region not just because of the reduction in rainfall—the actual rainfall amounts recorded were similar to some of the other severe droughts—but because temperatures were significantly warmer during 2002-03, which exacerbated the dry conditions due to the fall-off in rainfall.

Senator HEFFERNAN—Has there been reduced run-off in the Murray-Darling Basin due to climate change? Are you able to give us an answer on that?

Mr Plummer—I cannot give an answer in terms of the run-off statistics.

Mr Stewart—In terms of our position—if you like to call it that—on the climate change issue we pretty much agree with the current findings of the Intergovernmental Panel on Climate Change which basically say that globally the information is there to suggest that temperatures have increased by a certain amount over the last 50 years—I think it is 0.6 of a degree globally—and that appears to be associated with human induced activities. In terms of then forecasting what will happen on a regional scale, we really do not feel that the modelling at this stage is capable of doing any more than giving an indication of possible outcomes. Being in the weather forecasting game and being able to predict seven days ahead is tough enough, let alone trying to predict it at a regional level.

Senator HEFFERNAN—The hydro people tell us that there is a long-term decline in their reserves of water in all of the storages in the Snowy. Given yesterday we were in South Australia and they said, ‘Come what may, we get 1,850 gigs come over the border there, mate. She’ll be right,’ I just wondered whether there are any little danger signs out there. Given that they are now going to cloud seeding, which from reading your report will have mixed results, are there some warning signals for the government and for the Murray-Darling Basin in the weather?

Mr Stewart—I have always felt from that point of view that we need to take account of the current highly variable nature of our climate and be aware that it is highly variable and be ready to manage it for changes in either direction.

Senator HEFFERNAN—Hopefully, you are going to tell me that we are going to get a couple of wet years. Does it rain more over the Southern Ocean now than it ever did? Has something happened there?

Mr Plummer—In terms of the Australian continent, and I talked about those trends earlier, the largest increases since around 1950 have been over the north-west and the tropics. Particularly over the last 7½ years or so we have seen reduced rainfall over much of the south-east and a continuation of the dry spell that has been observed since the mid-1970s in the south-west of the continent. So there are trends emerging in the rainfall records.

Mr Stewart—With trends you have to be careful because, if you look at any historical length of records over 100 or so years, you will see that at various stages there are trends in different directions at various times.

Senator HEFFERNAN—There is a very good southern oscillation summary for 100 years and it is all in colour—you blokes probably put it out for all I know—that does show in very simple pictures that you can get four or five dry years and then two or three wet ones.

Mr Stewart—Some work that we did a few years ago indicated that there seemed to be in some of the rainfall records a wet period-dry period type fluctuation as well. Again, if you look at a series of data, you can pick up those sorts of things. But, if you are looking at specific things in a regional sense, it is much more difficult to identify them.

Mr Plummer—A lot of work has been done in the south-west because, as I said before, the rainfall has dropped off there since the mid-1970s. We have a longer period of record to analyse there, and there has been a substantial amount of work done on those records. I guess the jury is still out in terms of whether this is natural variability or the enhanced greenhouse effect. I guess it is likely that both are playing a part. I guess further work will continue to establish the causes of that particular trend and other trends around Australia.

CHAIR—As a follow-on question to much of what you have already said, I am interested in the research work that might be undertaken by the bureau, particularly in relation to water reforms across the country. The government, certainly through the National Competition Council, has spoken about best practice internationally for research being undertaken. To what extent are you involved in any of the COAG reform processes? I ask the question mostly because I am trying to determine whether people who are directly involved in research to date are people who have a direct interest in water—that is, as water users as opposed to, say, weather forecasters. I would presume that you have an enormous role to play. To what extent are you involved in a formal sense in informing what best practice science is being done?

Mr Stewart—I mentioned earlier that the director of the Bureau of Meteorology is a member of the NRM and the Prime Minister's standing committees. Under their umbrella they have the NHT and NAP type programs. So the bureau gets an opportunity through involvement in those ministerial councils and standing committees, and the various committees underneath them, to have input into NRM and NHT type issues. In terms of the COAG water reforms, we have been on a range of committees that have discussed things like water markets and those sorts of activities which fall under the water reforms. We provide input on climate and weather related matters wherever we can. We have also been one of the members of the Cooperative Research Centre for Catchment Hydrology since its inception in the early 1990s. That has involved our research staff and centre in activities associated with the research program of the CRC. That has been in support of things like environmental flows, which is part of the COAG water reform. We would see our role as providing climate and other information that supports the activities that are required. From that point of view, access to our databases is one of the key things that the people have been interested in as well as our analyses of climate and where things are headed.

CHAIR—One of the reasons I asked is that we heard yesterday from the Centre for Groundwater Studies at Flinders University. I was quite impressed with the work they are undertaking but they made the point that not enough investment is being made in research of that kind, mostly because it is about research to do with things that you do not see, as opposed to things that you see on the surface. I wonder whether you have any comments in that respect. I am trying to find out whether or not the thinking and the knowledge base that has been developed is perhaps skewed in favour of users, as opposed to the best scientific foundation of

knowledge being developed to assist proper decisions being made to make the river systems healthy and viable. I am not asking you to judge your peers; I am just thinking more about the processes of how knowledge is gathered.

Mr Stewart—You might find that in various sectors of the research there could be more resources allocated to the pure science side of things. The CSIRO might be a better group to talk to directly about this sort of thing. The research within the bureau tends to be research aimed at improving our capability to forecast the weather and provide the services that we do. Our support to research outside tends to be more in terms of the provision of information and advice on meteorological matters. I do not think I am really well placed to say whether or not the resources that are put towards the pure side of research versus the applied side of research is in the right balance. Our experience with the CRCs has certainly been that most of the research carried out really has to be very much targeted towards the end user and the use, as opposed to theoretical research where you might make an enormous breakthrough but the chances are not necessarily good.

Senator HEFFERNAN—Mr James, you are a hydrologist, are you?

Mr James—Yes.

Senator HEFFERNAN—Do you look at changed weather patterns and their impact on the recharge of the aquifer and that sort of thing?

Mr James—No, we are not involved with ground water hydrology at all. The primary focus of hydrology in the bureau is to do with the provision of the flood warning service. There is a small component to do with water resource assessment as well.

CHAIR—I will take you to another matter—cloud seeding. It has been mentioned in a cursory manner in the media. Is it a good idea or a bad idea? I have not seen the evidence yet to suggest that as an activity it may or may not improve rainfall available within certain catchments. Will it have unintended environmental consequences, for example? In Kosciuszko National Park they are in the process of looking at that. The New South Wales parliament is looking at rushing through special legislation to allow that to occur, but that is mostly to exempt it from the planning laws in New South Wales. I certainly take the view that the EPBC Act would override it in any event but they seem to be going ahead. If you are sidestepping your planning laws, your checks and balances, surely there may be unintended consequences even if the intention is good.

Mr Stewart—I would not like to comment on the policy aspects of that. I am happy to make some comments on where we see the science at currently, and our attitude to it. In the paper I have provided you with a statement from the WMO that talks about where it believes the current status of weather modification is in general. I suppose that really does say that it is quite possible to use certain mechanisms to enhance the potential for rain in a particular area. As far as we are aware, though, to prove in a statistically scientifically sound correct manner that you have actually increased the rainfall in a particular area is very difficult to show because of the inherent natural variability that occurs in an area. However, if you have all the right weather conditions and you follow certain procedures you can cause rain to occur at a particular point at a particular

time. Whether that means that less rain falls in an adjoining area or another area, or whether there are other—

Senator HEFFERNAN—That is the great curiosity.

Mr Stewart—I do not know whether we have the information to confirm whether there are other unintended consequences.

CHAIR—It is a bit like magical clouds, is it?

Mr Stewart—It is important to realise too that it is quite often the case that at the time when you want to cause the additional rain the conditions are not there for it to happen anyway—the clouds are not available. However, if you are looking at it in terms of causing more rain to occur when the clouds are there and retaining it in storage then that is something you need to look at—the losses and a range of other things.

Senator BUCKLAND—In your submission you talk about the WMO guidelines. Is there something sinister in this? It says that the designed experiment is developed before any operational seeding is undertaken. You talk about the credibility. How is it done? Is it a matter of putting a bit of water up there to try to agitate more water to fall or is there some chemical process that is involved? That is what I mean by ‘sinister’: is there something we—certainly I do not know—do not know about that causes the precipitation?

Mr Stewart—There are pellets.

Senator BUCKLAND—I understand that there are pellets, but what are the pellets made from? Are they made from dry ice?

Mr Stewart—I am sorry, I am a hydrologist so I do not know. Neil, do you know?

Mr Plummer—No.

Mr Stewart—I am sorry, I do not know. I think they vary.

Senator BUCKLAND—I wondered about that. From the guidelines, I understand that you need a few clouds. It is no good putting the things up there if there are no clouds, and they would have to be the right rain-bearing clouds to start with.

Mr Stewart—Yes, that is right.

Senator BUCKLAND—I understand that having it fall in the wrong place is not worth while.

Senator HEFFERNAN—He asked for snow, I think.

Mr Stewart—I think they are trying to induce for snow in the Snowy area.

Senator HEFFERNAN—Yes, for the snow operations up there. There is definitely a lot of truth to the fact that it is no good praying for rains when the wind is in the wrong quarter.

Senator BUCKLAND—I understand that.

Senator HEFFERNAN—That applies to the weather bureau too.

Mr Stewart—I could probably find out what the different particles are that they use. I am sure that that information would be available. I have no idea whether they have any environmental impact. Were you also questioning how they determine whether something has been successful?

Senator BUCKLAND—Yes.

Mr Stewart—I am aware of what they did in a trial in Tasmania from that point of view. It was an interesting thing. As I understand it, they had a system whereby the pilot was given the instruction to take off and, when the plane was over the cloud, a decision was then made whether to seed or not to seed. They recorded what happened when they seeded and when they did not seed. That was the statistical test as to whether there was any net effect. When they had analysed the data, they found they did have an effect and they were able to increase the amount of water in their storages at those times.

Senator HEFFERNAN—My understanding of the plan for the Snowy is that it will be shot from the ground.

Mr Stewart—Yes. There are different techniques from that point of view. As I understand it, it is just to put particles in the atmosphere that enable the formation of droplets and for the rain to occur.

Senator BUCKLAND—That question was just an aside. I was interested when reading that. You have talked about El Nino, and on the morning reports on the ABC et cetera we keep getting told by the bureau about what is happening with climate change—and I am not attributing that to any of the individuals here today. Are the changes that we as a society have made to date, such as cutting out CFCs and trying to reduce our pollution, having a marked effect on what is happening to our water and to rain patterns in Australia?

Mr Plummer—I guess the regional and large-scale influences of global hemispheric changes in the circulation systems are the largest influence on things like rainfall and temperature patterns. For example, the monsoon over Northern Australia and the location and strengths of the frontal systems over Southern Australia are largely governed by large-scale influences—for example, sea surface temperature patterns and other influences, one of which is likely to be carbon dioxide concentrations.

Senator BUCKLAND—Have we seen a decrease since the world has tried to grapple with this issue? Whether or not we accept the Kyoto protocol, to date have we seen a reduction in the pollutants and, if so, is that overall reduction in pollutants having an effect?

Mr Plummer—This is getting away a bit from my area of expertise but I can say that the carbon dioxide record has continued to increase at a rate of about 0.5 or 0.6 per cent per year.

Mr Stewart—I would think the simple answer at this stage is that it is probably too early to tell whether or not the current actions are having any impact at all. It is just too early to tell.

Senator BUCKLAND—Okay, I accept that. I am probably beating a dead horse at the moment!

CHAIR—But we can be concerned about certain practices. For example, clear-felling and fire regeneration activity right across the region and not just in Australia.

Mr Stewart—Yes.

CHAIR—Or the one-offs, like Indonesia a couple of years back, that do have a detrimental effect on the climate.

Senator HEFFERNAN—I have to say that I was alarmed to go to China last year—being the big international traveller that I am!—and not see the sun for 10 days, not because of the clouds but because of the pollution. I forget the name of the city I went to where there are 250,000 people who work in the steelworks. It looked like you were inside a fog. It was just smog—terrible.

Senator BUCKLAND—Are the records that are being kept for our climate in Australia—rainfall patterns and temperatures—collated with other parts of the world to see what changes are happening on a global basis that could influence our weather? I do not know how the weather works. I know the wind blows and the rain comes—occasionally! Also, because we are in the Southern Hemisphere, is it correlated with places like South America or Africa? I suppose they would be the logical places to look at.

Mr Plummer—There is the collection of observations referred to earlier—the standards under the World Meteorological Organisation. All WMO member countries will be collecting observations in a standardised form. At the end of each year there is a report on what the global temperatures have been doing, just as I have talked about changes in temperature and rainfall for Australia. This has been going on in parts of the world so that at the end of each year the World Meteorological Organisation and other international institutions can talk about how this particular year ranks against others and what the global trend is.

Senator HEFFERNAN—Can we pick what is going to happen here by what is happening—I think Senator Buckland, you may have been referring to this—with the weather in Africa? Does the whether that Africa gets come over here or does a lot happen in between? Does our weather go somewhere else?

Mr Plummer—There are large-scale what we call teleconnection links. The El Nino southern oscillation provides probably the largest link of that kind. So, for example, when we are experiencing an El Nino related drought, I quite often will see similar conditions in parts of southern Africa and parts of India, while western and South America may be experiencing wetter conditions. So there are those global links on the year-to-year timescales.

Senator HEFFERNAN—For a poor old farmer like me, should I be actually looking at the weather in South Africa as well as the back page of the *Herald*?

Mr Plummer—We try to bring that information together in the monitoring we do at the Bureau of Meteorology. We do keep an eye on what is happening in other parts of the globe and try to bring that together in our media releases, web pages and so forth.

Senator HEFFERNAN—Let us go to the bottom line: is this going to be a dry year?

Mr Plummer—At this time of year we always consider whether we will get an El Nino. That is by far going to be the biggest factor in our predictions of whether it is going to be dry. There has been a fair amount of talk so far this year about whether we will swing into an El Nino. We still believe it is too early to call. This period through autumn we turn the predictability barrier when the global climate system is going through a readjustment from summer into winter.

Nevertheless, there are some indicators that are suggesting an increased likelihood of an El Nino developing. If we take the base rate for an El Nino in any given year to be 20 to 25 per cent then we are probably above that but probably less than 50 per cent. So at this stage we would not be putting the odds towards an El Nino but we would be saying there is an increased likelihood.

Senator HEFFERNAN—So whatever happens you are covered. Every El Nino year does not necessarily bring low rainfall though. There have been some El Nino years when there has been reasonable southern rainfall, haven't there?

Mr Plummer—There have. It is a bit of a communication difficulty we have globally with El Nino events. The last one we had, believe it or not, was termed in global terms 'a weak to moderate event' but it was one of the more significant El Nino impacts on Australian rainfall. The 1997-98 event, which was the one prior to the most recent, had much weaker impact in terms of rainfall on eastern Australia. So you are correct there. That one was termed a strong global event and it had a weaker impact on Australia. We have seen through history that it is not necessarily the case that the strong El Nino events bring the strong decreases in rainfall for Australia.

Mr Stewart—The El Nino event itself is located across the Pacific Ocean. The other oceans and water bodies around Australia have an impact on our weather as well, so there are different factors at different times.

Senator HEFFERNAN—What hope have we got?

Mr Stewart—We are getting better.

Senator STEPHENS—I think your answer, Senator Heffernan, is that you are going to have to agist your stock. Gentlemen, on page 9 of your submission where you are responding to the terms of reference of the inquiry you make some fairly significant comments about governance of the whole water management issue. In 3.2 you talk about there being a void at the technical management level now and a lack of coordination between the agencies with different standards. You suggest that this could be addressed by the development of a collaborative structure. Is your argument then that there is not an overarching structure that adequately addresses all this?

Mr Stewart—We are very pleased to report that, since we put our submission in, the government has gone ahead and established a committee on water resources data management issues.

Mr James—It is a committee that evolved as a result of the National Land and Water Resources Audit and the issues that were raised in those reports. It is a group that agriculture and fisheries has assembled and includes representatives from all of the states. A major objective of the group is to improve access to data held by all the states. We would hope that that committee will also address issues such as coordination of networks, data and standards—the broader range of technical issues that we felt had been neglected for some time.

Senator STEPHENS—Has it met yet?

Mr James—Yes, there have been a couple of meetings and there has been some progress there.

Senator STEPHENS—Perhaps it is not fair to ask you this, but I will anyway. Over the last few days we have been discussing whether or not witnesses consider that there is a need for a national regulator of water licences and water issues to coordinate a Commonwealth approach. Do you have any thoughts on that issue?

Mr Stewart—If you are talking about licences to extract and that sort of thing, that is really outside our area of involvement and our role. Our role I suppose is more in terms of that link between the rainfall run-off rather than the actual extraction and use.

Senator STEPHENS—That is fair enough. I just thought you may have had some thoughts about it or had some discussion about the whole-of-government approach.

Mr Stewart—I think it is essential that any information or data we collect nationwide is collected to a set of agreed and established standards across all states. That is the only way we can make adequate comparisons. Whether that is done through a national authority as such or by all groups getting together and deciding on an agreed set of standards depends; in some cases one way works and in other cases other ways work.

Senator STEPHENS—Thank you.

CHAIR—To follow on from where you said that the collection of data between the states is improving: does that mean that there was a lack of cooperation previously or that it was so far down the list of things that needed to be done that we never got to it? I understood that the process of looking at a national audit and establishing formal mechanisms had been in train for at least 10 years, from what I can recall from what the NCC spoke about back then. It is encouraging that things have changed since your submission came in. Perhaps you have more influence than we do with government in establishing these matters.

Mr Stewart—I do not think it has changed necessarily through our influence. I think you will find that a general feeling came out of the National Land and Water Resources Audit that we needed to do things a bit better in terms of the comparison of data between one state to another and the use of common definitions and common terminology. I think that had slipped a little bit

from focus while we were focusing on other aspects of managing the resource. In terms of urban flooding, our issue was more with the major urban water authorities who went through that period of being commercialised. As that occurred, they were more protective of their information as intellectual property and that made it a little bit more difficult for us to say to them, 'We need it for public good activities.' I think we have worked our way through those sorts of issues; I think it was just a teething problem associated with that process. This process will help with that as well.

CHAIR—Thank you, gentlemen, for appearing before the committee today and providing assistance. If there is anything that we need to follow up, we will be in touch. A copy of the *Hansard* will be available over the coming weeks for you to check that everything you said has been recorded accurately.

Senator HEFFERNAN—There have been some reports in the papers lately that the first half of the last century was some sort of a dry period—but I am bugged if I can see it on the charts—and that we are now going to go into another 30 or 40 years of a sort of dry period. Do you blokes deal with that sort of stuff?

Mr Plummer—We do, yes. We look at these records all the time.

Senator HEFFERNAN—Should we believe that stuff?

Mr Plummer—I am not sure where the 40-year period actually comes from. Whether it is an analogy with what has happened in south-west Western Australia, I am not sure. There is no evidence as far as we can see to suggest a 40-year dry period.

Senator HEFFERNAN—So I shouldn't jump out the window!

CHAIR—Thank you again.

Mr Stewart—We would be pleased to follow up with anything as required. Thank you.

Proceedings suspended from 10.13 a.m. to 10.33 a.m.

GRAY, Mr Anthony Gerard, Group Public Affairs Manager, Visy Industries

HURDITCH, Dr William John, Project Adviser, Pratt Water

CHAIR—Welcome, Dr Hurditch and Mr Gray. Do you have any comment to make on the capacity in which you appear?

Mr Gray—I am Richard Pratt's representative on the Pratt Water Murrumbidgee Project.

CHAIR—I now invite you to make a short opening statement before we go to questions.

Dr Hurditch—We are very pleased to be able to give some evidence and answer questions for this committee on the subject of our Murrumbidgee water efficiency project. We have been working on this project for over 12 months. It is a jointly funded initiative which flows out of earlier work that has been funded and promoted by Richard Pratt to raise the consciousness of the Australian community about the need for some very proactive work on water efficiency and water saving, particularly from a private investment perspective. As I said, the work that is under way in the Murrumbidgee valley has never been done before. It is a collaborative piece of work and I would like to hand to the committee a diagram which illustrates how the project is structured and then perhaps we can go through that together. The diagram is on one page and it explains how the project works.

While that is being passed around I will give a little more background. In about December 2001, Richard Pratt called together a small group of people to start discussing how we could proactively look at the need for better water management and water efficiency in Australia. A small group was formed and Pratt Water Pty Ltd was formed as an entity. With funds provided solely by Richard Pratt, that group worked for 12 months developing a scoping document called 'Water in the Murrumbidgee', which was released in August 2002. That scoping document brought together a range of possibilities for saving water, better using water and better managing water on farm and off farm. From that report a series of submissions were made to both the New South Wales government and the federal government for additional support in a tripartite way through the national action plan for a larger study. That larger study is now under way and that is the subject of this flow chart that I have handed out. The larger study is specifically aimed at developing and testing investment feasibilities for water efficiency investments in the Murrumbidgee Valley. That project is under way now.

I will run through the diagram and explain how it works. The project commenced with the first funding flow in May 2003. The total funding for the project provided by governments is \$5.3 million—\$2.65 million from each of the New South Wales government and the federal government under the national action plan. It is very much seen as a template or a pilot to be applied elsewhere in Australia, not just the Murrumbidgee. One of the conditions of our contract, which is actually with the New South Wales government under the NAP arrangements, is for us to provide ideas and concepts that can be applied broadly throughout Australia and perhaps elsewhere. While the project is in the Murrumbidgee it is seen as a national initiative.

Richard Pratt is providing a large amount of in-kind resources to the project. On the diagram the people who are in the dotted line are provided in kind, as are substantial other resources. That is specified in the contract as well.

The project reports to the national action plan steering committee through a reference group which is comprised of Commonwealth, state and project and community participants, including the Murrumbidgee Catchment Management Board. The director is Helmut Konecsny, who is a technical director with Visy Industries. Then there is a management team, which is set out there on the third tranche. It is composed of a number of people, with Ian Wisken as assistant director. He is the project leader at this stage. There are other people involved in the region. We have an office in Griffith that has been established for over 12 months and which liaises with the community.

There are a number of silos, if you like, at the bottom—they are not really silos but they look like that on the diagram—which deal with various aspects of the project. On the far left is engineering and administration. We have a team of Pratt Water engineers and others who reside principally in Melbourne and are provided in kind. They are people who have been working on water technology and developments for quite a number of years and they are deployed into the project. Then we have a range of investment projects that are led by various subgroup leaders. I will not go into them in detail, but there is a range of specifically chosen projects to identify where water savings can be achieved by investments in various sectors. Lake Wyangan is a large area north of an old irrigation area which is in bad need of refurbishment and refitting, so we are looking at a total area plan for refurbishment of irrigation with new technology, and with a transitional arrangement for urban encroachment. The town of Griffith is moving towards the Lake Wyangan area so we have a 10-year window to utilise some temporary technology and then to expand agriculture into the north part of Lake Wyangan. That is one example and we will come up with a template for managing that transition.

Summer flow management, which is a subcomponent that I am working on, is a holistic approach to dealing with the problem of using high summer flows to deliver irrigation water, which is countercyclical to the ecological and environmental flow. Normally, winter flows are highest because of weather conditions and summer flows are lower, but we have turned that around with our irrigation and regulated system. We are looking at how to better manage that summer flow to provide relief for the constraints, such as the Tumut River, the Gundagai choke and other areas, and at the potential for new investments to better manage that system.

Timber plantations were specifically chosen because of the significant impacts, socially, economically, and, potentially, environmentally, of plantations in the upper catchment. So we are looking in a very detailed way at the implications of current plantations and plantation expansion for the triple bottom line for water use—that is, the economic, social and environmental outputs for the valley. We are looking at wine grapes as a potential alternative expanded crop for water utilisation with new technology. That is a global market study that projects back into the valley and is based on actual contracts for sale of new types of grapes. There is a similar market study for grains. On-farm investment looks at the motivations and drivers for farmers to convert to high-pressure drip irrigation. Stock and domestic delivery systems look at better ways to deliver the very large quantities of water that go to stock and domestic users, which are usually characterised by very large evaporative and seepage losses.

Environmental farming looks particularly at the upper catchments and ways of better managing salt and other damaging impacts of some upland farming—for example, ways of bringing deep-rooted perennials and other grazing systems into play. We are looking at off-farm investments, working with the Murrumbidgee Irrigation and other irrigation companies, to provide better ways of investing in pressurised near farm systems to enable farmers to convert. We are also looking at the Lower Bidgee, which is a large area of water usage and a significant area for new production. These are just some of the investment projects, and I am sure we will have some discussion on those.

Mr Gray—If these projects appear to have a heavy skew towards the economic it is quite deliberate, because the basic premise of the study is that you do not have to make a choice between the environment and the economy. If you are smart about it, you can achieve considerable economic growth and do the right thing by the environment.

Dr Hurditch—We have been very careful to ensure broad consultation with and broad involvement of particularly the valley community but also beyond it. We have set up an integration advisory panel, which is really a reference group to stress test as we go all the work that is under way. The members of the integration advisory panel are listed there, and you can see that it has a broad spread of scientists, political representation, community people and farmers and irrigators. So we have quite a good spread of expertise. They have been given free rein to criticise, to make changes and to amend the various works in progress. We have regular meetings, and the next meeting of the integration advisory panel is in Canberra on 28 April.

As well as the investment projects being examined, we have a number of what we call feasibility support projects, which are really the toolkit, or the way in which we want to make this work applicable beyond the Murrumbidgee. So we are doing work on how to examine the business case for better water use efficiency in a whole range of areas. We have an industry working group, which is basically a group of suppliers, innovators and technical representatives. There is work on the upper catchment for the unregulated system. We are developing information and training resources for farmers for irrigation technology. One of the things we have found is that there is a very big gap between what is available worldwide and what is deployed in the farming area, and that is because of communication issues, lack of a deep market and a whole range of other issues that we are trying to deal with.

We are looking at how best to make choices about where water ought to be deployed by integration of investments. We have an ecology and biodiversity working group which is looking at ways to detect when we are going to cross thresholds which will lead to environmental harm and identify the best ways to manage, albeit in an acknowledged regulated system, how best to get some environmental and biodiversity outcomes. We have a policy and regulation review group which will be looking at recommendations for reform and change. I will stop there and take your questions.

Senator HEFFERNAN—Firstly I would like to congratulate Pratt Water for its enthusiasm. Mr Chairman, Dick Pratt is the guy who came out to Australia and started in an orchard in Shepparton. He has decided to put a bit back. His enthusiasm and that of his employees needs to be recognised and to be part of the history of Australia when it comes to the change in attitude to water. Yesterday, we heard about efficiencies in the Riverland. One of the propositions that they put to us in Berri was that any water savings that could be made from the farm gate on should be

able to be taken up in further development by the farmer and any saving made from the farm gate back to the source should be returned in some way to the public good. Do you have any comments about that?

Dr Hurditch—The principle that we have been adopting in this study is that whoever pays for the investment to save water ought to be able to share in the benefits of the water saved. There is a big difference in the system between on farm, which is essentially private property; near farm, which is the irrigation area which tends to be a cooperative corporate structure; and then system wide, upstream from the irrigation areas, which is effectively the commons and owned by the government. Different principles need to be applied in each of those zones.

Senator HEFFERNAN—Who gets what under your scheme? I will come to how you put Coleambally Channel into a pipe later. Is the Pratt thinking that savings will be used for further development of water or put back? The Murrumbidgee River is one of the better rivers; you have picked a good river. It has a good supply. But generally the Murray-Darling Basin is seriously overcommitted and any savings in a lot of the system would have to go to some cutting back of the overcommitment. Do you have a view that there would be new development?

Mr Gray—Our general view is that there can be new development and water savings because there is a lot of wastage in the system. A hypothetical case might explain where we come from. Let's say a farmer is currently using flood irrigation. He has water rights which go to that but he invests using his own money in water saving, high technology trickle irrigation. That farmer could choose to expand his area under irrigation and expand his crops or, if there were a purchaser, he could choose to sell his water right. The purchaser may be the government that decides that the water will go back to environmental flows. We take the view that it is not really up to us to decide where water should go other than to identify savings opportunities.

Senator HEFFERNAN—Where do the water savings created by the investment from water bonds go in your plan?

Dr Hurditch—The water bond structure that you would be familiar with is actually not part of this study but a separate component. We specifically left it out because that is perhaps stage 2. Our questions are: what are the investments and what are the opportunities now? How do you actually fund investments? The water bonds are for offstream.

Senator HEFFERNAN—There are a few unanswered questions.

Dr Hurditch—There are a lot of unanswered questions. It is perhaps a brick through the window that says, 'Maybe we need to think about this differently.' In terms of the question, one of the problems with the whole water debate is that we have had environmental water and we have, as you have said, productive or consumptive water. In a way all water is used for some purpose. We have this policy and regulatory review working group that is the very last item on our structure which is looking at this whole question of all water being owned by someone and going somewhere. So the environment in a sense becomes a customer. Rather than being just a default mechanism for drain water or whatever—or high-flows or low-flows—the environment ought to be a customer and have people buy water for it to produce goods. We keep thinking of environmental water as either leftovers in some systems which are overallocated or first bites of the cherry that is paid for somehow out of the common good. If we think of the environment as a

customer with custodians, who are usually governments but could still be trusts or private funds who are interested, we change the whole thinking about the use of water. The environment could become another customer.

Senator HEFFERNAN—In the Murrumbidgee there may be—just picking a figure—a 40 per cent reduction in people’s long-term access availability to water and the reward may be that they can continue to produce as much income with 40 per cent less water and the cutback in the allocation could go to fix up the overallocation rather than go anywhere. There is a long-term trend in the Snowy for a draw down on the reserves. It makes a lot of sense to try to avoid the seepage, leakage and all the rest of it, but is it practical to put some of these channelled waters into pipes?

Mr Gray—Absolutely.

Senator HEFFERNAN—So how big a pipe would you have to have—I have been busting to ask someone this for a long time—to put the Coleambally Channel into a pipe?

Dr Hurditch—I am not an engineer, but we have a team of engineers who have done the calculations.

Senator HEFFERNAN—It is doable.

Dr Hurditch—Maybe Tony could explain the relationship with some of the technology providers.

Mr Gray—One of the challenges that Mr Pratt laid down when we first started talking about water is some way of getting on top of the continual escalating cost of water-saving infrastructure. The first thing you run up against is the engineers telling you this is too expensive; the amount of water saved does not justify the capital spend. He said: ‘There has to be a cheaper way to do it. If it currently costs \$100 a metre upwards for pipe, I want to do it for \$10.’ So we laid down a challenge to a number of companies to come up with low-cost alternatives. A number of companies are working on it but the company that has made the most progress to date is Gale Pacific, which is listed on the Stock Exchange. It is the company that produces Coolaroo shadecloth. It has come up with a woven flexible pipe which is, for want of a better description, like a fire hose. It can supply that for \$10 a metre at 400 millimetre diameter. It is ideal in certain applications to just lay in an open channel—

Senator HEFFERNAN—A paddock.

Mr Gray—Not only paddocks but old channels that might be concrete or earthen that need retrofitting or have high seepage. The reduction in wastage is immediate and impressive. We currently have two kilometres of this pipe being trialled in old channels in the Murrumbidgee area. It is being pressure tested. The early results are very promising. That is the first diameter they have made. They have also produced a 1.2 metre diameter pipe. Once we have trialled and proved the 400 millimetre they will move on to larger ones. If that works, that will dramatically lower the cost of the infrastructure. So the answer is: it can be done and it can be done a lot more cost effectively than most people tell you is required, but it is not applicable in every circumstance.

Senator HEFFERNAN—So what are the plans for the main delivery like the Tumut River and the Murrumbidgee River? Do we have to take into consideration the recharge of the aquifer that may occur along the river system?

Mr Gray—All these things are covered by the study. Shahbaz Khan from CSIRO is an expert in this area and is doing a whole water balance as part of the Pratt Water study. When the final report comes down later this year it will have a matrix of potential projects, estimated capital cost and value of the water saved.

Senator HEFFERNAN—I have had a bit to say about plantations and where they ought to be, hoping that we can convince people to bring them down out of the really high rainfall area and put them where we can get a salinity credit et cetera. Do you have any strong disagreement with that?

Dr Hurditch—No, not at all. The only challenge I would take up is that we are not necessarily talking just about plantations; we are talking about land use changes. I notice that the national water initiative communique talks about land use changes and interception. I do not think we should get to a stage where Australians are asked to pay for rainfall, but we do need to be very cognisant of the effect of changing landscapes and changing land uses on all of the things that come from them—salinity, water—so I do not think we have any disagreement. What I will say is that the Pratt Water study—the third investment project on the list there, ‘timber plantations’—is looking, I believe for the very first time in Australia, at the real effects of a realistic plantation configuration on water yield and water quality. The debate has been great, but a lot of the data that has been adduced so far has been based on very small catchments that are usually totally forested. So we are looking at what we call a realistic case of the impact of plantations or other land use changes, and we are comparing it with alternative land uses on water yield and water quality.

Senator HEFFERNAN—From your experience of the huge requirement of plantation for that fantastic industry at Tumut, is below 35 inches of rainfall feasible for plantation?

Dr Hurditch—We tend to draw a line at—what is 650 millimetres?

Senator HEFFERNAN—It is 28 inches.

Dr Hurditch—Anything above 650 millimetres becomes acceptable under normal investment criteria—without a salinity credit, without all of those additional things.

Senator HEFFERNAN—We are hoping that we can use the salinity credit.

Dr Hurditch—That will make a big difference—and being able to target areas where you can actually make up the difference between what would normally be a bad investment, making it either a marginal or a good investment.

Senator HEFFERNAN—If we could coordinate the one point whatever billion that is left in the national action plan—the couple of hundred million dollars is confetti in the wind; there has been no coordination—and encourage some plantation with a salinity credit attached to it to make it all stack up, would you go along with that?

Dr Hurditch—The chairman of Visy Industries made such a statement in March 2003.

Mr Gray—It is on the public record. It is important to note that, when we assessed timber plantations as part of this study, we found that a lot of people were surprised at the size of the economic contribution of plantations in the Murrumbidgee area. I think it is something like an \$800 million industry. It is significantly larger than rice, which gets a lot more attention.

Dr Hurditch—This project is about the Murrumbidgee Valley as a unit and the relative uses of water and their outputs in terms of people, dollars and environmental benefits. When you actually add it all up, there are a lot of myths out there and there are a lot of things that need to be rediscovered.

Senator HEFFERNAN—We have jollied up the rice fellas a bit, as well, I have to say.

Dr Hurditch—Don't read me wrong; rice is a critical industry and it is of huge benefit to the region and many people.

Senator HEFFERNAN—They have plenty of efficiencies that they are thinking about.

Mr Gray—And working on value adding.

CHAIR—As a follow-up to the question by Senator Heffernan in relation to plantation forests, I am interested in your comments about land use management and the need to look at that. We heard yesterday in South Australia from Dr Chris Barber from the Centre for Groundwater Studies. He described plantation forests more along the lines of almost putting pumps in place that drain the aquifers. I take the point that you make in relation to being charged for rainfall. What do you say in response to his comments? There are two things. The first is that plantation forests act as a natural pump in catchment areas, and the second issue is about, I suppose, the whole question of how you deal with available waters for environmental flows for industry and so on.

Dr Hurditch—The biological reality is that trees pump water out of the ground to function.

CHAIR—Some more than others.

Dr Hurditch—Yes. I do not believe that in a total catchment pine trees transpire any more than eucalypts do.

Senator HEFFERNAN—I agree with you.

Dr Hurditch—What we have to be careful about is that we are comparing an essentially cleared landscape in many areas with what becomes a forested area. The first question is: where is the baseline drawn? There is no dispute that trees act as pumps. That is how they work and how they were designed, so they work that way. Draining the aquifers is a fairly emotive sort of term, and I would challenge that. The moisture absorbing parts of the root systems of pine trees are in the top three centimetres of soil. The taproot and the main roots are the anchoring—they actually have a physical purpose whereas most of the nutrient and water absorption happens in the top three to five centimetres of soil. If you go into a pine plantation with a spade, you will

find a whole mat of roots just below the surface, and that is where most of the water uptake occurs. So I would dispute that they are draining the aquifer. I am not a hydrologist but I am an ecologist. They pump water, but the real question is: how significant is it in terms of the total catchment? Again, we are looking at that in detail with the aid of CSIRO. Rob Vertessy and his group are part of our team, so we are looking to get a real handle on it.

Senator HEFFERNAN—In respect of long-term thinking, I want to try to get an audit of what is going to be available when 2020 comes and we have trebled the plantations. If people are going to insist on going into 60-inch rainfall areas and probably intercepting 2½ megalitres a hectare per annum, should we take that water out of the river and apply it as a licence to the plantation?

Dr Hurditch—That will be a decision for the authorities. As to whether it is reasonable or not, I suspect the question of parity between various land uses and investment options ought to be the bottom line.

Senator HEFFERNAN—The point is you blokes are well aware of the figures. Once you get up behind Batlow there is 60-inch rainfall. If you are down in Tumut with 32- or 28-inch rainfall, the difference in run-off between a lucerne paddock and a pine or a eucalypt plantation is bugger-all. There is very little difference, so there is nothing to equate there. Farmers are thinking: ‘If I grow a paddock of lucerne, I am going to get a bill for water.’ Down in the slopes there is a really slim discharge, and with lucerne there is bugger-all run-off anyhow—pardon my language. But when you get up into those really high-rainfall areas, you are intercepting a lot of water that would normally be part of the flow. The difficulty I see is that in a year of lower rainfall—and we have this great variability in our rainfall, as we just heard from the bureau—you cannot turn off the trees but you can turn off the pumps. That is reasonable thinking, is it?

Dr Hurditch—It is reasonable thinking to apply the same rule to land users proportionate to their water use.

Senator HEFFERNAN—Kate Carnell keeps telling me that.

CHAIR—I want to move on to another matter. I think Mr Pratt is doing a great job in trying to move issues outside of the square in which they have been traditionally dealt with. He has also been a big supporter of Indigenous issues, as you would well know. In relation to the feasibility project that you are looking at, I became a little curious when you were talking about an approach that tried to engage all stakeholders. At first glance, it seems to deal with those who are the primary stakeholders as opposed to Indigenous groups who may, for example, have an interest from a native title perspective or environmental groups who would look at this from the perspective of the environment—environmental flows and so on. How do you deal with those issues in the context of the project that you are moving forward with?

Dr Hurditch—Firstly, we have engaged with over 150 individuals and organisations in the valley in collecting information and assessing issues that are important to them, including representative bodies such as the catchment management boards, the authorities and others who have representatives from Indigenous communities on them by statute. In that sense we are consulting with the broader community and are respecting the way in which the community expresses itself in representation on those statutory boards.

Secondly, in specific areas we have had some engagement with specific Indigenous landowners. We are at this very moment investigating opportunities to work with the Nari Nari Tribal Council, who have ownership of a property in the Murrumbidgee and are looking at having a requirement for water efficiency, which I think is great. It is an innovative thing. They are putting a requirement on their lessee, who is a non-Aboriginal, to put in place some water efficiency management. We are looking at some piping solutions with the Nari Nari at the moment. There might be others.

Mr Gray—We have regular and ongoing consultation informally with environmental groups, but there is formal representation at the reference group level with the Australian Conservation Foundation and Tim Fischer.

CHAIR—That is fine. I am not suggesting for a moment that you should take the lead on that, either. I am mindful of the fact that having looked at all of the documentation so far, particularly from government agencies, there seems to be a glaring absence on questions of native title, Indigenous groups and so on.

Dr Hurditch—It is fair to say that we have not looked at the question of native title for water use at all, but it may be something that our regulatory group could take on board.

Senator BUCKLAND—I have just a couple of questions. Mr Gray, this question is in relation to the synthetic piping that you were telling us about. Evidence we had some time ago now was that you cannot pipe or cover these things because they clog up with mud. How do you manage that with the synthetic piping you are talking about?

Mr Gray—The synthetic pipe has internal and external coating. To digress for a minute: from an external point of view it is especially UV resistant, but there is coating inside it. The issue of clogging up is being actively looked at as part of this trial. So far, so good. The first kilometre or so has been on the ground now for nearly six months, and there have been no issues at all so far. We are looking at it. I cannot give you a definitive answer because we are still in trial, but it looks good.

Dr Hurditch—There are some areas that require more pressurisation than others because they might be completely flat, whereas you can have less pressure with others where you have a bit of natural head because you get a normal cleaning out. The other issue with the piping is that in stark contrast to a typical engineered solution, which might be a 100-year life system, if you do get a blockage, bushfire damage or something, you can in a matter of one hour cut out a piece and fit a new piece in.

Mr Gray—It is incredibly cheap.

Senator HEFFERNAN—What sort of pressure does it handle?

Mr Gray—It is comfortably rated to two bars now. It went up to six as part of the trial and it blew the CSIRO's connections off.

Dr Hurditch—We believe we will get to above six. I must stress that this is very much a work in progress. It is leading edge. The difference between this pipe and the BioHose and others that

are used around the world is that this does not have a weld. It is continuously made, so there are no weak points. It is quite innovative.

Senator BUCKLAND—I have to say that it is the most encouraging news I have heard since I have been on this inquiry. It is a marvellous innovation.

Mr Gray—We presented it to John Anderson, who said a similar thing. He said it was some of the best news he had heard in a long time.

Senator BUCKLAND—It is something on which the group should be congratulated for pursuing.

Mr Gray—There is a lot of potential. It does not apply in every circumstance. There are some circumstances where it is not suitable, but we believe there are a number of circumstances where it will be very suitable and where it will change the game.

Senator HEFFERNAN—Dr Hurditch, can you give us a bit of an idea of the friction side of it? You have a kilometre of piping, and put in the old language the width is 16 inches. What does it deliver out the end of the pipe in megalitres per whatever?

Dr Hurditch—The right amount for the farm that it is delivering to. I do not know the actual volumes, but you have the main canal, then you have laterals and then the farms come off the laterals. Each lateral has a 16-inch pipe. In our case we have seven farms connected to the one pipe, so it is enough for seven farms through that pipe.

Senator HEFFERNAN—So it runs seven wheels, in other words?

Mr Gray—That is the other thing—it enables us to take the wheels out and put in sophisticated and accurate measuring equipment.

Senator HEFFERNAN—The equivalent of it.

Dr Hurditch—We are using Doppler measurement instead of the wheel.

Senator HEFFERNAN—We made some interesting discoveries yesterday in terms of how much water South Australia actually use.

Mr Gray—The wheels are, as you know, very inaccurate. They can be up to 30 per cent out in measuring.

Dr Hurditch—One of the public benefits of this advancement that we are in the middle of is in the areas outside the Murrumbidgee. We have had consultations as recently as the last two weeks with representatives of the Wimmera Mallee Irrigation Project and of the greater Darling anabranch Meningie projects. I must say that from those parties we have had a range of responses from ‘very excited’ to ‘we must look more at this’. When you think of that in terms of the public interest element—for example, the Wimmera Mallee pipeline project has a price tag somewhere north of \$450 million—there is an expectation that it will come from public funds. If we can cut \$100 million or more off that project, there has to be public benefit.

Senator HEFFERNAN—It would be wonderful to deliver this water around the areas of Coleambally et cetera. It would be a pity to see it go out into the paddies. Do you think the non-paddy rice thing will be a natural follow-up to your pipe? That would be a big water saver.

Dr Hurditch—I cannot answer that because I am not a rice technologist.

Senator HEFFERNAN—When I got stuck into the rice industry, I noticed that Kay Hull, who was on their advisory body, freaked out—as did Sharman Stone—and said, ‘What are you doing to the rice growers?’ I had a call from the research station, saying that I was pretty well right on the money talking about non-paddy rice, because it is in the pipeline. So we may have huge water savings out of this.

Dr Hurditch—We know for certain that the rice industry has done a lot of work with cool season rice and shortening the growing period, which reduces the amount of water that needs to be used. But I cannot give you any information on non-paddy rice.

Senator BUCKLAND—Coming back to the pipe, I again say that it is absolutely great.

Mr Gray—We should have brought some in.

Senator BUCKLAND—You should have. It might have helped to answer my next question. When you have one of these breaks or there is fire damage or whatever, I cannot imagine mum going out and stitching two bits together. What is the mechanism for joining them?

Mr Gray—There are a number of different repair kits, depending on the size of the tear. Joiners are also being developed as low-cost alternatives. There is a patch for a small hole, which, for want of a better description, is little bit like mending a bicycle tube but it does not require any heat; it is just a hand-pressure tightening element. The other system, as Dr Hurditch said, is simply to take a section out and put a new section in. It is very quick.

Senator BUCKLAND—What about patching on the corners? I drove through the Murrumbidgee area earlier this week, and it distressed me to see all the open channels.

Mr Gray—It will go around corners.

Dr Hurditch—I have some photographs here. I suggest that I circulate to the committee, not this document—which has a lot of other material in it—but some photographs and some other material on the pipe itself.

Senator BUCKLAND—To see those will answer my questions. In the flow chart you gave us this morning, you referred to the investment projects silo—to use your words loosely—

Dr Hurditch—A bad word, I think.

Senator BUCKLAND—I see there that you have summer flows, management and then timber plantations, wine grapes, grains et cetera. There are certainly a few grapes being grown out there, as I again saw.

Dr Hurditch—Yes.

Senator BUCKLAND—That we are introducing these crops in pretty large numbers worries me somewhat. They are bigger vineyards than we have in South Australia where we produce the best wine in the world—but that is an aside. Is there anything to control that? It is a cash crop; it is really quick to grow. This year it has not been too financially productive. Who chooses what grains or crops can be grown in an area? Are you involved in that at all?

Dr Hurditch—Yes, indeed. This has been thought through very carefully. We have had a business development team, comprising 30 professionals from trading houses and agribusiness companies, scanning over 100 potential opportunities. A grid has been developed which sets the number of criteria for selecting these projects. The top most grid was ‘Market for product’—not Australian market but global market. One of the things we identified particularly was not just common or garden chardonnay or something but the gaps in wine fashion and in growth areas globally, our current plantings and the daylight between those two—in other words, identifying the opportunity to grow particular varieties that are going to meet emerging fashions and perhaps reduce the hectareage of varieties that are perhaps in oversupply or looking like coming into oversupply.

One of the benefits of our piping technology is that instead of saying, ‘We are going to deploy irrigation technology here, we are going to grow these grapes and we hope that for the next 20 years the market stays good,’ this technology is cheap enough to be able to pull out crops and change in five-year intervals. So instead of going for a long-term, hope-it-works strategy, you can actually go for an opportunistic, just-in-time strategy for production. We are marrying both the market sensitivity with the technology cost and effectiveness to get the optimum market solution.

Senator BUCKLAND—Does your group look at reclaiming some of the areas that are being overtaken by the problem of rising salinity? I know it is there and it is happening. Is there anything that is really addressing that and trying to regain some of that? I do not know if it can be done—I have got no idea.

Dr Hurditch—In the irrigation areas themselves, which in the total valley context are quite small areas, it is more about rotations and prohibitions on soil types. Outside the irrigation areas we are looking at a whole range of other environmental farming techniques which, as I said, limit saline encroachment. We are looking at measures such as natural sequence farming, which has been developed by a chap called Peter Andrews. He has looked at our areas and a reference panel has been set up to look at that. Richard Pratt has been assisting in funding some of that separately. We are also looking at grazing management systems. A colleague of Senator Heffernan’s, David Dowling, has been talking to us about the deep-rooted perennials, old man saltbush and solutions for managing land problems elsewhere in the catchment. So we are addressing that land restoration aspect.

Senator HEFFERNAN—Can I just ask a final question on this pipe. There is a mood out in the western division where we have a lot of channels. I declare an interest here, Chair. We have a domestic water supply that goes through 28 miles of channel, and the polythene alternative is seriously expensive. Would this be another—

Dr Hurditch—Absolutely. Fifty millimetres.

Mr Gray—We did not have to start with 400 millimetres; we just thought that that was the most convenient. As it can go up in diameter, it can come down in diameter. In fact, that was one of the issues raised by Wimmera Mallee: they said that they wanted to reduce most of their pipes to 50-millimetre diameter.

Dr Hurditch—We can do that.

Mr Gray—We have not made the pipe yet, but we see no reason why it cannot be done.

Senator HEFFERNAN—There would be an unlimited market.

Dr Hurditch—We are not just looking at this textile pipe; we are also looking at continuous manufacture HDPE piping, which is solid piping, but making it much cheaper than is now available.

Mr Gray—And on-site. There is some technology we have identified out of Scandinavia. We think the combination of the on-site manufacture of the HDPE pipe, the flexibles and a couple of other alternatives will cover off most applications.

I do stress that this company, Gale Pacific, which is a publicly listed company, just happens to have made the most advances now. We do not have an exclusivity agreement with them. We have challenged other companies, which I do not really need to name here, to come up with similar stuff. There is another company that are looking at a different type of product. They assure us that, within the next few months, they will come up with something that may reduce the cost even further, but we will know when we see it.

Senator HEFFERNAN—Good stuff.

CHAIR—We will conclude there. I believe that you have taken on notice the opportunity to provide specific photographs of the piping system being trialled. I am mindful of the time constraints and I wonder whether you might also provide some information about the Pratt project involving turning the rivers inland in Northern Australia. We did not have a chance to talk to anyone about that when we were in Darwin or Western Australia.

Mr Gray—I do not believe that was a Pratt project.

CHAIR—Okay, ignore that one. On behalf of the committee I thank you for appearing here today and providing us with assistance. If there is there is anything we need to follow up, we will certainly be in touch.

Mr Gray—We would like to add to that package some detail on a financing initiative that Pratt Water is behind which assists farmers with financing for high-technology water-saving irrigation.

CHAIR—Have you already provided that?

Dr Hurditch—No, we will add that to the information we are supplying on the piping. So we will cover those two particular issues.

CHAIR—Thank you.

[11.22 a.m.]

CAMPBELL, Mr Ross William, Director, Water Reform, National Competition Council

FEIL, Mr John, Executive Director, National Competition Council

CHAIR—I welcome the representatives from the National Competition Council. Mr Feil, would you like to make some opening remarks?

Mr Feil—Yes, thank you. The National Competition Council provided a short written submission back in March 2003 outlining the water reform matters agreed by the Australian government and all the states and territories in 1994 which the Council of Australian Governments decided should be part of a 1995 national competition policy. That submission noted elements of the 1994 COAG water reform framework relating to water pricing, the development of systems of water entitlements separate from land title, the development of water management arrangements specifying the amounts of water available for extraction and for the provision to the environment to ensure the health of water-dependent ecosystems, water trading, and economic and environmental appraisals of proposals for investment in new rural water infrastructure.

In March 2003, the NCC provided several documents, including documents setting out the 1994 COAG water resource policy and the reform framework, and our 2002 water reform progress assessment report. COAG decided that governments should complete their implementation of the 1994 reforms by 2005, with milestones along the way for particular reforms. COAG asked the NCC to assess state and territory governments' progress in implementing the entire national competition policy, including the 1994 water reform framework. We scheduled assessments of water reform for 1999, 2001 and then annually from 2001 to the intended completion date of 2005.

The council's assessment reports are provided as advice to the Australian government Treasurer, who then makes decisions in relation to competition payments. Since March 2003, when we provided our written submission, the council has conducted its 2003 NCP assessment, including for water reform. In December 2003 we released a framework for our 2004 water assessment, including water reform. We are quite happy to provide both the assessment framework and our report from 2003 if the committee has not already got these. The 2003 document is a reasonably daunting volume.

Senator HEFFERNAN—No pictures in it?

Mr Feil—No pictures; solid blocks of text, I am afraid, and no pipes, unfortunately. If you wish for additional copies, we are more than happy to send a stack to the committee if you let us know the numbers. As I said, at the end of last year we released our assessment for 2004, which will be our second last in respect of the existing water reform agenda. In line with the schedule set by COAG senior officials, the 2004 assessment will look primarily at government's progress with rural water pricing reforms, water management arrangements, intra- and interstate water trading and also the public consultation and education programs associated with those reforms.

That process is beginning now and will be completed during much of the balance of this year. The 2005 assessment is a wind-up—a comprehensive look at compliance with the whole of the 1994 water reform framework.

In August 2003 COAG announced an agreement by the Australian government and the governments of New South Wales, Victoria, South Australia and the ACT to invest \$500 million over five years to address water overallocation in the Murray-Darling Basin, to protect six significant ecological assets along the Murray River and to re-align capital works programs to more effectively manage the six assets. COAG also agreed to develop a national water initiative. In doing this, COAG reconfirmed its commitment to the 1994 water reform framework. The national water initiative is being developed by an intergovernmental process, not separately from the National Competition Council and national competition policy. That water initiative would only form part of the national competition policy assessment agenda to the extent that governments agree to that course or to policy approaches that clarify the 1994 reform obligations. So, in essence, until the national water initiative concludes that it is something it wishes the council to assess, our role is strictly in respect of the 1994 agreements. We do not believe at this stage there is anything that is being developed in the national water initiative that would come into conflict. Hopefully the national water initiative takes forward work that has been done in our assessments so far. With that brief introduction, we are more than happy to assist the committee with any questions we can answer.

Senator HEFFERNAN—What is the national trade in water rights?

CHAIR—We will start with Senator Stephens. We will come to you, Senator Heffernan.

Senator HEFFERNAN—You have got more time. You can think about that, Mr Feil!

Senator STEPHENS—Listening to how you are looking to progress this year with the rural water pricing reforms—the assessment process that you are involved in this year—will next year be an overview of all of the compliance issues?

Mr Campbell—That is correct.

Senator STEPHENS—First of all, can you give me a 20-word summary of your 2003 document? Are you happy with the progress by the states so far in terms of meeting the requirements?

Mr Campbell—The assessment found that progress had been proceeding. There are various instances in various jurisdictions where aspects of the 1994 reform framework have not advanced quickly enough but, on the whole, reform progress was being made on many of the significant issues. In some cases, the council accepted that there were ongoing processes which had not concluded at the time of the assessment which would deliver the obligation. In 2003 the council made only one recommendation on competition payments relating to water, which was in relation to urban water pricing in Western Australia. It was to do with the lack of transparency in the pricing arrangements. The Western Australian government subsequently dealt with that by establishing the Economic Regulation Authority and giving it responsibility for the water industry. That authority will look at and will make recommendations on urban water pricing. That will sort out that particular issue for Western Australia.

Senator HEFFERNAN—That is very good bureaucratic speak but it did not tell me anything. What the hell are you talking about? What did they do wrong and what do you expect them to do right?

Mr Campbell—The obligations are for water prices to reflect full cost recovery and cover all aspects of costs and for there to be clarity or transparency in how those prices are formed. Several jurisdictions do that through asking an independent economic regulator, such as IPART in New South Wales, to formulate a price path for water charges—that is, to set maximum water charges. In Western Australia, that process occurred within the cabinet without evidence of how the price related to the efficient operation of the business.

Senator HEFFERNAN—So would that be a dollar a kilolitre? Have you got any idea?

Mr Campbell—I am not sure what the actual numbers are but there was no evidence that showed that this price related to the costs that would be incurred by an efficient water business. Part of this is intended to ensure there is pressure on water businesses to improve their efficiency. To the extent that there is not transparency in those arrangements, it is easier for water businesses to set prices which are just adding, say, the rate of inflation to the previous year's price. All of this is intended to impose a bit more transparency onto the pricing arrangements. As I said, several jurisdictions have done that by asking economic regulators to look at pricing through a public process and produce reports which can be scrutinised. That places pressure on businesses to improve how they operate. As I said, Western Australia established the Economic Regulation Authority and told the council that it will issue terms of reference for the authority to look at urban water prices.

Senator STEPHENS—In 2005 you will be winding up. What will happen after 2005 in terms of water?

Mr Campbell—As far as the 1994 program goes, you are correct: the 2005 assessment will look at everything that had to be done. The council will most likely produce a document which benchmarks progress at that time across all of the obligations. Whether there is a future role and what that role will be will probably depend on the outcomes of the national water initiative. That may identify an ongoing role looking at water reform for a body, not necessarily the National Competition Council. I cannot surmise on that; it depends where the national water initiative gets to. The council's objective is just to perform the 2005 assessment and ensure there is material there to allow any ongoing work to take that forward.

Senator HEFFERNAN—What is a nationally traded water right? If you know the answer you are unique. It is government speak for something I do not understand.

Mr Campbell—It is shorthand for an ability to trade water entitlements where that is physically possible. 'National' is not the right terminology because you cannot—

Senator HEFFERNAN—The banks have had to bite their tongues on it a bit, because they thought they were going to have this grand scheme of a nationally traded market like the stock exchange.

Mr Campbell—You cannot obviously trade—

Senator HEFFERNAN—With respect to national competition policy and COAG thinking—and I am not so sure the original building blocks of COAG in 1994 were the correct blocks in all circumstances—do you have any comments to make? Do you think we could have improved the original construction or is that outside your area of expertise?

Mr Campbell—It is probably a bit beyond my area but, having been involved in the assessment, the 1994 framework did cover some pretty important elements of water reform: getting pricing right to encourage conservation, ensuring businesses became efficient and covered their costs so they could adequately refurbish and establish infrastructure, looking at arrangements for better use of water through facilitating trading, looking at arrangements which better define what is available for extractive use and how you manage environmental needs, and looking at institutional arrangements so that natural resource management recognises that there is an interaction between land and water. Previously all of that was different.

Senator HEFFERNAN—In today's thinking, would we still build the Snowy?**Mr Campbell**—In today's thinking, we would look at whether the project was economically viable and ecologically sustainable.

Senator HEFFERNAN—That is a really good bureaucratic response. What do you reckon? You will not get the sack, I promise, because you can say what you like in here.

Mr Feil—We have to say what we know an answer to as well.**Senator HEFFERNAN**—It is an interesting line. There are all sorts of debates about the economies of what we do. In your submission you say:

... in new rural water schemes ... governments should only proceed with the investment after assessing that the project is economically viable and environmentally sustainable.

Maybe in its beginnings there was no chance of the Snowy being economically viable, but in the national good there needed to be some national input.

Mr Campbell—‘Economically viable’ encompasses wider social benefits and costs. You may have noticed that two dams were considered through the NCP process in the more recent assessments. Both of those involved a consideration of the economic viability of the project—whether the project itself was commercially viable but also the wider social benefits and costs.

Senator HEFFERNAN—For the record, you might say where those dams were.

Mr Campbell—Certainly. One was in Queensland, the Burnett Water Infrastructure Project, and one was in Tasmania, the Meander Dam. In thinking about those, both proponent governments looked at the project itself, questions of its commercial viability and wider social benefits and costs, and identified that there was a net social benefit from both projects.

Senator HEFFERNAN—I think the exercise in public education of the value of water as a national asset has really worked well, like Landcare. Your former boss and I strongly disagree on how water should be traded because he says and the banks say that you should have depth in the market—you should have paper water and should be able to trade it as a piece of paper. I do not agree with that. Given, for instance, that we did not let the North West Shelf go where the market

said it should because of the national interest, do you think it is in the national interest to have speculators, Thames London and everyone else, in our water market?

Mr Campbell—Speculators operate in all markets and are a bit of the basis for markets working.

Senator HEFFERNAN—But these are serious investment vehicles whose capacity to use the water is to screw a margin out of someone who is going to use it. Do you think there is enough room in the market for that or is it necessary to take that margin away from the people who are going to use it and give it to someone who is sitting on the bank in Noosa?

Mr Campbell—I think we look at remedies that are generally available for that sort of thing, such as through the Trade Practices Act, if we become concerned that there is too much market power in a particular market, including in the water market. It is a complicated question.

Senator HEFFERNAN—It is.

Mr Campbell—In many areas the ability to sell water entitlements for maximum value is important to particular farmers.

Senator HEFFERNAN—We have just heard from the Pratt Group. Obviously one of the things happening now in water is that the water is drifting through the trading available to the higher users. I am not so sure that it is a good idea in Australia's national interest—even though you are pure theorists in this area of national competition; and you can respond to that such as you want to in a second—to allow the transfer of the wealth from where it is going to be used to a bank vault for an investor. We are trying to get people to invest and grow their investment in water savings and efficiency with the capital base of the water value, which is the bankable bit of their security. Yet there are people—such as you, the national bank and various investment vehicles and carpetbaggers around the place—who think, 'This is a river of gold and we ought to get into it.' Do you have any ideas as to how you could bring some moderation to the speculative side of water?

Mr Campbell—It is a serious question, I agree. Some jurisdictions, such as New South Wales, do not see a need for a policy approach to limit speculation. Others have looked at mechanisms like saying that entitlements can be traded provided you can use that entitlement—that you have a project for using that entitlement and some land to use that entitlement on. They have thought about managing the potential for speculation in that way. As I said, there may be remedies available through the Trade Practices Act.

Senator HEFFERNAN—Do you fellas have a policy? I have a difficulty with what could happen and what is able to happen—for instance, in South Australia but not in New South Wales or Victoria at the present time where they have separated the whole thing. We had an instance in New South Wales last year, and obviously there is some speculation in the market now, of people withholding water that they had a right to from the market in much the same way as the Saudis do with the oil—they up the production or lower the production. It is an issue of the supply of and the demand for water.

If you are holding 1,000 megalitres or 50 gigs of water then you can manipulate the market. Once you separate the water from the land—and for the bank that is a great proposition; and I do not disagree with the bank's thinking there—if you can carve off the water, that it is an easy sale, rather than selling the farm, to secure the bloke if he is behind with his payments or whatever. But then he becomes a tenant farmer on the spot market. Once you get a spot market for water, you get this great opportunity for speculation. Do you blokes have a view on that and whether it is in the national interest as it were?

Mr Feil—I would have thought that part of the answer to that question is that, where you think extreme speculation and withholding or hoarding to try and raise price and exercise market power is likely to occur, you would want to look at whether the existing remedies were adequate. If someone can get sufficient of the water available in a catchment that they can determine the price then that is a monopolisation question that is not—

Senator HEFFERNAN—But that is an argument that could go on for five years while the farmer goes broke.

Mr Feil—It might be, but it also might be something that can be remedied in an effective manner under trade practices law. I think at an extreme you would want to see an intervention that dealt with that, and there is nothing in the operation of national competition policy in a general sense that prevents regulation from being put in place to deal with genuine issues that are established to exist.

Senator HEFFERNAN—This debate is progressing. My position 18 months ago was very lonely, but the Commonwealth now has a line in that agreement from last year that says that we are going to do something about speculation in the market. I would just like to know that you blokes have got that message and whether you have any ideas of how that might work.

Mr Feil—In this area, and in our work generally, we do balance the desire for markets to operate in a competitive manner with other interests. Where the national interest is best served by something other than the free run of competition, where that can be shown to produce a better result—and it has to be shown because the default option is that competition should work—and where you can establish that—

Senator HEFFERNAN—Yes, but that is the difficulty. You have to prove something that is difficult, and that is a bloody slow bureaucratic process. It was good enough for North West Shelf—but I think that was a political decision. I am not so sure that I would trust a process, when time is of the essence, to make a judgment on those things, without that involving a whole lot of court cases. Thames London have absolutely ruined some communities in Africa, because they have bought up the water rights and let it out at a price that the local villagers cannot afford to pay to drink the bloody water. So the local villagers have gone back to digging their own shallow wells, which are infected et cetera. Surely to God, when you blokes go home and sit down with the TV and the kids, you must think, 'Why the hell would we let water, our most precious natural resource, become just another commodity in a speculative market?' It will. There is no question about that. The smarties will see the capital base value of water, which is always going to go up, as a great investment—and I am not so sure that that is in the national interest.

Mr Feil—My answer, as I have said, is that, if there is a genuine reason in the national interest to restrict trading in any way, as long as that reason can be made out in a sensible, logical way and with some degree of proof behind it, NCP will not stand in the road; but it does put up a hurdle that someone does need to get across by establishing the case in a rigorous, transparent manner and where all parties have had a chance to be heard. When that happens there is no difficulty.

Senator HEFFERNAN—George Gear floated that thing last year. I do not know where it got to. Certainly I have had plenty of adverse comment on it. His idea is to make money on the margin out of water and to capture the great asset value of it. Do you blokes put the interests of that sort of operation—because it is about depth in the market; it is a free market and everything—ahead of the capacity of users? Desert communities in America have been priced out of the water by desert developers who are bringing in millionaires. They can pay \$US500,000 a megalitre, believe it or not, for water, and they are competing with farmers. I do not think that is in the national interest. I am going to shut up now. You have given me a reasonable answer. I am just giving you reasonable notice that I have grave reservations about it. I talked about this matter for some years with your former chairman, and I am still not convinced.

Mr Feil—I understand what you are saying, but I think I will quit while I am at least close to ahead.

CHAIR—I would like to take the issue that Senator Heffernan has raised a little further. Following on from the Boral case and the concept of horizontal and vertical integration we know that some supermarket chains at the moment are diversifying into a range of areas from petroleum to pharmaceuticals—or they at least are talking about those things. Is it not possible to imagine that, given that the mainstay of their work is food products, particularly fresh products from the farm to the shelf, they may, either as a business strategy or a strategy that might be viewed at some time in future as being anticompetitive, make decisions to acquire water rights perhaps as an investment tool or as a tool to stay ahead of the competition? How are you dealing with those possible scenarios for the future? We are talking here about things that already exist, that we know about and that are being dealt with in the courts. As for things that are likely to occur, we were just talking about a particular new marketplace being opened up for a range of possible new ventures in the future.

Mr Campbell—The first thing to note is that governments in 1994 decided that trading so that water could be used where its value is maximised was likely to be in the national interest. The process through the national water initiative suggests that, and certainly the statement in the COAG communique in August last year also sees this, facilitating market structures and water trading is likely to be beneficial because it means that water can go to where it is going to contribute most to the national income. So the principle was set by the Council of Australian Governments. As Mr Feil has said, where there is evidence of problems with the way that markets operate it is also open to governments to look at that and to take some sort of remedy.

CHAIR—It just worries me that, as Mr Feil said, the second last report has been prepared as far as national water reform is concerned. Surely you would continue to have a role from a competition policy perspective, particularly as it relates to the behaviour of certain corporations

on the question of a water market being available to them. I know you rely upon the Trade Practices Act, but so did small businesses in the case of Boral.

Mr Campbell—The organisation with the role in relation to the Trade Practices Act is the Australian Competition and Consumer Commission, not the National Competition Council, so it would have that facility. Any continuing National Competition Council role would depend on things like the outcomes of the national water initiative, the review of the role of the council and the role of national competition policy that COAG had undertaken to do prior to September 2005.

CHAIR—But you do not believe that that is an area, even though the ACCC does have certain jurisdictional responsibilities, to at least scenario build on potentialities for the future and to at least alert COAG and specific state governments like New South Wales, where they are saying they are not interested in regulating in this field, through some process?

Mr Campbell—The general issue of speculation, as discussed by Senator Heffernan, has been raised through the NCP water assessment processes. We have talked about it in this last assessment. It is recognised as a potential issue by some state governments and some have thought about measures to manage speculation. Others do not see it as such a problem, seeing that the encouragement of water trading reduces opportunities for individuals to hoard water if water can be obtained from other systems. Those who are focused more towards the environmental end say that, if water is not used, it is staying in systems, and that is a benefit. So the issue is quite complicated.

Senator HEFFERNAN—That is quite scary, though, because you say some governments are alert to the issue of speculation and others are not. The Northern Territory government do not know anything about water. They are bloody hopeless. We have been up there in Darwin for a hearing. Obviously they are restricted with their resource base in water. They have no understanding of water trading or licensing. It is a scary phenomenon. Do you have a position on water as it crosses the border, in terms of competition policy? I think Cubbie Station on the Lower Balonne is a national disgrace. They have recently put over \$200 million worth of water into their storage for a few thousand dollars and completely intercepted the riparian water rights of people down the river. The Queensland government's community reference group in St George have said that they have taken a position where, if the Culgoa delivers six per cent of its flow to Bourke, they have fulfilled their obligation. It used to be 26 per cent. Do you blokes have a position on those sorts of issues? Where does competition come into that?

Mr Campbell—Water reform is not strictly so much about competition as it is about improving the efficiency of water use—

Senator HEFFERNAN—I agree with that.

Mr Campbell—and getting arrangements right so that questions like land degradation can be addressed. One of the central elements of the 1994 program, and which will be taken on by the national water initiative, from the look of COAG's communique, is making sure that the water management arrangements are right—that, as best as possible, you can specify how much water will be available for extractive use and how much should be available for the environment.

Senator HEFFERNAN—But you blokes do not have a position on whether there ought to be a national overview. There are a lot of people in Queensland who will tell you that what water that rains up there ought to stay in Queensland and what goes down the river is bad judgment on their part. The argument for the Dirranbandi community, for instance, is that this has brought great wealth and great use of the water. They, therefore, are entitled to intercept all this water. They have an A and B water licence regime out for comment now which is going to take even more water. Where does that leave the people down below who, allegedly, would not generate as much income because they are growing cattle and sheep instead of cotton? Where does that leave them with national competition policy? Does your policy say, ‘The people in Dirranbandi are right, and bugger the people down below’?

Mr Campbell—I think the water reform aspects in the national competition policy say that there is a responsibility on governments to get their water management right and their licensing arrangements right.

Senator HEFFERNAN—So there is a fair bit of scope for the government to disregard the cold sort of calculation of competition policy for the better community—environmental or whatever.

Mr Campbell—Yes. Two of the big planks of water reform are water management—so that you work out your water entitlements and how much extractive water is available and how much water is required by the environment—and the other one is the facilitation of trading, so that people can trade their water entitlements. Another is appropriate natural resource management arrangements and greater community consultation on those management arrangements.

Senator HEFFERNAN—So do you have the capacity to make a recommendation to the Commonwealth that the Commonwealth should take a greater role in the management overview, as I think Senator Stephens suggested earlier? I think it makes a lot of sense.

Mr Campbell—I guess that is what is behind the national water initiative—

Senator HEFFERNAN—I think that is what was missing in the building blocks originally. It is a bit like the trains 100 years ago. We are dealing with all these state regimes, but the rivers do not stop at the border.

Mr Campbell—Constitutionally, though, the responsibility for water policy rests with states and territories, not the Commonwealth.

Senator HEFFERNAN—What I am asking you is: should we change that? It is the national competition policy you see. Would you have the courage to recommend that?

Mr Campbell—I think the Commonwealth and the states and territories are seeing that there is scope to look at better arrangements in systems like the Murray-Darling Basin, which is across several jurisdictions, and that we better manage that more appropriately. That is why the states have agreed to funds to restore the six identified environmental assets. I think it is also why governments are looking to develop a new what they call national water initiative which looks like it will achieve better coordination in the management arrangements.

Senator HEFFERNAN—What we have come up against in the last couple of days is the given of 1,850 gigs to South Australia and caps on all the Murray-Darling stuff down here, but up in Queensland we have, ‘She’ll be right, mate.’ They have just demonstrated their capacity to completely remove a major flood event from the river and put it into storage, and too bad for the people further down. I think you should go away and have a think about some of that.

CHAIR—There being no further questions, Mr Feil and Mr Campbell, thank you for appearing and providing assistance to the committee. I do not believe there were any matters taken on notice, but if there is anything we need to follow up we certainly will through the secretariat. Thank you for providing assistance.

Mr Campbell—Thank you for the opportunity.

[12.03 a.m.]

BODMAN, Mr William Thomas Hayes, Chair, Joint Committee, Yarram and Stradbroke Branches, Victorian Farmers Federation

GREENAWAY, Mr Eric John, Member, Joint Committee, Yarram and Stradbroke Branches, Victorian Farmers Federation

HEWITT, Mr Christopher John, Chairman, Community Steering Committee, Wimmera Mallee Piping Project, Victorian Farmers Federation

WELLER, Mr Paul, President, Victorian Farmers Federation

ACTING CHAIR (Senator Heffernan)—I welcome the Victorian Farmers Federation, who I hope are all praying for rain. If you would like to make an opening statement then we will go to questions.

Mr Weller—There are four issues that we would like to highlight in our submission. The first one is the need for secure property rights for farmers to continue to invest in the latest technologies so that we too can keep improving our environmental outcomes. If we do not have secure rights, the investment will drop off from the farming community and that would be bad for the farming community and for the environment.

The second issue we have mentioned is the Living Murray. We believe the Living Murray got off on the wrong foot by mentioning three volumes rather than environmental outcomes. Having the six icons sites we support is the way to look at it and get environmental outcomes rather than having volumes of water. It has been proven that good management is far better than a volume.

Living Murray has had a poor community engagement process. There has been no consensus of the community and no agreement on the problem. We believe that if there had been a better community process there may not have been such a divide in the community. However, we think that the first step proposal where there is agreement by the states and the Commonwealth for \$500 million, with up to \$500,000 for the six icons sites, is a reasonable way of dealing with the problem.

The major problem we have had with the Latrobe aquifer is that it is interjurisdictional and that the state government and the federal government have been bickering over whose responsibility it is and who is at fault, whether it be the farmers or Esso BHP. If this aquifer were just within Victoria, like the Compaspe aquifer which I am on, the government would have formed a community committee, got consensus that there was a problem—and there obviously is a problem in the Latrobe aquifer; it is dropping a meter a year, so how are we going to manage it?—there would have been a decision on what the licence amounts would be and we would go forward from there. The trouble is that when it is interjurisdictional we cannot get the state government and the federal government to agree. However, since our submission went in they agreed on an inquiry by the CSIRO, which commenced in June, to examine all existing research and reports on the responsibilities for the current situation, the risk of subsidence—another

major problem if you are dropping water at a metre a year—and the degree of certainty of the results as well as a future work program to address it. We recommend that the Senate committee examine this report when it comes out.

The last issue we have on water today is the Wimmera Mallee pipeline. It has to be affordable for the community to get the environmental outcomes. If this project goes ahead, substantial amounts of water are proposed for the environment but it has to be at a cost that the community can afford. Now that we have a design that has been agreed to by the community and which was funded by joint state and federal money to get it to this stage, we need to have a commitment to the funding for the whole of the project to go ahead so the community can know that it is something they can afford. We might leave it at that.

ACTING CHAIR—We will deal with that straightaway and then I will go to my colleagues.

Mr Weller—Chris Hewitt is from the Wimmera Mallee. He is on a working group out there, and Eric Greenaway and Bill Bodman are both here from the Latrobe aquifer.

ACTING CHAIR—I will come to that. We have just heard from Pratt Water. What is the cost proposed for the Wimmera pipeline?

Mr Hewitt—The capital cost is just \$400 million.

ACTING CHAIR—They said there is a possibility that they can knock \$100 million off with their new pipes. Are they going to be too late with their technology?

Mr Hewitt—I do not think they are right in what they are saying. The Wimmera Mallee piping system is not an irrigation supply. It is only for stock and domestic, and it is over two million hectares. The pipes are designed to deliver small quantities of water which are going to be less than a megalitre per 640 acres. We have looked at Pratt Water's lay-flat pipe and we have been to Griffith to look at what they have done. We are looking at replacing a channel system that is 17,500 kilometres with 7,500 kilometres of pipe, which is a huge amount. The pressures under which our pipes would be operating are in the order of up to 100 PSI. Their pipes are really for low-pressure, high-volume water delivery. Some of their products may be useful in terms of lining, balancing, storage and things like that. But, with regard to the pipes themselves, ours will be put underground for heat and algal build-up and things like that, and, as I said, they will deliver only small quantities of water; theirs are really for transferring very large volumes of water at low pressure.

ACTING CHAIR—They told us that they can compete with two-inch polythene.

Mr Hewitt—We are burying our pipes underground to protect them. They are not going to be a problem for the farming community. Their particular pipes can be punctured even by a kangaroo. They suggest that their pipes should be fenced off to avoid that sort of damage. The sheer cost of that added on to the piping project makes it prohibitive. There are a lot of technical reasons why they are unsuitable.

ACTING CHAIR—So what are you blokes talking about—just ordinary polythene?

Mr Hewitt—We are talking PVC and poly, with sizes down to 50 millimetres. It is a huge piping area—one-fifth of Victoria is the region—but we are delivering only 30,000 megalitres all up for both town and rural supplies.

ACTING CHAIR—How much does that area use now?

Mr Hewitt—Currently that is all they use, but they deliver 160,000 megalitres on average over a—

ACTING CHAIR—To get 30?

Mr Hewitt—To get 30. That is the wastage. That water has been taken out of the Glenelg and Wimmera river systems, as well as out of the Avon and Richardson rivers and others within the region.

Senator BUCKLAND—I guess what you are talking about would not have the problem of sediment build-up or anything of that nature, which was formerly claimed to be a problem with piping.

Mr Hewitt—If the water that goes into piping systems is of poor quality, there is an issue of build-up of both algae and sediment within those pipes. But the design process we are going through is looking at those issues and at the possibility of using sand filters or even putting fully treated water into those pipes.

Senator BUCKLAND—I guess the pressure that you are operating under is also an issue.

Mr Hewitt—We have to operate under very high pressures. The system is designed to deliver small quantities of water, which build up over a 24-hour period, to farmers' tanks so that the farmers can then draw off water at the rates they need for their farming operations. It is not like a town supply, where you have instantaneous supply. To reduce the cost, you have a system of balancing tanks on your farm and reticulate it that way.

Senator BUCKLAND—Is anything being done to look at the irrigation water movements?

Mr Hewitt—There is no irrigation. This is a stock and domestic system.

Senator BUCKLAND—I appreciate what you have just said, and I understand the differences between your system and actual irrigation processes. Perhaps what you are talking about is more appropriate. I am not a judge of that. I will ask this more general question. There has been a lot of speculation about water trading, and we heard from the South Australian Farmers Federation yesterday. I am wondering what the federation's view on water trading is. Is there a national view or are there state-by-state views?

Mr Weller—With another hat on I chair the National Farmers Federation Water Taskforce, and we do support trade. However, you have to take into consideration the impacts of trade on third parties. We support trade but, if you were to take the Goulburn system—which is where I live—and you were to trade extra water right onto the Goulburn, where there has been a limited resource, you would actually undermine the security of the present water right holders there.

There are one million megalitres of water on the Goulburn system at the moment. For 97 out of 100 years that amount delivers water right, and for three out of 100 years it delivers less than water right. If you were to move an extra 100,000 megalitres of water right there, those farmers who were farming there and thinking they were going to get water right for 97 out of 100 years would not get that because there would be an extra 10 per cent of water right. You cannot have trade that undermines people's present security.

Then, if you moved water out of a district and left stranded assets in a district, you would also have issues. If 100 megalitres of water were to move out, it would push up the price by about 12 per cent. If there were going to be water moving out of districts, you would have to look at reconfigurations of districts. You would have to look at whether there were some channels we could close so that we would not get the price of water rising just through delivery and maintenance charges. If you were going to have water moving around, you would have to look at what you were leaving behind when you took the water out.

Senator BUCKLAND—I am sure Senator Heffernan is going to go into this in a little bit more detail than me, so I am not going to labour the point, but I want to ask you about trading with non-farm people. If Geoff Buckland decided to set up a little organisation that strictly traded in water and he bought a lot of access to water and then started selling it around the place at spot prices or started to manipulate the prices, what would your attitude towards that be?

Mr Weller—In Victoria you would not be able to do that, because you have to have land. That is our position: you have to have land to hold water on. Under the present green paper, which is going to turn into a white paper in Victoria, there are proposals about site use licences. We basically have them already in the northern irrigation district, which is on the Goulburn, where I come from, and the Murray, where, because of salinity problems, you can only use 10 megalitres per hectare if you have A class drainage and a reuse system. If you have neither of them, you can only have five megalitres per hectare. So there really is already a site use licence.

ACTING CHAIR—You cannot stack water on land.

Mr Weller—Yes, that is right. We believe that is the best policy. In Victoria, the Victorian Farmers Federation sees no advantage in someone in Collins Street owning water and trading it. There is no advantage for the environment, and there are no advantages for farmers. All that it will do is put another cost in there.

Senator BUCKLAND—There could be an advantage to the fellow in Collins Street, though.

Mr Weller—If they were to come in and control the water, yes, but there would be a disadvantage for agriculture.

Senator BUCKLAND—Yes. I understand that.

ACTING CHAIR—You have some work to do with your South Australian colleagues. They disagree with you on this.

Mr Weller—The South Australians do have a different view to the Victorians when it comes to water, but I think our view is the reasonable view. We are looking for an outcome between

agriculture and the environment. What does having someone trading water in Collins Street do for the environment? It does nothing for it. Under the national water initiative and the Living Murray, we are looking at ways that the environment can hold a share of water, which is not a farmer owning water. We can go along with that. If there is an environmental pool there that is to be managed for the environment, that is fine, but that is different to having water barons in Melbourne just trading water.

Senator BUCKLAND—I have a feeling that Senator Heffernan might go back to that. One of your key concerns is property rights. If holders of land who do not have free access to water sell off their water rights before they sell the property, what effect would that have on an incoming farmer? For example, if I am buying a farm from you but you decide to give Mr Hewitt your water by selling your allocation to him, I come in with a dry block of land. Where do you go with that? What does it do to the property market, and what does it do to the community as a whole?

Mr Weller—This is happening, and this is a concern that we have in the northern irrigation area at the moment. We have the chequerboard type approach, where a farm here sells its water off and there are no areas that are going out. It needs to be a bit more structured. If you are going to take water out of the areas, it should be through certain channels rather than everybody being allowed to sell it off, because you get the stranded asset problem otherwise. However, I have actually bought a farm where a bloke sold his water off. My neighbour sold out. The only way he could sell, because he was wanting too much, was to sell the water off. Then I had to buy the block to keep city slickers out and from coming to live next to me. I can go into the temporary trade market and buy temporary water each year to irrigate that farm. So there are opportunities like that. But it does decimate the local community if the district is not as productive.

If I had not bought that farm and someone else had just come, bought it, ran a couple of horses and a few sheep and maybe an alpaca or something on it as well, the Murray Goulburn milk factory in Rochester would then start to become unviable. Then Murray Golden will start saying, ‘We’ve got a milk factory in Rochester, another one at Litchfield and one at Cobram and they’re all running at about half full. Which one are we going to close?’ That will take 200 jobs out of one of those towns, and the local garage in Lockington that services a few tractors will probably be looking to move to Melbourne to work on cars in Melbourne.

Senator BUCKLAND—I assumed that was where you were going. Can you explain your concerns about the effect that oil extraction in Bass Strait has on ground water?

Mr Weller—I could answer that, but Eric or Bill would be better qualified.

Mr Bodman—I chair the joint committee of the FF branches in the area and could answer, but Eric is the one whose irrigation affairs are most affected. So we both share the responsibility there. Your question was about the issues around oil extraction?

Senator BUCKLAND—Yes.

Mr Bodman—All of the official reports commissioned to date on the operations in Bass Strait say that the problem arises—not solely; all contribute to it—hugely from the offshore oil and gas extraction in the associated water. It is a huge aquifer. It is about 42,000 square kilometres.

Nearer to the oil rigs it has dropped over 1½ metres and less as you come inland from the coast. At the coast it drops by 1.1 metres per year. Over the 30-odd years that that has been going on, it has dropped in excess of 40 metres at the coast and more out at the rigs.

The effect of that is multiple. The effect that it has on irrigators is immediately noticeable in that bores have to be dropped. Research has shown the cost of all that, and we can make that available to you. It involves the cost of dropping your bores and pumps further and lifting the water further, and it also restricts development. Another issue is the risk of subsidence, also identified in the same reports as of the order of one in 10 chances of being around one metre at the coast south of Yarram, which is significant on coastal areas, low-lying land and townships. It has an effect, as yet unquantified but estimated by the experts, on the streams that flow out of the Strezlecki Ranges and supply water for irrigation and to townships in the region. So it is a big issue. It has the potential to have quite a significant effect on people. All we are asking is that the Commonwealth should recognise that, as the major identified risks are in their area, they should be involved in investigation and in funding the investigations and, if alleviation is required, in contributing to that as well. If none of those things are done, of course an issue of compensation would arise, and our contention is that the Commonwealth should be involved because the causes arises from their licensed operations.

ACTING CHAIR—Are you talking about the gas fields?

Mr Bodman—Both oil and gas fields—largely oil at the start and moving towards gas. In fact it is fluid extraction, with the water that comes out with it, and there is more water than oil or gas by a long way. About 100,000 megalitres annually are pulled out of the aquifer in combination, according to the official reports, and the experts estimate—and, again, this is hard to estimate—that the annual recharge is of the order of 80,000 megalitres.

ACTING CHAIR—What is the history of the farming extraction? The miners are taking 100,000 megalitres or whatever.

Mr Bodman—The Latrobe Valley coalmines extract. Some of the experts say that that has not affected the aquifer as yet, but that is up for discussion and examination. I will ask Eric Greenaway to comment on the farmers.

Senator BUCKLAND—Before you do, you came to the coalmines, which I am familiar with. I know that they continually pump water as they go down and I know that it is very porous there, so I would imagine that they are on an aquifer anyway. Do they have a program of desalination for that water? What do they do with the water?

Mr Bodman—We drove through it this morning. They evaporate most of it into the air to cool the water used to drive the turbines. It seems an amazing thing to me that you waste heat by generating heat with coal and then dissipate it into the atmosphere, getting rid of all the water at the same time, and then you dispose of the then saline water through an outfall disposal line to Ninety Mile Beach and out into Bass Strait. So, in effect, we are watching an exercise in using what I would describe as the community's water to get rid of the heat that has been expensively generated.

Senator BUCKLAND—But you could put it through a desalinisation process—although I understand that that is not your area of expertise.

Mr Bodman—Desalinisation is not an issue there. They dispose of the water that is made more saline by the evaporation. They use pretty fresh water with a small amount of salt in it, but by the time it has been through the evaporation process it is very concentrated, much stronger than sea water—do not ask me the exact amounts—which they then dispose of. Salination itself is an issue, but not in the Latrobe Valley. With the lowering of the aquifer, there is a risk of salt water intrusion at the edges of the aquifer.

Senator BUCKLAND—Can that water be put back into the aquifer?

Mr Bodman—It is our contention that it should in fact be reinjected into the aquifer, both from the coal and from the oil and gas extractions. At least for the coal they are currently using it for this cooling operation; nonetheless, its total effect means that the water levels are dropping and that there is a risk of subsidence, a loss of development by the irrigation sector and an effect on the environment from coastal inundation, because there is a lot of very low-lying coastline there.

Senator BUCKLAND—That water could be trapped and, as you say, reinjected.

Mr Bodman—Yes. That is exactly what we are saying: the total water one way or another should be reinjected because there is not sufficient uncommitted water to get it from another source. The water is already overcommitted in some streams.

ACTING CHAIR—Is this before or after they have used it for cooling?

Mr Bodman—After they have used it for cooling there is only a small percentage because most of it has evaporated into the atmosphere.

ACTING CHAIR—So you are saying that it should be reinjected into the aquifer before they use it?

Mr Bodman—Yes, but we are aware that the examination of the coalfields is a state issue. We think that should be addressed and we have approached the state government as to what is the best way to do that. We do not want to sound knowledgeable, because we are not, but certainly the proper handling of the water is an issue. We are presenting a case to the Commonwealth here, and we will of course present the case to the state as well.

ACTING CHAIR—We will move now to the question of the extraction.

Mr Greenaway—I have brought along two or three graphs to give you a bit of a picture of what is really going on. We have on this graph here the actual area we are talking about. Here are all the oil and gas fields offshore. This area here is the Yarram irrigation area, which is mainly affected and which is where Bill and I live. We have four observation bores that measure the drop in the aquifer levels. They all drop by around one metre to 1.1 metres a year, from when the earliest bore was put in at Sale, which was working from 1974 until 1995. From all the reports from Esso and so forth the pressure drop in the field out here is a 1.4 metre to two metre drop per

year, year on year. Along the coast here the drop is about 1.1 metres and close to the recharge area it is about half a metre a year, which is where we are. This aquifer covers 42,000 square kilometres, and we have had this huge drop in water level. The Commonwealth will not accept that the fluid extractions of oil, gas and water from Bass Strait are causing that problem, whereas it is extremely clear. This same aquifer runs back into the Latrobe Valley, and you can see the Loy Yang power station here.

This graph shows the actual usage of water fluid—and I have some smaller copies for you. It shows the total extraction of fluid from the oilfield from 1969 to 1997. The red area shows the irrigation usage of about one to two per cent over that period. Water usage from the aquifer in the Latrobe Valley is about 25,000 megalitres or about a quarter of what the oil and gas extraction is.

ACTING CHAIR—Why do your blokes take out 100,000 megs?

Mr Greenaway—About 100,000 is all they admit to. The average irrigation use for those years is about 2,000 megs up to 95,000 megs. Then there was quite a big increase but that was after those graphs were—

ACTING CHAIR—Did you say 2,000 megs?

Mr Greenaway—Yes.

ACTING CHAIR—That is bugger-all water.

Mr Greenaway—I know. They keep saying, ‘We don’t know what’s causing the problem.’

Mr Bodman—You should say it has increased from 2,000 as an average.

Mr Greenaway—It has increased since then but those graphs—

ACTING CHAIR—How much are the irrigators taking out of the aquifer now?

Mr Greenaway—In the last two years it was 6,000 megs and 10,000 megs.

ACTING CHAIR—That is still bugger-all.

Mr Bodman—It was even less than that because of the other users that were on it. Esso themselves only take it out for serious problems.

ACTING CHAIR—What is the solution?

Mr Greenaway—The problem was originally that when the oilfield started it was in the licence agreement that the water being drawn out with the oil, particularly with the oil and not with the gas—

ACTING CHAIR—Was that because they did not know?

Mr Greenaway—Of course there was not much irrigation then. There were only two or three people irrigating, and I was one of them in 1969. I suppose the problem with subsidence was not recognised. Esso are operating under their licence. When you get a cone of depression where the oil is trapped, you get a very thin layer of oil. As it is getting thinner, they are pumping more and more water in to pull the oil in, which comes to the surface at the offshore rigs.

ACTING CHAIR—Pardon my ignorance; do they have a bore down into the aquifer and they pump it?

Mr Greenaway—They are pulling the water and oil out. They separate it at the surface and just tip the water into the sea. That water really should be reinjected into the aquifer, which happens in most oilfields around the world.

ACTING CHAIR—That is the solution.

Mr Greenaway—But it is extremely expensive. They could have used the old production wells to reinject the water instead of pumping them full of cement and sealing them off.

Senator BUCKLAND—You said it is being put back into the aquifer in other places around the world?

Mr Greenaway—Most places around the world. They do that to maintain the pressure.

Senator BUCKLAND—Because I am totally ignorant about these things, could you provide the committee with a few sites where that is done? I suppose it is not hard to find out.

Mr Greenaway—I have not got access to that information, but I guess it would be quite easy to find that for you. Most oilfields do it as a necessity but, because it is one of the freest flowing oilfields in the world, they tell us it is not necessary.

ACTING CHAIR—Would it be too harsh to say that this is a serious environmental miscalculation?

Mr Greenaway—Because of the risk of subsidence, which maybe was not known back in 1969 when the licence was drawn up, it is now a serious miscalculation.

ACTING CHAIR—How long have you been putting this case and trying to get someone to listen?

Mr Bodman—Five years.

Mr Greenaway—Five years seriously. There was a high level—

ACTING CHAIR—What are they telling you?

Mr Greenaway—They keep saying, ‘We just can’t prove that it’s offshore.’ But they will not do any studies. All the scientific reports show—

ACTING CHAIR—Who are ‘they’?

Mr Greenaway—The Victorian and federal governments.

ACTING CHAIR—Who in the federal government?

Mr Greenaway—Particularly Peter McGauran, our local member. Every time we approach him, he keeps saying: ‘It’s a very complicated issue and we still can’t be really sure. We can’t prove that it is the offshore oil and gas.’ But they will not accept any studies.

ACTING CHAIR—Let me give you a little comfort: you have rung the alarm bell here.

Senator STEPHENS—Mr Weller was saying earlier that the CSIRO are going to undertake an inquiry. What is the reporting date of that inquiry?

Mr Greenaway—The end of June.

Senator STEPHENS—So they doing a kind of desktop audit of all the reports?

Mr Greenaway—There are a significant number of reports which all point to the same thing but, as soon as a report comes out, they shelve it or will not publish it.

Senator STEPHENS—Can you provide the committee with the terms of reference of the inquiry? Are you able to table that?

Mr Bodman—Yes, we can do that. We did not bring the terms of reference with us but we can get them for you.

Senator STEPHENS—Thank you. That would be very useful. This is certainly the first time the issue has been put to us, so it is quite specific to the state and the region. As Senator Heffernan said, it is certainly ringing some alarm bells for us because it is a very significant issue.

Mr Greenaway—It is quite a major problem. The farming area had a moratorium put on it because of the huge drop in the aquifer. As we can see, it is a straight line drop from—

ACTING CHAIR—You do not have to tell me anything; I have got the message! The great irony of this is that Senator McGauran is a member of this committee.

Mr Greenaway—Since it has become a marginal seat, he has taken more notice. There has been a moratorium put on any further irrigation but there has been no restriction put on the fluids taken from the oilfields or from the Latrobe Valley. We read reports now that half the bores will be dry within 10 years, but the Commonwealth will not come into the picture because they keep saying, ‘We still don’t know what’s causing the problem.’

ACTING CHAIR—Do not worry. You have rung the bell.

Mr Greenaway—Good; thanks very much. It is a simple bell.

Senator STEPHENS—I will go back to some of the other things that you raise in your report that are very significant. You make some comments about the Living Murray initiative and the potential negative implications on Victoria. Would you like to elaborate a little more on what you think those negative impacts might be?

Mr Weller—If the first step of the Living Murray initiative—that is, the commitment that came out some time in November—is lived up to, I do not believe it will minimise the negative impacts. We are realists in the VFF. When you have a federal coalition government and state Labor governments making an agreement then we can say there is still a problem but both sides of government have agreed so we have to work with what is there. The comfort that we gained is that infrastructure improvements and savings of water from infrastructure are the first priorities for getting water back for the environment. Then there is buying from willing sellers. Willing sellers is where there will be a problem. As we have said, you are taking water out of production, which will have an impact on our communities. So the emphasis has to be on infrastructure first to get as much as we can out of infrastructure saving because, if you do buy from willing sellers, which is better than governments just coming and taking it, it will have a negative impact on our regional output in our communities.

Senator STEPHENS—You also make the point in your submission that you have concerns about the lack of real community engagement concerning the Living Murray initiative. Can you tell the committee what community consultation has taken place and what your concerns are about that?

Mr Weller—There have been offers for the Murray-Darling Basin Commission to come around and do a series of workshops. We took them up on that opportunity last August. They came around and we had meetings at Shepparton and Kerang. The biggest frustration is that they come around and talk to farmers but they cannot tell them what is happening. They came around and said that, at that time, there were three proposals. They came around before the first-step proposal and said, ‘Yes, there needs to be water going back to the environment,’ but they could not say how, where or what the guidelines were going to be; it was just that there was going to be water going back to the environment. When you consult with farmers, they want to know what is going to happen. Earlier, the farmers wanted to be consulted about their views on the health of the environment because it is frustrating to the farming community that you use the Murray-Darling Basin Commission’s and the Greens’ criteria for the health of the Murray, but their own figures show that the Murray is no less healthy than it was in 1930.

ACTING CHAIR—On the salinity and—

Mr Weller—If you use the criteria of salinity, turbidity and—

ACTING CHAIR—How would those figures stack up if you were not taking the aquifer out—if you were not intercepting the salt?

Mr Weller—True, the salt—

ACTING CHAIR—You are starting to get nearer the truth now.

Mr Weller—What we have to accept is that the Murray is a working river and that salt interception schemes are part of that. Because of the benefit that irrigation brings to the community through export dollars and employment, we have to accept that that is all part of the working river. We agree that we have to work to keep the environment healthy, and farmers have done a very good job on that over the last 30 years with their—

ACTING CHAIR—But it is not fair to say that if you took away what we are doing to it the river would be as good today as it was 50 years ago. If we did not have mechanical intervention, that would be a bullshit argument.

Mr Weller—I am saying that the facts show that with the mechanical intervention the river is as healthy as it was in 1930. Mechanical intervention is part of its being a working river and we are keeping the balance.

ACTING CHAIR—My problem is that we have not taken into account a lot of the things—such as the growth of plantation forestry and the complete denial of its impact—that have given cause for the mechanical intervention. In the Murrumbidgee River management plan draft deferred in New South Wales there is not one sentence that refers to the 2020 vision growth of plantation forests—which is a trebling—and the impact that that is going to have not only on the recharge, which impacts on what is happening further down the Murray, but also on the run-off.

Mr Weller—You would have irrigators supporting you on that.

ACTING CHAIR—I know. I am trying to win a bit of ground back for the poor old rice growers. I am a strong advocate of doing those calculations, which have not been done. There has been no work done in New South Wales.

Mr Weller—You make a good point. In Victoria we had this debate over the farm dams legislation. Victoria signed up to it, as New South Wales did, but Victoria did something about it. If you have a Murray-Darling Basin cap and farmers in the catchment areas continue to catch water and create new developments on their farms—which they have been able to do, provided they do it off a waterway—you are undermining the reliability of the water supplied to the irrigators who have made investments in laser grading and drip irrigation. It would be unfair to undermine their security by allowing further development. So the farm dams legislation introduced two years ago in Victoria said that if you are going to have a further development in the upper catchment you have to go and purchase the water from an irrigator that was wanting to go out in the lower—

ACTING CHAIR—We have just asked Pratt Water whether it is not an unreasonable view that if you are going to put plantations in the above 35-inch or 50-inch rainfall area you should have to buy water. If you are going to cut irrigation in the Coleambally area by 40 per cent and not calculate this long-term impact of plantation forestry then you are going to go back to the irrigators in another 10 or 20 years and say, ‘Sorry, old mate, we’ve got to take some more off you.’ So, you blokes are on the money there. I am with you.

Mr Weller—Good.

Senator STEPHENS—I would like to ask you about your engagement with the Murray-Darling Commission. Were you actively involved with the working groups of the Murray-Darling Commission?

Mr Weller—Yes. After I became president I was invited to be on the community reference panel.

ACTING CHAIR—Leith Bouilly's committee?

Mr Weller—Yes, one of them. There is a community advisory council as well as the community reference panel. I am on the community reference panel.

ACTING CHAIR—I would like to ask you about the advisory body that Leith Bouilly chairs. Are you on that?

Mr Weller—The community reference panel.

ACTING CHAIR—Do you think that it is sort of ironic that Leith Bouilly chairs a committee which talks about caps et cetera but in her own patch she is in full denial?

Mr Weller—You should not ask a Victorian that.

Senator STEPHENS—I think a judge might rule that out of order.

ACTING CHAIR—Under the A and B regime they are proposing to give themselves bundled water licences worth millions of dollars up there. You are protected here, mate; you can say it. I have a very strong view that Leith Bouilly has a serious conflict of interest being in those positions.

Mr Weller—If you were going to have community acceptance of the program when they are focusing on taking the water out of the Goulburn, Murrumbidgee and the main stream of the Murray for these environmental flows, the group would probably have more credence if you had a leader from that area rather than from an area where—

ACTING CHAIR—They are in complete denial on the issue.

Mr Weller—Yes.

Senator STEPHENS—Going back to my previous question about your relationship with the Murray-Darling Commission, you said that you were actually on that community reference panel. Does your organisation have input directly into the working of the commission?

Mr Weller—No. This is where we have a bit of a problem with the community reference panel. I go there but I am not a representative of the VFF. They just pick people out of the community. Other than my coming back and reporting to our water resources committee on what is happening there, there is no actual accountability. The others from Victoria—the likes of Steve Mills, Carl Russell and Hank Sanders—go back and have no-one to answer to; they are hand-picked people out of the district. Yes, they are people out of the district, but they are not

accountable to anyone. They do not report back to anyone. They are just there to give their views, which is very dangerous.

ACTING CHAIR—This is on the local—

Mr Weller—No, this is on the community reference panel.

ACTING CHAIR—They are just political appointments, are they?

Mr Weller—They are hand-picked, yes.

ACTING CHAIR—Political stooges.

Senator STEPHENS—What is the name of the other consultative body that you are on?

Mr Weller—There is the community reference panel and then there is the community advisory council, which I am not on. That is another level above.

Senator STEPHENS—Is the community advisory council membership representative of organisations and stakeholders?

Mr Weller—No. They are going through that process at the moment and I have applied. They are appointed by Minister Truss.

Senator STEPHENS—But as representatives of organisations or stakeholder groups?

Mr Weller—No. They asked for one person from the NFF and three people from Victoria. They have asked for environmental people as well. There are about 15 or 16 on the advisory council. I put in for one of the three positions from Victoria.

Senator STEPHENS—So not from the NFF? There would be someone separately nominated from the NFF?

Mr Weller—Yes.

Senator STEPHENS—So there is a general stakeholder representation there.

Mr Weller—Yes, but you do not get appointed from Victoria because you are the president of the VFF. It is just because you are a representative from Victoria.

ACTING CHAIR—What are the guidelines? Is there a criterion of professional capacity to get onto one of these committees—or do you just have to be good-looking?

Mr Weller—It would help, I suppose!

Senator STEPHENS—That counts you out!

Mr Weller—They question you on criteria such as your knowledge of the water issues, whether you are a water user or, if you are not a water user, whether you have an environmental or engineering background.

ACTING CHAIR—Is there much interesting contest in the deliberations?

Mr Weller—Obviously there is, because the first meeting was meant to be held at the end of March and I have not heard what the committee is yet. The deliberations are taking a fair while, so there must have been a fair bit of interest.

ACTING CHAIR—Could we get a copy of those graphs and things.

Mr Greenaway—Yes, I have copies.

ACTING CHAIR—We can guarantee you that we are going to use them.

Mr Bodman—Would it be helpful if we also provided an index of the documentation for you?

ACTING CHAIR—Whatever information you could assist us with, we would be grateful to receive. Thank you very much.

Mr Bodman—We will table this index of the documentation.

ACTING CHAIR—I want to ask the VFF—you fellows—about the role of the Commonwealth with respect to water. You have appeared before the other committee, the lower house one. They have some different terms of reference and a different style to this committee, and they have put out an interesting interim report in recent days. Do you want to comment on that—the Wilson Tuckey view of life?

Mr Weller—No, I will not; I have not read the report.

ACTING CHAIR—I am pretty concerned that water is where rail was 100 years ago. It is just not working—especially the Murray-Darling Basin—with the different regimes of the states. Some people would say that Victoria is a long way ahead of the other states in terms of disciplines in the system and approaches to water, and some of the things you have said today are good news for us.

We go to St George in Queensland and hear about what they are proposing for the Balonne, which used to make a 26 per cent contribution through the Culgoa River to the Darling at Bourke and is now going to put in something like six per cent. In recent days, in January and February, Cubbie Station demonstrated its capacity to absolutely divert a full flow flood event into its main storage there, which is something like 28 kilometres long and five kilometres wide and holds a couple of hundred thousand megalitres—for sweet bugger all money, a couple of hundred million dollars worth, if you put it down at \$1,000 a megalitre.

Then they have a proposition through the community reference committee which, strangely enough, is chaired by the same Leith Bouilly who has an interesting business relationship with Cubbie Station. They are recommending to the Queensland government that they provide an A

and B licence regime. An A licence regime is one where you are in a flood plain and you put a bank around the flood plain and keep the water off it. Do not ask me what that does for the region environmentally, for the recharge and the environment but, in the case of that particular person, with 9,000 acres it will produce a 7,000 megalitre water licence in return for keeping the water off the land. The water that would have been absorbed by that land then becomes a water entitlement and you put it into a turkey nest and grow cotton.

Given the pressures that are on Victoria and your efficiencies—and you see what happens over the border in New South Wales—doesn't it bother you, the NFF and everyone that some of the thinking up there is almost bushranger country? Some of the earthworks that have been developed to do this bunding go right across waterways, and somehow the waterways have been gazetted out—they have disappeared from a few records. Why aren't the NFF and the VFF and everyone else screaming, 'Let's have some national overview of all this'?

Mr Weller—I thought that was what we were trying to get to with the national water initiative. With the national water initiative, because of the states, we got nowhere in seven months. That is what the people in Minister Truss's office would have us believe—that the states would not come any further than they wanted to because they are saying that the bill to fix it is going to be too big. We believe that the states that keep allocating licences when they know the water is not there are responsible.

ACTING CHAIR—In the Lower Balonne, for instance, the Commonwealth is restricted to worrying about the Ramsar site in the Narran Lakes. The Namoi aquifer is an event 20 years ahead of your aquifer. It is the same bloody thing; it is deliberate knowledge of a mining of the aquifer. Those guys up there are now having 85 per cent of their water entitlements taken from them. There is an excellent case, as you know, for class action. I think the NFF is thinking about it.

Mr Weller—The fighting fund is actually funding that case now. The thing with the Namoi is that licences continued to be given out when they knew it was overallocated.

ACTING CHAIR—Let me give you the history so we can put it on the record here again today. In 1983-84 Neville Wran was Premier and Paul Landa, who has since died, was the minister responsible. The local land-holders pleaded with the government at the time not to continue issuing licences. Despite that the government took a conscious decision to give that aquifer a 30-year life and to mine it. When Nick Greiner's government came in and big Wal Murray was the deputy, Causley wanted to stop it. That government, across all political persuasions, said, 'No, no.' Now it is a catastrophe. You say you generally support compensation being paid to farmers. For instance, the average punter along the Murrumbidgee or wherever is going to lose 40 per cent of their water entitlements. Do you think they should be compensated?

Mr Weller—Along the Murrumbidgee?

ACTING CHAIR—Yes.

Mr Weller—It depends on the value and how often it is delivered. For example, a megalitre of water right on the Murrumbidgee is not worth the same as a megalitre of water right on the Victorian Goulburn or Murray.

ACTING CHAIR—What is the permanent transfer price of your water?

Mr Weller—It is around \$11.50 at the moment, for a megalitre of water right in Victoria. For that you get a megalitre 97 years out of 100, and probably for 60 years out of 100 you will get a megalitre and a half.

ACTING CHAIR—I will tell you another story. I think the farming organisations have a lot of work to do.

Mr Weller—We have a lot of challenges with water.

ACTING CHAIR—We went to Moree. There is a lot of goodwill. Craig Knowles's office demonstrates goodwill. It is a 'How the hell do you fix it?' sort of a problem. The compensation is because of the national catastrophe effect of overallocation et cetera and state blunders in years gone by, by all governments.

Mr Weller—We had better put it on the record that from the Victorian point of view we would not agree that Victorian irrigation districts are overallocated. We would say that, because of our conservative approach, it is sustainable.

ACTING CHAIR—Yes, I think in some ways you are a bit of a model of behaviour. But up there is where the farming organisations have to bring to heel in some ways the Christmas effect of the compensation argument. We discovered a quarter of the bore licences, the ground water licences, in the Gwydir aquifer were actually owned by people who did not have any aquifer. It is a bit hard to believe, isn't it?

Mr Weller—You wonder why they apply.

ACTING CHAIR—When I rang Craig Knowles's office he said, 'No, that would not be right.' Anyhow, it is right. The Gwydir aquifer has obviously come to terms with being mined. They were facing something like 40-odd per cent allocation because in the calculation were included the mature licence users, the sleepers, which are people who have a licence and have an aquifer, and the phantom people. Fifty per cent were mature, 25 per cent were sleepers and 25 per cent were phantom people but because they had a licence issued they came into the calculation for the allocation. We got those people who had the licences but no water to tell us in the hearing up there that they thought that they should be compensated if they were taken away.

Mr Weller—That is asking a bit much.

ACTING CHAIR—Let me go one step further. When I rang New South Wales Farmers about this—and I will not do in the poor bugger I rang—I said, 'Why are you blokes silent on this? This is a no-brainer. It would be a fraud of the public purse.' What was going to happen on 1 July last year in New South Wales—and this is one of the reasons it did not happen—was that they were going to untie those licences from that land so those people who had a valueless water licence on a piece of land that had no aquifer were going to be able to sell it for, probably, \$1,000 a megalitre to someone who actually did have the aquifer. They would get \$1 million. When I put that to New South Wales Farmers they said to me, 'Senator, you have to understand

that some of our members own those licences.' They said that when I asked them why they are silent on that issue. I think the farmer organisations have a bit of work to do.

Mr Weller—Obviously, we would have to understand the full story there. What you are saying does seem odd.

ACTING CHAIR—It does not seem believable. But believe me, it is what happened.

Mr Weller—If you did not actually have the hole in the ground—

ACTING CHAIR—In the southern New South Wales area you either use it or lose it. For some reason—and I am not aware of the reason—they did not. Some of the plantation forestry in eastern Australia is in high rainfall areas. I have a view that they ought to be sent a bill for the water they are taking too. You do not have to comment on that—life might become too complicated. Is there such a body in the Northern Territory?

Mr Weller—There is the Northern Territory Cattlemen's Association.

ACTING CHAIR—They have a lot to learn about water. You blokes at NFF ought to talk to them because they have a long way to go to understand the water issues up there. Thank you very much. We are very grateful for your help today. We will be on the job for you.

Mr Weller—Thank you very much.

Proceedings suspended from 1.01 p.m. to 2.05 p.m.

GAUDION, Mr Ken, Member, Warby Ranges Landcare, Ovens Landcare Network

HEARSON, Mr Craig, President, Hodson Horseshoe Landcare Inc., Ovens Landcare Network

JONES, Mr Jack, Secretary, Mudgegonga Landcare Group, and President, Ovens Landcare Network

NEARY, Mr James Henry, Member, Burgoigee Creek Group, Ovens Landcare Network

ACTING CHAIR—I welcome our next witnesses by teleconference from the Ovens Landcare Network. This is a public hearing and 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 the record that all witnesses are protected by parliamentary privilege with respect to submissions made to the committee and 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 that all evidence be given in public the committee may take evidence confidentially. If the committee takes evidence confidentially it may still publish and 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. Would you like to make an opening statement before we go to questions?

Mr Jones—Thank you. Our basic statement, I suppose, would be to reinforce the view of our network. Basically, the view from our network is that the land-holders in this area have lost a right to water with the legislation and we feel that everybody has a right to a percentage of our rainfall. Our long-term sustainability is dependent on us being able to use that water to more effectively graze our land for whatever management processes we need. We also have members arguing very strongly that we can use the water more efficiently in this area than is the case by letting it flow down the river, losing two-thirds of it, to be used downstream further. That is the debate in summary.

ACTING CHAIR—Is that the long and the short of your opening statement?

Mr Jones—I will let the others add their comments to that.

Mr Gaudion—Firstly, I would like to express my disappointment that the committee is not coming to Wangaratta and I will further request that they do come. Local knowledge across water issues would be invaluable to this inquiry. I note that this morning's sessions have been taken up by paid people. We are farmers and I think we have a need to be sustainable. Thirty-eight per cent of the Murray-Darling Basin water comes from the North-East Catchment Management Authority's area, and within that are people whose viewpoints on water cover

gravity irrigators, farm dams users, water quality interests, environmental concerns, rural and city consumption, waste water usage and storage dams, and there are Indigenous aspects that go back a long time. So the whole spectrum of water ideology is represented in this catchment. I have some more points to make but I will perhaps defer—

ACTING CHAIR—Just remember one thing, mate: take a little comfort in the fact that you are dealing with a farmer here. I do not know how old you are, mate, but I have been farming all my life and I know Wangaratta backwards. Not being there is not necessarily a disadvantage, although I appreciate that there is certainly an ambience in being there. I apologise that we cannot be there.

Mr Gaudion—Okay. There were some other people that were going to be at the Gateway in Wangaratta on Monday and I would like to reserve the right for a submission to come to you.

ACTING CHAIR—Yes. There is plenty of time to do all that.

Mr Neary—Just getting back to the storage of water, I know that people say that we cannot build any more dams but I think that, at the end of the day, for sustainability right through the whole system probably the big Buffalo dam—and the land is already purchased—should go ahead. My thoughts are that a short-term loss will be a long-term gain for the environment if larger dams are built because that water could be used for environmental flows at different times of the year.

ACTING CHAIR—Fair enough.

Mr Hearson—There were two issues that our group were quite concerned about. The first was the environmental impact of moving water from a high-rainfall area to a low-rainfall area and using it for irrigation. The other issue was a definition of a watercourse. What it is needs to be very clearly stated and defined, and that definition has to be stuck to by all authorities—government or semi-government authorities or just individuals. There is just one other little point. Bill Baxter, the member in Wodonga, put a little report out probably five years ago, the Baxter report, which recommended 10 per cent of the flow on individual properties as a fair amount to be retained for irrigation use by private land-holders. We as a group are very supportive of that and believe that it would be fair economically and environmentally to all concerned. Thank you.

ACTING CHAIR—Thanks very much for that. Let me just go to the crux of the problems you have retaining water on your farm from run-off. As you know, in New South Wales that is exactly what we have and we have legislation that restricts us to 10 per cent. You say that 38 per cent of the catchment of the Murray comes out of your area—is that correct?

Mr Jones—Yes. The Murray-Darling Basin.

ACTING CHAIR—Do you have streams on your properties? You have local streams, I take it?

Mr Jones—I will give a bit of a summary, Bill. We have got a variation in our soil types. Our lower catchment, especially from Wang down, is basically all river flats. The downstream part of

the whole of the Ovens system is a sedimentary system. You go into the hills and they are fold mountains with granite pushed up. Once you get further south from Myrtleford you run into granite country which has been pushed up, so near Beechworth you have a rock formation, which is granite. Those different types create different water systems. Once you get into the granite country you have sands taking water in, which comes out further down as springs. Once you get onto the more sedimentary systems you do not get as many springs but you get a lot more run-off in the winter. You have a soil which will hold water if you build dams, and that country needs to hold water so that they can carry water through the summer. When you go into the granite country you cannot build good dams that hold water in most areas because it is leaky soil, but you do have springs and, if you have smaller dams, those springs will keep the dams full.

ACTING CHAIR—So your area is in the Upper Murray—would that be a description of where you are?

Mr Jones—We are more representative of the Ovens catchment, but the Ovens and the Kiewa rivers provide basically 38 per cent of the water into the Murray-Darling.

ACTING CHAIR—Are you familiar with the impact on that area of the 2020 plantation thing?

Mr Jones—I am a little bit familiar with it, having some involvement in the agriforestry system.

ACTING CHAIR—Are you declaring an interest in forestry?

Mr Jones—I have some, yes.

ACTING CHAIR—This committee has serious concerns about the lack of long-term planning of consequential interception of run-off from the 2020 Vision of trebling plantation forestry by 2020. I just wondered whether you thought that what was good for the goose is good for the gander. Plantation forestry established above a 35-inch rainfall, as you are probably aware, intercepts a fair bit of run-off. If you get up to 50 inches or 55 inches you are talking about 2½ megalitres a hectare per annum. Have you got any comments to make about that? Given that your argument is that you should be able to retain 10 per cent of all water that runs through your property, plantation forestry will retain a lot more than that and that in turn will interfere with the local streams and also the local springs et cetera in your district. Have you got any concerns along those lines, given that you are a plantation forester, I take it?

Mr Gaudion—I will just give a slightly different comment. If you are talking about run-off you also need to be aware of the impact of last year's bushfires—

ACTING CHAIR—I am aware that in the long term last year's bushfires are going to take a thousand gegalitres out of the run-off and in the short term, over three or four years, increase the run-off. But over a nine- to 12-year cycle of the regrowth it will take a thousand gegalitres out of the catchment.

Mr Gaudion—Coming back to the forestry concerns, I think that in the topographical area where you have high rainfall there will still be plenty of catchment run-off regardless of what happens.

ACTING CHAIR—That is not a scientific observation though; that is a cocky's view of life, isn't it? The science is against you. If I could take you up to the back of Delegate I could show you the farmer's perspective on that where the local streams have actually dried up.

Mr Jones—I will make one comment on a life experience. I saw this happen. Firstly, I will say that a lot of our farming country is not going to be impacted upon by forestry unless you take it out of farming and put it into forestry.

ACTING CHAIR—That is actually what is happening in New South Wales.

Mr Jones—For the people who wish to use springs in the granite country, if they planted their own catchment area they may affect their own springs. Some of the springs are fed already from naturally vegetated country. Some of mine are fed from my adjoining land—some of that land is mine and some is crown land. If you change from stringy-bark to pine it is not going to have a big impact, and I am saying that from my own experience. We had above our property in Rosewhite a thousand-acre lease which was cleared and planted to pine. We saw a dramatic—a thousand-times—increase in the flow of the creek that came off that area when they cleared it and, as the pines have grown, it has reduced that flow and that flow is now back roughly to what it was under natural bush.

ACTING CHAIR—Yes. The real impact for a national audit of water, of course—which is what we are concerned about and what you are concerned about—is how much water you can intercept on the individual farm. You say 10 per cent is a fair thing, and I guess New South Wales has come to the same conclusion. Victoria has a different view of that. But in the long term what I am talking about is the conversion in New South Wales. The plantation industry has decided that it is easier and less trouble as far as environmental planning goes to buy cleared land and plant it out rather than try to push old growth et cetera and plant it out.

Mr Gaudion—In this catchment, the area we are talking about, there is a high percentage of public land which is treed already and so it is going to have a lesser impact than it would in New South Wales.

ACTING CHAIR—That is fair enough. But as a principle, which is what I was really trying to say, if you had a laissez-faire approach to what farmers can do with the run-off from the land then you would have no restrictions, no consideration—which, I have to say, has been the case up until now and we are hoping to dramatically alter it—concerning the growth of plantation forestry. We actually think that there has got to be a lot of water planning associated with plantation forestry, and we have had the Pratt Water people in this morning who agree with us.

Mr Gaudion—I guess you are implying that perhaps those big water users should be paying for the water usage like everyone else.

ACTING CHAIR—We think we can make out a case for plantations that insist on going up into the 50- and 60-inch rainfall country—because as sure as hell the plantations are going to

take the water out of the river system—that they should in fact have to buy a licence to remove it from the system. We think it is pretty unfair to go to a farmer downstream and say, ‘We’re going to take 40 per cent of your water licence because we want to reallocate some of the overallocation of the system in the Murray-Darling Basin,’ and then have to go back in another 20 years and say, ‘We want to take another 40 per cent because, oops, we did not give consideration to the impact of the 2020 plantation vision.’

Mr Jones—I cannot see any of us really disagreeing with that concept. If you change existing bushland to a pine forest or a hardwood forest we do not think it will make a big difference.

ACTING CHAIR—No, that is right.

Mr Jones—If you take cleared land and change it to forest it is definitely going to have an impact—the science is there. Also, in the Portland-Mount Gambier area there is ample science showing that they have ground water and, if you put trees in, you pull the ground-water level down. So the science for that is there. But most of our areas at this stage being planted have not been extensive areas of farmed land so we have not seen the impact. But we do agree that, if you are going to take a large chunk of our country and plant it, you will affect the water flow and then affect the farmers further downstream so that they lose the water rights because the water has to be going down further. So the planting of the trees will have impacted on the whole picture, and that needs to be planned for. I will add that when planting trees even in small areas the air flow needs to be considered because it has an impact on frost and, as we get more horticulture, I think that will become an issue as well.

Senator BUCKLAND—I am just looking at the Mudgegonga district land group’s admission. In your submission you say:

Rights to stock and domestic water also need to be clarified, particularly in relation to stream supplies where farmers are voluntarily excluding stock from the waterway to prevent degradation of the stream.

I understand all of that. You are also saying that you only take a small amount of water out because you do not irrigate, as they do in Mildura, and you are also supporting the idea of a management scheme. What is your real problem? Are you saying that you are not getting enough water when you do not need it anyway?

Mr Jones—We are saying that if you want to catch quality water out of our area we need to improve our grazing management. Properties need to be fenced into smaller paddocks. Once you start doing that you need more wells accessing the springs so that you can put troughs in each paddock. At present you may have a paddock that is a hundred acres with one dam in a corner. That dam may not easily gravity feed the whole paddock and there will be other springs that could be accessed and a well put in to give you that water. Legally we can still dig a well on those sites because we are saying we want it for stock and domestic use. But there have been arguments with Murray Goulburn Water who say that we cannot because we have already got a well there or we have already got a dam. We are saying that if we wish to increase our grazing management we need to preserve our right to put additional sources of water so that the property can be further subdivided—not subdivided as in a title but subdivided as in fenced.

ACTING CHAIR—What about reticulation? If you have got one well, couldn't you make out a case to reticulate it?

Mr Jones—If you can gravity feed it down the hill. If the well is at the bottom and you have to pump up, that is where you get into trouble. The cost of pumping water with the returns on our grazing systems becomes prohibitive.

ACTING CHAIR—Would you put a well up the hill?

Mr Jones—If you have got a spring there you can. James Neary has a comment because his catchment area has some of the same problems.

Mr Neary—Just getting back to the Mudgegonga one, where I think you have lost the idea a little bit, Goulburn Murray Water and the Catchment Management Authority want all the streams fenced out if possible. But, at the end of the day, if we fence a stream out we would have to pay for the water out of that stream if it is pumped across a fence line. So we are saying that we can leave all the creeks and gullies open and put our cattle or sheep in at no charge, but if we want to do it in an environmentally friendly way and fence it out then Goulburn Murray Water are saying that we have got to pay for the water. We are not on for that because people will just leave some of those creeks open. So that is that point.

Just getting back to the 10 per cent that we wish to retain—and that goes to what Senator Heffernan was on about—plantations will not go in up here if the farms are sustainable and we have got irrigation water available. There are only small amounts of irrigation water to grow a crop of cherry trees or strawberries or olives and there is a bit of irrigation for fat lambs or dairy. Those plantations will not go in because I think in the long term general farming will outrun the returns out of plantations. I think that what Senator Heffernan is on about with plantations here is a non issue with the use of water.

Senator BUCKLAND—My understanding is that you can catch water—probably when it rains or out of your well—and it feeds into a dam on the property. That would be low down if you are on a hilly bit. Is the real problem pumping water back to the top to feed these paddocks?

Mr Jones—There is a cost in that pumping, but pumping for stock is an expensive issue. We can put wells up hills. I have got some country where I have got several springs right up at the top. I just need to put dams big enough to carry through. The springs do not flow well into the summer. It is a matter of fact that Goulburn Murray Water want to make up paid permits to be able to put in wells. We also have the issue of some of the gullies being designated waterways and some not designated waterways. The CMA have a different definition of a designated waterway from the one that Goulburn Murray have.

Mr Hearson—Something that we are missing here is the economic situation. We are in an area which is a small farm area and employment is an issue. Losing irrigation entitlements or losing the potential to put intensive agriculture or horticulture into our region will affect the community in the long term and the economics of the region. Basically, irrigation is not about here and today; it is about here 20 years or 40 years into the future and it is about being able to build on the base we currently have.

ACTING CHAIR—Out of curiosity, what is the average farm size there and what does the average farm carry?

Mr Jones—For the Mudgegonga area most farms were originally 320 acres and a lot of them are still only that big—there are a couple of properties that are bigger. A property that size will run over 100 or 120 breeders and, if you manage your pasture right, you will be able to do that sustainability forever and supply good quality water. The return, as you would imagine, is very small so people cannot afford the cost of pumping water. Most of them have off-farm income as well. But they do have the ability with time to break up their paddocks and manage the land better. The others here can comment on the size of properties in their areas.

Mr Gaudion—It is a very mixed in our area, from smallholdings to large ones of several hundred acres.

Mr Hearson—It is very similar in our area. The average would probably be around 300 acres. There are a few that are bigger but there would be a lot more that would be smaller.

Mr Neary—The average in our area would be 500 to 600 acres and the average DSE rating is 11, but there are people like me who are up around about 20 or 21 DSEs. I have got an irrigation dam which was constructed in 1995 before the cap and that has certainly made my place much more viable.

ACTING CHAIR—Do you keep it full?

Mr Neary—When I get enough rain. Last year I put 120 megs in it in one month. The year before I put about 30 megs in it for the year.

ACTING CHAIR—What would the run-off be for your property? Have they given you a calculation?

Mr Neary—Yes, they did but I cannot tell you now off the top of my head, sorry.

Mr Jones—I have several small dams which have been registered under the current system. I was only a part-owner and the previous generation did not want to get into the register back in the early 1970s with the original moratorium. Since the 1800s we have always irrigated small areas. I have got three empty dams now because I have started my autumn pasture; one of them got emptied in the spring because we had a patch of no rain, and that got cut for hay. They are only small areas but they make a big difference to carrying the stock. I am up in James's stocking rate of 26 DSEs. My pastures are still only being developed. I can carry that sustainably, I believe, in the long term with that extra little bit that helps you out when you do not get an autumn or your spring cuts out.

ACTING CHAIR—I am going to hand over now Senator Stephens. Senator Stephens comes from a farm at Goulburn which is pretty cold in the winter.

Senator STEPHENS—And very dry, Senator Heffernan. Thank you, gentlemen, for your submissions, and we have several submissions here before us. Mr Jones, I am looking, firstly, at the submission from your landcare group. I just want to talk about the comments that you make

about the National Heritage Trust system on the third page of your submission. You say that your group has completed almost \$1 million worth of works associated with erosion. Was that National Heritage Trust money?

Mr Jones—The total return—farmer money and government money—has been for various and different NHT projects. We have managed it so that we use the input from government as seeding money. The government often only put in a third or a quarter or even less and the landholder's input was the rest.

Senator STEPHENS—That is good. But you just make the point in your submission that both the distribution of NHT funding and the system itself are causing concern for you. Would you like to expand on those two points that you make?

Mr Jones—There are two parts to that point. The paperwork burden of the people managing it is horrendous. It also requires technology—computers that have huge memories so that you can handle photographs and do the maintenance work on that in terms of ongoing work and keeping track of all the points—and that is all done by volunteers, not by paid people. The second part is that we have got hassles with the issues of fencing out the gullies, which we are doing. When we fence out our gullies we lose the right to graze our stock straight in to get a drink—and that is the point that James was making. I am getting people waving at me that those issues are really landcare issues rather than water management, but the water management part of our comment was that we had people fencing out the gullies, which was going to protect and give better water quality, and the changes in the legislation are making people not wish to fence out their gullies because they cannot get access to water to water their stock.

Senator STEPHENS—I understand. So really the point is that where your group would like to do some work—fencing off the streams to reverse degradation—there is no incentive to do that because you will have to pay for the water then.

Mr Jones—That is the main argument. We are getting more and more bureaucracy, limiting us and our ability to put dams in. Most of our dams are on drainage lines, many of which are now designated waterways, and it is difficult to get the right to put dams in those areas, and we cannot build big dams because our soil leaks.

ACTING CHAIR—With a lot of the streams that you are wanting to fence out, is it the same owner on both sides of the stream or are they generally boundaries?

Mr Jones—No, they are just streams through your property. They are drainage lines through your property.

ACTING CHAIR—That is an interesting concept. If you fence them out you cannot get the water. I would have thought that was a no-brainer. So to overcome the difficulty that that presents you have to have a watering point that you do not fence out—

Mr Jones—Some land-holders have done that. James certainly has done a lot of that, where he has fenced out sections and left sections so that stock get in.

ACTING CHAIR—I am pleased that you have made this point for the committee because it is an interesting dilemma.

Mr Jones—Part of our difficulty is that the CMA have brought in legislation, which is state wide, and under the bylaws they have defined their waterways and their designated waterways. Goulburn Murray Water have not followed that same definition. They include many more of the drainage lines as waterways. The CMA have passed over all of the management of the building of dams to Goulburn Murray Water and Goulburn Murray do not want you to be building dams on drainage lines.

Senator STEPHENS—We have had mixed evidence over the course of our hearings about the need for an overarching national body to oversee the issue of water. What is your take on that?

Mr Gaudion—Bill Heffernan pointed out that New South Wales have a different arrangement for what storage farmers can use for the rainfall that falls on their land. So Victoria is being disadvantaged against that where we have to buy the water first to put in our dams. I believe there is a good case for some national equivalence that would see people treated evenly on each side, for instance, of the Murray River, but right across the country in general terms.

Mr Neary—Just on water trading, all states are different. I do not know how anybody can understand it all. For instance, take New South Wales this year. I have got a next-door neighbour who has a property at Corowa. He was allocated 16 per cent as his water right this year. Two months ago they rang him up and said that he could use as much water as he wants. I cannot understand how all this works and I think that half the problem is that one state has got one rule and another one has got another rule. We need to get, as Ken Gaudion said, an equal ruling on all water, whether it is sales water or water right or our ability to store water on our properties.

Mr Hearson—One area that our group has been concerned about is that Goulburn Murray Water has been encouraging the construction of reuse dams in irrigation districts. They are very similar to run-off dams in our area. It is not possible to construct a run-off dam in an upper catchment area but they are encouraging reuse dams, which are basically run-off dams, in lower catchment irrigation areas. Again, there are inconsistencies.

Mr Jones—I have had experience in New South Wales and long-term experience in South Australia. Where you will be sitting tomorrow, I was working for a long time in the channel system. The issue is very complex. I talked before about our granite soils where we can put wells in easily. There are other parts of our catchment and also the whole Ovens system where there is no ground water and the people have to put in dams. That inconsistency between the CMA's law and the Goulburn Murray on our ability to put in dams is really limiting people. The water falls on the ground and runs off. If you put in a dam you can catch it. We all did have a right under our original titles when they were drawn up in the 1870s and 1880s and we have slowly lost many of those rights. That is where we are suggesting that an overarching management would certainly help.

ACTING CHAIR—Jack, there is such a thing as a riparian water right. Are you saying that under the legislation in Victoria your riparian water rights have been interfered with?

Mr Jones—Significantly. I have a house that I am living in at the present that was built by my father in the early 1950s and it pumps water out of a well within 50 metres of the house. That is on the second title. I now own both titles. I have been told by Goulburn Murray Water that I am taking water illegally by pumping out of that because it is on a designated waterway.

ACTING CHAIR—I would have thought there were some existing riparian water right users' rights.

Mr Jones—Bill Baxter is arguing that, and I backed him all the way with information when the Victorian dams legislation went through. We needed grandfathering in, but that is not clear in what is happening, and Bill is still arguing with Goulburn Murray Water on some of those issues.

Mr Gaudion—Perhaps it would be timely now that I make the comment that I was on the Farms Dams Committee that looked at that. The chairman of that committee, Bill Hill—and I spoke to him just before this meeting—was due to meet with you in Wangaratta, and I want to reserve the right that he presents to you.

ACTING CHAIR—Just relax about all that. Anyone who wants to be heard will have plenty of opportunities to be heard. They can make a written submission or we can even from Canberra do a similar thing to what we are doing here today—we do not have to be actually eye to eye. We are all pretty ugly and you are probably better off not seeing us, just hearing us.

Senator STEPHENS—Mr Neary, I have a question about the network's submission. You make mention in your first point about the water resource study and strategy for the Australian Alpine Agribusiness Forum. Are you able to provide a copy of that to the committee?

Mr Neary—Yes, that copy is available to anyone at all. That was done in 1999.

Mr Jones—We will get a copy of that sent to you. Will that suit you?

Senator STEPHENS—Yes, thank you very much.

ACTING CHAIR—Thanks very much for that. I guess, from a practical farming point of view, with some of the things that you have said it does not take a lot of brainpower to work out that they are no-brainers. There is such a thing as a riparian water right and it seems to me that there may be some interference with that. There would be ways around that fencing out the creek thing. If you have got other evidence that will further strengthen your case we would be grateful if you could provide it. Maybe some of the logic used by the people who have put you in this position—whether the Catchment Management Authority or the Goulburn Murray Water—needs to be looked at. That is what we are here for: to try to represent the issues for all rural water users. If there is anything that you would like to add further before we bring this hearing to a close, please do so.

Mr Gaudion—The local knowledge of the long-term residents is being ignored by government departments and water authorities. The Victorian farm dams legislation is quite flawed because you now have to buy a right to put a dam on your property, and if you go to full trading rights there is no mechanism to allow the water to flow into your property other than rainfall and you are meant to be able to sell it out but there is no pipeline or trading mechanism

to get it out to downstream users. So it is flawed. I think there is also an opportunity for the North-East, under the conversion of the sales water to medium-security entitlements, for some water to remain in the North-East. As we are seeing at the moment this debate is quite topical because we are seeing the Victorian government perhaps offering 20 per cent of that sales pool to the environment as a trade-off to conversion for medium-security entitlements. We feel in the North-East that this is where the water comes from and we are really missing out.

ACTING CHAIR—So if there were a dam—was it big Buffalo that you mentioned?

Mr Gaudion—That is correct.

ACTING CHAIR—Would that have captured water up in your area and then you would have been able to use that as a continuous supply for some sort of industry up there?

Mr Gaudion—It would certainly add to the greater security of the whole area.

ACTING CHAIR—Where does that water now flow—what catchment?

Mr Gaudion—The Ovens flows into the Murray.

ACTING CHAIR—Does that go into the Hume? Where does that end up?

Mr Neary—The Ovens River is a catchment which is parallel to the Kiewa, which is almost parallel to the Mitta. You have got the Dartmouth Dam on the Mitta, you have got the West Kiewa hydro scheme catching water on the Kiewa and the Pretty Valley and then you come around to the Ovens. The Ovens has the King flowing into it. The King has a dam on it. The Ovens system also has the Buffalo as a feeding river, and the Buffalo has a small dam on it which was planned originally to be a lot bigger. The Ovens itself does not have a dam on it, which is making us vulnerable to the conservation lobby that are saying that it is the last wild river left in the whole of the Murray-Darling system. We also lose out in that we are all now subject to stream flow management plans. The Ovens itself has not got a dam on it but there are dams on some of the feeding streams—the Buffalo that feeds in at Myrtleford and the King that feeds in at Wangaratta.

ACTING CHAIR—Suppose I go up there to buy a farm—I am not too sure whether I would be clever enough to make a living from 300 acres and a thousand DSE, but just say that I did all that—and then I decided that I wanted to put in another 500-yard or a 500-metre ground catch to catch a bit of water that is either run-off or out of a spring, what is the process for me to do that? Are you saying that I can do it or that I have to pay for it or pay an annual charge?

Mr Gaudion—You will have to go to Goulburn Murray Water and you will need to work that through with them. Firstly, you will need to find a site for the dam and get that approved. You will need engineers to plan the structure of the dam. You can buy a water right and pump from a stream during winter flow, and you will buy that water and pump it out of the stream into the dam. Depending on your soil type, you may well have to pay to line the dam with a plastic film to seal it so that it does not leak. Then with that water you bought you can irrigate. If you cannot get water out of a stream in its winter flow when they have an excess in all of the streams, you

will have to buy water on the open market from, say, Shepparton, and bring it back if the system will allow you to transfer it.

ACTING CHAIR—So that is one of the great difficulties. Up in our country our ground tanks hold like bottles so you just get natural winter run-off and, with a bit of luck, you get through the year. But your ground is too porous in a lot of places for that.

Mr Gaudion—Yes.

Mr Hearson—Getting a permit to construct a new dam is near on impossible. The definition of a watercourse is an issue. Anything that runs water, according to Goulburn Murray Water—and it can be on flats around the paddock that will run water in the rain—is considered to be a watercourse and no dam can be built.

ACTING CHAIR—So what existing user rights are there?

Mr Hearson—Current dams are okay—

Mr Jones—If you have your permit. If you use it for irrigation you need to have applied for a permit back in the early 1970s when the cap came on and there was a moratorium. Then when the farm dams legislation came in you could have put in for a permit at that stage, registering your dam.

ACTING CHAIR—Do you think that they were targeting small enterprises like cherry orchards and things like that, or are they as much concerned about the dam that 25 cows are going to water on?

Mr Gaudion—They have not yet picked up on the dam that 25 cows can drink from. That dam comes under stock and domestic. But they are getting more difficult.

Mr Neary—Just getting back to the Victorian farm dams legislation, since that was legislated to the best of my knowledge there has not been one commercial use dam constructed in our catchment because people have got to buy the water from downstream to put back in. That has stopped all productivity here in the higher catchment. Going back to other water things, the Victorian government have got stream flow management plans, sustainable conversion limits, and winter fill, which used to be from 1 May until the end of October. They have now cut that back, to from 1 July until the end of October. They are getting at us in all ways. It is not only that we cannot build a dam, there are three or four other issues also causing us trouble up here. They are saying that the water should be used for high-value enterprises. I dismiss that because what is high value today might be worth nothing in 10 years time. All I am saying is that they are restricting people's ability to do what they reasonably want to do on their own properties. We do not want to catch all the water—we have said that right from the start—but we need a reasonable amount. We put up the 10 per cent and that was rejected.

ACTING CHAIR—What is average size of one of these dams and what is the average commercial use? Is it orchards? I thought that you were being restricted with your stock and domestic and I thought that was pretty tough.

Mr Neary—I suppose the average size would be 80 megalitres but there are some in the catchment up around 250 megalitres. Above the Hume Dam to the best of my knowledge there are only 15,000 megalitres stored in irrigation dams. It is only a minimal amount stored and on a normal irrigation day 24,000 megs go down the Murray River.

Mr Jones—There are some other properties with small dams. Many of the cherry orchards and the apple orchards at Stanley have dams that are only a couple of megs. They are catching and using the water strategically at certain times to help their crops.

ACTING CHAIR—So with a two-meg dam on a cherry orchard under the current legislation, do they pay for the water?

Mr Jones—They are catching themselves. If they want to build a new dam, they are going to have to buy the water and bring it upstream.

ACTING CHAIR—I guess if you blokes are all old cockies like me you would never put up a new fence; you would always repair an old one for tax purposes—it is a pity to put that on the record really, isn't it? I imagine you would never build a new dam; you would always clean out an old one.

Mr Jones—That is the other side of it. Technically, you now have to get a permit to clean a dam. They have not fully enforced that part of it. The Catchment Management Authority in the top end, the North-East, is underfunded so they have not been able to do it. The second part of that is that Goulburn Murray are handling it and, technically, you need to get a permit to clean out a dam and they will tell you what size it will be when you finish cleaning it out.

ACTING CHAIR—They're a bloody wake-up to me, aren't they!

Mr Neary—On the sales water issue that has been going on, most of the gravity irrigators have in the past had 100 per cent sales water available to them if they wanted it. I have got a 150-meg dam and there is no way known I can put 300 megs in it. We are saying that the gravity irrigators should have their water right—nobody has any problem about that—but the sales water should be available to them only when it is excess to everyone else's needs, the environment and whatever else. If governments are going to give away 20 per cent of that sales water to the environment—which we have no problem with—and considering how they are treating us with the farm dams legislation, we reckon that we should probably be allocated 20 per cent of that sales water so that it is able to be stored up here. I think people are forgetting that with all this water innovation that has gone on—best management practices and whatever else—the next time everything fills up we will never be back in this situation. And we will get another wet year, Bill—don't worry about that.

ACTING CHAIR—I hope you are right, mate.

Mr Jones—On the same issue about the size of dams, I have registered one of my dams as 1.8 megs. We regularly take four megs. One year we took six megs out of that dam—the dam has a spring, and it keeps filling. Now Goulburn Murray are saying that outside that winter period I should be letting all that go through. I registered it for four megs 12 months ago and yet nobody has come and inspected it. I know one person who has had a dam inspected in this whole area

and he is on the stream flow management committee at Porepukah. We do not know where we stand even though we have registered our dams. We have got a letter saying that our applications were received, and that is it. How do you invest more money in using lower use sprinklers and better systems if you do not know where your security is.

ACTING CHAIR—I appreciate the problem and we are grateful to hear of these problems. I think you have told your story pretty well. Is there anything further that you would like to add?

Mr Hearson—Just very quickly to finish off on the economic impact of the situation: if you look at the 2020 Vision, what is taking away irrigation water or potential for irrigation in this area stops potential for a lot of new industries. In the last 10 years we have seen horticulture and viticulture grow up in this area and they have created a lot of employment. The next wave of agriculture requires irrigation. This area will not be able to participate with these rules in place and that will create great economic hardship and it will impact on not only the land-holders but also the rural community and towns as such.

ACTING CHAIR—Would you blokes be happy if you are allowed to retain 10 per cent of your run-off and then pay for water? If you have got a couple of hundred megalitres in storage, obviously you would not capture that off 200 or 300 acres, would you?

Mr Hearson—Would that be as of right, as in a title?

ACTING CHAIR—I would have thought that, if you were given certainty, maybe there would be a case to be made out that for that certainty there would be a price attached to the annual cost of the water. If you are going to take a couple of hundred megs a year over and above your run-off, would it be unreasonable to have to pay for it? Are the sums that fine that if you had to pay for your water you would be unviable?

Mr Hearson—Discussion in the room is that 10 per cent would be fair.

Mr Jones—On our country you get 10 megs landing on every hectare.

ACTING CHAIR—Tell me what rainfall you have got.

Mr Jones—We have got 37 inches to 42 inches.

ACTING CHAIR—I will go away and test that later.

Mr Jones—You can do your maths: a metre over an area, and a hectare is 10 square metres.

ACTING CHAIR—Jack, with great respect, the whole metre will not run off, old mate.

Mr Jones—No, all I am saying that that falls on the ground.

ACTING CHAIR—Yes. We are talking about run-off. I take the point.

Mr Jones—One of my friends here has pointed out the fact that our rainfall does vary and it goes from 350 millimetres up to 800 millimetres. I would say that ours goes from 350 up to 1,700 millimetres. That has been in my lifetime.

ACTING CHAIR—But generally the district is 32-inch?

Mr Jones—It varies dramatically in short distances. It depends on gullies and which way it follows. You could call it a 25-inch average.

ACTING CHAIR—That is not all that high. If you have a 200-meg dam and you were given a licence and you could fill the dam from a creek or a river or somewhere for the orchard or whatever you were going to use it for, plus capture 10 per cent of your run-off, would you agreed to it? Would that be the trade-off?

Mr Jones—Generally, people are saying yes, they would. I am saying that they are lucky if, like James, they have got soil that will hold that. In my area you cannot—

ACTING CHAIR—I understand that. That is a real bugger of a problem that.

Mr Jones—You could build a series of little dams and use the springs and you will still get the same amount of water.

ACTING CHAIR—But there is no continuous supply that you can just pump out. Say you were given a 200-meg licence for an orchard or something, there is not a year-round supply in the stream, is there?

Mr Jones—No.

Mr Gaudion—What we did with our business—which is cherries north of the Warby Range—was to buy water rights from tobacco farmers. We put in an eight-inch pipeline from the Ovens River 11 kilometres away. Over the last four years that has made us sustainable through the drought. It is drier now than it was during the drought.

ACTING CHAIR—We are going to have to finish. I am very grateful for your input. Feel free to access any members of this committee with all your frustrations and, if there is any way we can help you, we will do so. I just want to finish by telling you a little dry weather story. I have a place at Booligal, which is on the Lachlan River. We have had one good season since 1993 and that was the winter of 2000, the Olympic year. That year we had 360 points of rain between Christmas and New Year in the 1999-2000 changeover. That was the third fall of rain for us since 1993 in which an inch of rain fell—so there you go.

Mr Jones—I have been involved in growing a crop in the Mallee on a four-inch rainfall and we got a 15-bag crop. So it is possible if you get the rain at the right time.

ACTING CHAIR—And you got a bit under it. Thank you very much to everyone there and congratulations on your presentation today. We will sign off now and hope to hear from you later.

Mr Gaudion—Let me leave you with one small thing to think about. If the federal government would think about giving compensation to farmers in Queensland for not removing trees, why not pay compensation to farmers in the North-East for not building dams?

ACTING CHAIR—As you are probably aware, in Queensland the Commonwealth did not go along with that, the state government did.

Mr Gaudion—Yes, with a big fat cheque.

Mr Jones—My final comment is that the Commonwealth government has a big job with a planning issue. We are using soils inappropriately in all sorts of different places. We really need to seriously consider whether some of our irrigation communities can survive long term or whether we should pack them up and move them to a different soil with a different water source.

ACTING CHAIR—We are hearing plenty of that. Despite what you may hear, there are some efficiencies being built in further down. For instance, in the Coleambally irrigation areas there were areas where they were growing rice that have been shut up now because it is totally unsuitable. Thank you very much for your time.

[3.04 p.m.]

McGOWAN, Mr Paul, Executive Officer, Wodonga District Committee, Victorian Farmers Federation

ACTING CHAIR—I welcome Paul McGowan, who is giving evidence via teleconference. Are you aware of the rules?

Mr McGowan—Yes, I have read them.

ACTING CHAIR—If you have an opening statement to make, we would like to hear it.

Mr McGowan—My background today is that I am representing the High Catchment Committee of the Victorian Farmers Federation, a group of people who live above the Yarrawonga Weir. They are not irrigators, basically. They supply the water. As you know, about 38 per cent of the Murray flow comes from this catchment. I am a consultant. I have worked all over the world for UNDP, the World Bank, the Asian Development Bank, and I formed and managed a company that employed 70 consultants on its staff. Most of my work over the years has been with water—urban water and irrigation schemes.

In 1982-83 I was also a member of the Australian Commonwealth Department of Resources and Energy committee which looked at the total policy regarding Australian water resources for the next 20 years. We put out a program on that foreseeing all the problems that we are now facing. One of the interesting things that came out of that was the myth that Australia was the driest continent. We found out that Australia was not the driest continent if you measured it in terms of head of population, which we believed was the real thing to measure. On head of population we are one of the best endowed countries in the world with water.

ACTING CHAIR—We are in the top 10 in that regard.

Mr McGowan—Right. So you know all about that. There are three points that I want to make today relating to the policy of jurisdiction, efficiency of water usage and the environment. Incidentally, do you have in front of you my written submission?

ACTING CHAIR—Yes.

Mr McGowan—One of the problems we have got is that 20 years ago water was essentially a state responsibility and the Commonwealth has been progressively involved in that until it has really become a de facto partner with the states, particularly in the Murray-Darling Basin where it is funding a lot of the state works. So the Commonwealth is now responsible for a lot of things that it was not responsible for before. I am particularly anxious that you are a Senate committee because the Senate committee really rises above the local parochial things that we are always looking at in Victoria. For instance, we have in Victoria quite a clash of opinion in the farmer organisations between people like us in the high catchment and the irrigators.

On the environmental issues, we know with hindsight that we have made a lot of mistakes. Our current policy is to mitigate some of those. If we look at it from a worldwide perspective, which I am very familiar with, we know that there are many areas of the world that have suffered enormously from salinity damage. I just need to mention the Nile Delta, which is now almost desolate because of salt, the lower reaches of the Tigris and the Euphrates, and the Indus River. We have learned all these lessons from salinity damage. We know that basically what has happened in those old civilisations is exactly the same as is happening today in many of ours with salinity. The logical thing is to irrigate the lower, flat country. This is the country that in recent geological years has been under the sea and has highly saline levels, but to irrigate there is the natural thing to do. In other countries, as that area has become denuded through salinity, people have had to move upstream and do the higher country. That can be a little bit more expensive because it is not just open flat plains. Some of it is just more expensive to irrigate—that is, if you do not take into account the cost of environmental issues. Once you start looking at the cost of environmental issues, there is a lot to be said for irrigating up in the higher valleys.

We have put the proposition over many years that you should look at the places where you are going to irrigate. This came up with the chairman of the Murray-Darling Basin Commission, Don Blackmore, two years ago in Wodonga. He was asked: ‘Why are we taking the water away from the high catchment, environmentally friendly areas and sending it downstream? Why isn’t there a change? His comment was: ‘In time it will change, but at present the political pressure is to continue in the irrigation areas.’

I think we have to take a statesmanlike view and look much more to the future. First of all we need a complete reappraisal of where irrigation should be occurring. In Victoria the decision has been made that there will be no irrigation in the higher rainfall areas. We have had changed legislation because the government sponsored irrigation authorities are very heavily losing money—every year they are working on a deficit. I will not speak about New South Wales at the moment, but government policy in Victoria is to make sure that there is more and more water—sales water and everything else—going downstream so that it can be sold and government debts can be reduced. That is all right for the short term but in the long term we have to think about whether that is the right thing to do.

With regard to the salinity levels in the Murray-Darling Basin, I am sure you are aware of the general situation in the lower reaches. In the higher reaches here, the Kiewa River has 30 EC units of salinity; the Ovens has 60. That is very pure water and these are the areas where we should be thinking about using the water. The next question is: is there enough area in these higher reaches to irrigate? The answer is yes.

I would give you a full report if I were there in person, but the Victorian department of agriculture did a study about three years ago on the areas that were available in these higher rainfall areas—the Murray, the Mitta, the Kiewa and the Ovens rivers—to see how much area there was. In the Murray Valley alone—that is not counting the other big valleys—they had 19,000 hectares suitable for horticulture, but there were only 3,000 megs available to irrigate it. There is no way that these areas can get more water. This is a very important restriction on the growth of this area but, much more importantly, it is a restriction on where water will be used environmentally favourably. Charles Sturt University in Wagga did a survey. The most important consideration for all the people that they surveyed was: loss of property rights due to the farm dams policy undermining landholder contributions to resource management.

I have dealt with two points so far—that is, the jurisdictional issue between the state and the Commonwealth; and, secondly, the environmental issue. The third point is the efficiency of water use. In the King Valley of Victoria, which we represent, in the grape growing industry they budget two megalitres a hectare for growing grapes. In fact, they nearly always use nearer one megalitre. At Sunraysia, they are using between eight and 12 megalitres for a hectare of grapes. It shows where water can be used efficiently if we use our brains. In the high rainfall areas, we have reasonably good rainfall and we need supplementary irrigation only. We do not need to irrigate for such a long period—just a little bit of help to make it go. All the horticultural crops that we talk about need some supplementary irrigation in summer. What I am really saying is, if we are interested in efficiency, we should be looking at irrigating the higher rainfall areas—and we have got plenty of land to do it.

My next point is about water trading. We all agree that water trading should occur but the rules make it virtually impossible in the high catchment areas to trade water. All the trading has to be downstream, but the rules are so undeveloped that there is very little water trading going on. Another point is that the government has been talking—in particular Mr Anderson has been talking—about giving water rights some sort of Torrens title.

On my farm I have many different titles and most of them give me the Torrens title to the water. I will just read one of my titles, which was given to me relatively recently by Queen Elizabeth II. It is not 100 years old. It says ‘The title is given to me ... the right to seek wells for water and to use for all purposes of any wells and springs now and hereafter upon the said land as though this grant had been made without any limitation as to depth.’ That is my Torrens title. But the Victorian government has taken that title away from me as far as water is concerned. On my dams, which I now use for irrigation in a drought time, I have to pay a licence every year for that water. I have to pay for the water that is in the dam whether I use it or not, and the government policy is to increase that fee every year to pay for the general losses of the water authority.

That has taken me about 10 minutes. I would be very pleased if you could question me because I would like to expand on that and many other issues, and I know you are fixed for time.

ACTING CHAIR—Thank you for that. By the way, have you seen Fred Johnson in recent years?

Mr McGowan—No, I have not.

ACTING CHAIR—Does the water in your dam flow into your dam off someone else’s property.

Mr McGowan—No, it is all from my dam; it is from a spring. This is one of the anomalies of the whole water situation. If I have heavy clay soil and it runs into my dam, I have a right to that water—or I did in the past. If it happens to come from a spring anywhere, it is classified as ground water. Because I am on granitic soil, I cannot store surface water at all. All my soil is porous. So it comes down the lower part of the property where I have it stored.

ACTING CHAIR—Is it stored in a bit of secure clay or something like that? Is the water stored in a bit of tighter ground?

Mr McGowan—Yes, down on the bottom of the valley I have clay.

Senator BUCKLAND—You advocate the shifting of the water from the lower areas, from places like Mildura, up to the higher areas. You even say that you have the area to do that. Your submission worries me, because hindsight is one thing but reality is another. What do we do with a community such as Mildura? We have to look at the practical things here. What do we do with the thousands of people that live there and the thousands of people that rely on the area for their income? What happens to the farmers in those irrigation districts?

Mr McGowan—I recognise the problem. Let me expand on it even more. What do we do about the rice industry at Coleambally? If you look at it, you will see that, when they built the Snowy River, an enormous amount of water was diverted inland. There was no market for that water at all. The water supply was okay. It was looking at the future; we were going to irrigate the inland, which we did. We had so much water available. There was no demand for it, and we had to create a demand. That is why we set up and expanded the rice industry. The rice industry used to be very small around Griffith and Leeton. When we got all that water, we took all that Coleambally area and made it a rice area because we had to get the water sold, otherwise we could not support the whole policy of doing that. That was the right policy at the time. I am sure it was the right policy. But, because it was the right policy 40 years ago, it is not necessarily the right policy now. Water was ample then, and we were trying to sell it. Now the situation is reversed, and I think the same applies to Mildura. It was a good idea in Chaffey's day to do it.

If you look at the Mildura situation, which is a very good one to take as an example, you will see that there is now a policy on the planning for the Deakin expansion. You may be aware of that. The feasibility study for the Deakin expansion showed that it did not matter what you did, you were going to increase the salinity of the Murray River. They were going to spend several thousand dollars per hectare putting in drains and trying to look after the salinity, but the best salinity solution still made the Murray more saline.

These are the political decisions that have to be faced. I know they are very difficult, but at least we should be looking to the future. That is a separate problem. I am not prepared to say what the solution is for Mildura. But the point is that we certainly should not be making it a lot worse, which is what we are doing right now in Victoria. We are taking away the water that used to be available in the catchment area and we are going to divert it down to the Deakin the project in Mildura.

ACTING CHAIR—There are roughly 50,000 acres available above the Hume Dam. The water requirements for that would be 67,000 megalitres but only 34,095 megalitres is available. So surely, in response to Senator Buckland's question about what to do about Mildura, if there are only 34,095 megalitres available above the dam then it is not going to have much of an impact on lower down if you develop—

Mr McGowan—No, I am saying that 34,000 megalitres is what is available with licences; the total amount of water coming down the Murray is almost unlimited.

ACTING CHAIR—Right. I get the message.

Mr McGowan—That is just the licences available. The situation in the Ovens River is just as bad. You might be aware that the Ovens River flow is almost the same as the Goulburn River. It is 1,400 gegalitres a year compared with the Goulburn's 1,460 gegalitres a year. There is virtually no irrigation in the whole of the Ovens Flat. It could be another Goulburn River. There is plenty of water up here, but the policy is that it is not to be used here. Now there are very strict legal instructions. We can never build any more dams or anything.

I would like to take that a bit further. It is very much an issue here that these rights have been taken away from us and there has been no compensation. There has been no compensation at all for the rights that we used to have a few years ago which have now been taken away. This was a state issue. Now—because of the partnership between the states and the Commonwealth and the Commonwealth funding so much of this money that is going into fix up the problems—if someone was really a smart lawyer and could find the money to take it to the High Court, the Commonwealth would be just as liable to the states for compensation. The states say that they are not liable for compensation—and that is true: legally they are not liable—but the Commonwealth is liable.

Senator BUCKLAND—Carrying on from what I said earlier, I understand all that you are telling me. I take it on face value that you are correct—I am not in a position to challenge your comments and I do not intend to. What you are saying seems to me to be something that we can look at in hindsight and think, 'That is a good idea.' You have spoken about compensation and the fact that you have not been compensated for the rights that you have lost. I cannot see how we compensate a community such as Mildura—and I choose Mildura because I am familiar with the area. How do you compensate a community such as that? How do you relocate? How do you get them to change their methods of farming or go into a different industry structure to accommodate the needs of the committee there?

Mr McGowan—I can see the problem and I do not pretend to have the answer. What I am trying to say to you as a Senate committee is please look 50 and 100 years ahead not to the past. I am saying that everything that has gone on in the past was okay; it is the future that we have to be looking at and planning for. That is what our children and grandchildren will be looking for us to do. If the Senate does not do it, nobody is going to do it. The Victorian government is not going to do it. The local politicians are not going to do it for obvious reasons. Somebody has to look to the future and be statesmanlike. As far as compensation is concerned, of course compensation should be paid if people have rights taken away from them. You were talking about compensation for Mildura. We got no compensation.

Senator BUCKLAND—I have no further questions.

Mr McGowan—I can see your problem. I know that, if I were a politician at Mildura, I would be doing exactly what those politicians are doing. Somebody has to take the long-term view, that is all I am begging for.

Senator BUCKLAND—All I can say to you is that this committee is trying to do that. We are trying to weigh up all of those problems that we are being confronted with. Thank you for your contribution.

Mr McGowan—I know how difficult it is because I have been sitting on your side of the table before in these things. Some problems are very difficult to solve. There is no doubt about it, water is one of those. What are we going to do about the rice industry? Are we going to cut the whole industry? We cannot.

ACTING CHAIR—No, that is right.

Senator STEPHENS—Mr McGowan, I am interested in what you were saying about someone taking a statesmanlike position in this and looking at the future. Looking at your submission here I am wondering whether you have any thoughts on how appropriate the COAG process is and how well it coordinates the whole water issue—whether it is an adequate mechanism or whether there is a need for a national overarching body or regulator.

Mr McGowan—I think the principles that COAG has come up with are pretty good. I think it is trying to do a very good job, I really do. I have not thought about what should take its place. I am only talking about the Murray-Darling Basin now, not the whole of Australia. In the Murray-Darling Basin, COAG is basically looking after the rights of the existing irrigators. That is what it is really trying to do. All the arguing and bargaining that is going on is to try to take some water away from existing irrigators and put it down the river. I am saying we should be looking at a much bigger picture. I do not know what authority is going to have the courage to do it, but somebody has to look ahead.

Senator STEPHENS—That is a fair point.

ACTING CHAIR—Say I buy a place on the Ovens or wherever you referred to on the Upper Murray, can't I buy a licence and take it up there? Can't I buy a 1,000 megalitre licence off a bloke at Mildura and cart it up the river?

Mr McGowan—In theory, under certain conditions you can. In practice, it is so difficult and there are so many conditions imposed by Goulburn-Murray Water to stop that happening. The government does not want that to happen so the regulations are there. In theory you can do it. I cannot do it where I am because they do not allow it, but there are certain places on the Ovens River where in theory you can do that. But do you see the government's point of view? If you take it up to the Ovens, you do not have to pay for that water on the Ovens; it is on your own farm, it is the rain or it is the free water. Down below they can sell that for \$20 or \$30 a megalitre.

ACTING CHAIR—No. Just say I buy a farm in the Upper Ovens and the Ovens River runs through it and I buy a 1,000 megalitre water licence and grow something—

Mr McGowan—Are there problems?

ACTING CHAIR—Yes.

Mr McGowan—I will explain it to you very carefully. If that property adjoining the Ovens River was already growing tobacco and it was already established, there would not be a big problem. If you were expanding it and going into a big area, there would be so many problems that you would not want to do it unless you were growing a very high-value crop. In this general

area it is only the people putting in vineyards who can possibly do that because the cost of meeting all the regulatory things is so high. When you are establishing a vineyard, the actual cost of water is very low in your total investment. But if you are doing any ordinary sort of farming—horticulture or grazing—the costs and the regulations are really prohibitive, and they are designed to be prohibitive.

ACTING CHAIR—I guess that is what water trading is all about—to take it to the high-value producer.

Mr McGowan—That is right, to take it to the high value. I have no problem with water trading if it is fair, but it is not fair. I personally have a licence and I am in a high rainfall area—I have one metre of rain a year—and I only use my conserved water in a drought. I do not use it in a good year because I do not need to. I am only a cattle farmer and I irrigate lucerne with it. I have applied to sell my water and they say I cannot sell it.

ACTING CHAIR—Because you are on an unregulated stream?

Mr McGowan—That is right, exactly. It is no problem if I were on the Murray or the Ovens and had a licence. The whole thing needs to be looked at in much more detail than it has been. They use the excuse: ‘We have been trading water for only a few years. We will get around to it.’ There is a lot to be done with water trading, and it is very unfair at present.

ACTING CHAIR—We are going to have to wind up there. We are very grateful for your input. We have asked some government agencies to appear before us and, for whatever reasons, they have not turned up. So if you have any information that you can supply to us about the restrictions on setting up in these unregulated areas or moving irrigation upstream—why you are not allowed to move licences from one area or another et cetera—we would be grateful.

Mr McGowan—The reason is basically financial, and there are two points in that that I would like to conclude on. One is that governments know the problem very clearly, but they do not want to do it because of the money. The second is that all political parties now have been brainwashed, if I can use that word, by the environmental lobby, because they say, ‘We’ve got to keep these streams up here pristine. The water is all for the environment and we mustn’t take any water out of these rivers. They’re heritage rivers,’ and all that sort of thing. It is environmental water when it is here but, as soon as it gets past Yarrawonga, it is no longer environmental water and it is saleable water to the irrigators. That is the great story that the greenies have been able to impose on all political parties. Gentlemen and Senator Stephens, I am most grateful to you for hearing me. I think you are doing a wonderful job, and I wish you success with your report, which I look forward to seeing.

ACTING CHAIR—Thanks very much, Mr McGowan. I now declare this hearing adjourned.

Committee adjourned at 3.31 p.m.